Reviews of Administration in the Bombay Presidency 1933 (1933)

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Reviews of Administration in the Bombay Presidency

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INTRODUCTION

This volume contains all the twenty-three Reviews of Administration of the Bombay Presidency compiled individually under the instructions of His Excellency the Governor, Sir Frederick Sykes, in consonance with his intention of having the whole administrative machinery of Government examined and ensuring efficient working in accordance with present and future economic and progressive requirements. Each review includes all the important changes effected during the last five years, including a summary of reforms, developments, economies carried out and proposals which Government have considered and rejected. The position disclosed has been examined by the Reorganisation Committee, and the subject matter, including the recommendations of that committee, brought up-to-date for future reference and assistance. This volume has been paged consecutively, but each review is prefaced by a table of contents.

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I—LAND REVENUE AND GENERAL ADMINISTRATION AND MANAGED ESTATES

I. Existing organisation.

Scope and functions of the department.

1. The department of which the commissioners are the heads outside the secretariat may be called that of "land revenue and general administration". It is generally known as and is hereafter referred to in this review as the "revenue department". Its scope is however much wider than this name would imply. It has to deal in a greater or less degree with every branch of the administration and consequently with every department of Government.

The whole of the land of the presidency is and always has been administered by Government. The staff required for this purpose, extending from the commissioners downwards through the collectors, prant officers, mamlatdars or mukhtiarkars and circle inspectors to the village servants, superior and inferior, is necessarily enormous and ubiquitous. An order from the head can with great facility and despatch be executed in every village.

In an undeveloped stage of administration all branches of State business can easily be conceived of as in the hands of one such department and this was pretty much the case at the beginning of British rule. But, as administration develops, other departments are inevitably formed owing to the increase in the amount of work to be done or owing to its technicality. It would manifestly be administratively bad tactics to stipulate that every collector must qualify in engineering so as to be able to carry out public works and then to double the number of collectors to enable them to carry out these additional duties. The obviously correct thing is to form a separate department with its own cadre.

The separation of functions may not be complete. For instance certain forests are in charge of the revenue

department. Forest dues to some extent, and irrigation rates are collected through the revenue department.

Even in those matters in which the separation of functions is complete, the department which has the general administration in its hands, except in so far as specialized departments have been formed to run various branches of it, has necessarily a powerful voice in controlling the general policy and lines of work of these specialized departments. The engineer executes the new projects, but the revenue department has, under Government, the most powerful voice in the selection of the projects for execution after all the data are available.

When there is any new development in administration it is generally entrusted to the revenue department. For instance, that department administers the Court of Wards Act and the Stamp Act. It also took up the formation of co-operative societies and carried on until in the usual way—this time very quickly—the formation of a separate department was inevitable.

Other departments often work in greater or less degree through the agency of the revenue department, because that department has the staff already available. Thus, though there is a registration department under an inspector general, the collector is the district registrar and has, for instance, the appointment, etc., of all the clerical establishment of that department in his district in his hands. The assistant and deputy collectors and mamlatdars or mukhtiarkars inspect the sub-registry offices.

It is difficult to make a statement of the scope and functions of the department. Its central duty is the administration of the land and the collection of the land revenue and of provincial taxes. Second only in importance comes its discharge of the bulk of the magisterial work of the presidency outside Bombay city and the control of honorary magistrates and benches. The foregoing paragraphs give some hint of its scope and functions outside these two main branches, but an adequate idea can be better given later when the duties of the various grades of officers of the department are described. Anything affecting the general welfare of the people comes within its scope and it is consequently concerned in some way or other with all problems connected with the different branches of the administration. It supplies Government with a judgment on projects and schemes from the

point of view of general administration as contrasted with the narrower views of specialised departments. It administers all branches of Government for which a separate department is not necessary. It carries out work for other departments for which these departments do not have the necessary staff and for which it would be uneconomical to appoint a separate staff so long as that of the revenue department is available. More especially where the people in bulk have to be dealt with or information for the collection of which no special machinery exists is required, it is done through this department.

II. Articulation of the department.

General organisation.

2. As regards the existing organisation the chart attached as appendix I attempts to illustrate it cartographically. It is proposed to deal with it here in brief so as to explain the different links and their functions.

Commissioners.

3. The first commissionership was created by Regulation V of 1830. The object of this appointment was stated in the Regulation to be the superintendence of the "revenue administration", which in its turn, according to the preamble of the Regulation, comprised the system of general superintendence and control. Thus the idea that the commissioner is not only meant for the revenue administration, but for securing general superintendence and control over other branches of the administration as well, goes back to the early days of British rule. A second commissioner was appointed in 1843 under the authority of Act XVII of 1842 and the collectorates then existing were divided between the northern and southern divisions, each division being subject to the control of the commissioner for that division.

In 1860 the supervision of the police was entrusted to the commissioners and so the commissioners were then styled "revenue and police commissioners". In 1877 a third commissionership was created and the supervision of the small political agencies was then made over to the commissioners. As a result of this the title of these officers was changed into the simple one of "commissioners" as in other parts of India. Meanwhile another commissioner had come to be appointed as commissioner

in Sind when Sind was annexed in 1843. With the development of the excise administration, a commissioner of *abkari* revenue was appointed in 1878 and, in contra-distinction with him and the commissioner in Sind, the commissioners in the remainder of the presidency are often designated divisional commissioners, though the Land Revenue Code, by which the Regulations quoted above were, along with several others, superseded, recognises them all as "commissioners" (*vide* sections 4, 5, etc., Land Revenue Code).

The collectorates in the presidency are distributed among the four revenue commissioners as under :—

Northern division	..	Ahmedabad, Broach and Panch Mahals, Kaira, Surat and Thana.
Central division	..	Ahmednagar, East Khandesh, West Khandesh, Nasik, Poona, Satara and Sholapur.
Southern division	..	Belgaum, Bijapur, Dharwar, Kanara, Kolaba and Ratnagiri.
Sind	..	Karachi, Hyderabad, Sukkur, Thar Parkar, Nawabshah, Larkana, Dadu and Upper Sind Frontier.

The last mentioned district has, instead of a collector, a deputy commissioner.

Bombay city forms a separate administrative unit and the Bombay Suburban district has been linked to the central division for statutory purposes. Bombay city and the Bombay Suburban District have now been placed under a single collector.

It will be seen from the above that in each division there are from 5 to 8 districts. The collector is at the head of the district administration and below him are the prants for each sub-division, of which there are generally two or three in a district, and below the prant is a mamlatdar (mukhtiarkar in Sind) for each taluka and mahalkari for each mahal. Each taluka or mahal is divided into from one to four circles comprising from 30 to 50 villages each, under a circle inspector. In Sind there is a supervising tapedar for each circle. Each village has a patel (except in Sind) and an accountant (the latter often for a group of villages), with several inferior

village servants. The number of prants (including personal assistants), mamlatdars, mahalkaris, mukhtiarkars, circles and villages is shown in appendix II.

In accordance with the schemes referred to in paragraph 81, there are no prant officers in the Surat, Ahmednagar and Belgaum districts, but only personal assistants to collectors, and in each of nine selected talukas circle inspectors have been replaced by a single revenue inspector.

Commissioner's functions and duties.

4. The commissioner's functions and duties may be considered in relation to—

(i) Government and the legislative council;
(ii) Other commissioners and the heads of other departments;
(iii) Collectors and other subordinate officers of the revenue department;
Collectors as managers of certain estates;
(iv) Local self-governing bodies;
(v) The public.

(i) In relation to Government and the legislative Council.

5. The commissioner's duties in relation to Government are both advisory and executive. He is the principal adviser of Government as to the action to be taken on every proposal about district administration which has to go to Government from collectors and from some other officers. Only in urgent matters in which expedition is extremely important—such cases arise particularly in connection with the maintenance of law and order—may the collector write direct to the secretariat and merely send a copy of his communication to the commissioner.

The commissioner's advice is perhaps even more necessary in respect of transferred subjects which are administered by ministers, who have not themselves had as a rule administrative experience, than in respect of reserved subjects. The range and variety of subjects on which the commissioner is consulted can be gauged from the list appended as appendix III. In this list subjects dealt with by commissioners outside the ordinary revenue and magisterial subjects and outside matters of a standard recurring type such as those concerning forests, irrigation, police and local bodies (which are dealt with in detail later) are tabulated.

The commissioner's duties are executive in that he is responsible for securing that the policy of Government in various matters is fully carried out by collectors and some other officers. The commissioner in Sind is invested with higher and more numerous powers than the divisional commissioners.

The divisional commissioners are usually nominated as members of the legislative council and have to be ready to address the house when called on by the chief whip on all sorts of subjects coming before the council. They are also expected to act as Government whips for their divisions. The commissioners are also returning officers for the following constituencies :—

Provincial council.

Commissioner in Sind	.. Non-Mahomedan rural and Mahomedan urban constituencies in Sind, and jagirdars and zamindars in Sind.
Divisional commissioners	.. Mahomedan constituencies, urban and rural, in their divisions.
Commissioner, central division.	Deccan sardars and inamdars.
Commissioner, northern division.	Gujarat sardars and inamdars.

Legislative Assembly.

Commissioner in Sind	.. Mahomedan and non-Mahomedan constituencies in Sind and jagirdars and zamindars in Sind.
Divisional commissioners	.. Mahomedan and non-Mahomedan constituencies in their divisions.
Commissioner, central division.	Gujarat and Deccan sardars and inamdars.

Council of State.

Commissioner in Sind.	Sind Mahomedan constituency.
Commissioner, central division.	Bombay presidency Mahomedan constituency.

(ii) In relation to other commissioners and heads of departments.

(*a*) *Other commissioners.*

6. The conditions prevailing in Sind are different from those in the presidency proper and the commissioner in Sind has therefore little to do with the divisional commissioners. He is, however, advised by several other heads of departments in technical matters pertaining to Sind. The commissioner of excise, for instance, pays annual visits to Sind to work in an advisory capacity with the commissioner in Sind in excise matters pertaining to the sub-province.

The duties of a divisional commissioner towards other commissioners, though not very extensive, are none the less important. The commissioners form a sort of team and meet periodically in conference and thrash out important and intricate questions of policy arising in the course of the administration of their divisions or specially referred to them by Government for joint discussion and report. These joint reports enable Government to lay down lines of policy in regard to different matters affecting the administration of the presidency.

(*b*) *Other heads of departments.*

7. The heads of other departments who chiefly have relations with the commissioners are :—

(1) Commissioner of excise.
(2) Settlement commissioner and director of land records. (This appointment is held in abeyance at present.)
(3) Inspector general of police.
(4) Chief conservator of forests.
(5) Director of public instruction.
(6) Superintending engineers.
(7) Consulting surveyor to Government.
(8) Director of public health.
(9) Registrar of co-operative societies.
(10) Director of agriculture.
(11) Surgeon general.
(12) Accountant general.

In spite of the tendency of the secretariat to work as far as possible through their own departmental heads, the commissioner has often to deal with all these heads of departments. His relations and dealings are not, however, of the same intensity with all of them. It is therefore necessary to deal with the principal heads separately.

(*c*) *Commissioner of excise.*

8. He is the adviser of the commissioner in Sind in all excise matters pertaining to the sub-province, the commissioner in Sind being the head of the excise department within his jurisdiction. The divisional commissioners have no concern with the commissioner of excise. They are, however, not excluded from interesting themselves in and advising Government about the excise arrangements in their divisions.

(*d*) *Settlement commissioner and director of land records.*

9. (This post is at present held in abeyance and its functions are carried out by the commissioners, central and southern divisions, and by the senior superintendent of land records, southern circle.)

The duties of the settlement commissioner and director of land records are the direct charge of the conduct of surveys and the compilation and maintenance of the basic land records. His department is an adjunct of the revenue department and carries out inspection work on behalf of the revenue department, especially in respect of the marginally mentioned village and taluka forms and city survey work. The revenue commissioner looks to the director of land records for advice on all technical matters relative to land records and also for criticism of the work of the revenue department staff in each district so far as the maintenance up-to-date and in proper form of the land records is concerned. Proposals regarding the non-routine work of the department, e.g., new city surveys, are made by the director of land records, either through the revenue commissioner concerned or after consulting him, and other

Village forms.

The record of rights and the crop and tenancy registers.
Births and deaths.
Cattle census and resources.
Register of water sources.

Taluka forms.

Agricultural returns.
Vital statistics.
Cattle diseases.
Water supply.

important proposals made by him are generally referred by Government to the revenue commissioners.

(e) *Inspector general of police.*

10. In Sind the commissioner in Sind controls the police administration, but the inspector general of police assists him in dealing with questions of salaries, distribution of police and certain other matters of organisation and administration.

In the rest of the presidency, though the inspector general of police is responsible for the recruitment, direction and technical supervision of the police force, the divisional commissioner is responsible for the general police administration of his division (*vide* sections 13, 17, 18 and 19 of the Bombay District Police Act) and has to advise Government in all matters of importance connected therewith. The district superintendent of police and the police force of a district are under the control of the district magistrate, who again is subject to the lawful orders of the commissioner, and the inspector general of police has to recognise these facts in exercising control within his sphere. The commissioner may address his orders directly to the district superintendent of police of a district and he may make inter-district transfers of police in times of emergency. The inspector general is bound to remedy any defects pointed out by the commissioner. It is the duty of the commissioner to control the distribution of the police force in his charge and the arrangements for suppressing offences, so that the force may be put to the most effective use. In exercising this control he is empowered to issue orders to the district magistrates. Though the inspector general of police controls all technical matters regarding his department and the details of the interior organisation of the force, all other important matters, especially those of a general nature involving modification of existing rules, orders of procedure, proposals relative to the abolition, reduction, establishment or strengthening of a police post or station, come to the commissioner for approval or in order that he may record his opinion in passing them on to Government (Cf. rule 10 (5) of the Police Manual). Likewise proposals for the employment of additional police under section 25 of the District Police Act go as a matter of course to Government through the commissioner. As a corollary to his control, the commissioner has full powers of inspection.

The commissioner is also the constituted referee in matters of doubt between the district superintendent of police and the district magistrate in regard to subjects unconnected with the internal economy of the force (rule 10, chapter I, Police Manual).

(*f*) *Chief conservator and conservators of forests.*

11. Except in technical and account matters the conservators of forests were formerly regarded as subordinate to the commissioner, but the chief conservator has, since his appointment in 1918, become the controlling authority over the conservators in regard to all professional matters. In regard to other matters the chief conservator is in the position of adviser, being consulted either by the commissioner or by Government, as the case may be. But he is not in this latter capacity necessarily interposed either between the conservator and the commissioner or between the latter and Government. The chain of reference from the conservator to the commissioner and from the latter to Government continues to be the recognised one, it being, however, at the option of the commissioner to consult the chief conservator. In cases where a commissioner makes a reference to Government and the chief conservator has not already been consulted by him, Government, if they consider fit, consult that officer themselves. Even where he has already been consulted by the commissioner, Government may consult him *de novo* if necessary.

The commissioner, in the exercise of his control over the forest department, has full powers of inspection.

(*g*) *Director of public instruction.*

12. The director of public instruction is not to any material extent connected with the commissioner in so far as college and secondary education is concerned. With the transfer of the control of primary education to local bodies, the commissioner has, by reason of his connection with local bodies, come to take a share of the work in connection with primary education.

In the course of his tour the commissioner may inspect such schools as he thinks fit and bring to the notice of Government any important defects of a general nature, e.g., indiscipline among pupils or seditious tendencies in the staff, regarding which he thinks action necessary. Reports regarding such matters also reach him from the collectors. Individual defects of importance he brings to the notice of the director of public instruction.

(h) Superintending engineers, roads and buildings.

13. The works which the public works department undertakes are divided into major and minor works. Until some years ago the whole of the grant for minor works, except that allotted to the marginally noted officers, was made over to the commissioner in Sind and the commissioners of divisions for allotment to the works in different departments after weighing the relative needs of each department. Subsequently Government decided to allot grants separately to the marginally noted officers and the commissioners of divisions have now to deal with only the minor works of the judicial and revenue departments, while the commissioner in Sind deals in addition with those of the police department.

(1) Surgeon general.
(2) Director of public instruction.
(3) Inspector general of prisons.
(4) Chief and superintending engineers.

(1) Inspector general of police.
(2) Director of agriculture.
(3) Chief conservator of forests.
(4) Commissioner of excise.
(5) Settlement commissioner and director of land records.
(6) Inspector general of registration.
(7) Collector of Bombay.
(8) Electrical engineer to Government.

As regards major works the list of works to be undertaken in the ensuing year used to be framed every year by the commissioners in consultation with the superintending engineers. The procedure then followed was :—

The collector of the district called a meeting of the district heads of departments such as the district judge, civil surgeon, district superintendent of police, divisional forest officer, educational inspector and executive engineer and decided in consultation with them what works were essential and the order in which they should be undertaken. The list so prepared was forwarded by the collector to the commissioner not later than 1st September in each year. The commissioner then forwarded the district lists to the heads of the departments concerned requiring them to communicate any changes they considered necessary. On receipt of these lists from the heads of the departments concerned with their suggestions, if any, the commissioner and the superintending engineer prepared in personal consultation the final list of major works arranged in order of urgency and submitted it to Government in the public works department not later than 1st October each year.

The above procedure was changed in 1926, since when each administrative head of a department forwards to the

secretariat department concerned by the 15th August of each year the list of new major works proposed by him for execution in the ensuing financial year. By the 1st September each secretariat department sends a list of works pertaining to the departments subordinate to it, arranged in order of urgency, to the commissioner for any remarks or suggestions he may have to make. The commissioner scrutinizes the lists received and makes remarks as to the relative importance of the demands of each department and the order of importance and urgency of the works to be undertaken and returns the list to the secretariat department concerned by the 1st October. By the 15th October the secretariat department forwards its list as finally prepared to the public works department, which then includes in its budget demands to be forwarded to the finance department such works as have been administratively approved by Government and technically sanctioned by the competent authority before that date. A consolidated list of new major works is placed by the finance department before a secretaries' meeting early in December every year. Such works as are selected at that meeting are thereafter placed before the meeting of honourable members and ministers and secretaries. At this meeting a final selection of new major works to be included in the budget is made.

As regards administrative approval the commissioner is authorised to accord such approval to works in connection with residential buildings and subsidiary services such as sanitary water supply and electric installations provided therein up to Rs. 5,000, subject to the condition that the standard rent calculated according to fundamental rules does not exceed 10 per cent. of the average monthly emoluments of the class of tenant for whom the residence is intended. The commissioner is also competent to accord administrative approval to works pertaining to Provincial residential buildings irrespective of the above limit provided they follow strictly the type designs approved by Government for the particular class of officers or subordinates concerned. The limit in respect of works other than those connected with residential buildings, Government Houses and ecclesiastical buildings extends to Rs. 25,000, provided that the works follow without material deviation the type plans approved by Government, otherwise to Rs. 5,000 (*vide* paragraph 705 (*a*) (II) of the Bombay Public Works Department Manual).

Famine programmes prepared by the public works department have to be scrutinised by the commissioner before they are sent up to Government. The commissioner is a member of the provincial and chairman of the divisional road board and correspondence on matters pertaining to the divisional road board or the road board goes to Government through the commissioner.

(*i*) *Superintending engineers, irrigation.*

14. The normal functions of the irrigation department are—

(1) the preparation and execution of projects for new works and extensions and improvements of existing works ; and

(2) the maintenance and development of existing works and the distribution of water to the best advantage.

Regarding the former function, the Irrigation Commission of 1903 expressed the opinion that revenue officers should be freely consulted during the preparation of projects not only of those works which are intended to have a protective character but also of those which are certain to be remunerative and the Government of India asked the Government of Bombay in 1905 to issue instructions likely to secure the co-operation of the officers of both departments. They also directed that all irrigation projects should be accompanied by a note by the revenue officers concerned showing the prospects of irrigation and the probable income from water rates or enhanced land revenue on which the forecast of the financial prospects of the project could be based. These instructions were communicated to all concerned in January 1906. The advice of the commissioners regarding such projects has been of great service to Government. For example, had it not been for the way in which the commissioner, central division, pointed out the necessity of completing the Visapur Tank project in 1925, it is difficult to believe that Government would have sanctioned its completion.

As regards the second function, the main problems regarding the development of existing canals relate to—

(*a*) the fixing of proper water rates for canal-irrigated crops ;

(*b*) the canal rules, which regulate the distribution of water, its proper assessment and other matters incidental to it ; and

(*c*) the recovery of water rates.

As regards water rates, Government have directed that proposals for revision of water rates should be submitted by the executive engineer through the collector, the superintending engineer and the commissioner and that the latter should invariably consult the settlement commissioner and director of land records and the director of agriculture before submitting such proposals to Government.

There are no express orders directing that amendments to canal rules should be scrutinised by the commissioners. But the canal rules were first overhauled in 1914 by a conference of revenue and irrigation officers. In passing orders on the resolutions of this conference Government stated that it was essential that officers of the revenue and irrigation departments should keep in the closest touch with one another. It has since then been a recognised practice for each reference regarding amendment of these rules and allied matters to go to Government through the settlement commissioner (while that appointment was filled), the director of agriculture and the commissioner.

With the object of expediting the disposal of all major questions affecting irrigation in the Deccan, Government have directed that all such questions should be referred to the commissioner, central division, who should convene periodical conferences of the officers of the revenue, irrigation and agricultural departments for the consideration of such questions and their submission, with the recommendations of the conference, to Government for final orders. With a view to establishing a closer connection with the irrigators on the Deccan canals and in order to afford a more regular means of obtaining information as to the requirements and difficulties of irrigators in this area, Government have appointed a committee, called the Deccan Irrigation Advisory Committee, consisting of non-official representatives nominated by Government for three years—two for each of the major canals and two for the minor canals—with the commissioner, central division, as chairman. The representatives selected are, as far as possible, to be themselves cultivators using canal water or landholders with land under command of the canals. The functions of the committee are strictly advisory and its recommendations are to be submitted to Government by the chairman. The constitution and rules of business of the committee have been published for general information in the form of a press note, dated the 3rd May 1932.

As regards the recovery of irrigation rates, the demand statements are prepared by the irrigation department and sent in two lots—the kharif and rabi statements—to the revenue department for recovery. Of the amount recovered by the revenue department, in the northern and central divisions, two and, in the southern division, three per cent. is credited to it to cover the cost of recovery.

The commissioner exercises no authority over any officer of the public works department except in times of famine, when he has special powers of ordering the execution of works. Where, however, any action of the public works department either in the construction or running of a work has repercussions outside that department, the matter is generally referred by Government to the commissioner. The cultivators, when aggrieved, approach the commissioner and collector as a matter of course.

(*j*) *Consulting public health engineer.*

15. The public health engineering branch works out water supply and drainage schemes at the request of local authorities with the sanction of the Board of Public Health Works. The commissioner, central division, is president and the consulting public health engineer, secretary to the Board of Public Health Works which advises Government on all applications for financial or other assistance in executing schemes received from local authorities in the presidency excluding Sind.

(*k*) *Consulting surveyor to Government.*

16. The consulting surveyor's proposals relating to town planning or development schemes in respect of areas belonging to Government reach Government through the settlement commissioner (through the commissioner, central division, for the period during which the settlement commissioner's post is held in abeyance). The consulting surveyor has to obtain the approval of the revenue commissioner concerned before he can tender his advice and assistance to local bodies. Thus his department does not act *proprio motu* but comes into play through the general administrative department on the recommendations of the collector and commissioner. The collector often consults the consulting surveyor direct for layouts of Government land

(*l*) *Director of public health.*

17. Measures to preserve the public health are primarily the duty of local bodies; but officers of the revenue department have to see that they discharge these duties and have power under the relevant Acts to take action if a local body fails in its duty. The director of public health advises officers of the revenue department and the local bodies. Proposals for coping with an epidemic by means of extra establishment reach the commissioner from, or *via* the collector and the commissioner calls for the professional advice of the director of public health, if he finds it necessary, before making recommendations to Government or asking the surgeon general to depute the extra establishment required. Should any hitch occur in making the arrangements, it is the function of the commissioner to take the appropriate steps to remove it.

Similarly in regard to religious fairs, if the arrangements are in the judgment of the public health department inadequate, it is through the officers of the revenue department that the appropriate steps are taken and, if Government have to be approached, it is through the commissioner that the collector approaches them.

Such schemes cannot be judged entirely from the point of view of the public health department, nor can the finance of such schemes be dealt with by that department. Officers of the revenue department are ultimately responsible for the public health and for seeing that proper steps are taken. It is the commissioner, generally in consultation with the collector, who discharges this responsibility.

The registration of vital statistics is carried out by the revenue department and by certain local bodies.

(*m*) *Registrar of co-operative societies.*

18. The assistance of the revenue department staff is utilised principally in making the recovery of co-operative societies' dues and the registrar, deputy registrar and assistant registrars of co-operative societies keep in close touch with collectors and the commissioners regarding the needs of their department. The extra work thrown on the revenue establishment in connection with the recovery of societies' dues has become heavy and the appointment of special recovery officers has been sanctioned recently, as an experimental measure, in tracts

where arrears are heavy. The cost of these appointments is recovered by a percentage charge on recoveries.

(*n*) *Director of agriculture.*

19. Commissioners and collectors do not exercise control of any kind over any officer of the agricultural department in the presidency proper, but the revenue and agricultural departments have of necessity many points of contact, especially on the statistical side of the latter department, since certain agricultural statistics are of prime importance in connection with the land revenue. Statistics of the normal yield of crops, prices of agricultural produce, the outturn and forecasts of the outturn of the principal crops each year are maintained by the agricultural department, but the data are supplied to it by the revenue department and the form both of the data and the finished product must suit the purposes of both departments. Any question of alterating the form or procedure of obtaining the data would be discussed by the commissioners and the director of agriculture.

In respect of carrying on his experimental and demonstrational work the director of agriculture scarcely has occasion to consult the commissioner. In respect of propaganda the agricultural department used to work a good deal through the revenue department, but the modern tendency is to work more through the taluka development associations.

The agricultural department in Sind which is independent of the agricultural department in the presidency proper is in charge of the Chief Agricultural Officer in Sind who is subject to the general administrative control of the Commissioner in Sind.

(*o*) *Surgeon general.*

20. The surgeon general has to deal with local bodies in regard to the medical staff employed by them and their expenditure on hospitals and dispensaries and, should any hitch occur, refers the matter to the commissioner. The commissioner makes proposals to the surgeon general for the distribution of Government grants to dispensaries and hospitals run by local bodies.

(*p*) *Accountant general.*

21. There is constant correspondence between the commissioners and the accountant general regarding :—

(1) budgets and audits of the different branches of the revenue administration, including district treasuries, and the accounts of estates under management ;

(2) deputation of officers on foreign service, their leave and pension contributions ;

(3) budgets and budget grants and reappropriations pertaining to the revenue department ;

(4) leave, pension and other personal matters of gazetted officers subordinate to the commissioner ;

(5) audits of the various local authorities and the recoveries to be effected from their funds from time to time.

(iii) IN RELATION TO COLLECTORS AND OTHER SUBORDINATE OFFICERS OF THE REVENUE DEPARTMENT.

(*a*) *Control, supervision and co-ordination.*

22. The commissioner makes appointments and transfers of mamlatdars (mukhtiarkars in Sind). Appointments of prant officers are made by Government usually on the commissioner's recommendation or with his concurrence. Thus he is largely instrumental in seeing that the various links in the district administration are suitable and properly placed. As supervising and controlling officer the commissioner tours through the districts in his charge, inspects the collectors', prants', huzur and mamlatdars' or mukhtiarkars' offices, gives instructions and sees that the orders of Government are properly understood and carried out.

The commissioner's co-ordinating function is incessantly in operation. Within certain wide limits the collector acts on his own responsibility and initiative in matters entrusted to him as collector, whether by executive or statutory directions, as for instance in the granting of suspensions and the making of land grants. But he often finds himself in uncertainty and applies for advice to the commissioner, who can generally solve the problem by reference to his records or experience. If it is a general problem and new, the commissioner probably obtains the views of other collectors and perhaps (in the presidency proper) of the other commissioners and issues general instructions after considering them.

In matters that go beyond the limits of the collector's authority the sanction of the commissioner or of Government is required and in this connection a vast number of reports reach the commissioner. It is especially the number of reports and returns which go to Government *via* the commissioner which has given rise to the calumny that the commissioner is merely a post office. It is true that in a great many cases there is no room for difference of opinion or that it is only the collating and discussion of the information for the division as a whole that is done by the commissioner. But the scrutiny which the process involves is valuable even in the most trivial and routine matters. This scrutiny and collation are necessary and there are on the other hand also many proposals and returns which require much reshaping before they can be passed. On the one hand are certain types of proposals which require extensive overhaul in the commissioner's office, which has much more experience in dealing with them than any collector's office. On the other hand many proposals reach him which tend towards the formal, as, for instance, proposals for revenue-free grants of land which exceed the collector's limit of sanction and a proposal for the dismissal of a watandar patil, which only Government can sanction, however clear the case may be.

(*b*) *Appellate and revising authority.*

23. Appeals against the decisions of collectors in almost all land revenue matters lie to the commissioner and he has also the powers of revision (section 211, Land Revenue Code) in respect of the majority of orders of collectors and subordinate officers. He is the appellate and revising authority under the Watan Act and chief controlling authority for purposes of section 45 (refund of penalties and excess duty) and section 57 (certifying the statement of a case to the high court) of the Stamp Act. He is the appellate authority in respect of the orders of the district magistrate with respect to the maintenance of law and order under the District Police Act. As regards the other Acts with which the district magistrate is concerned the commissioner exercises a general superintendence.

(*c*) *In relation to collectors for the management of certain estates.*

24. These functions are dealt with in the note at the end of this "review."

(iv) In relation to local self-governing bodies.

(a) *Municipalities.*

25. The following are some of the important powers exercised by the commissioner in respect of all kinds of municipalities :—

		District Municipal Act.	Bombay Municipal Boroughs Act.
(*a*)	To sanction election rules .. (power delegated).	Section 11 (1) (*c*).	Section 10 (1) (*c*).
(*b*)	To nominate persons on pilgrim committees.	Section 27-A (1).	Section 37-A (1).
(*c*)	To sanction transfers of lands and leases of over seven years.	Section 40 (2).	Section 48 (2).
(*d*)	To assign part of municipality's pilgrim tax to local boards.	Section 72.	Section 92.
(*e*)	To hear appeals against the municipality's order regarding overcrowding.	Section 149 (2) (*c*).	Section 184 (2) (*c*).
(*f*)	To rescind or approve the collector's orders suspending execution of the orders of the municipalities.	Section 174 (2). Section 175 (3).	Section 214 (2). Section 215 (3).
(*g*)	To issue orders preventing extravagance in the employment of establishment	Section 176.	Section 216.
(*h*)	To appoint a person to perform a duty which a municipality fails to carry out and to recover the cost.	Section 178 (2) (3).	Section 218 (2) (3).
(*i*)	To nominate persons on the committee of management in the case of suspended municipalities.	Section 179 (3) (*b*).	Section 219 (2) (*b*).

The following are matters on which the commissioner passes final orders in respect of town municipalities only, the corresponding powers in respect of borough and city municipalities being exercised by Government :—

1.	To appoint nominated councillors.	Section 10 (1) (*b*)—District Municipal Act.
2.	To fix the qualifying tax ..	Section 12, explanation 2—District Municipal Act.
3.	To remove a municipal councillor.	Section 16—District Municipal Act.
4.	To confirm the election of a vice-president in certain cases.	Section 23 (3)—District Municipal Act.
5.	To grant leave of absence to the president or vice-president in certain cases.	Section 23 (5)—District Municipal Act.
6.	To sanction rules and also establishment schedules.	Section 46 —District Municipal Act.

7.	To sanction by-laws ..	Section 48—District Municipal Act.
8.	To sanction imposition of taxes.	Section 59 (*b*) and Section 61—District Municipal Act.

The commissioner appoints nominated councillors of city municipalities also.

The powers conferred on Government under certain sections of the District Municipal Act have been delegated to the commissioner in Sind.

Under the Bombay Local Fund Audit Act, XXV of 1930, the revenue commissioner or an officer not below the rank of a collector exercises the powers and performs the duties provided under sections 5, 8, 10, 11 and 12 of that Act. Section 11 gives the commissioner the power to surcharge against the person or persons responsible the amount of any illegal payment or loss caused by negligence or misconduct.

(*b*) *Local boards.*

26. The powers which the commissioner exercises in regard to local boards are similar to those which he exercises in respect of municipalities. In the following matters he can pass final orders :—

(1) Appointment of nominated members—section 5 (1) (*b*) of the Bombay Local Boards Act.

(2) Final decision as to whether a vacancy in respect of a member has occurred—section 9 (4).

(3) Appointment of members on a district local board where election fails—section 18 (3).

(4) Extension of the term of boards; limited to four years in the aggregate—section 28.

(5) Final decision regarding disqualifications—section 30 (2).

(6) Removal of a taluka local board member for misconduct—section 31.

(7) Compelling concurrence of a dissenting local authority (other than a cantonment committee) for formation of a joint committee and giving decision in case of disagreement of such joint committee on any matter—section 46 (2) and (3).

(8) Sanctioning sales or transfers of immoveable property or leases thereof for a term exceeding seven years—section 47.

(9) Closure of burial or burning grounds—section 59 (1).

(10) Sanctioning by-laws—section 62.

(11) Assignment of the proceeds of a ferry or road or bridge toll between two districts concerned in the division—section 75, 1st proviso.

(12) Sanctioning expenditure by a board outside its area—section 77.

(13) Decision in regard to a dispute between a district local board and any taluka local board in regard to apportionment of charges etc.—section 81 (2).

(14) Sanctioning rules for the levy of taxes under section 99—section 101.

(15) Prevention of extravagance in expenditure on establishment—section 121.

(16) Powers of inspection and supervision—section 124 (1).

(17) Confirmation or modification of collector's orders regarding execution of unlawful or otherwise objectionable orders of a board—section 125 (2).

In addition to these powers the commissioner in Sind exercises the power of filling in vacancies in local boards due to a failure to elect the full number of elected members—section 5 (5).

All references regarding local boards, where Government orders are necessary, reach Government through the commissioner, who is expected to suggest a definite line of action.

(c) *Village panchayats.*

27. In the following matters affecting village panchayats the commissioner can pass final orders :—

(1) Declaring a local area to be a village or to cease to be a village, or extend or curtail the limits of such area—section 4 of the Bombay Village Panchayats Act, 1933.

(2) Removal of certain disqualifications in respect of election or nomination—proviso to section 8.

(3) Appeal by a Village Panchayat against the order of the District Local Board for the levy or increase of tax—section 90 (2).

(4) Appeal by a Village Panchayat against the requirement of the Collector or the District Local Boards in the matter of reduction of establishment—section 98 (3).

(5) Revision or modification of an order of the Collector under section 99 (1)—section 99 (3).

(6) Revision or modification of the order passed by the District Local Board in case of default of a Village Panchayat in performance of duty—section 101 (3).

(7) Dissolution and reconstitution of panchayat on alteration of limits of village—section 103 (1).

(8) Appointment of members in the reconstituted or established panchayats—section 103 (2).

(9) Fixing the term of a reconstituted or established panchayat—section 103 (3).

(10) Vesting property, etc., of panchayat which has been dissolved in reconstituted or established panchayats—section 104 (1).

(11) Sanctioning the bye-laws framed by the District Local Board—section 109 (1).

(*d*) *Sanitary committees and boards.*

28. Village sanitary committees and boards are governed by the Bombay Village Sanitation Act of 1889, as amended by Bombay Act XXV of 1931 and can be formed in villages to which Part II of the Act has been applied by the collector of the district, or Part III of the Act by the commissioner.

Sanitary committees and boards are under the control of the collectors.

(*e*) *Cantonment boards.*

29. Matters dealing with cantonment electoral rules, burial grounds in cantonments, control over sources of water supply, levy of fees for the practice of trades or callings, by-laws and extension of the provisions of the Cantonments Act, 1924, have to pass through the commissioner.

(f) *General.*

30. It will be seen from the above that the commissioner bears a considerable responsibility for guiding and supervising the work of all local self-governing bodies within his jurisdiction. With the de-officialization of these institutions and the enlargement of the franchise it is getting increasingly difficult to maintain the required minimum administrative efficiency in them.

(v) In relation to the public.

31. Most of the important non-officials of each district call upon the commissioner while he is on tour. Another occasion for such personal intercourse is during the council sessions when the commissioner comes into daily contact with non-official representatives of the people of his division.

In times of famine or scarcity the commissioner has the special responsibility, under Government, for the famine administration within his jurisdiction from the initiation of relief measures right up to the closure of such works.

Collector.

32. Next below the commissioner comes the collector. He is the pivot on which the district administration turns. Not only is he at the head of the revenue department in the district, but he is expected to superintend the working of the officers of other departments in so far as the needs and exigencies of the district administration are concerned. Nothing can or should pass in the district of which the collector should not keep himself informed. The vicissitudes of trade, the state of the country, the administration of civil justice, the progress of public works must all affect most materially the interests of the classes of whom he is the constituted guardian. Officious interference in matters beyond his immediate control must be avoided, but temperate and intelligent remonstrance against anything which he sees to be wrong is one of the most important of his duties.

COLLECTOR'S FUNCTIONS AND DUTIES.

33. His main functions fall under the following heads :—

(i) Revenue.
(ii) Accounts.
(iii) Quasi-judicial in revenue matters.
(iv) Minors, wards and managed estates.
(v) Local self-government.
(vi) Officers of other departments.
(vii) Collector's subordinates.
(viii) The public.
(ix) As district magistrate.
(x) As district registrar.
(xi) In relation to states.
(xii) Sanitation and public health.

(i) COLLECTOR'S FUNCTIONS AS REVENUE OFFICER.

34. This is the most important sub division of the collector's duties. Of the various statutes conferring powers and imposing responsibilities on the collector, the following are the principal :—

Group I (Fiscal).

Land Revenue Code.
Irrigation Act.
Forest Act.
Stamp Act.
Court Fees Act.
Tolls Act.
Income-tax Act.
Abkari Act.
Tobacco Act.
Opium Act.
Revenue Recovery Act.

Group II (Inam).

Watan Act (Matadars Act in Gujarat).
Pensions Act.
Summary Settlement Acts.

Group III (Public utility).

Agriculturists Loans Act.
Land Improvement Loans Act.
Co-operative Societies Act.

The Guardians and Wards Act and the Court of Wards Act would also fall in the third group, but they have not been mentioned here, as the collector's functions and the duties under them are separately mentioned.

Group I—Fiscal.

35. The collector is most intimately connected with the first Act of group I, the Land Revenue Code. He is the custodian of Government property in land (including trees and water) wherever situated and at the same time the guardian of the interests of members of the public in land, in so far as the interests of Government in land have been conceded to them.

All land, wherever situated, whether applied to agricultural or other purposes, is liable to payment of land revenue, except in so far as it may be expressly exempted by a special contract (*vide* section 45, Land Revenue Code). Such land revenue is of three kinds :—

Agricultural assessment ;
Non-agricultural assessment ; and
Miscellaneous.

The collector's duties in respect of all such land revenue relate to its (1) fixation, (2) collection and (3) accounting.

The collector must understand thoroughly the system by which the assessment is fixed on each piece of land roughly in proportion to its productivity. This assessment is revised every thirty years taluka by taluka, and the collector is expected to review the settlement reports with great care. Though the assessment is guaranteed against increase for a period of thirty years, Government grant suspensions and remissions in bad seasons as a matter of grace and the determination of the amount of these suspensions and remissions is in the hands of the collector.

As regards non-agricultural assessment section 48, Land Revenue Code, provides for alteration of the agricultural assessment when agriculturally assessed land is used for a non-agricultural purpose. In the same way unassessed land used for a non-agricultural purpose is

assessed to non-agricultural rates. All this has to be done by the collector according to the provisions of and rules under the Land Revenue Code. Non-agricultural assessment is generally fixed for thirty years except in the Bombay Suburban District where the period is fifty years. Miscellaneous land revenue has also to be fixed by the collector according to the circumstances of each case.

The collection of all land revenue rests with the collector, who has to see that the land revenue due is recovered punctually and with the minimum of coercion, though the Land Revenue Code provides for various coercive measures from a simple notice to the forfeiture of land for the recovery of Government revenue.

The collector has also to see further that the collections are properly credited and accounted for.

The collector has to look to the collection not only of land revenue payable under the Land Revenue Code, but also of all arrears payable under the provisions of the various Acts mentioned in group I and other Acts which contain a provision that dues are recoverable as arrears of land revenue. To take an instance, though income-tax is now assessed and levied by a separate department, a good deal of the recovery work has to be done by the collector and his establishment.

In regard to the administration of the Forest Act it is not only the recovery of the forest revenue with which the collector is concerned, but the ultimate responsibility for the administration of the department, so far as his district is concerned, lies with him and the divisional forest officer is his assistant for the purpose of that administration. As regards the Abkari and Opium Acts the collector has also to do much more than watch the recovery of revenue. He holds abkari sales, issues licences, deals with licensees in certain matters and is in fact the agency through which the commissioner of excise arranges to have the policy of his department carried out. The important functions which the collector has to perform in regard to the excise administration of his district are :—

(1) Control of operations for the prevention of smuggling and illicit distillation in the district.

(2) Superintendents of excise are empowered to take disciplinary action against licensees up to a certain extent. Beyond this the power vests in the collector.

(3) Supervision and collection of license fees.

(4) Supervision over the work of the superintendent of excise in regard to tree-tapping.

(5) Disposal of appeals against the orders of the superintendents of excise under the powers given by the Abkari and Opium Acts.

Under the Tobacco Act the collectors are charged with the duties of collecting the tobacco revenue, granting, suspending and revoking licenses, assessing and fixing license fees, inspecting account books of licensees, issuing warrants, obtaining entry, searching, seizing and detaining, disposing of confiscated articles, compounding offences, hearing appeals against orders passed by officers subordinate to them, etc. The collectors may delegate some of these powers to prant officers and mamlatdars or mukhtiarkars (*vide* paragraphs 53 and 60).

Group II—Inam.

36. About one-fourth of the occupied land in this presidency (excluding Sind) comes under the category "alienated". Besides this there are various cash alienations or allowances settled under various Acts, treaties, engagements and executive orders. The collector's chief duty in respect of alienations both in land and cash (which are a legacy of the former Governments) is to see that the conditions under which they are continuable according to the settlements to which they were subjected during the initial stage of the British Government are observed and that they are continued only to the persons entitled to hold them. Of the various Acts dealing with such alienations the Watan Act, which deals with inams under what may be called the "official" tenure, or tenure of land held for service to Government, is perhaps the most important. In pre-British days it was customary to provide for the remuneration of various officers in the shape of land and this system has been largely retained in so far as village officers and inferior village servants useful to Government are concerned. The Watan Act also applies to the watans of the district hereditary officers of former days, whose watans have been commuted. The Act provides for preservation of the inam in the family to which the hereditary office belongs, as also the registration, succession of what are called representative watandars in respect of hereditary offices which are still continued

hereditarily, also the appointments, dismissals etc. of such officers and servants. The duty of the proper administration of the Act in respect of all these and other matters dealt with under the Act devolves on the collector. Though he can delegate his powers to his prant officers, he has to supervise their work, hear appeals from their orders and deal with certain important matters himself.

The other Acts in this group need not be dealt with in detail.

Group III—Public utility.

37. The Agriculturists Loans and Land Improvement Loans Acts regulate the grant of loans to agriculturists at cheap rates for financing their operations. The collector has to estimate the needs of his district in accordance with the policy of Government for the time being and, in the event of a bad season, to make further demands for as much money as can be usefully loaned for the purpose of tiding over the scarcity. He has to take the necessary steps for the most advantageous distribution of the amount placed annually at his disposal and to see that the advances so made are recovered at the proper time. Co-operative societies, wherever the co-operative movement has made sufficient progress, are expected to relieve the collector of a part of this work. But this is a comparatively recent innovation and not yet sufficiently advanced to give any appreciable relief to collectors. It may at the same time be mentioned that the extra work thrown on the collector in connection with the recovery of co-operative societies' dues has become heavy in those districts in which the number of such societies is considerable.

(ii) ACCOUNTS.

38. The collector is in charge of the treasury and is personally responsible to Government for its general administration, the due accounting of all moneys received and disbursed, the correctness of the treasury returns and the safe custody of the valuables which it contains. He does not, however, take part in the daily routine of treasury business. For that work his delegate and representative is the treasury officer, or huzur mamlatdar or mukhtiarkar, who is in immediate executive charge of the district treasury, including the account branch.

The money held in a Government treasury consists of—

(1) the treasury balance, from which Government disbursements are made and into which Government receipts are paid ;

(2) the currency chest balance, which holds a portion of the currency reserve coin and a stock of notes.

The management of the currency chest rests with the treasury officer only at places where there is no branch of the Imperial Bank of India conducting Government treasury business.

The personnel of the district treasury consists of—

(1) The collector.

(2) The treasury officer.

(3) The treasurer (where there is no branch of the Imperial Bank) and his staff.

(4) The head accountant and the clerical establishment.

The actual working of the treasury in the matter of receipts and payments is governed by the Civil Account Code and other rules and orders. Every day a sheet, supported by vouchers, is received at the district treasury from each of its sub-treasuries. It contains the receipts, payments and balance of the day before (in some cases the second or third day before according to the distance by post); and is, after examination, posted into the accountant's books at the district treasury. At the close of the day's transactions, the accountant transcribes the totals of his subsidiary registers into his cash book, sums it up on both sides, closes it, and prepares a balance sheet in the prescribed form. Meanwhile the treasurer also sums up both sides of his cash book and draws up a balance memorandum, which gives details of the notes, coin etc. composing the balance in his hands. When the results in the two balance sheets agree, the treasury officer signs both cash books and both balance sheets.

The working of the treasury proceeds in this way from day to day and on the last day of the month the cash (coin and notes) held at the district treasury is verified either by the collector himself or, if he is not present at headquarters, by a responsible assistant deputed by him for the purpose. The cash in each sub-treasury is similarly counted by the local officer in charge. The cash balance report for the whole district is then drawn up and the account balance compared with it. Then the cash balance

report is despatched to the deputy controller of the currency and the monthly returns to the accountant general. These latter consist of lists of payments and a cash account, supported by the cash balance report described above. The lists of payments and the cash account monthly sent to the accountant general from each treasury represent the first stage in the compilation of the public accounts. Taken together they cover the whole of the public transactions of the presidency, including departmental accounts and debt and remittance, and conjointly work up to the cash balance of the presidency at the end of each month. They may be said to constitute the primary fabric of the public accounts of the presidency.

Each treasury was formerly inspected by a gazetted officer deputed by the audit office (accountant general) once in two years. But in the interests of economy the inspection work has now been relaxed by 66⅔ per cent. Consequently treasuries will now be inspected once in six years so long as the present financial emergency continues. The inspection report is sent to the collector in two parts, one relating to matters administered by the deputy controller of the currency and the other dealing with all other points. The collector reports the action taken by him on the first part of the report to the deputy controller of the currency and on the second to the accountant general. These officers bring to the notice of the commissioner (and of the local Government, where necessary) all matters in which they think that the action taken by the collector is inadequate.

In matters of accounts and audit the collector (with the treasury officer under him) is responsible to the accountant general, whose instructions he has to obey. In matters pertaining to resource and currency (that is, the supply of necessary funds and the different forms of currency required for the working of the treasury and the withdrawal of surplus funds and uncurrent currency), Government of India securities (i.e., payment of interest, redemption of terminable loans, safe custody etc.) and issue of new Government of India loans, the collector has to carry out the instructions of the deputy controller of the currency, who controls these matters in accordance with the rules in the Resource and the Government Securities Manual and the instructions issued from time to time by the controller of the currency.

(iii) QUASI-JUDICIAL IN REVENUE MATTERS.

39. Among the quasi-judicial functions of the collector (on the revenue side), apart from hearing appeals from the prant officers under the Land Revenue Code and various other Acts, may be mentioned (i) the revisional powers exercised under section 23 of the Mamlatdars' Courts Act, 1896, in respect of mamlatdars' orders under it, (ii) the work which the collector does in connection with the execution of civil courts' decrees, and (iii) proceedings and awards under section 11 of the Land Acquisition Act.

(iv) MINORS, WARDS AND MANAGED ESTATES.

40. The commissioner as court of wards generally delegates to the collector all the powers of the court of wards except those specified in No. 23 of the rules under the Court of Wards Act.

In Sind the manager of encumbered estates and not the collector is entrusted with the management of all estates of which the revenue department assumes charge under the various Acts.

(v) LOCAL SELF-GOVERNMENT.

41. In all cases in which the power of passing orders in matters affecting local bodies rests with the commissioner or Government either the proposals are made by the collector, or they are received by him from the local body and submitted by him to the commissioner with his remarks. The main cases in which the collector can pass final orders are :—

Boroughs.

(1) Claims to properties.—Section 64, Bombay Municipal Boroughs Act, 1925 (compare section 50-A, District Municipal Act).

(2) Acquisition of land within the regular line of street.—Section 119 (2) of the Act (compare section 92 (2), District Municipal Act).

(3) Stopping of dangerous quarrying.—Section 156, proviso (compare section 126, proviso, District Municipal Act).

(4) Establishment of slaughter houses beyond municipal districts.—Section 175 (compare section 141, District Municipal Act).

(5) Grant of assistance in recovering rent.—Section 205 (compare section 166, District Municipal Act).

City and town municipalities.

In addition to the above :—

(1) Boundary marks.—Section 4 (3), District Municipal Act, 1901.

(2) Expenditure on receptions etc.—Section 56 (*m*).

Local boards.

(1) Appointment of members of a taluka local board when there is no candidate for election.—Section 18 (3), Local Boards Act, 1923.

(2) Assignment of toll tax receipts between local boards and Government when the roads vest partly in the district local board and partly in Government.—Section 75, second proviso.

Village panchayats.

(1) Determining the number of elected members.—Section 6 (1) (*a*) of the Bombay Village Panchayats Act, 1933.

(2) Appointment of nominated members.—Section 6 (1) (*a*) proviso.

(3) Nomination of a principal holder of a revenue village or his representative.—Section 6 (1) (*c*).

(4) Decision as to who is the senior officiating revenue patel or the principal holder or the representative of the holder.—Section 6 (2).

(5) Fixing the date for election.—Section 7 (1).

(6) Decision in case of dispute or doubt as to who is qualified to vote.—Section 7 (3).

(7) Declaring the election of a member to be invalided.—Section 9 (1).

(8) Extension of the term of office of elected members of a panchayat.—Section 11 (2).

(9) Removal of a member, sar-panch or deputy sar-panch from office.—Section 21.

(10) Decision in case of dispute or doubt as to whether a vacancy has or has not occurred.—Section 22 (2).

(11) Sanctioning lease, sale or transfer.—Section 29 proviso.

(12) Appointment of members of village bench including the holder of a revenue village or his representative—Section 37 (2).

(13) Decision as to who is the principal holder or a representative of the holder.—Section 37 (2).
(14) Appointment of a chairman of the village bench.—Section 37 (4).
(15) Decision in the case of a dispute as to whether a member of a village bench is a party to, or interested in, a suit or case.—Section 50.
(16) Deciding whether a case should be tried by a village bench or a criminal court.—Section 77.
(17) Execution of decrees for money and moveable property and staying of execution of proceedings.—Sections 81 (2), 82 (2) and 83.
(18) Recovery of fine and compensation ordered by the village bench.—Section 84 (3).
(19) Cancelling the jurisdiction or quashing the proceedings of a village bench or cancelling orders passed by a village bench.—Section 87 (1).
(20) Recovery of taxes or other dues as arrears of land revenue.—Section 91 (6).
(21) Writing off of irrecoverable sums.—Section 92.
(22) Power to call for proceedings of a panchayat etc.—Section 94.
(23) Prevention of extravagance in expenditure on establishment.—Section 98 (1).
(24) Suspension of the execution of order or resolution of a panchayat, etc.—Section 99 (1).
(25) Execution of work in case of emergency.—Section 100 (1).
(26) Deciding the liability of a member for the loss, waste or misapplication of any money or property of a panchayat due to his misconduct or gross neglect, and recover the amount as an arrear of land revenue.—Section 110 (2) to (4).

Sanitary committees and boards.

(1) Establishment of a sanitary committee.—Section 5 (1), Village Sanitation Act, 1889..
(2) Nomination of members and chairman of sanitary committee.—Section 8 (1) (2).
(3) Approving the rules framed by a sanitary committee.—Section 8 (2).
(4) Nomination of members of sanitary boards.—Section 19.
(5) Removal of a member or chairman of a sanitary committee.—Section 32.

Cantonment boards.

In the working of cantonment boards the Collector deals with all matters which go to Government through the commissioner.

The control sections of the various Acts governing local bodies give authority to the collector as the chief local representative of Government to supervise the actions of local bodies and to give advice. In view of this there is constant correspondence between the collector and local bodies on all sorts of matters, which may not be specifically covered by the Acts, rules and bye-laws.

(vi) OFFICERS OF OTHER DEPARTMENTS.

42. The officers of other departments stationed at district headquarters can be divided into two groups :—

Group I.

(1) District judge.
(2) District superintendent of police.
(3) Divisional forest officer.
(4) Executive engineer.
(5) Civil surgeon.
(6) Superintendent of excise. (There is a superintendent for a group of districts.)

Group II.

(1) Excise inspector.
(2) Administrative officer, district local board (education).
(3) District agricultural overseer.
(4) Inspector of sanitation and vaccination.

The district judge has a separate and independent sphere of work and as sessions judge he exercises appellate powers over the decisions in criminal cases of the district magistrate, and other first class magistrates in the district.

The district superintendent of police is of all these officers the most intimately connected with the collector, who, as district magistrate, is responsible for the administration of law and order in the district and can direct and control the district superintendent of police in administrative matters.

The divisional forest officer is regarded as the collector's assistant in regard to forest administration.

The executive engineer stands a little apart. Since his work is technical he is not directly subordinate to the collector, though in a sense he plays a part subsidiary to the general administration of the district of which the collector is the head and is expected to help the collector whenever required to do so. The collector can ask him to investigate the utility of minor irrigation works likely to be agriculturally useful in the district. According to section 11 of the Famine Relief Code, 1927, the executive engineer arranges in consultation with the collector for the inclusion in the programme of expansion of public works of plans for special and current repairs to roads and other useful works suitable as scarcity works. The programme of famine relief works is also prepared quinquennially by the executive engineer in consultation with the collector. When the time for actual opening of any relief work comes, the collector can requisition the services of the executive engineer for making immediate arrangements for procuring the necessary establishment, tools, plant, building materials etc. (Famine Code—Section 81.)

The civil surgeon also has a separate and independent sphere of his own, but must place his professional and technical advice and assistance at the disposal of the general district administration whenever it is required. In those districts, e.g., Dhulia, Bijapur and Ratnagiri, in which the civil surgeon is ex-officio superintendent of the district prison, he has, in the latter capacity, continual relations with the collector as district magistrate. According to section 10 of the Famine Relief Code the civil surgeon is under the general orders of the collector in so far as the medical and sanitary arrangements on scarcity and relief works are concerned.

The superintendent of excise is generally subordinate to the collector and is in particular subject to his supervision in the following matters :—

(1) The superintendent must, when he sends his diary to the commissioner of excise, forward to the collectors to whom he is subordinate copies of those parts of the diary which appertain to their districts.

(2) The diaries of the inspectors and sub-inspectors of excise are collected together and forwarded by the superintendent, with his remarks, to the collector.

(3) The control of tree-tapping and tree-numbering and watching and checking the work of excise staff in connection therewith are performed by the superintendent under the supervision of the collector.

(4) Correspondence regarding excise bungalows and other excise buildings must be conducted by the superintendent through the collector.

(5) Papers regarding the investigation of serious charges against non-gazetted officers are sent by the superintendent to the commissioner of excise through the collector.

(6) Confidential reports regarding the work of excise inspectors are forwarded to the commissioner of excise through the collector.

It will be seen, therefore, that the district superintendent of police, the divisional forest officer, the civil surgeon, the executive engineer and the superintendent of excise form a sort of team with the collector as their captain.

The president of the district local board and the president of the district headquarters municipality, though non-officials, come into this group so far as local self-government in the district is concerned.

The officers in the second group are all of subordinate status. Their services in their particular sphere can be requisitioned by the collector either directly in case of necessity if the matter is urgent or through their official superiors.

(vii) Collector's subordinates.

43. In order to check, supervise and superintend the work of his assistants and deputies in various branches and to keep them up to the mark and also to get to know the different parts of his district and its people, their grievances and their wants, the collector tours for at least four months every year. In the course of his tour he is expected to visit all talukas, inspect the offices of mukhtiarkars, mamlatdars or mahalkaris and acquaint himself with the capacity of their staff. The strength of the clerical branch of the revenue establishment of a district ranges from some 125 to some 200 persons and the collector has to deal with all matters connected with the vacancies, promotions, leave, discipline, punishment and retirement

of all of them. He has to see not only that efficiency is maintained but also that the representation of the different classes and communities in the district is properly secured. As regards village officers and inferior village servants, he hears appeals against the prant officers' orders, exercises general superintendence and deals with certain matters such as the dismissal of hereditary village officers under section 58 of the Watan Act or the forfeiture of watans, for both of which the sanction of Government has to be obtained through the commissioner.

(viii) THE PUBLIC.

44. In spite of all that has been recently said to the contrary, the collector is still the interpreter to the people of his district of a system of Government designed to be paternal and benevolent. He has wide opportunities of doing lasting good to the people. It is not only in times of famine and epidemics that he does a great deal to grant relief and help to those who need it. Both at headquarters and in the course of his tour he is ready to listen to all complaints and grievances and does his best to remove them. Nor is it the case as is sometimes alleged by those who have little knowledge of rural areas that the collector, the prants and the mamlatdars are looked on by the people as hard tax-gatherers and little else. Rather do they appear to the people as dispensers to the best of their ability of justice and help and as a rule still obtain the willing and friendly co-operation of all classes.

The collector is the returning officer in the presidency proper for the non-Mahomedan rural and urban constituencies of the local legislative council in his district and in Sind for the non-Mahomedan urban and the Mahomedan rural constituencies in his district.

(ix) AS DISTRICT MAGISTRATE.

45. The collector's duties as district magistrate are both judicial and executive. He is at the head of all magistrates in the district—stipendiary as well as honorary—and of the benches of magistrates. He has, besides the power of trying and committing cases like other first class magistrates, the power of transferring cases within his district and hearing or referring to other qualified magistrates for disposal appeals from convictions by magistrates of the second and third classes. He can call

for the record and proceedings of any magistrate in the district and refer any case to the high court under section 439 of the Criminal Procedure Code. Thus he is responsible for the administration of the criminal law in the district.

As regards prisons the district magistrate, who is the chairman of the board of visitors of the prison within his jurisdiction, arranges for a weekly visit to the prison by one of the members of the board. He also arranges for a quarterly meeting of the whole board to carry out the duties of inspection of the prison.

Under section 11 (2) of the Prisons Act, 1894, the district magistrate is empowered to pass orders not inconsistent with the Act or the rules thereunder to the superintendent of a prison other than a central prison or a prison situated in a presidency town.

The executive management of sub-jails is subject to the orders of the district magistrate.

The district magistrate is also at the head of the police in his district and has extensive powers under the Criminal Procedure Code, the District Police Act and other Acts for the maintenance of law and order. It is his duty to examine the records of police stations and outposts. The primary object of such inspection is that the inspecting officer should gain an insight into the state of crime in the limits of the police station and satisfy himself that cases are being promptly disposed of. The examination is, therefore, confined to a general examination of such records as relate to registration of crime and bad characters, the issue of summonses, recovery of fines and the registration and disposal of property passing through the hands of the police. But of course, as head of the police administration in his district, the collector has authority to make any more extended examination which he may consider necessary in special circumstances.

In his executive capacity the district magistrate is concerned with the issue of licenses and permits under the below-mentioned Acts :—

(1) Arms Act.
(2) Petroleum Act.
(3) Explosives Act.
(4) Poisons Act.
(5) Stage Carriages Act.

He has also to supervise the general administration of these Acts, to inspect factories and magazines and to perform various other supervisional functions.

(x) As district registrar.

46. As district registrar the collector controls the administration of the registration department within his district.

The inspector general of registration makes appointments, transfers and promotions of sub-registrars and of inspectors of registration offices, the district registrar of the clerical staff. The district registrar also grants leave to sub-registrars on average salary up to four months and appoints substitutes and receives any applications which sub-registrars submit for transmission to the inspector general.

He supervises and controls the work of the sub-registrars, hears appeals against their orders refusing registration, can himself register documents whenever he thinks it expedient to do so (e.g., documents in which a sub-registrar is a party) and has hitherto been required, if possible, to examine the books, indexes and accounts and other records of the sub-registrars subordinate to him once a year. It has been decided to restrict the district registrar's inspection to a general inspection of sub-registrars' offices (see "Review of the Registration Department") but the new rules have not yet been framed.

The district registrar is registrar of births and deaths under section 12 of Act VI of 1886 (Births, Deaths and Marriages Registration Act) for the local areas within his district. He keeps in his office a register of births and deaths of Europeans in his district. He also keeps in his personal custody sealed covers containing wills deposited with him.

(xi) In relation to states.

47. Since the transfer of the Bombay States to the control of the Government of India, collectors have ceased to be political agents with the result that their interest in the affairs of the States is now very restricted.

In the case of the railway lands lying within the Bombay States, Baroda and Hyderabad, the powers and jurisdiction over which have been ceded to the Governor-General in Council

and are exercised by the officers and courts of the Government of Bombay having executive authority and jurisdiction in the neighbouring British districts, previous arrangements continue namely, the commissioners and collectors exercise the same authority over the railway lands lying within the States as they do over the neighbouring British districts.

When disturbances occur or appear imminent in the States, commissioners and collectors are likely to be called upon to decide, if there is no time to refer the matter to Government, whether any British police should be sent to the States to deal with the disturbances or to prevent them from affecting the neighbouring British districts.

The commissioner of excise and the collectors concerned continue to be in charge of the excise arrangements of those States which have leased their abkari administration to the Government of Bombay while the leases are in force. It is also proposed to enter into agreements with the States to prevent smuggling and to safeguard the revenues of the Government of Bombay and the commissioner of excise and the collectors concerned will have to see that the provisions of these agreements are observed.

The commissioners and collectors and the medical authorities also have to maintain close co-operation with the authorities of neighbouring States to prevent the spread of epidemics from one jurisdiction to another.

(xii) Sanitation and public health.

48. The duties of the collector generally in the matter of sanitation are—

(*a*) to see that ordinary sanitary measures are initiated in cases of outbreaks of epidemics disease,

(*b*) to watch and stimulate the efficacy of the daily sanitary administration of municipalities and other sanitary authorities, and

(*c*) to advise and encourage the local bodies to improve the permanent sanitary condition of the areas under them so far as the funds at their disposal will allow.

He can freely requisition the advice and technical assistance of the assistant director of public health in this regard.

Prant officer.

49. Prant officers form a connecting link between the mamlatdar and the collector. A prant officer has from three to five talukas or mahals in his charge (sub-division). In some districts where the prant officer is also personal assistant to the collector he is in charge of one or two talukas. The duties of a prant officer may be considered under four heads :—

(i) Revenue.
(ii) Excise.
(iii) Magisterial.
(iv) Others.

(i) Revenue.

50. A prant officer exercises all the powers conferred on the collector by the Land Revenue Code or by any other law in force or by executive orders, in regard to the talukas and mahals in his charge, except such powers as the collector may specially reserve to himself.

His principal functions in this regard in his sub-division are :—

(1) Inspection and supervision of the work of mamlatdars, circle inspectors and village officers including the inspection of taluka kacheries.
(2) Appointments, transfers etc. of stipendiary village officers and the appointment etc. of hereditary village officers.
(3) Safeguarding Government property by constant inspection, dealing with encroachments, breaches of the conditions of land held on the restricted tenure etc.
(4) Grant of waste land and disposal of alluvial land.
(5) Levy of non-agricultural assessment and passing orders regarding miscellaneous land revenue.
(6) Hearing of appeals against mamlatdars' decisions in assistance cases and watching the execution of assistance decrees.
(7) Crop and boundary mark inspection and the checking of annewaries (estimates of crop yields for purposes of suspension and remissions of revenue) and the record of rights.
(8) Supervision over the realisation of Government revenue.
(9) Successions to watans and other properties.
(10) Land acquisition.

(ii) Excise.

51. Prant officers have been invested with powers under the Abkari Act in respect of the following matters :—

(1) The issue of passes for the import, export and transport of excisable articles.

(2) The giving of special orders for the occasional sale by retail of any excisable article or hemp in quantities exceeding certain limits.

(3) Requiring every person who manufactures or sells any excisable articles under a license to measure, weigh or test any excisable article in his possession.

(4) Entering and inspecting at any time by day or night any warehouse, shop or premises in which any licensed manufacturer or vendor carries on the manufacture or sale of any excisable article or hemp or draws toddy or stores any excisable article, testing, measuring or weighing any such person's stock of excisable articles or hemp, entering any building, vessel etc., in which he has reason to believe that any excisable article liable to confiscation is manufactured, kept or concealed and, in the case of resistance, breaking open any door and removing any other obstacle to his entry into any such shop, etc.

(5) Seizing liquor etc. liable to confiscation and detaining and searching any person guilty of any offence under the abkari law.

(6) Issuing warrants for the arrest of persons who are believed to have committed any offence against laws relating to abkari revenue.

The prant officer must also take a general interest in abkari matters, because there is no branch of the administration which has a stronger claim on the interest and assistance of the district and police officers.

(iii) Magisterial.

52. The prant officer is the sub-divisional magistrate of his charge and as such exercises the powers specified in part IV of schedule III of the Criminal Procedure Code. These include the power to require security for good behaviour (section 110), power to make orders

calculated to prevent apprehended danger to public peace (section 144), power to pass orders on police reports of investigation (section 173), power to transfer cases to subordinate magistrates (section 192), and power to call for and forward to the district magistrate records and proceedings of subordinate magistrates (section 435). Prant officers usually have appellate powers and hear appeals from convictions made by second and third class magistrates in their subdivisions and such other appeals as the district magistrate may transfer to them.

As sub-divisional magistrate the prant officer is required to inspect police sub-inspectors' offices from much the same point of view as the district magistrate inspects them.

(iv) Other duties.

53. Among the other duties of the prant officer may be mentioned :—

(1) Keeping the collector informed of what is going on in his sub-division not only from the revenue point of view, but also in matters connected with law and order.

(2) Bringing to the notice of the collector slackness or laxity of the mamlatdars, circle inspectors etc. in his sub-division.

(3) Forest settlement work.

(4) Grant of tagai loans.

(5) Tobacco work.

Really the prant officer can do as much as he wishes to help the administration of his sub-division and promote the general well-being of the people. He is expected to tour in his charge for seven months each year and spend at least 1 month in each of his talukas. Thus he has immense opportunities of studying at first hand the needs of the people and their grievances and can do a lot if he really exerts himself.

Under the Tobacco Act, prant officers are empowered to grant licenses, assess and fix fees subject to the special or general orders of the Collector, inspect account books of licensees, if so authorised by the Collector, issue warrants for arrest, search, etc., hear appeals against orders passed by mamlatdars or mukhtiarkars, etc.

It has recently been decided that in one district of each of the three divisions of the presidency proper the experiment should be tried of substituting for the prant officers an equal number of personal assistants to the collector, who will not be placed in separate formal charge of any particular sub-division of the district but will perform such duties as the collector may assign to them.

Huzur officer.

54. The huzur officer was until recently in every district a deputy collector, but huzur deputy collectors are now being gradually replaced by huzur mamlatdars and mukhtiarkars.

The duties of the huzur officer as treasury officer in connection with the treasury and account office have been described in dealing with the duties of the collector. He is often also in charge of the city survey records of the headquarters town.

In abkari matters he is responsible to the collector for the proper and punctual collection of abkari revenue and for the keeping of accounts of money paid and to be paid by each licensee. As the collector is on tour in the fair season, the huzur officer has generally to arrange, under the orders of the collector, for the disposal of different kinds of licenses and to deal with matters connected with the abkari administration at headquarters. He has to prepare for submission to the collector and the commissioner of excise monthly returns showing the progress of tree-tapping, revenue realisations from consumption of liquor and drugs in the district and other particulars required for statistical and administrative purposes.

The huzur officer is usually a city magistrate and also sub-divisional magistrate for the headquarters sub-division. There are however whole time city magistrates or additional city magistrates of the deputy collector's grade at Poona, Ahmedabad, Surat, Bandra, Karachi, Hyderabad and Sukkur. At these places the huzur officer has only treasury and account office work and sometimes also appellate magisterial work. At Bandra there is no treasury, the treasury and account work for the suburban district being performed partly by the huzur officer, Thana, and partly in the office of the accountant general, Bombay.

Mamlatdar, mukhtiarkar and mahalkari.

55. The mamlatdar (in Sind the mukhtiarkar) is the officer in executive charge of the administrative area known as a taluka, which generally contains from 100 to 175 or more villages. A few of the smaller or less important of such units are called mahals or pethas and the revenue officer in charge of them is styled the mahalkari. There are sub-treasuries for all mahals and there is practically no difference in kind between the functions and duties of a mamlatdar and those of a mahalkari.

The mamlatdars date from pre-British days. Under the Peshwas they were variously designated—mamlatdars, subhedars, or kamavisdars. In 1839 the Bombay Government directed that all these officers should be designated mamlatdars. In some other provinces they are called tahsildars, *i.e.*, officers in charge of treasuries. Their duties may be sub-divided into :—

(i) Revenue.
(ii) Quasi-judicial.
(iii) Magisterial.
(iv) Treasury and accounts.
(v) Other administrative duties.

(i) Revenue.

56. The mamlatdar's revenue duties are to prepare the ground-work for the prant officer and the collector to pass their orders upon. When these orders are passed he has to execute them. He has also to keep a constant watch over the work of village officers and to make inspection of boundary marks, crops, the record of rights, removal of encroachments etc. and for this purpose to tour in his taluka for at least two weeks every month.

In regard to the annual demand of land revenue he has to get ready all the statements necessary for what is called the making of the "jamabandi" of the taluka. The demand for fixed agricultural revenue is settled, but there are remissions and suspensions to be calculated upon that fixed demand in lean years. Remissions and suspensions are given in accordance with the crop annewaries, with the determination of which the mamlatdar is most intimately concerned. To the demand of fixed revenue is added the amount of non-agricultural assessment and of

fluctuating land revenue, such as that arising from the sale of trees, stone or sand fixed by individual orders given from time to time. The jamabandi is partly an audit of the last year's accounts and partly an inspection of the accounts of the current year.

The brunt of the work of collection also lies on the mamlatdar. He can issue notices under section 152, Land Revenue Code, inflict fines for delay, in payment under section 148, Land Revenue Code, distrain and sell moveable property and issue notices of forfeiture of the land, though he has to take the prant officer's or the collector's orders for actual forfeiture.

He has also to collect other Government dues, for instance, excise license fees, toll or ferry-farm dues, irrigation revenue, forest grazing fees, income-tax, co-operative credit societies' dues and tagai dues.

It is also the duty of the mamlatdar to see that there is no breach of any of the conditions under which inams are held and, whenever there is any such breach, to bring it to the notice of the collector through the prant officer.

He has to make enquiries and get ready the material on which the prant officer has to pass his orders under the Watan Act. He can himself pass orders, as to the appointment, remuneration, period of service, suspension and fining of inferior village servants, the grant of leave of absence to them and the like [section 64 (2) of the Watan Act].

Applications for grant of tagai are generally received by the mamlatdar, who has to make enquiries, see the sites for the improvement of which tagai is sought, ascertain whether the security offered is sufficient, determine what instalments for repayment would be suitable, etc. He can himself grant tagai up to Rs. 50 (or up to Rs. 250 in case of land improvements, if specially empowered). In other cases he has to obtain the prant officer's or the collector's orders.

The mamlatdar's duties regarding tagai matters do not end with the giving of it; he has to see that it is properly utilised, inspect the works undertaken by its means, watch the repayment and make recoveries from defaulters.

(ii) Quasi-judicial.

57. The quasi-judicial duties which the mámlatdar performs include :—

(1) inquiries and orders under the Mamlatdars' Courts Act,

(2) the execution of civil court decrees,

(3) the disposal of applications from superior holders for assistance in recovering land revenue from inferior holders, and

(4) enquiry in respect of disputed cases in connection with the record of rights in each village.

The last two are summary enquiries under the Land Revenue Code.

(iii) Magisterial.

58. Every mamlatdar is *ex-officio* a magistrate of the third class. But most mamlatdars have either second or first class powers and try or commit for trial criminal cases arising from their talukas or sent to them by the district magistrate or the sub-divisional magistrate.

The mamlatdar's magisterial work on the executive side consists of—

(1) any special investigations that the district magistrate or the sub-divisional magistrate may entrust to him ;

(2) the recovery of fines ;

(3) the disposal of ownerless property, intestate property, property attached on suspicion and property coming before him in criminal cases or transferred to him for disposal by the district magistrate or the sub-divisional magistrate ;

(4) management of the sub-jail ; and

(5) keeping the district magistrate and the sub-divisional magistrate informed of all criminal activities in his charge and taking steps incidental to the maintenance of law and order in his charge.

In case of serious disturbance of the public peace the mamlatdar carries great responsibility, for, as the senior magistrate on the spot, he must issue orders and carry on till his superiors arrive. He has thus in these days often to face serious situations with inadequate forces.

(iv) Treasury and accounts.

59. As sub-treasury officer the mamlatdar is in charge of the taluka treasury, which is called "sub-treasury" in relation to the district treasury. Into this treasury all money due to Government in the taluka, land revenue receipts, forest, excise, public works and other receipts, is paid and from it nearly the whole of the money expended for Government in the taluka is issued. The sub-post offices in the taluka receive their cash for postal transactions and remit their receipts to the sub-treasury. The sub-treasury officer pays departmental officers on cash orders issued by treasury officers and on cheques, except where certain departments are allowed to present bills direct at the sub-treasury. The sub-treasury officer also pays and issues remittance transfer receipts and supply bills, when authorised by the deputy controller of the currency. The sub-treasuries are otherwise collecting depôts only.

When the mamlatdar is away from his headquarters, the head karkun (head munshi in Sind) is *ex-officio* in charge of the sub-treasury and the account business and is held personally responsible for it. The head karkun in a taluka holds towards the mamlatdar a position analogous to that which the huzur officer holds towards the collector.

The taluka sub-treasury is also the local depôt for stamps—general, court-fee and postal—of all denominations and for the stock of opium held there for sale to licensed dealers. A few sub-treasuries have been specially authorised to discontinue the maintenance of a stock of postal stamps. In such cases the sub-post office at the taluka headquarters is supplied with postal stamps from the post office at the district headquarters.

A currency chest is now maintained at almost all sub-treasuries in which surplus cash balances are deposited. From it withdrawals are made to replenish sub-treasury balances. Currency telegraphic transfers are also issued at and on sub-chests under special instructions from the deputy controller of the currency.

The mamlatdar has to verify the balances in the sub-treasury, including those of stamps and opium, on the closing day of each month, which for the convenience of the district treasury is fixed on 25th of all months except

February, when it is 23rd, and March, when it is 31st, the latter being the closing day of the financial year. The report of the verification, together with the monthly returns of receipts under different heads, has to be submitted by the mamlatdar to the huzur officer. The sub-treasuries are annually inspected by either the collector or the prant officer.

(v) Other administrative duties.

60. The mamlatdar's main duty lies towards the collector and the prant officer, whom he must implicitly obey and keep constantly informed of all political happenings, outbreaks of epidemics and other matters affecting the well-being of the people, such as serious maladministration in any department or any hitch in the working of the administrative machine, due, for instance, to subordinate officers of different departments being at logger-heads.

He must help the officers of all departments in the execution of their respective duties in so far as his taluka is concerned. In fact he is the hand-maid of them all and the connecting link between the officers and the public whom they are all meant to serve. This is particularly so in departments which have not a local taluka officer of their own, such as the agricultural department, which expects the mamlatdar's help in the preparation of season reports and price returns, forecasts of crops, the working of the taluka development association and so on. The mamlatdar is also responsible for the cattle census, which really comes under the purview of the agricultural department. The co-operative department expects the mamlatdar to propagate co-operative principles in his taluka. He has to execute the awards and decrees of societies in the taluka, unless there is a special officer appointed for the purpose. He has to take prompt action in respect of epidemics and to render to the assistant director of public health and his assistants every help in preventing the outbreak of epidemic disease and suppressing it when it occurs.

Under executive orders the mamlatdar has to provide the military department with the necessary provisions and conveyances when any detachment marches through the taluka.

The mamlatdar's position in relation to other taluka officers, e.g., the sub-inspector of police, the sub-registrar, the range forest officer, the sub-assistant surgeon and the abkari inspector is not definable. They are not subordinate to him except perhaps in a very limited sense but are grouped round him and expected to help and co-operate with him in their own spheres.

Under the Tobacco Act a mamlatdar or mukhtiarkar may exercise powers similar to those exercised by a prant officer, except that of hearing appeals, provided they are delegated to him by the collector.

Though the mamlatdar is not expected to work directly for local self-governing bodies, he is usually the principal source of the collector's information about them. He is generally a nominated member of the headquarters municipality in his taluka and of the taluka local board and from his position usually takes an influential part in their deliberations.

In relation to the public well-being the mamlatdar is the local representative of Government and performs generally the same function as the collector on a somewhat lower plane.

Circle inspector and supervising tapedar.

61. The circle inspector in the presidency proper is in some respects a link between the mamlatdar or the mahalkari and the village officers. He has generally 30 to 50 villages in his circle. There are from one to four circle inspectors in a taluka or mahal. The duties of a circle inspector relate to—

(1) boundary marks inspection, inspections of crops, including the estimating of their annewari, the inspection of tagai works and detection of illegal occupation of land,

(2) preparation of agricultural and other statistical returns, *viz.*, T.F.-XX, crop statistics; T.F.-XXII, cattle census, and T.F.-XXIII, water supply,

(3) supervision of the village officers in the preparation and maintenance of the record of rights, the mutation register and the tenancy register,

(4) examination of rayats' receipt books and supervision of the revenue collection, and

(5) such other miscellaneous work as the mamlatdar may from time to time entrust him with, e.g., inquiry into an alleged encroachment.

The measurement and fixation of boundary marks of survey numbers and the partition of survey numbers in execution of civil court decrees or otherwise used to be done by the circle inspector, but is now entrusted to cadastral surveyors working directly under the district inspector of land records.

In pursuance of the scheme referred to in paragraph 80, circle inspectors in each of nine selected talukas have been replaced by a single revenue inspector.

In Sind the functions of the circle inspector are performed by the supervising tapedar.

VILLAGE HEADMAN.

62. The patel is the principal official in a village. In the works of the early English writers he is called the "headman of the village". Elphinstone says—"The patels are the most important functionaries in the villages and perhaps the most important class in the country. They hold their office by a grant from the Government (generally that of the Moguls), are entitled in virtue of it to lands and fees and have various privileges and distinctions of which they are as tenacious as of their land. Their office and emoluments are hereditary. The patel is also the head of the village police and as such is responsible for the administration of justice and for the maintenance of law and order in his village. Though originally the agent to Government, he is now looked upon as also the representative of the rayats."

The duties of the patel fall under the following heads :—

(1) Revenue.

(2) Quasi-magisterial.

(3) Administrative.

His revenue duties are :—

(i) In conjunction with the village accountant to collect the revenue due to Government from the rayats ;

(ii) to detect encroachments on Government land and protect trees and other property of Government ;

(iii) to execute the orders received from the taluka office in connection with recovery of the revenue and

(iv) to get the village accountant to maintain properly the record of rights and other village accounts and to get him to submit the periodical returns punctually ; and

(v) to render assistance to high officials visiting the village for inspection work or other purposes.

He is also an *ex-officio* member of the village panchayat, if there be one in the village.

The quasi-magisterial functions appertain to the police patel. In a majority of villages the same person is both the police and the revenue patel. The police patel is responsible for the writing up of the birth and death register and for the care of unclaimed property found in the village. He has also—

(i) to report the occurrence of crimes in the village to the officer in charge of the police station ;

(ii) to hold an inquest in case of unnatural or sudden death ;

(iii) to arrest any person who, he may have reason to believe, has committed any serious offence and to forward such person to the nearest police station for further action ; and

(iv) to pursue and carry out any search of suspected criminals under certain safeguards.

He can try and, on conviction, punish with confinement in the village chavdi for a period not exceeding 24 hours any person charged with committing, within the limits of the village, petty assault or abuse.

He can also try the following offences when specially empowered by the district magistrate :

(i) Mischief or petty theft when the estimated value of the property stolen or of damages sustained does not exceed Rs. 2.

(ii) Resistance or refusal to obey lawful orders personally issued by him.

As regards the patel's administrative duties, he is expected to look to village sanitation and public health.

He must also report promptly the outbreak of any epidemic diseases to the taluka office. He is also expected to render every assistance to travellers provided payment is duly tendered.

There are no patels in Sind.

VILLAGE ACCOUNTANT.

63. In the Deccan and Karnatic the office of the accountant used generally to be held by hereditary kulkarnis. From 1914 onwards hereditary kulkarnis have been allowed, subject to certain conditions, to commute the right of service attached to the kulkarniki watan. There are now stipendiary talathis wherever such commutation has taken place. In the central division districts this substitution of talathis for kulkarnis has been general in all districts except Sholapur, where the number of kulkarnis is still considerable. The main duties of the village accountant are—

(1) to maintain village accounts relating to demand, collection and arrears, the record of rights etc.;

(2) to inspect crops and boundary marks and prepare agricultural statistics;

(3) to help the patel in the collection of land revenue, write the combined day and receipt books and other accounts and do other clerical work, including that of the police patel when he is illiterate.

In Sind the functions of the talathi (and also some of those of the patel) are performed by the tapedar.

The principal work of supervising tapedars and tapedars is crop inspection for recording the areas under crops, on which the assessment is based. The regulation of water supply under the Barrage involves the keeping of records by abdars of the irrigation department showing what fields are cultivated and when they require water. An experiment was made in the Thar Parkar and Nawabshah districts of reducing the number of supervising tapedars and tapedars in talukas where there are also abdars. The experiment is reported to have failed and it is likely that it may have to be dropped altogether.

INFERIOR VILLAGE SERVANTS.

64. The classes of inferior village servants useful to Government include the following :—

Mahar.	Walekar.	Karbu.
Jaglia.	Talwar.	Natekar.
Ramoshi.	Kalkar.	Chaugula.
Koli.	Metgar.	Sanadi.
Rakwaldar.	Naikwadi.	

They are to be found only in the presidency proper and are usually hereditary except in Gujarat, where there are stipendiary inferior village servants.

The mahars and jaglias are the most important. They have duties towards both Government and the people. Besides the profits of their watan lands these inferior village servants receive baluta (remuneration in kind) from the rayats.

The duties of the mahars towards Government are—

(1) to call up the rayats to make payments of land revenue and other Government dues,

(2) otherwise to assist the village officers in the collection of Government revenues,

(3) to take remittances to the Government treasury,

(4) to render assistance in measurement work,

(5) to make enquiries regarding births and deaths in the village,

(6) to carry village officers' post to and from the taluka kacheri,

(7) to keep a watch over village boundaries and the boundaries of individual fields.

The duties of jaglias towards Government are—

(1) to assist the police patel in his duties,

(2) to patrol the village at night,

(3) to accompany the mahar to the Government treasury with the remittances.

(4) to watch the camps of the district officers when they encamp at the village on tour,

(5) to render assistance to village officers in the discharge of their duties, especially their police duties.

III. Co-ordination with other departments.

(i) General.

65. One of the strongest points in the present organization of the revenue department is the facilities it gives for the co-ordination of the work of the revenue department with that of other departments. Each branch of the administration, dealing as it does with its own peculiar sphere, must have the necessary internal control over its own affairs. But the *raison d'etre* of each department is the service which it renders to the general public. The general administrative department, that is, the revenue department, is and has all along been the department which endeavours to secure that the various services best accord with the needs of the people.

The process of bifurcation and separation of other departments from the central trunk of the administration, i.e., the revenue department, has not advanced to an equal extent in all cases. The other departments may be placed in three groups according to the intensity of the inter-relation existing between them and the revenue department :—

Group I.

(*a*) The land records, registration, agricultural and forest departments.

(*b*) The police, judicial (criminal) and excise departments.

Group II.

The public works department (irrigation, roads and buildings), and the consulting surveyor's department.

Group III.

The education, medical, public health, civil veterinary, co-operative and other departments.

The land records, registration, agricultural and forest departments are, like the revenue department, intimately connected with land, but have each a special and technical function of their own which is however directly ancillary to the revenue department in its more restricted sense.

(ii) Land records department.

66. The land records department prepares and maintains the basic land records for the purposes of the revenue department. The director of land records (whose post is now in abeyance) is intimately connected with the revenue commissioners and every new proposal of his which would affect these records comes under the scrutiny of the commissioners. The divisional superintendent of land records is the assistant of both the commissioner and the collectors in technical matters and the district inspector of land records is an assistant of the collector in technical matters. The mamlatdar sends to the district inspector, for disposal through his staff of cadastral surveyors, all applications received by him for measurement work.

(iii) Registration department.

67. The sub-registrar sends a statement of the essentials of every transaction affecting rights in land to the village accountant of the village concerned. The village accountant enters it in his record of rights (not improbably with a note that the survey or sub-division number given in the deed is wrong). The question of simplifying the procedure of land registration in Bombay city (to begin with) by applying the land transfer system obtaining in England was considered, but was eventually dropped, as it is beset by practical difficulties.

As regards the public, all officers from the collector to the mamlatdar have to ascertain by periodical inspections of the work of sub-registrars whether the service which the sub-registrars are intended to render is promptly done. It is for this purpose that Government have directed that the mamlatdar should at least once a month visit the sub-registry office and see how the work is going on, though he need not go into the technical matters connected with registration.

A notice is prominently displayed at every sub-registry office that complaints may be made to the mamlatdar. This notice and the inspection by the mamlatdar are sore points with the sub-registrars, who are incessantly trying to get rid of them. It is only the fact that the collector is the common superior of both that enables them to be maintained.

(iv) Agricultural department.

68. The functions of the agricultural department relate, so far as they concern the revenue department, to statistics, research and propaganda. The agricultural department is largely dependent on the revenue department for the collection of its statistics, *e.g.*, of prices and live stock; and these statistics are primarily for the use of the revenue department, though they serve other purposes and for convenience are compiled by the director of agriculture. The form which the product should finally have is necessarily a matter for discussion between the commissioners and the director of agriculture.

In the sphere of its work of research and investigation the revenue department often suggests the subjects to which the technical investigation and research could be advantageously directed.

In its propaganda work the department has often to seek the aid of the revenue department, especially of the mamlatdar and village officers, for instance, in the establishment of agricultural development associations pushing on the cultivation of cotton or of improved varieties of groundnut, the use of labour saving machines etc.

(v) Forest department.

69. The main functions of the forest department relate to—

(1) afforestation;

(2) disafforestation;

(3) development of forests—

(*i*) conservation,

(*ii*) utilization of forest produce or exploitation,

(*iii*) arboriculture.

Of these the first two are practically functions of the revenue department, as is the settlement of public rights on land proposed for afforestation. Working plans for the development of forests are drawn up by the forest department in consultation with the revenue department and after they are sanctioned by Government are carried out by the forest department with the assistance of the revenue department.

The service which this department does to the public is rendered less to individuals than to the public taken as a whole, in safeguarding, developing and exploiting forests which are the property of the State. To the illiterate rayat what the department does for the public good is sometimes less obvious than what, in the interests of forest conservancy, it prevents individuals from doing and therefore the revenue department has often, especially in the early days of forest conservancy, been called in to restore amity between the forest department and the villagers. The officers of the revenue department have also to assist forest officers in making villagers realise their obligations in extinguishing forest fires and preventing the destruction of forests.

(vi) Police department.

70. The functions of the police are executive, while those of the magistracy are principally judicial. The police department comes next to the general administrative department in importance.

The actions of the police with regard to the public are all strictly regulated by law and it is one of the functions of the magistracy to ensure that the police rigidly conform to the law in their dealings with the public.

(vii) Judicial department (criminal justice).

71. The sessions judge and the assistant or additional sessions judge try cases committed to them by the district magistrate or other qualified magistrates and hear appeals against the judgments of first class magistrates. Orders passed by these judicial officers have to be carried out by the magistracy by police agency.

(viii) Excise department.

72. Though the commissioner of excise is responsible for excise administration, the commissioners of divisions are not thereby to be excluded from interesting themselves in and advising Government about the excise arrangements in their divisions. The correlation of the various officers of the revenue department with the excise administration have already been described.

(ix) PUBLIC WORKS DEPARTMENT.

73. Mr. A. C. Logan, I.C.S., stated, when as commissioner of abkari and customs, he gave evidence before the Decentralisation Commission, that "the public works department was practically autocratic, partly owing to the Government of India Code and partly to its very favourable position in the secretariat." There may be less truth in this statement now than at the time when it was made, but the public works department is essentially a technical department and so not subject to control from outside.

The Montagu-Chelmsford reforms however substantially increased the control of the finance department over its expenditure.

The department consists of two branches—one dealing with roads and buildings, and the other with irrigation and railways.

As regards roads and buildings the executive engineer under paragraph 53 of the Bombay Public Works Department Manual, receives positive orders only from his own departmental superior. The superintending engineer, executive engineer, commissioner and collector have to co-operate in several respects, but their co-operation depends on their sense of duty as units of the same administrative machinery.

The contact between the commissioner and the superintending engineer in charge of irrigation works is closer. In matters dealing with irrigation rates and irrigation rules the commissioner, the director of land records (when he existed) and the director of agriculture (in Sind, the chief agricultural officer) has his say.

With the development of the research side of irrigation the problem of securing co-ordination between the functions of the agricultural department and the irrigation research branch in the presidency proper has given rise to some controversy. The subject was discussed at a conference of revenue and irrigation officers held in February 1929 when the following resolutions were passed :—

(1) Research and experiment by the irrigation development and research circle should be confined to problems of agriculture affecting and affected by water supply and drainage.

(2) Propaganda for the adoption of agricultural methods dependent on irrigation control should be carried out by the irrigation development and research circle.

Government have not yet passed orders on the question.

A special division was created in 1925 with the idea of constructing minor irrigation works in scarcity districts in the presidency. The scope of the work included the maintenance and repairs of irrigation tanks, bandharas, village water supplies, wells and all possible means of conserving and utilizing the rainfall in scarcity districts. This division was abolished in the year 1929 as a measure of retrenchment. A reduced programme of minor irrigation works is now carried out under the executive engineers of the divisions concerned, in close contact with the revenue and agricultural departments.

(x) Consulting surveyor's department.

74. This department exists primarily to provide local bodies with expert advice in town planning, town development and extension schemes and Government and other bodies who acquire land with an expert valuer. The duty of determining whether this expert service should be made available to any particular local body has been laid on the commissioners. In land acquisition cases the collector requisitions the services of the department without a reference to the commissioner.

The department is under the general administrative control of the settlement commissioner and under that of the commissioner, central division, for the period during which the settlement commissioner's post is in abeyance.

(xi) Educational department.

75. The educational department was until the post of director of public instruction was created in 1855 practically under the control of the commissioner. The divorce of the department from the revenue department is now almost complete, though officers of the revenue department can, and are in fact expected to, inspect primary and secondary schools in the course of their tours and assist the spread of education by all means in their power. Proposals for the nomination of additional members to school boards of local authorities under section 3 (2) of

the Bombay Primary Education Act, 1923, are submitted to Government by the collector through the director of public instruction in consultation with the educational inspector. Other important subjects on which the revenue and educational departments come into contact are :—

(1) the selection of sites for school buildings,
(2) the grant of building sites for aided schools, and
(3) the education of aboriginal tribes.

(xii) Medical and public health departments.

76. Apart from purely technical matters and matters affecting the interior economy of the medical and public health departments interconnection between these departments and the revenue department is well developed and maintained. On the medical side may be mentioned the district hospital committees which collect funds for civil hospitals. The collector is usually chairman of these. When questions arise as they frequently do between local bodies and Government on non-professional medical matters, the revenue department is concerned almost equally with the medical department. In public health matters, apart from certain specialised and localised activities such as control of the large fairs, the public health department is dependent on the revenue department for much of its information and for assistance generally.

(xiii) Civil veterinary department.

77. There is now a director of veterinary services for the whole of the presidency proper. Sind has a superintendent, civil veterinary department, who is subject to the general administrative control of the commissioner in Sind.

Revenue officers assist the veterinary department in reporting the occurrence of epidemics and in using their influence in inducing owners of live stock to follow the instructions of the department.

(xiv) Co-operative department.

78. This department is of recent growth. The first Co-operative Societies Act was passed in 1904. Its main object was the promotion of thrift and self-help mainly among the agricultural classes and thereby the enhancement of their credit and the affording of credit facilities. In the early stages of the movement the officers of the

revenue department assisted the officers of the department in inculcating among the masses the principles of co-operation and in the formation of new societies. The department is now equipped with an adequate agency of its own for these purposes and is dependent on the revenue department principally for the collection of dues in accordance with the orders of arbitrators and liquidators.

It has also been the policy of Government to secure that agriculturists as a class should look to co-operative societies for loans, especially for the improvement of land. With this object in view, Government have ordered *inter alia* that :—

> "in order to develop and to utilise the co-operative movement, Government desire that in approved tracts all loans under the Land Improvements Loans Act should be made, if possible, through the agency of co-operative societies and that in any case preference in the grant of loans should be given to these societies. Such tracts should be approved by Government on the recommendation of the registrar of co-operative societies made through the commissioners of divisions. In the special tracts in which loans under the Agriculturists Loans Act are authorised in normal seasons, Government may direct that distribution of such loans should be entrusted to co-operative societies. Except in such approved or special tracts, distribution of takavi loans should continue to be carried out by the staff of the revenue department."

IV. Changes of importance effected in the past five years.

79. Details of the various economies effected under the heads of "V, Land Revenue" and "22-General Administration" are given in Appendix IV. Recent retrenchments have consisted principally in reducing establishments without corresponding reduction of charges, or of work. The more important administrative changes which have occurred in the past five years are as follows :—

(*i*) Creation of a new district of Dadu in Sind, and a new taluka of Garhi Khairo in the Upper Sind Frontier in the same province, with various consequent changes in the boundaries of other talukas.

(*ii*) Holding of the post of Settlement Commissioner and Director of Land Records in abeyance.

(*iii*) Combination of the revenue posts of Collector of Bombay City and Collector, Bombay Suburban District, under a single officer.

(*iv*) Amalgamation of the districts of Broach and Panch Mahals from the 6th November 1933.

(*v*) Abolition of the district treasury in the Kolaba district.

(*vi*) Abolition of a prant in the Kolaba district by adding two talukas of it to the remaining prant, the other two being placed in the direct charge of the Collector under the system already existing in the Upper Sind Frontier whereby the Collector virtually becomes his own Prant Officer for a portion of the district.

(*vii*) Amalgamation of talukas, in a few cases, or their reduction to the status of mahals, and abolition of mahals as separate revenue units.

(*viii*) Introduction, in May 1933, of the system of bi-monthly Commissioners' conferences, at which the Commissioners meet to consider and report on questions of importance or of interest to all the divisions in the presidency proper, which are referred to them by Government, or are taken up by them on their own initiative or at the suggestion of heads of departments. Heads of departments when concerned are invited to attend these conferences.

(*ix*) Amalgamation of the two posts of Superintendent of Land Records in Sind and Survey Officer under the Revenue Officer, Lloyd Barrage and Canals Construction.

(*x*) Increase in the fees charged for inspecting the Bombay City Survey Records.

(*xi*) Recruitment of mamlatdars exclusively from amongst the aval karkuns.

(*xii*) Certain changes in the scale of fees charged to estates managed by revenue officers under various acts and by the Manager of Encumbered Estates in Sind. The scales now in force are shewn in the accompanying Note on the Administration of Managed Estates.

(*xiii*) Replacement of huzur deputy Collectors by huzur mamlatdars and mukhtiarkars (a change still in progress).

(*xiv*) Withdrawal of the field party establishment in the presidency proper from survey work.

(*xv*) The decision of Government (subject to the sanction of the Secretary of State which has been applied for) that the posts of Superintendent of Land Records should in future be held only by officers of the provincial service.

(*xvi*) Government have decided that one post of assistant secretary in the revenue department of the secretariat should be held in abeyance from April 1st, 1934, but that the matter should be considered again after twelve months in the light of the experience gained.

V. Proposals not accepted.

80. (*i*) The relative merits of the system of divisional commissioners and a Board of Revenue are discussed at length in the report of the Decentralisation Commission, 1909. The revenue department is the sole department of Government which has no single departmental head. The three divisional commissioners meet fairly often and present joint reports to Government on a large miscellany of questions and Government are considering the issue of instructions designed to systematise the commissioners' meetings and so implement, at some distance of time, the recommendation which the Decentralisation Commission made in this regard over twenty years ago.

It was principally in recognition of the fact that the forthcoming reforms, in transferring control of land revenue administration from a Government containing a member or members promoted from the revenue service to a Government comprised solely of elected ministers, would alter the basis on which the superior control of the revenue department vested, that the Reorganisation Committee raised again the question of appointing a Board of Revenue. They also thought that economy would be served by the resulting amalgamation of offices, the reduction of divisional commissioners' posts to two (which they considered possible under the board system) and the delegation of appellate and other powers from the secretariat with a reduction of some secretariat posts and the transfer of others to Poona. Government has, however, decided not to adopt this proposal.

(*ii*) The proposal to recover from the Bombay Municipality half the cost of maintaining the Bombay City Survey has been dropped.

VI. Proposals partly considered or dealt with.

81. (*i*) Reduction of the post of political assistant to the Commissioner in Sind. Government have ordered that the post should be kept vacant for one year in the first instance.

Abolition of prant officers.

(*ii*) The Reorganisation Committee considered that the best means of securing economy in the land revenue expenditure was by removing some of the numerous links in the chain of the revenue organisation. They considered that the least essential links were :—

(1) the prant officer, and
(2) the circle inspector ;

and proposed the eventual complete elimination of both as posts with separate spheres of duty. Their proposal is roughly to save one post of deputy or assistant collector in each district, those districts which now have three such posts retaining two of them and those with two retaining only one ; but all the deputy or assistant collectors who remained in a district would have jurisdiction over the whole district, share the collector's work with him and have no separate establishment except a touring clerk or two. They would in fact be personal assistants but employed on touring and inspection work as well as in control of the office.

To compensate for the abolition of so many posts of sub-divisional officer and the reduction of time which the assistant and deputy collectors who remained would be able to devote to magisterial work, the committee proposed that all sub-judges should be invested with magisterial powers and use them if their civil work permitted and that in a few headquarters additional posts of resident magistrate should be created.

The proposal in the shape put forward by the committee would be a move in the direction of separation of judicial and executive functions ; a separation which is in theory desirable and popular, though it is in no country complete and never can be complete. It also involves the elimination of some delay and duplication of work which at present occurs between collector's, prant officers' and mamlatdars' offices. But the close touch which a touring officer maintains with his charge by continuous touring, which enables him to reach its most outlying parts, is an asset of great value, while the

concentration of the work at present done by the collector and his prant officers into one office might lead to unwieldiness. This danger might be partly met by larger delegation of powers to mamlatdars, but it is questionable whether mamlatdars generally are of the calibre to shoulder a substantial part of the prant officers' responsibilities. Fifteen Subordinate Judges in the Presidency Proper have been invested with First Class magisterial powers as an experimental measure. Even if the experiment prove successful, it is doubtful whether it will be possible to invest many more subordinate judges with magisterial powers in relief of prant officers, while to create more than a very few additional posts of resident magistrates would involve an additional expense which in present financial conditions Government is in no position to afford. Government have decided that an experiment should be made in the three districts of Surat, Ahmednagar and Belgaum of converting the existing prant officers into personal assistants, but without at the outset making any reduction in their number. These personal assistants have not been placed as revenue officers in charge of any definite localised sub-division of the district, but are carrying out such duties as the collector has assigned to them. They have no separate prant offices, but work with the collector's office.

Abolition of circle inspectors.

(*iii*) The Reorganisation Committee's recommendation in this matter takes two forms. They proposed firstly that in talukas and mahals where there was only one circle inspector the post should be abolished and the work done by the circle inspector should be done by the mahalkari aided by his aval karkun. Government have now decided that the circle inspector in the Uran, Mahableshwar and Chandgad mahals should be abolished. As regards the remaining talukas and mahals where there is only one circle inspector, it has been decided that the post cannot be abolished. Secondly, in talukas or mahals where there was more than one circle inspector, the committee proposed the abolition of the circle inspectors' appointments and the assignment to the taluka or mahal officer in their stead of a single revenue inspector. These revenue inspectors would be in the same grade as the aval karkuns and would with them form a cadre from which the posts of mamlatdar would be filled. The committee's idea was that the

revenue inspector being a young man and a candidate for promotion to mamlatdar's rank would be a live and intelligent agency, which circle inspectors in many cases admittedly are not, while service as a revenue inspector would be the best possible training for a mamlatdar. The question, however, remains whether the improvement in the quality of the inspection and other work done by the revenue inspector would make up for the reduction which must occur in its quantity. Government have decided that the system proposed by the committee should be introduced in the first place as an experiment in nine selected talukas of the presidency proper. Government have also investigated the question of reducing the number of circle inspectors, apart from the reductions involved in this scheme by assigning additional duties to aval karkuns, etc., and have abolished some extra posts of circle inspectors.

VII. Matters postponed and the reasons for their postponement.

82. (*i*) Elimination from both sides of the budget of the provision for assessment of alienated lands, amounting to nearly a crore of rupees a year. The Government of India have considered it desirable that this change in the accounting arrangement should be dealt with along with other important changes in the accounts system which will be necessary on the formation of the new constitution.

(*ii*) In connection with their recommendation for the formation of a Board of Revenue (paragraph 80) the Reorganisation Committee proposed that there should be only one appeal against an original order in revenue cases under the Land Revenue Code. This proposal involves the amendment of certain sections of the Bombay Land Revenue Code, and, as Government have decided not to undertake any amendment of the Code till the new constitution comes into operation, the Committee's proposal has been held in abeyance.

(*iii*) The question of tenancy legislation has been under the consideration of Government from time to time. In 1926 the settlement commissioner was asked to investigate the question of framing legislation of general application. His draft Bill was examined by the commissioners of divisions and, after full consideration, Government came to the conclusion that such legislation should be postponed until the new constitution has been brought into effect.

(*iv*) Government had proposed to amend the Bombay Land Revenue Code with a view to give effect to the advice of the Joint Select Committee of the two Houses of Parliament on the Government of India Bill that the process of revising land revenue should be brought under closer regulation by statute. They decided, however, not to proceed with this legislation at present in view of the impending constitutional changes, and the fact that no satisfactory and workable system could be devised to replace the existing settlement procedure, and therefore attempts to frame a bill proved unsuccessful.

VIII. Matters still to be dealt with.

83. (*i*) Introduction of new systems for training assistant collectors, deputy ollecctors, aval karkuns and revenue inspectors.

(*ii*) Reduction in the special pay of Rs. 300 of the Deputy Commissioner, Upper Sind Frontier.

(*iii*) Replacement of supervising tapedars and tapedars by abdars in certain talukas in the Lloyd Barrage area.

Managed Estates.

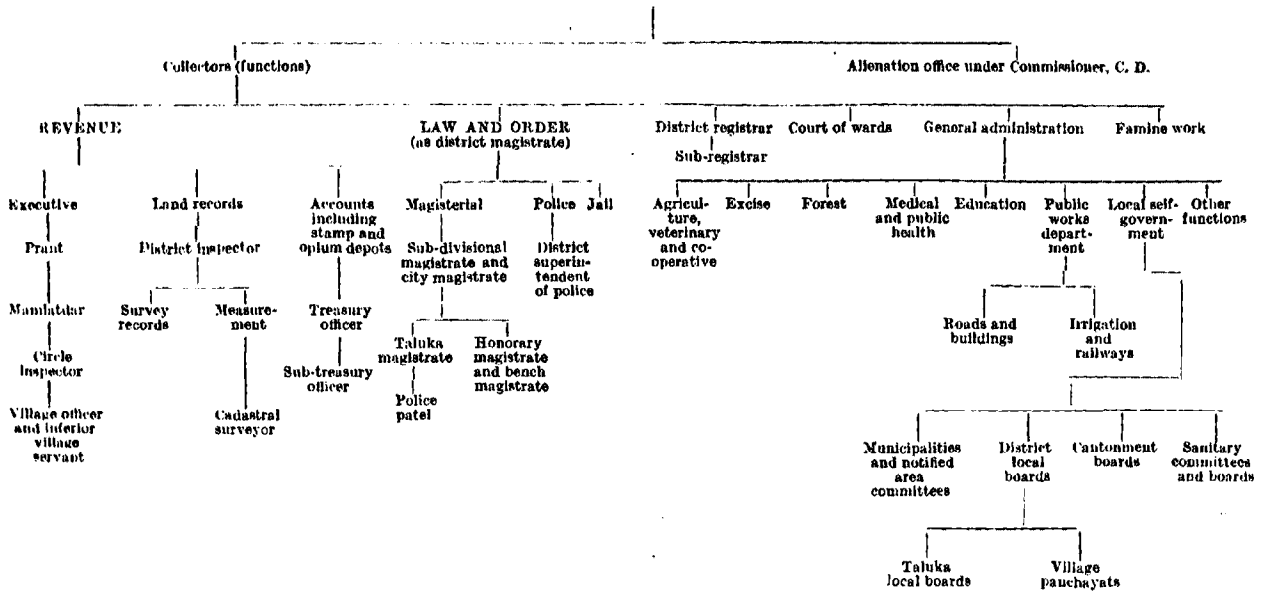
84. The Reorganisation Committee's proposals under "managed estates" are dealt with in the accompanying Note.

APPENDIX I.

ORGANISATION OF THE DEPARTMENT OF LAND REVENUE AND GENERAL ADMINISTRATION.

Secretariat.

COMMISSIONER for each division and for Sind.



APPENDIX II.

STATEMENT SHOWING THE NUMBER OF PRANTS, TALUKAS, CIRCLES AND VILLAGES IN EACH DISTRICT.

Name of district and its land revenue for 1931–32.	Number of prants with personal assistants, if any.	Number of talukas and petas	Number of circles.	Number of villages.
Northern division.				
Ahmedabad .. .. Rs. 22,48,000	3 (*including a personal assistant).	9	17	888
Kaira .. .. Rs. 22,64,000	2 ..	7	18	589
Broach and Panch Mahals .. Rs. 27,40,000	2 ..	9	26	1,107
Surat .. .. Rs. 26,31,000	2 personal assistants	8	23	849
Thana .. .. Rs. 19,24,000	3 (*including a personal assistant).	11	29	1,591
Central division.				
Ahmednagar .. .. Rs. 24,05,000	2 personal assistants	12	34	1,375
East Khandesh .. .. Rs. 39,46,000	2 ..	13	32	1,801
West Khandesh .. Rs. 25,13,000	2 ..	8	23	1,488
Nasik .. .. Rs. 21,38,000	2 ..	11†	34	1,695
Poona .. .. Rs. 18,09,000	3 (*including a personal assistant).	12	25	1,202
Satara .. .. Rs. 29,37,000	3 (*including a personal assistant).	13	30	1,357
Sholapur .. .. Rs. 16,11,000	2 ..	7	15	720
Bombay Suburban District .. Rs. 2,64,000	‡ ..	2	2	93
Southern division.				
Belgaum .. .. Rs. 22,18,000	2 personal assistants	9	25	1,132
Bijapur .. .. Rs. 18,61,000	2 ..	9	24	1,174
Dharwar .. .. Rs. 32,12,000	3 (*including a personal assistant).	13	24	1,473
Kanara .. .. Rs. 10,70,000	2 ..	11	27	1,417
Kolaba .. .. Rs. 18,14,000	2§ ..	8	30	1,627
Ratnagiri .. .. Rs. 10,46,000	2 ..	11	15	1,327

* The personal assistant is also in sub-divisional charge of one or two talukas.

† Excluding one peta which is under the divisional forest officer.

‡ There is a single deputy collector for both Bombay city and the Bombay Suburban district.

§ One prant is under the collector.

Name of district and its land revenue for 1931–32.	Number of prants with personal assistants, if any,	Number of talukas and petas.	Number of circles.	Number of villages.
Sind.				
Karachi .. .. Rs. 9,42,000	2 (*plus* a personal assistant).	9	19	743
Hyderabad .. .. Rs. 15,59,000	2 ..	7	21	928
Sukkur .. .. Rs. 12,95,000	2 ..	8	24	722
Larkana .. .. Rs. 18,44,000	2 ..	7	23	454
Dadu .. .. Rs. 8,70,000	2 ..	7	19	444
Thar Parkar .. .. Rs. 17,76,000	3 ..	11	41	969
Nawabshah .. .. Rs. 14,48,000	2 ..	7	22	768
Upper Sind Frontier .. Rs. 16,36,000	2* ..	5	17	364

* One prant is under the deputy commissioner, Upper Sind Frontier.

APPENDIX III.

SUBJECTS ON WHICH THE REVENUE COMMISSIONER HAS TO GIVE HIS OPINION (EXCLUDING REVENUE AND MAGISTERIAL SUBJECTS).

(1) Procedure for extension of Acts and Regulations affecting the public.
(2) Accidents due to electrical works.
(3) Administration of hill stations, such as Mahableshwar, Panchgani etc.
(4) Administration reports - compilation of --
(5) Adulteration of food articles—prevention of—
(6) Delegation of powers.
(7) Aerial mail service—survey of suitable landing grounds.
(8) Age and nationality certificates.
(9) Agricultural indebtedness.
(10) Dewasthans.
(11) System of correspondence and sorting and indexing of records.
(12) Employment in foreign countries (Persia) of Indian clerks and artisans.
(13) Working of the Workmen's Compensation Act.
(14) Establishment of post and telegraph offices.
(15) Armistice Day arrangements.
(16) Assam tea plantations—recruitment for—
(17) Athletic tournaments.
(18) Safeguarding of banking interests.
(19) Wireless stations.
(20) Births and deaths—registration of — among Europeans, etc.
(21) Levy of tolls.
(22) Revision of the district gazetteers.
(23) Telephones - construction etc. of—
(24) Boring operations.
(25) Broadcasting—development of --
(26) Camp supplies—orders regarding and arrangements for —
(27) Cantonments.
(28) Cattle diseases.
(29) Cemetery—upkeep of—
(30) Charitable endowments.
(31) Cinemas.
(32) Measures for dealing with civil disobedience campaign.
(33) Hospitals and dispensaries—donations for—

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(36) Cotton markets—rules for the management of —
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(39) Depressed classes.
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(47) Separation of executive and judicial functions.
(48) Exhibitions.
(49) Ferries.
(50) Fishery.
(51) Floods.
(52) Food-stuffs.
(53) War-loan.
(54) Petrol.
(55) Lotteries.
(56) Mill strikes.
(57) Mines and minerals.
(58) Museums.
(59) Motors.
(60) Newspapers.
(61) Passages and passports.
(62) Quinine—supply of —
(63) Warrant of precedence etc.
(64) Recruiting.
(65) Reformatory.
(66) Stationery and forms.
(67) Indian titles etc.
(68) Indian trade and industries.
(69) Tramways and railways.
(70) Treasure-trove.
(71) Weights and measures.
(72) Electrification of towns.

APPENDIX IV.

STATEMENT SHOWING THE RECEIPTS UNDER THE HEAD "LAND REVENUE" AND THE EXPENDITURE UNDER THE HEADS "LAND REVENUE" AND "GENERAL ADMINISTRATION" FROM THE YEAR 1904-05.

Year.	Receipts under "land revenue."	Expenditure under "land revenue."	Expenditure under "general administration."	Total of columns 3 and 4.
1	2	3	4	5
	Rs.	Rs.	Rs.	Rs.
1904-05	4,15,78,000	74,07,000	20,69,000	94,76,000
1905-06	4,22,44,000	74,24,000	21,58,000	95,82,000
1906-07	4,86,33,000	75,08,000	21,02,000	96,10,000
1907-08	4,59,49,000	76,38,000	21,90,000	98,28,000
1908-09	4,53,85,000	81,17,000	21,30,000	1,02,47,000
1909-10	5,24,12,000	80,21,000	21,61,000	1,01,82,000
1910-11	5,16,91,000	78,67,000	22,84,000	1,01,51,000
1911-12	4,73,50,000	82,73,000	34,80,000	1,17,53,000
1912-13	4,73,92,000	84,24,000	25,17,000	1,09,41,000
1913-14	5,60,00,000	84,71,000	26,50,000	1,11,21,000
1914-15	5,11,51,000	89,04,000	28,54,000	1,17,58,000
1915-16	5,21,46,000	86,59,000	28,14,000	1,14,73,000
1916-17	5,11,98,000	82,58,000	28,56,000	1,11,14,000
1917-18	4,91,54,000	84,35,000	29,84,000	1,14,19,000
1918-19	4,28,97,000	1,01,96,000	32,55,000	1,34,51,000
1919-20	5,25,44,000	2,11,65,000	26,95,000	2,38,60,000
1920-21	4,31,47,000	2,29,83,000	36,87,000	2,66,70,000
1921-22	5,47,44,000	1,64,53,000	1,22,62,000	2,87,15,000
1922-23	5,58,69,000	1,67,49,000	1,17,00,000	2,84,49,000
1923-24	5,08,89,000	1,82,36,000	98,83,000	2,81,19,000
1924-25	5,16,53,000	62,15,000	2,19,23,000	2,81,38,000
1925-26	5,41,11,000	64,15,000	2,24,94,000	2,89,09,000
1926-27	4,66,94,000	65,71,000	2,22,91,000	2,88,62,000
1927-28	5,23,19,000	66,48,000	2,20,37,000	2,86,85,000
1928-29	4,84,68,000	64,77,000	2,23,41,000	2,88,18,000
1929-30	4,79,63,000	66,09,000	2,23,90,000	2,89,99,000
1930-31	4,74,45,000	64,94,000	2,16,91,000	2,81,85,000
1931-32	5,01,34,000	69,86,000	2,24,78,000	2,94,64,000
1932-33 (revised estimate).	4,86,32,000	66,42,000	2,04,16,000	2,70,58,000
1933-34 (estimate) ..	4,82,42,000	63,66,000	2,07,76,000	2,71,42,000

Remarks.—The increase in expenditure, particularly during 1918-19 to 1920-21 is due to the revision of the strength, pay and allowances of the establishments. The increase would have been still more accentuated since the inauguration of the Constitutional Reforms if the expenditure had not been retrenched wherever it was possible to do so. The principal items of retrenchment effected or being effected under these two heads of expenditure since the year 1921-22 are as follows :—

Item of Retrenchment.	Approximate Annual Saving.	Remarks.
"*Land Revenue.*"	Rs.	
(*a*) Reduction in the number of circle inspectors	33,000	
(*b*) Abolition of one post of district inspector of land records in the northern division.	3,369	

Item of Retrenchment.	Approximate Annual Saving.	Remarks.
"*Land Revenue*"—contd.	Rs.	
(*c*) Withdrawal of the field party establishment in the presidency proper from survey work.	59,000	
(*d*) Abolition of one post of Superintendent of Land Records in the presidency proper.	8,600	
(*e*) Reduction in the clerical, menial and survey establishments in the Land Records Department.	36,400	
(*f*) Amalgamation of Superintendent of Land Records in Sind and Survey Officer under the Revenue Officer, Lloyd Barrage and Canals Construction.	8,142	
"*General Administration.*"		
(*g*) Reduction in the number of sub-divisional charges in the presidency including Sind, and abolition of 6 posts of personal assistants to collectors (1929-31)	81,000	
(*h*) Reduction in the subordinate revenue establishment (1921-23).	1,70,000	
(*i*) Reduction in the talati establishment (1921-25).	3,80,000	
(*j*) Reduction in the subordinate revenue and talati establishments (1932).	4,12,000	
(*k*) Replacement of deputy collectors by mukhtiarkars in 4 posts of daftardars in Sind.	14,000	
(*l*) Replacement of 25 huzur deputy collectors by huzur mamlatdars and mukhtiarkars.	89,000	This is the total saving that will accrue when the change is completely effected. To date the change has been effected in 20 out of the 25 posts.
(*m*) Replacement of deputy collector, Bombay Suburban district, by a mamlatdar and abolition of a post of Shiristedar.	5,000	
(*n*) Reduction of 3 posts of deputy collectors from the selection to the second grade.	7,800	The reduction is to be accomplished as vacancies occur.
(*o*) Amalgamation of talukas and mahals, and conversion of talukas into mahals.	50,000	
(*p*) Holding the post of settlement commissioner and director of land records in abeyance.	43,000	

Item of Retrenchment.	Approximate Annual Saving.	Remarks.
"*General Administration*"—contd.	Rs.	
(*q*) Placing Bombay city and the Bombay Suburban district under a single collector.	26,000	Further retrenchment has been effected by the reduction of the various scales of pay for clerical establishments.
(*r*) Abolition of s.s. "Jhelum" and flat "Multan".	11,000	
(*s*) Amalgamation of Broach and Panch Mahals Districts.	1,17,200	
(*t*) Reduction of revenue establishment in Kolaba district.	21,600	

The decrease in expenditure under "land revenue" and increase under "general administration" in 1921-22 is due mainly to the transfer of the minor heads "settlement commissioner and director of land records", "general establishments" and "sub-divisional establishments" from the former to the latter major head. The increase in 1923-24 under "land revenue" and the corresponding decrease under "general administration" is mainly due to the transfer from the latter to the former head of a fixed amount of Rs. 18,78,000 on account of establishment charges for land revenue work. The decrease under "land revenue" and increase under "general administration" in 1924-25 is due to the transfer to the latter head, under instructions from the auditor general, of the minor head which now appears as "22-E (c) General Administration—Other Establishments."

NOTE ON THE ADMINISTRATION OF MANAGED ESTATES.

Enactments.

1. There are four separate Acts under which the revenue department administers the estates of minors and others,—the Court of Wards Act, 1905, the Guardians and Wards Act, 1890, the Sind Encumbered Estates Act, 1896, and the Gujarat Talukdars Act, 1888.

The general scheme of these Acts, other than the Guardians and Wards Act, is that if the estate of any landholder, the position of whose family Government for any reason wish to preserve, is encumbered with debt or mismanaged or has no one capable of taking proper care of it, Government assume superintendence of the property, restore it to solvency and good order, if necessary provided for the proper education of the landholder or his children and hand back the estate as soon as it is freed from debt and there is a representative of the family capable of taking charge of it. The Guardians and Wards Act applies much the same provisions to the estates of minors. Under this Act the district court appoints a guardian who may be an officer of the court, a relative of the ward or the collector.

The Court of Wards Act applies to the whole presidency except Bombay City and the Guardians and Wards Act to the whole presidency. The Sind Encumbered Estates Act applies only to Sind and the Gujarat Talukdars Act only to those districts of Gujarat in which the talukdari tenure prevails.

Administrative arrangements.

2. The commissioners of divisions and the commissioner in Sind are courts of wards for their respective charges. In Sind the commissioner exercises all the powers of Government under the Court of Wards Act except the power to make rules and may delegate any of his powers to his subordinates. The powers of delegation of commissioners of divisions are restricted by a rule which requires the sanction of Government to the delegation by them of certain major powers. The Reorganisation Committee have recommended that commissioners of divisions should be granted the same powers as the commissioner in Sind in this respect. The matter is under the consideration of Government.

In the presidency proper the management of estates, the superintendence of which is assumed by the revenue department under any of the three Acts which are applicable, is carried out by the collector. There was formerly in Gujarat a special appointment of talukdari settlement officer whose functions were to carry out the land revenue administration of the talukdari estates under management and the liquidation and settlement of their debts. This officer never had jurisdiction in the Panch Mahals and during the period 1916–20 his duties were transferred by stages to the collectors of the districts of Broach, Kaira and Ahmedabad. The separate appointment of talukdari settlement officer has ceased to exist from 1920. The transfer of the

duties of this special appointment to the collectors of the districts concerned has given rise to no complaints. At the present moment there are only four estates under management under this Act—two in the Ahmedabad and two in the Panch Mahals. In the Belgaum district the number of private estates under management by the revenue department is so large that a special staff consisting of a deputy collector and his establishment is maintained solely for this work, the cost of the special staff being charged to the estates. In Sind the management of estates controlled under all the three Acts applicable to Sind is vested in a special officer called the "manager, encumbered estates in Sind." The whole cost of this special appointment, of the deputy manager and the two assistant managers, all three of whom are of the mukhtiarkars' grade, and the establishment is charged to the estates under management.

In the presidency proper appeals against the orders of the collector under the Court of Wards and Gujarat Talukdars Acts lie to the commissioner, against whose decision a further appeal lies to the Governor in Council. In Sind appeals against the orders of the manager, encumbered estates, under the Court of Wards and Sind Encumbered Estates Acts lie to the commissioner in Sind, whose orders, since he exercises all the powers of a local Government under the Acts, are final. Appeals, however, against orders made under the Guardians and Wards Act lie to the high court.

Extent of work.

3. The number of estates under management under the Court of Wards Act at the beginning of the revenue year 1932–33, with certain other details, is shown in the attached statement :—

—	Number of estates.	Debts due on date of assumption.	Balance of debt remaining to be liquidated.	Percentage of the cost of management to the gross income.
		Rs.	Rs.	Rs.
Northern division	29	8,01,000	4,71,000	9·38
Central division (including Bombay Suburban district).	39	14,71,000	9,12,000	8·1
Southern division	40	11,78,000	5,80,000	9·5
Sind	308	9,97,000	2,99,000	6·13

The number of estates under management under the Sind Encumbered Estates Act at the beginning of the revenue year 1932–33 was 275. The total number of estates taken under management since the passing of the Sind Encumbered Estates Act in 1896 is 1,401, of which 1,233 have been

subsequently released from management. The total indebtedness of the estates under management under this Act at the close of the year 1931-32 was Rs. 11,50,000, while the net income was Rs. 4,64,000 and the cost of management Rs. 38,000.

Recovery of cost of management.

4. It is a common feature of these Acts under which management of private estates is assumed that the cost of management is made recoverable from the estates. As has been stated above, when any special staff is provided solely to supervise the management of the estates, its full cost is charged to the estates under management in proportion to their gross income. Any appointments required for the internal management of estates are, of course, part of the ordinary expenses of the estates. But where no special establishment is provided to supervise the management of the estates, the cost of the supervision exercised by the ordinary revenue staff is recovered by means of a percentage charge. For estates managed by officers of courts under the Guardians and Wards Act Government have laid down the following scale :—

6¼ per cent. on the first Rs. 1,000 of income ;

5 per cent. on the second Rs. 1,000 of income ;

3¾ per cent. on the third Rs. 1,000 of income ;

2½ per cent. on the fourth to the tenth Rs. 1,000 of income ;

1¼ per cent. on income in excess of Rs. 10,000.

In addition a rate of 1 per cent. is levied on the capital value of non-productive property, such as ornaments, which comes into the hands of the manager. It is understood that the management of minors' estates by the courts does not involve Government in any net expenditure.

In the case of estates managed by Collectors in the presidency proper and by the Manager, Incumbered Estates in Sind, fees as shown below are charged for the supervision of their work by Government officers :—

All districts in the presidency proper except Belgaum and Ahmedabad.

5 per cent. on the first Rs. 10,000 of gross income.

2½ per cent. on the excess over Rs. 10,000.

Belgaum and Ahmedabad Districts.

4 per cent. on the first Rs. 10,000 of gross income.

1½ per cent. on the excess over Rs. 10,000.

Where an estate with an annual income of less than Rs. 1,000 is heavily involved and its exemption from the supervision charge is considered desirable, the commissioners have to address Government in

Sind.

1 per cent. on the first Rs. 10,000 of gross income.

½ per cent. on the excess over Rs. 10,000.

The Commissioner in Sind has been authorised to exempt any particular estate with an income of less than Rs. 1,000 if it is heavily involved.

Excepting the scale for estates in Belgaum and Ahmedabad districts, which is 1 per cent. lower than that recommended by the Reorganisation Committee, the scale for all the estates is equal to that recommended by the Committee.

The Reorganisation Committee suggested that a single administration report should be published for all classes of estates under management instead of three annual reports being published as at present. Government have decided not to accept this proposal because the impending separation of Sind makes the continuance of a separate report for Sind desirable while the amalgamation of the report on the administration under the Gujarat Talukdars Act with the report on the administration of estates under the other Acts would not effect an appreciable saving.

II—SIND AND THE LLOYD BARRAGE

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II—SIND AND THE LLOYD BARRAGE

GENERAL.

Sind being situated beyond the reach of the south-west and the north-east monsoons with a slight and fitful rainfall, the area of cultivation depending upon rainfall is insignificant. The river Indus, however, flows through its entire length and for many generations water brought by a system of canals and by branches of the river on to the land, has rendered cultivable a certain area. The supply of water, being dependent upon the rise and fall of the Indus, fluctuates, however, and whilst most of the large canals are regulated and the supply is reasonably assured, there can be no guarantee that water will be available at the season when the cultivator requires it.

2. The British occupation of Sind took place in 1843. In 1855 Lieutenant Fife reported on the irrigation of Sind and proposed a complete revision of the existing canal systems and the construction of new canals to supply almost the whole cultivable area. His scheme practically corresponded to the right and left bank areas of the present Sukkur Barrage project.

3. With his scheme Fife submitted a rough estimate of only one area—the Rohri-Hyderabad area. The authorities in England returned this in 1857 because it was not based on accurate surveys, and authorized a minute survey of the whole of Sind. The Rohri-Hyderabad canal was then surveyed and the project resubmitted in 1859, but remained in abeyance till 1867, when it was taken up again by Colonel Strachey, Inspector General of Irrigation.

4. The scheme for a Rohri-Hyderabad canal was at length submitted to a committee which was appointed in 1892. This committee recommended that the proposals for

the perennial canals should be abandoned, that the existing canals should be improved, and that the Jamrao weir and Jamrao canal should be constructed. They did not take the right bank of the river into consideration. The Bombay Government accepted the last two recommendations but were not prepared to abandon entirely the principle of high level perennial canals. As a result of the committee's report large sums were expended on improving the existing canals.

5. Sind irrigation was next studied by the Irrigation Commission of 1901-03, but no practical proposals resulted. Shortly afterwards, however, Dr. Summers, the Superintending Engineer, Indus Left Bank Division, surveyed a feeder to the Dad Canal from Rohri and recognized that eventually a weir would be needed at Sukkur to supply his feeders as well as a similar canal on the right bank. This survey was subsequently extended to the whole of the present Rohri-Hyderabad canal area. In forwarding preliminary plans and estimate to the Government of India the Bombay Government asked for sanction to prepare a scheme to comprise:—

(1) A barrage at Sukkur.
(2) A right bank canal.
(3) A Rohri-Hyderabad canal.
(4) An Eastern Nará canal.

This proposal was generally approved by the Government of India and orders were issued in 1907. The complete scheme for a barrage and canals was forwarded to the Government of India with a recommendation to the Secretary of State that only the Barrage and Rohri canal should be constructed, the proposal for the Eastern Nara and the right bank canals being held back for further consideration. The Secretary of State placed the proposals in 1912 before a committee of engineers in London consisting of Sir J. Ottley and Messrs. Jacob, Cameron and Webb.

6. This committee was of opinion that such a project was not justified as a protective work for Sind and that it was not shown to be a productive work and acting on this advice the Secretary of State declined to sanction its execution. The Government of Bombay did not, however, let the matter drop. Fresh investigations were undertaken and the conclusion was reached that, although it was difficult to prove any direct effect of the Punjab withdrawals on the river at Sukkur, there was reason to believe that these might have a prejudicial effect at the beginning and end of the kharif irrigation season, and that Sind ought to be

protected from such a contingency by the construction of a Barrage. The Bombay Government was convinced that the existing conditions of cultivation and irrigation were not suited to the special circumstances of the country and that Sind needed improvements and benefits of the kind which the Punjab and the United Provinces had long enjoyed. It therefore put forward a rough outline of a revised scheme with the following changes from the one previously submitted, viz. :—

(1) The inclusion of the right bank canal.

(2) A new site for the Barrage below the gorge.

(3) Possibly a new head to the Eastern Nara supply channel from the Barrage.

It submitted a rough forecast of the cost of the scheme as Rs. 1,120 lakhs and revenue as Rs. 63·5 lakhs with a net return of approximately 5·7 per cent. on the capital cost, and asked for the sanction of the Government of India to the preparation of detailed plans and estimates for a scheme on these lines. This sanction was accorded.

7. In October, 1915, an Executive Engineer was placed on special duty to revise the project, and in May, 1916, he submitted a report and outline for the whole scheme. These proposals were approved, but owing to the War nothing could be done until 1918 when Messrs. Baker and Lane were placed on special duty to investigate the nature of the lands commanded and to make recommendations as to the intensive cultivation, the nature of crops and the duties to be adopted in designing the canals. The report was submitted to Government in March, 1919. Another Executive Engineer, Mr. (now Sir) Musto, was simultaneously placed on special duty to design and estimate the cost of a complete scheme for a barrage and canals. He submitted his scheme to Government in July, 1920. This project provided for a Barrage at a new site below the gorge at Sukkur (instead of above it, as in the original project) and for a system of perennial canals on both banks of the river. The estimate of the total cost was approximately 18⅓ crores of rupees. The Government of Bombay submitted the scheme to the Government of India in July, 1920, strongly recommending it for the sanction of the Secretary of State who intimated his sanction to the technical and administrative sides of the project and the estimates for works in the House of Commons on the 2nd and 3rd August and in the House of Lords on 9th August, 1921. The approval of the Secretary of State to the

proposals of the Government of Bombay for financing the work was given in 1923, and approval to the project and permission to start construction were given by the Bombay Legislative Council in June, 1923.

8. It is unnecessary at this point to describe the project in detail. The Barrage has been constructed three miles below the gorge at Sukkur with three canals on the right and four on the left bank taking off from the river each with a separate head regulator. The head regulators of all the canals are immediately above the Barrage which can completely control the river-level and keep the approach channel to the canals clear of silt. The canals are divided into two systems. The right bank system comprises the North-Western, Rice and Dadu canals. The left bank comprises the perennial Rohri canal; a perennial supply channel to feed the Eastern Nara river and the canals dependent thereon and two feeder canals for irrigating land in the Khairpur State. The bulk of the work was completed by December 1931 and the canals were opened by His Excellency the Viceroy on the 13th January 1932. Irrigation commenced in June 1932.

9. The Government of India agreed to lend the necessary funds year by year to the Bombay Government for the purpose of financing the project. They did not, however, undertake to bear any part of the cost of the scheme. But it is evident that the success or failure of so large a project must be of great importance not merely to Sind and the entire Presidency, but indeed to the whole of India. More particularly its full success will have a considerable effect upon the central revenues. The supply of perennial irrigation to three and a half millions of acres of land, which were previously unirrigated and mostly uncultivated, must very greatly increase the export and import trade of the area. It is unfortunate that the large indirect return which it will produce in the form of income-tax and customs revenue will not at present be available for use either in repayment of its debt or to defray any of the cost of development of the area which is necessary for the production of that revenue. In this connection Sir M. Visvesvaraya and Nawab Ali Nawaz Jung Bahadur in their report on the construction of the Barrage and Canals wrote as follows :—

" The cost of the project compared to the yearly revenues of the Bombay Government is abnormally high and the

finances of this Government have been none too prosperous since the close of the War. This work is without question an all-India responsibility and its burden should be borne by the broader shoulders of the Central Government. To construct one of the world's greatest schemes in a detached sub-province containing a population of a little more than 1 per cent. and to make a Presidency with 6 per cent. of that total population, the bulk of which does not share in its benefits, responsible for the whole cost seems hard on the latter. The Government of India recommended the scheme at a time of transition when the hardships it would entail were not fully realised, and it is but fair that they should now come to the rescue."

10. The progress of the work of construction has been closely followed by the Government of Bombay. In January 1929 the Bombay Government arranged for the members of the Legislative Council to visit Sukkur, and 42 members availed themselves of the invitation. His Excellency Sir Frederick Sykes visited Sukkur in November 1929 and in November 1930. In March 1929 His Excellency convened a conference of officials to consider every aspect of the development of Sind, and more especially its agricultural development, which was inevitable when the Barrage and the canals were completed and perennial irrigation was thus made available for the whole country. As a result in July 1929 this Government published a memorandum which took stock of the situation as it stood then and indicated the lines, which were suggested either at this conference or from other sources, upon which the Government was dealing with it, and the outstanding points for decision and furtherance. This memorandum has been revised at intervals and the present edition brings it up to 30th September 1933 under the following heads :—

I—Irrigation.
II—Communications.
III—Land Policy and Revenue.
IV—Agriculture.
V—Forests.
VI—Administration.
VII—Finance.
VIII—Development of Sind under the Barrage conditions.

I. Irrigation.

11. From the point of view of irrigation Sind may be conveniently divided into three parts :—

(A) The area which falls under command of the Lloyd Barrage and Canals.

(B) Upper Sind.

(C) Lower Sind.

(A) The Lloyd Barrage and Canals.

12. (i) This vast project is designed to secure irrigation to the area comprising parts of the Shikarpur Canals in the Sukkur District and Begari Canals, the Ghar Canals, the Western Nara Canals Divisions and the Nasirabad tehsil on the right bank of the Indus, to Khairpur State, the Nasrat Canals, Hyderabad Canals, Jamrao Canals, the Eastern Nara Canals and a small part of the Fuleli Canals Division on the left bank of the Indus. The whole area under command excluding Khairpur State and Nasirabad tehsil amounts to 7,406,000 acres, of which 5,013,000 acres will be cultivated annually on attainment of full development. The irrigation in this area prior to the opening of the Lloyd Barrage Canals amounted to 1,830,000 acres and the increased irrigation provided for will therefore amount to 3,183,000 acres. Including Khairpur State and Nasirabad, the annual cultivation when full development is reached will be 5,453,000 acres.

13. (ii) *The Barrage.*—The Lloyd Barrage consists of 66 spans of 60 feet each, separated by 58 ordinary piers, each 10 feet wide, and 7 abutment piers each 25 feet wide. The total width of waterway provided is 3,960 feet and the over-all length of the Barrage between abutments is 4,715 feet. The structure has been designed to pass a maximum river flood of $1\frac{1}{2}$ million cusecs, or about 50 per cent. more than the highest flood hitherto recorded. Each span of the Barrage is fitted with electrically operated single steel gates, designed to maintain a level $18\frac{1}{2}$ feet above the Barrage sill. A road bridge is provided on the downstream side as an integral part of the Barrage at a lower level than the upstream arches carrying the operating gear of the regulating gates.

14. (iii) *The Canals.*—Three canals take off on the right bank and four canals on the left bank of the river

immediately above the Barrage. The principal features of these are tabulated below :—

Canal.	No. of spans of 25 ft. each in the head regulator.	Designed discharge cusecs at head.	Length in canal miles.	Bed width at head. Ft.	F. S. depth at head. Ft.
Right Bank.					
North-Western ...	6	5,152	36	165	10·2
Rice	13	10,215	82	243	11·75
Dadu	4	2,837	131	92·5	9·6
Left Bank.					
Eastern Nara ...	16	13,649	226	346	11·5
Khairpur Feeder, East .	2	2,094	13	82	8·5
Rohri	12	10,883	208	247	12·0
Khairpur Feeder, West..	2	1,936	45	79	8·8
Total ...		46,766	741		

The total length of the canals including existing channels is 6,816* miles, of which 1,647 miles of existing channels have been remodelled and utilised. The total quantity of excavation involved including work in the Manchar Drainage Scheme is about 610 crores cubic feet. This work has been and is being done partly by manual labour and partly by dragline machines. In all 46 dragline machines have been employed on the scheme. Of these only six are still working. Three of those at present laid up will also again be requisitioned for work on the Flood Protective Bund. Two 6-Ruston Machines have been sold. The total capacity of all the 46 machines put together was about 74 tons of earthwork per minute on the basis of 5½ days of 24 hours per week, equivalent to the labour of 32,000 coolies employed the whole year round or of nearly 77,000 coolies employed for the normal working season in Sind, consisting of five months.

	Canal miles.
*Main Canals	741
Branches, new	561
Existing Channels	1,647
Escapes	167
Distributaries and minors, new ...	3,655
Nara Valley Drain	45
	6,816

15. In case manual labour had been relied on for all earthwork of the canals, the cost would certainly have been 50 per cent. higher than actual cost by use of mechanical excavators. Even at an increase of 25 per cent. the extra

cost would have amounted to Rs. 1·65 crores. It may also be stated that it would have been quite impracticable to obtain 77,000 labourers even if the greater part of the agricultural labour of Sind had been drawn on, and such a step would have resulted in serious difficulty, if not disaster, to the zamindars whose agricultural operations would have been brought to a standstill in consequence.

16. (iv) *Cost of project and progress of work.*—The project is estimated to cost Rs. 20·03 crores or £15,022,500 sterling. Work was commenced in July 1923. The whole of the Barrage has been completed including the divide walls and all the head regulators. Of the total amount of earthwork, viz., 610 crores cubic feet, 608 crores cubic feet have been completed. All the channels have been completed except a few of small section which have subsequently been found necessary. The necessary canal structures, viz., regulators, falls and bridges, have also been completed.

17. (v) *Rectangulation survey and provision of water-courses.*—The original project, as sanctioned by the Secretary of State, did not provide for the rectangulation or square survey of the area, but in May 1926 Government decided, as the result of a conference of irrigation and revenue officials held by the Commissioner in Sind, that in order to secure the proper distribution of water and facilitate the alignment of water-courses, it was necessary to have the area rectangulated as far as possible, and arrangements were made for the rectangulation work to be commenced by the Survey of India Department in the ensuing cold weather. It was intended that the whole area should be rectangulated down to 64 acre blocks by the Survey of India, the cost being roughly estimated at Rs. 18·75 lakhs spread over a four years' programme. At the same time the cost of further sub-division of the 64 acre blocks, which was proposed to be done by the Barrage administration, was roughly estimated at Rs. 4·44 lakhs. Both these items, it was considered, might legitimately be regarded as a necessary part of the cost of construction of water-courses, which should be recovered from the occupants of land. A further expenditure for levelling and level charts, amounting to Rs. 8·88 lakhs, was contemplated in connection with this survey, and this was considered to be debitable to the project and not recoverable from the occupants of land.

18. In May 1927, the Revenue Officer submitted proposals, which were approved by Government, for restricting

rectangulation by the Survey of India to blocks of half a square mile instead of carrying it down to 64 acre blocks. A reduction in the cost of the Survey of India's rectangulation operations from Rs. 18·75 lakhs to Rs. 9·5 lakhs was thus secured. The sub-division below half square mile (320 acres) blocks was to be done under the control of the Revenue Officer, and a programme for the sub-rectangulation to 4 acre blocks of 15 lakh acres of unoccupied land, at a total cost of Rs. 7·5 lakhs or 8 annas per acre, was approved. While these operations were in progress, the Revenue Officer submitted proposals for extending sub-rectangulation to occupied land in certain areas, and a further programme for sub-rectangulating 8 lakh acres of occupied land was also approved. Of the total of 23 lakh acres, 19·25 lakh acres have been sub-rectangulated up to now at a cost of Rs. 6·75 lakhs, and it is hoped that the remaining area of 3·75 lakhs will be sub-rectangulated in the ensuing field season at a cost of Rs. 1·27 lakhs. The actual cost of sub-rectangulating 23 lakh acres will thus come to Rs. 8·02 lakhs, against an estimated cost, for 15 lakh acres, of Rs. 7·5 lakhs. The considerable saving secured over the estimated cost has been largely due to the greater output of the staff, rigid economy, and careful organisation.

19. In order to select occupied land for sub-rectangulation, the entire Barrage area has been classified as under :—

Class I—Villages which present no physical difficulty, e.g., where holdings are fairly large and where the necessary readjustment of areas is conveniently possible ;

Class III—Villages where, owing to the existence of numerous small holdings or other physical difficulties, sub-rectangulation within a reasonable period and at a reasonable cost is rendered impossible ;

Class II—Villages which are intermediate in point of difficulty between classes I and III.

The 8 lakh acres of occupied land, referred to above, in which sub-rectangulation has so far been undertaken, form the entire area of class I villages The Revenue Officer has now submitted proposals for sub-rectangulating class II villages, comprising an area of about 4 lakh acres, and these are under the consideration of Government.

20. In extending sub-rectangulation operations to occupied lands much difficulty is encountered. Such rectangulation is to the mutual advantage of Government and the zamindars : it renders the system of distribution of water more efficient, and, by reducing the unit of assessment to one acre blocks, enables zamindars to cultivate small portions of land according to their convenience without the liability to pay assessment for entire survey numbers of which only parts are cultivated. But these advantages are realised only by a few progressive and enlightened zamindars : and the majority would let things go on as they are according to the old unscientific system with all its inconveniences and wastage. To begin with, therefore, persuasion by concessions has been necessary. Rectangulation could not be carried out without slight variations being made, not only in the position but also in the size of holdings ; and, as no one would agree to receive back less area than he surrendered, this meant in practice that certain additions had to be made to holdings in order to rectangulate them. These additions, which came to about 4·1 per cent. over the area of the holdings, were given free, subject to the condition that land required for water courses, which comes to about 2 per cent. of the area rectangulated, would be given by the owners free of charge. The cost of 2·1 per cent. of land sacrificed would come to Rs. 15 per acre, the rate fixed for " mohag " land. Further, the recovery of the cost of rectangulation for these lands was also foregone. The total area for which these concessions were granted in the beginning was 23,555 acres.

21. As experience was gained, the concessions have been reduced. The concession waiving the recovery of the cost of survey is now withdrawn ; and it has been announced that, in class I villages—i.e., villages in which rectangulation can be carried out without difficulty—no land will be given in recognition of " mohag " claims until the village is rectangulated. Additions to holdings due to readjustment are allowed free up to 6 per cent., any excess over this area being charged for at the mohag rate of Rs. 15 per acre. It is hoped that these terms will prove fairly liberal to enable rectangulation of occupied lands to proceed at a fair rate. The sub-rectangulation so far completed is a practical demonstration of its advantages ; and requests for sub-rectangulation are pouring in even from class II villages. The demand is keenest in Dero Mohbat, Tando Allahyar, Sinjhoro and Mirpurkhas talukas.

22. (vi) *Application of the Bombay Irrigation Act, 1879.* —It has been recognised for a long time that the existing Bombay Irrigation Act is defective and unsuitable in its application to the general administration and control of irrigation in Sind. The approaching transformation of the greater part of Sind from the old conditions of haphazard irrigation to modernized methods of distribution and use of water, which must inevitably take effect with the advent of the Barrage, emphasizes the urgent necessity for provision by the earliest possible date of suitable machinery to deal with the new conditions. The Commissioner in Sind appointed a committee of revenue and irrigation officials in 1926 to consider and report on the question of revision of the Sind canal rules and to prepare a draft of amendments considered necessary to adapt the Bombay Irrigation Act to the requirements of Sind. The report and draft amendments were submitted to Government by the Commissioner in Sind in August 1927, together with his comments and the opinions of the Chief Engineer in Sind, the Chief Engineer of the Barrage, and several experienced revenue officials. Such of the proposed revised rules as are compatible with the existing Irrigation Act have already been sanctioned. An amending Act to the Irrigation Act giving powers to irrigation officers to change a zamindar's source of water-supply where necessary in the interests of proper distribution and use of water and to effect recovery of cost of new water courses from the holders of the land in the Barrage area has been passed into law. The opinions of the Lloyd Barrage Advisory and Standing Committees on the proposed other amendments to the Irrigation Act are now under consideration.

(B) Upper Sind.

23. The probable approximate costs for the remodelling of the three large canal systems in the Begari Canals division, the Desert canal, the Unharwah and the Begari canal, on the right bank of the Indus have been reported as :—

	Rs.
Desert canal	5 lakhs.
Unharwah	14 ,,
Begari canal	49 ,,
Total ...	68 lakhs.

As regards the Begari canal, a branch from the Rice canal was originally proposed to take over the "Dhoro" or concentrated rice area of the Begari below its 52nd mile, for which

provision of Rs. 48·7 lakhs was made. This proposal was abandoned, as it was found that by remodelling the Begari canal this rice area could be provided for adequately at less cost. The estimate of Rs. 49 lakhs for remodelling the whole Begari canal system covers provision of some Rs. 12 lakhs for the area originally intended to be served by the branch from the Rice canal. These projects, which provide for the complete remodelling of the three canal systems, would fully command irrigable lands under each. The preparation of the detailed projects for these canals has, however, been held in abeyance as there is no immediate prospect of the schemes being undertaken on account of the prevailing financial stringency. On the left bank of the Indus the area north of Sukkur, bounded on the east by the Jessalmir desert and on the north by Bahawalpur State, depends for its irrigation on the Mahi Canal system and on a series of small canals with direct heads from the river. A preliminary project report, comprising proposals roughly estimated to cost Rs. 56 lakhs, providing for the improvement of distribution of supplies and the extension of irrigation to parts of the area not at present under command, has been received. If this project, known as the Ghotki Canal project, is to be proceeded with, it will involve a preliminary expenditure of Rs. 40,000 on detailed surveys and preparation of the project. It is not likely, however, that any further progress with the execution of the project will be made in the near future in view of the present financial stringency. As has been stated, Upper Sind will remain unaffected by the operation of the Barrage, and any projects for the improvement or extension of irrigational facilities in this area will require to be considered on their individual merits and in no way as arising out of or resulting from the Barrage Scheme. The total cost of improvements to existing inundation canals and extension of irrigation to areas which at present have no such facility would amount, according to present information, approximately to Rs. 124½ lakhs for that part of Upper Sind which lies north of the sphere of the Lloyd Barrage and Canals. It is not possible at this stage to lay down any programme for the progress of these works, nor to forecast expenditure on them year by year.

(C) Lower Sind.

24. (i) It is the third section of Sind, comprising the larger part of the Fuleli Canals division and the whole of the Karachi Canals division, situated to the south of the limit of

command of the Barrage, which stands in danger of being adversely affected at the critical periods of the kharif season under future conditions. In recognition of this danger Government in 1923 gave assurances to the zamindars of Lower Sind that systematic improvements to canals in this area would be undertaken, and in pursuance of these assurances projects have been prepared and are in process of preparation for the complete remodelling of the canals irrigating Lower Sind. The projects will provide for straightening the old tortuous inundation canals, for taking out new branches and distributaries, where required, and for control of draw-off to equalise distribution of available supplies at a higher level of command. As the result of the adoption of these measures not only would Lower Sind be safeguarded from possible lowering of the river levels at critical periods, due to withdrawals of the Barrage Canals, but the more equitable distribution of supplies would benefit considerable areas now precariously commanded.

25. The principle of the proper control and distribution of water is involved in this scheme. It is of paramount importance in dealing with any large volume of irrigation water and the land affected thereby to ensure the most equitable distribution of water possible. On this depends the prosperity of all the irrigators on the system and the value of their holdings. If water is not equitably distributed, no individual cultivator can have any security as regards the value of his land. If the unsystematic distribution of water hitherto obtaining is allowed to continue, the zamindar with a fortuitously good supply will have the value of his land greatly enhanced, whereas a zamindar not so fortunately situated will find his landed estate of little or no value.

This principle is of fundamental importance to the Lloyd Barrage scheme and its financial stability. A good deal of the land under the Fuleli canal will be transferred to the Rohri canal setting free water which will be used for extensions of cultivation on the Fuleli.

26. In view of the fact that the success of the Barrage scheme is entirely bound up with the equitable distribution of water, it will be fatal to the Barrage itself to allow of any extension of the haphazard methods at present prevailing in the Fuleli area and indeed through the whole of Sind. Sales of land under the Barrage are an integral part of the financial scheme, and it will be impossible to persuade buyers that water will be equitably distributed on the Barrage canals

if they see Government, from year to year, not only allowing the present inequitable system to continue but extending it.

27. (ii) *Fuleli Canals Division.*—A project has been prepared for the remodelling of the Fuleli Canal system. The project is divided into five sections in each of which the necessary widening, regrading, provision of new distributaries and control of draw-off to secure equitable distribution is provided for at an estimated cost of Rs. 49,97,694 as under :—

	Estimated cost (including all charges).
	Rs.
Section 1—From head to mile 30, where a new cross regulator will be provided .	2,21,412
Section 2—From mile 30 to mile 46 (existing Alipur regulator)	6,70,248
Section 3—From mile 46 to mile 62, where a new cross regulator is under construction	13,56,581
Section 4—From mile 62 to mile 70/3, where a new cross regulator has been constructed	4,22,698
Section 5—From mile 70/3 to tail (mile 81/3) .	23,26,755
Total ...	49,97,694

The works in all the five sections with the exception of modules and remodelling of Mirwah Talhar have practically been completed. The expenditure under "Works" in 1932-33 was Rs. 4,09,276, whereas the provision in the budget for 1933-34 is Rs. 2,79,000. The whole remodelling scheme is expected to be completed by the year 1935-36.

28. (iii) *Other Canals in the Fuleli Canals Division.*—A project is under preparation for affording assured irrigational command to the area situated to the west of the Fuleli and bordered by the Indus and by the Karachi Canals Division. This area now depends for irrigation on the Hasanaliwah, Khairwah and Mulchandwah. The approximate estimated cost of the project is reported as Rs. 9·3 lakhs.

29. (iv) *Cost of immediately necessary improvements in the Fuleli Canals Division.*—The probable cost of remodelling the existing irrigation system in the Fuleli Canals

Division to safeguard this area from possible adverse effects at critical periods of withdrawals of the Barrage canals and to afford improved distribution of available supplies will therefore amount to approximately Rs. 59¼ lakhs.

30. (v) *Mehrani Canal Project.*—This project in the Fuleli Canals Division of the Hyderabad District cannot be said to come within the scope of the assurances of Government as communicated to the Lower Sind zamindars at the time of the inauguration of the Barrage scheme. The project contemplates the extension of irrigation to 61,607 acres of good culturable land to the south of Guni Taluka which at present lie uncommanded. The total culturable area to be brought under command will be 156,043 acres for which 1,510 cusecs full supply discharge is provided at the head of the canal. The project is estimated to cost Rs. 26,10,105 and the estimated return on capital expenditure is 10·68 per cent. It provides largely for extension of irrigation to new areas and will accordingly be considered on its merits after the immediate commitments of Government have been given effect to.

31. (vi) *Karachi Canals Division.*—Plans and estimates have been prepared for the projects for remodelling all the canal systems in this Division at a total cost of Rs. 72 lakhs. Out of these, the project for remodelling the Kalri and Narichach canal system was sanctioned for Rs. 10,70,949 in 1929 and another for remodelling the Sattah canal system was sanctioned for Rs. 2,81,377 in 1932. The work on the former system was started in 1930-31 and has now been practically completed. The commencement of the work on the latter system has been postponed pending experience of two or three post-Barrage abkalanis. The remaining projects are under scrutiny. The cost of works necessary to secure the irrigation in this Division against the adverse effects of Barrage withdrawals had previously been estimated as approximately Rs. 54 lakhs on a preliminary survey of the data available.

32. (vii) *Conclusion.*—The liability in sight to which Government are committed by the assurances given to the zamindars of Lower Sind in 1923 and 1925, that their interests would not be allowed to suffer as the result of the withdrawals of the Barrage canals, may therefore be said approximately to amount to Rs. 1·31¼ crores (Fuleli Canals Division Rs. 59¼ lakhs and Karachi Canals Division Rs. 72 lakhs) and, considering the outlay as a whole the expenditure

will be unproductive. The Fuleli and Kalri Remodelling Schemes are already in progress. The probable expenditure to end of the current financial year on these Projects is estimated at Rs. 42·42 lakhs (including all charges) and about Rs. 18·26 lakhs will be required till their completion in 1935-36. The commencement of the remaining projects in these divisions will depend on the financial situation. The question of the provision of a second barrage for Lower Sind, to be situated at Kotri or Jherruck, has been mooted, but the cost would be prohibitive considering the comparatively small area and unproductiveness of the country which could be brought under command of irrigation from above such a barrage, if built. This suggestion is therefore beyond the bounds of practical politics.

II. Communications.

(A) Roads.

33. (i) In August 1919, the late Mr. R. J. Kent wrote a note regarding improvements to road communications in Sind. As a result plans and estimates for metalling the following roads were submitted by the Chief Engineer and were sanctioned by Government :—

	Cost. Rs.
(1) Road from the Cemetery at Karachi to Drigh Road Station	94,833
(2) Road from Karachi Jail to Drigh Road ...	96,311
(3) Road from Drigh Road to Malir ...	1,60,433
(4) Road from Karachi to Hub River ...	2,12,634
(5) Tatta-Jungshahi Road	3,79,046

These works were carried out at the cost shown against each. Further expenditure of Rs. 19,519 was incurred during 1928-29 on providing a bituminous seal coat of Spramex in miles 4·6 to 9·0 of the Karachi Cemetery-Drigh Road.

34. (ii) The Finance Committee (appointed to discuss the draft financial statement of the Government of Bombay for the year 1919-20) recommended that, in the event of savings becoming available for expenditure, the provincialization of seven roads in Sind mentioned in their report should be taken into consideration as a first instalment. The Chief Engineer thereupon suggested 24 roads for provincialization, but the Commissioner in Sind selected only 16 of these in order of urgency. Government accepted this proposal and ordered these 16 roads to be provincialized.

1. Sukkur-Shikarpur Road.	Right Bank Circle.
2. Shikarpur-Jacobabad Road.	
3. Naushahro-Pad-Idan Road.	Left Bank Circle.
4. Mirpurkhas-Umarkot Road (first six miles).	
5. Katcha portion of Hyderabad-Mirpurkhas Road.	
6. Hyderabad-Badin Road.	

35. (iii) In April 1924 the Chief Engineer in Sind was requested to submit a report describing briefly the nature and condition of the roads provincialized in 1920 and 1921, indicating which of them stood in urgent need of improvements and were of sufficient importance to be taken in hand immediately. The Superintending Engineers of the late Indus Right and Left Bank Circles reported that the six roads noted in the margin were in urgent need of improvement. Government, however, directed that improvements to the following roads should be taken in hand as early as possible, and the state which each has now reached is as shown below :—

Northern Sind Circle—

(1) Sukkur-Shikarpur (21 miles). Plans and estimates for metalling the road sanctioned for Rs. 6,19,457. The work has been completed at a cost of Rs. 5,70,403. Estimates for asphalting miles 0 to 6 and 6 to 20/3 amounting to Rs. 80,502 and Rs. 2,56,034 respectively, have been sanctioned but the work has not yet been taken in hand for lack of funds. Eight new road bridges estimated to cost Rs. 53,595 are proposed to be constructed on this road. Plans and estimates for the work have been sanctioned. Work not yet begun.

(2) Shikarpur-Jacobabad Road (24½ miles). Plans and estimates, the latter amounting to Rs. 2,00,402 (revised), for brick paving 8 miles of the road (Shikarpur-Kot Sultan Section) with a 1½″ carpet of sand and bitumen have been sanctioned. The work has been in execution since last year and is expected to be completed during the current financial year. The expenditure incurred to end of August 1933 was Rs. 1,22,376. Miles 15-16/5 and 17/6-18/0 are also proposed to be similarly treated and plans and estimates, the latter amounting to Rs. 42,234 have been sanctioned. The remaining length of the road is proposed to be maintained as a '*kachha*' earth road.

Western Sind Circle—

(1) Radhan-Mehar (9 miles). Preliminary improvements sanctioned for Rs. 31,073. Work not yet begun.

(2) An estimate amounting to Rs. 96,607 has also been sanctioned for improvements to the Badah-Nasirabad Road (7¾ miles) and this work is completed, the total expenditure being Rs. 96,175.

Rohri Canal Circle—

(1) Hyderabad-Hala *via* Matiari (33 miles). An estimate for improvements to this road was sanctioned for Rs. 93,265 in December 1931. It has since been revised to Rs. 1,19,200. A sum of Rs. 46,371 was spent last year and Rs. 50,200 have been allotted this year from petrol tax fund for further work.

(2) Hala-Sakrand Road (24 miles). Plans and estimates for this road are under preparation.

(3) Sakrand-Moro Road (42·5 miles). An estimate for improvements to this road has been sanctioned for Rs. 65,871. Rs. 40,600 have been spent last year and further work is in progress for which an allotment of Rs. 21,000 is granted during the current year.

(4) Moro-Kandiaro (32 miles). An estimate for improvements to this road has been sanctioned for Rs. 30,104. Work not yet begun.

(5) Kandiaro-Kotri Road (16 miles). Plans and estimates for the road are under preparation.

(6) Naushahro-Pad-Idan (11 miles). Plans and estimates sanctioned for Rs. 33,127. Work completed.

An estimate for experimental road work for treating with oil emulsion amounting to Rs. 2,528 has been sanctioned for a length of 3 miles. The estimate is under revision.

Eastern Sind Circle—

(1) Mirpurkhas-Umarkot (47 miles). Plans and estimates for the first 6 miles have been sanctioned for Rs. 49,100. Work not yet begun.

36. (iv) In 1925 the Chief Engineer in Sind reported that three roads required to be metalled, besides the six mentioned above. These are shown below, the present stage of progress on each being noted :—

(1) Shahdadpur-Hala (13½ miles). Estimate has been sanctioned for Rs. 44,339 for brick-paving 4 miles only. Work has been completed. An estimate amounting to Rs. 1,26,317 for brick-paving the remaining portion of the road has not been sanctioned due to financial stringency.

(2) Tando-Adam-Uderolal (7¼ miles). Plans and estimate sanctioned for Rs. 1,25,808 for metalling. A revised estimate amounting to Rs. 72,903 for brick-paving the road has not been sanctioned due to financial stringency.

(3) Chhor-Umarkot (12 miles). Brick-paving sanctioned for Rs. 1,07,270. Work not yet begun.

Southern Sind Circle—

The Karachi-Kotri Road *via* Tatta was recommended by the Sind Roads Sub-Committee to be brought to the forefront at the earliest opportunity as it is a Class I interprovincial route to the Punjab. A project for reconstruction of the same was drawn up and submitted to Government. The plans and estimates therefor have been approved and technically sanctioned by Government at a cost of Rs. 4,92,581 and the road has been provincialised. The work was commenced and the sum of Rs. 75,000 spent in 1932-33. A further sum of Rs. 2,46,000 has been allotted in 1933-34. The work is in progress and is expected to be completed in 1934-35.

An estimate amounting to Rs. 7,51,300 representing the share of this Government to be paid to the North-Western Railway for the provision of a roadway in the Kotri bridge project was sanctioned in April 1931. The amount to be paid by Government has since been increased to Rs. 7,89,182. The increased liability has been accepted by Government, and the amount paid to the Railway authorities. The work has been completed.

An estimate amounting to Rs. 25,381 for reconstructing the edges of the Karachi-Malir Road, section I, mile 4/6 to 9/0, was sanctioned in August 1931. The work has been completed.

An estimate amounting to Rs. 21,783 for providing a 2″ carpet of sand and bitumen over 6″ brick-on-edge soling on Karachi-Malir Road ½ furlong in mile 7 (6½) and 3½ furlongs in mile 11 (10/0 to 10/5½) was sanctioned in March 1932. Half the cost is to be met from the reserve with the Government of India in the Road Development Account and the other half from the ordinary share of this Government from the Petrol Tax fund. The work has been completed at a cost of Rs. 19,311.

37. (v) In 1925 the necessity for providing better communications in the zone of the Barrage was brought to notice. The Commissioner in consultation with the Chief Engineer of the Barrage and the Chief Engineer in Sind stated that the question of improvements of communications had been discussed at a conference which unanimously agreed that—

(1) the question should be investigated by a thoroughly competent Road Engineer;

(2) it would probably be advisable to create two Road Engineers Districts in Sind so as to relieve the Irrigation Engineers of this work; and

(3) money must be made available for expenditure on roads.

The Commissioner suggested that in the first instance a competent officer should be placed on special duty to investigate the whole matter. This proposal was approved, and Government appointed Mr. H. B. Parikh, as Executive Engineer on Special Duty, to investigate and report on the question of improving communications in Sind and particularly in the Barrage Canals area. Mr. Parikh submitted his report in 1928 and gave preliminary estimates for the construction of the following mileage of Provincial and Local Board roads for the present:—

	Rs.
581 miles of trunk roads at Rs. 26,000 per mile ...	1,51,06,000
808 miles of feeder roads at Rs. 21,000 per mile...	1,69,68,000
	3,20,74,000

and also the following further mileage of roads when funds become available:—

	Rs.
73 miles of trunk roads at Rs. 26,000 per mile ...	18,98,000
531 miles of feeder roads at Rs. 21,000 per mile...	1,11,51,000
Total ...	1,30,49,000
Grand Total ...	4,51,23,000

38. The report was referred to the Roads Sub-Committee of the Advisory Communications Board, Sind, for consideration and report. The Commissioner in Sind submitted to Government the minutes of the proceedings of the Committee in which it was *inter alia* stated that the Committee was of the opinion that a programme for spending ultimately as much as Rs. 4·51 crores in all was not a practical proposition in these days of financial stringency. The Road Sub-Committee, therefore, appointed a Sub-Committee to go into the question and to make proposals for urgent works to the extent of Rs. 50 lakhs only, the amount to be provided from funds outside the Petrol Tax funds. The report of the Sub-Committee has since been received. The Sub-Committee has prepared a ten-year programme and a list of road works arranged in order of urgency. The total cost of the programme does not reach the sum of Rs. 50 lakhs proposed and the Committee consider that if the sum is available it will be advisable to take up some of the interprovincial

roads. The following points may be noted. Such bridges, so far as crossings on existing road alignments over canals and irrigation channels are concerned, are being or will be provided as part of the work of construction of the irrigation systems concerned. With regard to the construction of roads themselves these will generally be on or close to the alignments of the existing unmetalled roads and tracks, and it appears that in many parts of the country, for some time to come at least, the immediate needs will best be met by providing improved and raised unmetalled roads, which can be done most economically by employing modern grader and tractor outfits. These earth roads can later, when the growth of traffic renders such action necessary, be provided with metalled or other suitable surfacing. It is recognised that the provision of surfaced roads proposed in Mr. Parikh's report represents the probable final requirements when the whole country is fully developed.

Since the scheme was submitted by the Road Sub-Committee the financial condition of this Presidency had become considerably worse and Government found themselves unable to finance even this small scheme. The position was brought to the notice of the Government of India who have since agreed to assist this Government and as a preliminary measure to bear the cost of a fresh enquiry which will embrace the survey of the funds now available and likely to be available in the near future from all sources, and the extent to which the resources of the local bodies will be adequate to discharge their responsibilities, whether for roads or for other matters. The enquiry will also include a complete classification of roads with respect to their form of construction and cost and with respect to the authority to be responsible for their maintenance. The Government of India have appointed with effect from November 1933 Mr. S. G. Stubbs, Officiating Road Engineer with the Government of India, with a small staff for a period of six months to conduct the enquiry.

39. (vi) The figures of Government expenditure on roads in Sind (on original works and repairs) from the years 1921-22 to 1932-33 are as follows:—

Year.	Works.	Repairs.	Total.
	Rs.	Rs.	Rs.
1921-22	42,740	1,28,920	1,71,660
1922-23	1,00,248	1,44,992	2,45,240
1923-24	73,472	1,44,764	2,18,236

Year.	Works.	Repairs.	Total.
	Rs.	Rs.	Rs.
1924-25	1,65,700	1,45,054	3,10,754
1925-26	43,918	1,56,720	1,99,638
1926-27	1,11,961	1,68,353	2,80,314
1927-28	2,69,033	2,09,520	4,78,553
1928-29	2,82,952	1,92,537	4,75,489
1929-30	1,03,320	2,54,482	3,57,802
1930-31	30,614	1,70,816	2,01,430
1931-32	87,390	1,43,428	2,30,818
1932-33	6,51,927	1,49,421	8,01,348

(B) Railways.

40. The North-Western Railway main lines are already running in a north and south direction on each bank of the river in the Barrage area. The new feeder railways required may be grouped under two systems—viz. (1) the Sind Left Bank and (2) the Sind Right Bank Feeder Railways. These feeder railways are not necessitated solely by the advent of the Barrage scheme since there had already been a local demand for them independent of considerations connected with the execution of the Barrage project. The completion of the Barrage project has, however, made the improvement of communications in this area a matter of necessity and implies the construction of feeder railways and new roads and the improvement of existing roads.

41. *Sind Left Bank Feeder Railways.*—This system consists of the following broad-gauge lines, totalling about 164 miles in length which have been constructed and opened to traffic :—

(1) a loop line from Mehrabpur to Pad-Idan *via* Tharushah 44 miles ;

(2) a loop line from Nawabshah to Tando Adam *via* Sakrand and Hala, 54 miles; and

(3) a chord line between Tharushah and Sakrand, 66 miles.

The North-Western Railway administration anticipated an annual loss of Rs. 6,43,685 on the working of these three sections of line estimated to cost Rs. 97·5 lakhs and towards meeting this loss this Government was asked to make an annual contribution of Rs. 4 lakhs for the first five years. During the second five-year period the annual loss on working was estimated at Rs. 2,63,170. A guarantee of payment by Government of the actual loss on working, limited to a maximum annual liability of Rs. 2 lakhs,

subsequent to the first five-year period was also asked for by the Railway administration. This guarantee was agreed to by the Legislative Council in March 1928.

The construction of these lines was sanctioned by the Railway Board in June 1928. The Section Mehrabpur-Padidan was completed and opened to traffic on 20th May 1930. Work on Tando Adam-Nawabshah Loop and Tharushah-Sakrand Chord was also completed and both sections opened to traffic on 10th December 1931 from which date the guarantee period commences for the whole of this system.

42. *Sind Right Bank Feeder Railways.*—These are complementary to the Sind Left Bank Feeder lines. This system consists of two lines, viz., from Sita Road to Jacobabad and Larkana to Dost Ali, of an aggregate length of 135 miles.

The scheme provides for the dismantlement of the existing Larkana-Dodapur Narrow Gauge System and also for the purchase of this light railway. .

At the time of submitting the project it was expected that this would be a profitable line but conditions have changed so much with the bad state of the grain and cotton markets, etc., that it is doubtful if such optimism is still justifiable. Further as the greater portion of the proposed alignment runs parallel or very close to existing roads, motor traffic is bound to materialise to the further detriment of the successful operation of this line. It is therefore probable that the Bombay Government would be required to give a financial guarantee before these railway lines could be constructed.

In the meantime the Railway Board have decided to postpone the consideration of this project for the present.

The Mitchell-Kirkness report recommends that the alternative of development by road should be considered in lieu of these feeders.

The construction of a link line between Jacobabad and Dodapur is also under consideration in case funds for the full Right Bank Feeder Scheme are not forthcoming.

The Larkana-Jacobabad (Sind) Light Railway Company has recently applied to the Railway Board for permission to construct the following railways but their final decision is awaited :—

(*a*) an extension from Shahdadkote to Jacobabad *via* Ghari Khairo, Usta and Rojhan—a distance of 49½ miles.

(*b*) a branch extension of about 13½ miles from Shahdadkote to Bagh Tail.

43. Besides the systems mentioned above, there are certain other proposed lines more or less connected with the Lloyd Barrage. These lines are dealt with briefly below:—

(1) *Khadro-Nawabshah Railway* (*Jodhpur Railway*).—The final location survey of this railway has been completed and the estimate has been forwarded to the Railway Board. No action has yet been taken regarding the acquisition of land, as this project, in common with all other metre-gauge projects in Sind, is held up pending a decision on the conversion to broad-gauge of the Hyderabad-Chhor section of the Jodhpur-Hyderabad Railway and of the two branch lines from Mirpurkhas. The Mitchell-Kirkness report however doubts the necessity of this project.

(2) *Jhol-Hiral* (*Jodhpur Railway*).—The survey of this project has been completed and the project estimate submitted to the Railway Board.

The Sind Light Railway Coy. Ltd. has asked the Railway Board for permission to construct a metre-gauge line from Jhol Station on the Khadro Branch to Hiral Station on the main line, a distance of about 66 miles, and their orders are awaited.

(3) *Jhudo-Hiral* (*Jodhpur Railway*).—The survey of this loop has been held in abeyance pending a decision on the conversion to broad-gauge of the Hyderabad-Chhor section of the Jodhpur-Hyderabad Railway.

(4) *Tando Adam-Palh line* (*N.-W. Railway*).—The Railway Board has intimated that it is not proposed to investigate this further at present, as this project is considered unlikely to yield a remunerative return.

(5) *Tando Mahomedkhan-Sujawal and Badin-Jungshahi lines* (*N.-W. Railway*).—The reconnaissance surveys of these lines have been completed, and the Railway Board after considering the projects have come to the conclusion that a guarantee will be needed from the Bombay Government and that for the present the projects have been held in abeyance.

(6) *Shikarpur-Ratodero line* (*N.-W. Railway*).—It has been decided that the consideration of this line should be postponed.

(7) *Mirpurkhas-Nagar Parkar line (N.-W. Railway).*—The Railway Board has decided to drop this line in favour of the Viramgam-Radhanpur-Badin project for the Bombay-Karachi connection.

(8) *Bombay-Karachi Connection (N.-W. Railway).*—The Railway Board sanctioned an estimate for the final location and preparation of a detailed estimate for a broad gauge line on the Viramgam-Radhanpur-Suigam-Nagar Parkar-Badin route. The location was completed in December 1930 and the estimate submitted to the Board early in 1932. The detailed estimate contains an alternative route for the eastern portion Nagar Parkar-Suigam-Deesa-Palanpur-Sabarmati (near Ahmedabad). This alternative necessitates the conversion of the metre gauge (Deesa-Palanpur) to broad gauge and allows for broad gauge to run alongside the metre gauge from Palanpur to Sabarmati. This alternative is more attractive financially and has other considerations to recommend its adoption. Its chief disadvantage is the larger initial outlay of capital. A third proposal for running a metre gauge along the selected alignment from Deesa to Hyderabad has also been considered. This is considerably cheaper but has not been developed in detail.

After consideration of the report and detailed estimates of 1932, the Railway Board in April 1933 ordered the carrying out of a revised traffic survey which has since been completed and an advance copy thereof submitted to the Railway Board. This report is under scrutiny of the N.-W. Railway Administration.

With regard to this railway the Mitchell-Kirkness report remarks that this is an important through connection and the question of an alternative road does not arise.

(9) *A project for the conversion to broad-gauge of the line from Hyderabad to Chhor with two branches from Mirpurkhas to Khadro and from Mirpurkhas to Jhudo.*—The project was submitted to the Railway Board who, after consideration, postponed this for the present.

44. So far as the Sind Left and Right Bank Feeder Railways are concerned, the construction of which has become desirable owing to the advent of the Barrage scheme (*vide* paragraphs 41 and 42 above), it will be seen that liability on the part of the Bombay Government is confined to the Sind Left Bank Feeder Railways, and this is again limited to an annual guarantee against loss in

working of Rs. 4 lakhs a year for the first five years after the opening of the line for traffic and thereafter to the actual loss subject to a maximum of Rs. 2 lakhs a year, until the lines prove remunerative, when the amounts of the guarantees will be paid to this Government with simple interest out of profits.

III. Land Policy and Revenue.

45. (A) *Problem of disposal of land.*—The essential difference between the resettlement of Sind and the colonization of the canal areas in the Punjab is that in Sind the new canals are to irrigate an already settled country, whereas in the Punjab for the most part the irrigable area was at the outset a desert. The zamindars of Sind have their established position in the country, and it is essential that their legitimate claims should be considered. On the other hand the success of the project cannot be jeopardized by yielding to a number of interests that may be incompatible with the general and financial stability of the Barrage scheme. Moreover demands of all kinds have been put forward for grants of land on concessionary terms which, if acceded to, would involve grave financial risks. The policy that the Government has set before itself is that in the first place the legitimate claims of the present zamindars should be satisfied, secondly adequate provision must be made for special classes, such as peasant cultivators, and thirdly land must be sold in the open market in order that part of the capital cost of the project may be met by the receipts from the land sales. The cardinal feature of the situation is the marked absence of the large areas of hitherto uncultivated waste which form a familiar feature of the Punjab irrigation scheme. Out of the gross area of $7\frac{1}{2}$ million acres commanded by the scheme the greater part is not Government land, but is already in the occupation of private persons, and its value is being enhanced out of all proportion by bringing water to it. Some $1\frac{1}{2}$ million acres, after uncultivable land and land to be reserved for public purposes have been deducted, are available for the purpose of distribution, and this vacant land is very much fragmented. The policy adopted is that the indigenous population should have first claim to the newly irrigated tracts at the disposal of Government.

The Barrage and all the canals have been completed and water was admitted into them for purpose of irrigation during the kharif season of 1932. The area irrigated

during the first kharif season was 1,368,524 acres and that irrigated up to the end of December in the first rabi season was 1,155,067 acres, or in all 2,523,591 for the full year.

16. These facts lead to certain conclusions. New colonists cannot be settled on the land long in advance of the date when water will be available. There is much preliminary work to be done in the larger unoccupied areas before these lands can be disposed of profitably to Government and to the purchasers. Since most of the area contains a considerable nucleus of zamindars and cultivating owners already depending on agriculture for their livelihood, it is necessary to aim at the orderly development, so far as possible, of the whole tract at one and the same time. It is not possible to deal with the Barrage area piecemeal, deferring the development of certain sections until that of others is practically complete. In March 1929, Government published their conclusions as to the policy which it is desirable to adopt in the disposal of waste lands, while reserving to themselves full liberty to change that policy in any directions which experience or changing circumstances may indicate. The various classes of grants to be made may be considered under the following heads:—

17. (i) *Fallow-forfeited and Mohag Grants.*—Government have already made clear their opinion that the indigenous population has the first claim to consideration in the development of the area, and the Royal Commission on Agriculture has expressed the same view. They have therefore set apart 3,50,000 acres to be granted to existing landholders at the nominal rate of Rs. 15 per acre. Since Government are undertaking a capital expenditure of over Rs. 30 per acre on this land and on every other acre already occupied, the magnitude of the financial concession being made to the existing landholders in the tract will be readily understood. Government consider that the resources of these landholders can best be employed, and will be fully employed, for many years to come in bringing their lands under the more intensive cultivation which will be possible under Barrage irrigation.

In order to enable the total liabilities on account of fallow-forfeited grants to be ascertained, Government issued in November 1929 an order prescribing 30th September 1930 as the latest date up to which applications for the return of fallow-forfeited land would be received. The total area applied for has been 1,55,500 acres, of which 1,09,000 acres

has been actually taken up. But at the end of June 1932, the first instalment of the purchase price, which is payable in two instalments, had only been made in respect of 50,000 acres. So long as Barrage water was not available and the land could not be cultivated it was undesirable to exercise any severity in the collection of these outstandings. But the position is entirely altered now that the Barrage canals are flowing, and Government had prescribed 15th February 1933 as the latest date by which at least the first instalment for these lands must be paid.

Government had also prescribed 31st December 1932 as the latest date by which all applications for "mohag" grants must be made in the Barrage area.

48. (ii) *Peasant Grants.*—Although it is not possible to settle peasants on the land before cultivation operations can be undertaken, the terms on which Government are prepared to grant land to peasants are described below. When the Jamrao was colonized thirty years ago, grants for both Sindhi and Punjabi peasants were given free of malkano. In the Punjab to-day fairly heavy recoveries are made from peasants. The Punjab peasant is required to pay Rs. 3 per annum per allotted acre for the first ten years, and thereafter has the option of paying Rs. 5 per acre in perpetuity, without acquiring proprietary rights, or of paying heavier annual payments over a period, which may extend to forty years for the purpose of acquiring proprietary rights, according to the prescribed scale.

Government clearly cannot afford, nor do they consider it necessary, to give land to peasants free. The hari, whose status is raised to that of a peasant proprietor, has his income largely increased, and there is no reason why he should not pay a reasonable share of that increase to Government by way of instalments for the purchase of his land. But in the present conditions of Sind agriculture Government do not think it desirable to attempt to levy the prices which the Punjabi peasant willingly pays, and they have therefore empowered the Revenue Officer to make grants to Sindhi peasants on the following conditions. The peasants will be tenants-at-will for the first five years, during which they will pay Rs. 3 per annum per allotted acre and will be required to comply with certain conditions framed with a view to ensuring that they actually live on or near their land and bring it under cultivation. Thereafter they will be required

to pay malkano equivalent to half the amount paid by peasants in the Punjab according to the following scale :—

Number of years.	Annual payment per acre.
	Rs. a. p.
15	5 0 0
or 20	4 8 0
or 25	4 0 0
or 30	3 8 0
or 40	3 0 0

The ordinary land revenue will be recovered in addition to these payments of malkano. The peasants will thus be able to complete payments for their holdings within a period ranging at their option from 20 to 45 years. It is not desirable to permit payment within a shorter period, since the object is to get the peasants settled on the land and not to encourage them in the speculative sellings of their holdings. The present value of these payments is about Rs. 50 per acre. Government consider that peasants should be settled only on land of good quality and that a grant should ordinarily be about 16 acres and never more than 24 acres. For the present, Government have authorized the Revenue Officer to set aside 50,000 acres for the purpose of peasant grants. This is enough for 3,000 peasants. Government, however, trust that, as time goes on, it may be possible to set aside a larger area for this purpose.

49. It is not proposed at present to give peasant grants at concession rates to other than Sindhis (including Tharis). The Punjabi peasant is sufficiently alive to the value of perennial irrigation and will be able to buy land in the ordinary way at full rates provided that he is given reasonable opportunities to purchase small holdings and pay for them by instalments. An exception will be made in the case of Punjabi *abadgars* already settled in Sind in respect of areas mainly colonized by Punjabis. It is improbable that any other class would be suitable for or be attracted by the conditions obtaining in Sind, but Government will consider sympathetically claims that may be advanced on behalf of any such classes. The Revenue Officer has also been authorized to consider applications from co-operative societies or other organized groups for grants on terms not more generous than those outlined above. A beginning has already been made with peasant grants, and by the end of September 1933 over 20,000 acres had been disposed

of under this head. It is expected that the bulk of the area reserved for this purpose will be distributed during the current year.

50. (iii) *Military Grants.*—After very careful consideration Government have come to the conclusion that no concessions of a financial kind can be made at their expense on the grounds of military service. Subject to the fulfilment of a few definite commitments made before the Barrage scheme was sanctioned, the Revenue Officer is authorized to make grants to military personnel, either retired or serving, on terms of full payment for the land either by themselves or by the Government of India in the Army Department on their behalf. The free leases which had been granted to ex-soldiers before the inception of the Barrage scheme, with a definite undertaking that they would be confirmed without payment of malkano when the grant of land was reopened have now all been converted into permanent grants. They amount to approximately 9,000 acres. Government have agreed to set aside a further 10,000 acres for grant to serving or time-barred soldiers, on condition of full payment for the land, and allotment in connection with this scheme is proceeding, but at the present time it seems unlikely that the whole of this area will be taken up on the terms offered.

51. (iv) *Sales at full rates.*—Having regard to the capital cost of the Barrage scheme, it is necessary to obtain for the bulk of the unoccupied lands the best prices that will be procurable from time to time. It was at one time intended that sales by auction would be the rule, and that these sales would be open to all bidders, whether from this or other provinces. It was also proposed that payment for the land should be by instalments, the general rule being 10 per cent. down and the balance in five equated instalments of principal with interest at $6\frac{1}{2}$ per cent. In practice, it has been found that the period allowed for payment was too short, and the Revenue Officer, who was given authority to vary the number of instalments in cases where he considered it desirable to do so, has found it necessary to allow payment by ten instead of five annual instalments as a general rule. It has also been found that mainly owing to the great fragmentation of Government lands, it is generally more profitable to deal individually with applicants for land by offering them land at a fair price than to proceed by way of public auctions. Outside buyers from distant provinces will not come to Sind and wander about to see small scattered areas merely in the hope that they may be able to buy one

or other of them in an auction. Such buyers are interested only in the few large compact areas, and it is more practicable to set a fair price by treating with them individually after they have seen the *land in which they are interested.*

52. (v) *Limited auctions and sales at fixed prices.*—It was from the beginning recognised that there was in the aggregate a very large area for which sales by auction would not be advisable or even practicable. In these cases the Revenue Officer is authorized to sell lands at a fair price fixed by him, or to hold auctions confined to a limited class of bidders. Examples of the sort of cases referred to are lands which are equally in the *mohag* of several people and of which the sale to a stranger would consequently be inadvisable and lands in small scattered parcels to which no particular person has a valid claim, but which could not be expected to attract any considerable number of bidders at an auction. In such cases a standing offer to sell at a fixed price may be the better method.

53. (vi) *Short-term leases.*—At the inception of the Barrage scheme, over one hundred thousand acres in the Barrage area were held on temporary leases for five years and a considerable area was held on leases for one year which were regularly renewed from year to year. In some cases definite promises had been made that such lands would be permanently granted when the Barrage came into operation and in some cases lands were granted on the express understanding that no such claim would be considered valid. The circumstances of each lease have been examined in considering the terms on which such leases should be converted into permanent grants, and there have been some cases in which financial concessions have had to be made. Generally, however, it was considered equitable to fix a price approximating to the full value of the land and to recover it by an extended system of instalments. This conclusion is justified by the fact that few of these leases date back to the period anterior to 1910, when the Commissioner in Sind issued orders, in pursuance of a decision of Government, that no land commanded by the right and the left bank canals or by the remodelled Eastern Nara should be given out except on lease, the lessees to be subsequently given first claim to permanent occupancy on payment of suitable malkano fixed with regard to the enhanced value of the land due to an assured supply of water. Undoubtedly a large number of these lessees hoped to get their grants confirmed on

payment of a light malkano and the decision to fix a price approximating to the full value of the land has been most unpopular with them. This expectation is not, however, justified. These lands are often very valuable, and are already in regular cultivation, and Government do not think that the fact that tenants have had a free lease for several years can be admitted as a valid claim to further concessions in the matter of price. The leases are now being renewed only on the condition that the holders will agree to take the lands up permanently at the price fixed by the Revenue Officer when they are called on to do so. The land not so taken up will be available for disposal to others in the ordinary way. So far only about 13,000 acres of panjsalo land has been taken up permanently by the old grantees.

The Revenue Officer has been authorized to lease for a period of years lands which are not yet ripe for sale. These leases may be for varying periods and may be sold either by auction or by tender or at rates fixed by the Revenue Officer. The sale of these leases, which are now a regular feature of colonization work in other provinces, will bring in considerable sums and will materially assist the general development of the area by admitting of the temporary cultivation of lands for which water will be available, but which in other respects are not ready for final disposal.

It has also become evident that during the earlier years of the flowing of the canals, considerable areas of Government land must be given out at once in order to secure the proper working of the canals by ensuring a sufficient take off of water from all channels. Such lands it is not profitable to sell yet, nor is it possible to secure high rentals, but they are being leased for short periods on the best terms available. The only alternative to this procedure would be to let water run to waste.

Before the introduction of the Barrage scheme, no lease holder in the Barrage area paid any lease money but only paid the ordinary assessment on such area as was cultivated. The grant of free leases has now been stopped, and lease money at least equivalent to the assessment is now usually charged in addition to the assessment.

54. (vii) *Long-term leases.*—The Revenue Officer is receiving a certain number of applications for large grants for special purposes such as cotton-growing, cattle-breeding, fruit-farming, etc., generally involving some concession in the matter of price. The history of such grants in other

provinces suggests that careful scrutiny of such proposals is necessary, if the public revenues are to be adequately safeguarded. Government have therefore passed orders that the Revenue Officer should not sanction any application which involves either the grant of more than 500 acres or any special concession in the matter of price without their consent.

It is vital to the success of the whole Barrage scheme that the general standard of agricultural production should be raised. This can best be achieved by a demonstration of what can be done by private individuals or companies working for their own profit land for cotton-growing, cattle-breeding, fruit-farming, seed farms, etc. A few large grants ranging from 2,000 to 20,000 acres on terminable leases to persons who will adopt progressive methods and contribute to the social advancement of their small neighbours will be of great value. Government have already sanctioned one grant of 20,000 acres in the Umarkot Taluka of the Thar Parkar District. The grant is in an area remote from railways and other communications, where a considerable area of Government land was available which in the ordinary way would have taken some years to develop. The grantee has started growing cotton on a commercial scale and is also bound to set aside an area of 300 acres to be run as an experimental farm under the instructions of the Agricultural Department. It has already had the effect of drawing attention to the possibilities of this area in a marked degree, with the result that a great deal of the waste land surrounding the grant has already been sold or let on short leases to other applicants.

55. (viii) *Grants to other departments.*—The Agricultural Department have intimated that they will require about 3,000 acres for seed farms. The grant of leases for special purposes mentioned in the preceding paragraph may, however, obviate the necessity of setting apart so large an area for a Government seed farm. The question of the land that will be required by the Forest Department has been discussed in Chapter V below.

There remains the area remaining for disposal at full rates. It would be premature to estimate what this area will be. Leases for long periods, which will be a new feature in Sind, will, for instance, have to be taken into consideration, and it is difficult to foresee with any accuracy the extent to which these leases will be taken up. The total

area for disposal will be very large, and the sales are likely to be spread over a period of not less than twenty years, during the course of which some of the proposals may undergo modification in the light of the changing financial situation and actual experience. The proposals must therefore be regarded rather as a general indication of the lines along which development can for the present proceed than as an irrevocable commitment to a particular policy. The great fall in agricultural prices and values which has just set in may last for some years, but unless it becomes clear that it is likely to be permanent, it would appear profitable to slacken off somewhat the programme of outright sales and concentrate rather on bringing the land under cultivation as quickly as possible by means of short leases.

56. (*B*) *Other problems*—(i) *Introduction of new settlements.*—The number of talukas wholly or partly affected by the Barrage canals is 38, and the introduction of new land revenue settlements in all of them was necessary. Regular settlement enquiries were instituted and were carried out by two officers during the four years ending 1930-31. The reports had been completed but had not yet reached Government before the world wide depression of prices made it clear that any rates of assessment based on enquiries held before that depression set in could not be satisfactory, and could hardly be considered by Government unless they were first reviewed in the light of the changed conditions. Government therefore directed that the proposals made by the settlement officers should first be revised with reference to the fall in agricultural prices before they were published in the ordinary course for the submission of representations and objections. This review inevitably resulted in the recommendation of much lower rates of assessment than had originally been proposed. The introduction of the new settlements was sanctioned by Government in July 1932, and the new rates were introduced with effect from the kharif crop of 1932, which was the first to be grown on the supply afforded by the new canals.

57. (ii) *Land Acquisition.*—The acquisition of land for canals, distributaries and minors has now been nearly finished, the total area acquired for these channels up to 30th September 1933 being 46,314 acres at a cost of 61·66 lakhs. The remaining area for acquisition is for water courses, and most of this is being acquired by private negotiations without recourses to the Land Acquisition Act.

58. (iii) *Rectangulation.*—Details have been given in paragraphs 17 to 21.

IV. Agriculture.

A—Development of the Agricultural Department in Sind, 1923-33.

59. *Advisory Committee, 1923.*—As soon as the Lloyd Barrage Project was sanctioned, an Advisory Committee was appointed by Government to consider the development of the Agricultural Department in Sind in order to enable it to deal effectively with the large series of new agricultural problems which would arise on the advent of perennial irrigation. This Advisory Committee was composed of both official and non-official gentlemen and was under the Chairmanship of the Commissioner in Sind. The Committee submitted numerous valuable recommendations many of which are alluded to in the course of this chapter.

60. *Recommendations of Advisory Committee, 1923.*—With regard to the administration of the Agricultural Department in Sind, the Committee urged the separation of the Department in Sind from that in the Presidency, the former to be placed under the sole control of a local Director who would deal directly with Government and also with the Commissioner in Sind and the Chief Engineer, Lloyd Barrage and Canals Construction. On the side of scientific research and investigation into agricultural problems, the Committee recommended strongly that experimental work should be undertaken at once *before* the opening of the Barrage. They emphasised the importance of research into soil and irrigation problems with special reference to *kalar* land formation and reclamation and urged the financing of such scientific investigations on a liberal scale so as to ensure that the maximum results should be obtained. In connection with agricultural propaganda and extension work, the Committee considered that a greatly extended programme of district propaganda and demonstration work was essential and recommended the early development of the staff and equipment of the Agricultural Department in Sind to enable such an increased programme to be carried out fully and effectively.

The recommendations of the Advisory Committee of 1923 and the action taken thereon, up to the present year, i.e., 1933, are tabulated in Appendix I.

61. *Central Agricultural Research Stations.*—The Advisory Committee recommended the establishment of three main agricultural research stations, viz. :—

(1) At Larkana, for the area to be irrigated on the right bank of the Indus.

(2) At Sakrand, for the area under the Rohri and other canals on the left bank.

(3) At or near Shadipalli, for the area under the various canal systems dependent upon the Eastern Nara.

Government accepted these recommendations with certain reservations. The establishment of two main stations on the two banks of the Indus was admitted to be necessary but, as it was not then certain whether the problems of the Eastern Nara tract were so different in character from those of the rest of the Left Bank area as to require an independent station, this item was held over for further investigation. It was decided, however, to establish forthwith one central research station at Sakrand on the left bank of the Indus as the important problems of this large tract demanded immediate investigation. Suitable land was available and irrigation facilities were considered to be adequate. The scheme for starting this main research station at Sakrand was estimated to cost Rs. 3,02,432 during the year 1925-26 and this demand was finally passed by the Legislative Council in August 1925.

62. *The Agricultural Research Station, Sakrand.*—The Agricultural Research Station, Sakrand, is situated in Nawabshah District in the centre of the area which is commanded by the Rohri Canal and its dependent canal systems on the Left Bank of the Indus. Since the opening of the Station in 1925, the main research work of the Agricultural Department in Sind on post-Barrage problems of Agriculture has been centralized there. The scientific work of the station is organised in three sections, chemical, botanical and agricultural. In addition, a small physiological section, financed by grants from the Indian Central Cotton Committee, has been established at the station to carry on investigations into physiological problems of cotton cultivation in Sind. Within the past three years, minor organizations dealing with estate management and agricultural engineering have been established at the Station. In 1932-33, an oil-seed branch of the botanical section has been started for agricultural and economic research into the possibilities of the extension of the cultivation of improved

varieties of oil-seed and pulse crops in the Barrage areas. The work of this branch is financed by grants from the Sir Sassoon David Trust Fund.

63. *Direction and co-ordination of agricultural activities in Sind prior to 1930.*—The establishment of an Agricultural Department in Sind took place in 1904. During the period 1904-1930, the work of the Department was in charge of a Deputy Director of Agriculture and was under the general supervision and control of the Director of Agriculture, Bombay Presidency. The cadre of the department in Sind formed part of the general cadre of the Agricultural Department in the Presidency. After the organization of the Agricultural Research Station, Sakrand, in 1925, Dr. Mann, the then Director of Agriculture, held charge of the control and direction of the Station, in addition to his own duties until his retirement in 1927. Thereafter, temporary arrangements continued in force until June 1930. The Advisory Committee of 1923 had stressed the necessity for a separate Agricultural Department in Sind. The Royal Commission on Agriculture in India stated that :—

> "The Agricultural problems of Sind will, in our opinion, assume such importance as a result of the construction of the Barrage that we consider the province should have its own Director of Agriculture with headquarters at Karachi. The work of the Sakrand Farm and its sub-stations will fully occupy the time of a Deputy Director of Agriculture.
>
> We recognise that Sind under Barrage irrigation will contain as important and comprehensive a system of agriculture as Egypt has to-day and we consider that the welfare of the people demands a chain of experimental stations subsidiary to Sakrand and a full staff of competent officers. We are convinced that the financial returns to the State from expenditure on a far-sighted policy will be on the most generous scale."

In accordance with these opinions, in June 1930 the post of Chief Agricultural Officer in Sind was created, combining the duties of the Director of the Research Station at Sakrand and of Deputy Director of Agriculture; and Mr. W. J. Jenkins was appointed to it.

64. *Establishment of a separate Agricultural Department in Sind.*—Subsequently, the Chief Agricultural Officer in Sind was made independent of the Director of Agriculture, Bombay Presidency, in financial and administrative

matters and subordinate only to the Commissioner in Sind. Steps were also taken to separate the cadres of the Provincial and subordinate agricultural services on the basis of the present distribution. The Chief Agricultural Officer is, however, able to obtain the advice of specialist officers under the Director of Agriculture such as the Agricultural Chemist, the Live Stock Expert, the Economic Botanist, the Plant Pathologist, etc.

B—Agricultural Research and Investigation.

(1) Organization of Research.

65. *Agricultural Research Stations.*—The main agricultural research work of the Agricultural Department is centred at the Agricultural Research Station, Sakrand, where scientific investigation into post-Barrage problems of agriculture is being carried on in the chemical, botanical, agricultural and physiological sections established at that station. Research work on the rice crop is in progress at the Government Farm, Larkana, in the centre of the rice-growing areas of North Sind. Botanical work on the "bosi" wheat crop was formerly conducted at the Government Wheat Farm, Jacobabad, but, as this institution was closed down in 1932-33, arrangements have been made to continue this work on a small leased area. Irrigated wheats are being dealt with at the Agricultural Research Station, Sakrand. Research work on fruit culture and horticultural problems is centred at the Government Fruit Farm, Mirpurkhas.

66. *The Sind Research Committee.*—During 1930-31, considerable impetus was given to agricultural and irrigational research in Sind by the formation of a Sind Research Committee to co-ordinate and control research work in Sind in all its branches as affecting irrigation and agriculture. The composition of the Committee is:—

(*i*) The Commissioner in Sind (Chairman),

(*ii*) The Chief Engineer in Sind,

(*iii*) The Chief Agricultural Officer in Sind,

(*iv*) The Executive Engineer, Development and Research Division in Sind,

(*v*) An Agricultural Research Officer to be nominated by the Chief Agricultural Officer in Sind.

The main function of the Committee is to ensure the closest co-operation between the research work of the Agricultural and Irrigation Departments by consideration of the lines along which such work should proceed in future and by allotment of different items of research work among the various research organizations of both departments so as to avoid duplication and over-lapping of work.

(2) Improvement of Crops.

67. *Introductory.*—The Advisory Committee of 1923 urged that careful experiments should be made to determine (*a*) the types of crops which would give the best results under Barrage conditions and (*b*) the best rotations of crops which would enable the maximum returns to be obtained from the land without damaging it, while at the same time maintaining its fertility. This work is being carried on intensively at the Agricultural Research Station, Sakrand, and at subsidiary research stations of the department. This section of the report deals primarily with botanical and agronomical improvement of crops both with regard to yield and quality and an attempt has been made to indicate the progress made in these directions and to describe the future lines of work which are being undertaken.

(A) Wheat.

68. *Present position with regard to wheat improvement.*—The importance of wheat as a crop to be grown in the Barrage areas has always been recognized both by Government and by responsible commercial bodies in Sind. It is anticipated that wheat will be by far the most extensively cultivated crop under Barrage irrigation and that the total area under this crop will rise from half a million to two million acres. On the botanical side the research work of the department has been directed towards (*a*) obtaining by selection among local Sind wheats, the highest yielding strains for extension as pure crops in the districts and (*b*) improving the quality of the Sind wheat crop by the extended introduction of superior "strong" wheats, with good milling characters, from other parts of India and from abroad.

With regard to (*a*) the Agricultural Department has succeeded in selecting high-yielding strains of wheat, viz., C. Ph. 47 (Phandani), A. T. 38 (Thoree) and H. S. W. III (Boojri) which give definitely superior outturns per acre than

the ordinary local crops in general cultivation. These selected strains are being multiplied up and extended in the wheat-growing tracts. Under (*b*) above, the most successful importations are the famous "Pusa" wheats produced at the Imperial Institute of Agricultural Research, Pusa, Bihar. The variety Pusa 12 is already well established in North Sind and other high quality Pusa wheats, notably Pusa 114, appear to be well suited for cultivation under Sind conditions. Other successful importations include Punjab 8-A and Punjab 11, two valuable wheats from the Punjab, Manitoba No. 1, the world famous "strong" wheat of Canada and Bina wheat from the North-West Frontier Province.

Experiments on wheat cultivation and agronomy have shown that, under post-Barrage conditions of irrigation, early irrigation water can be utilised for flooding wheat fields in October and early November and, provided that suitable tillage methods, designed to preserve the moisture in the land, are adopted, the crop can be sown on such fields in late November or December without affecting final yields.

69. *Recent progress with regard to Wheat improvement.*— The series of "Major Wheat varietal tests" carried out in the rabi seasons of 1930-31 and 1931-32 were repeated in the rabi season of 1932-33 and the results obtained largely confirmed the results of the previous years. These tests involved the design and execution of a series of scientifically designed field experiments on both Government farms and zamindari lands in all parts of Sind. As a result of these tests, the Agricultural Department is now in possession of full and reliable information with regard to the yielding capacity of improved wheat varieties in the different wheat-growing tracts and a scheme for seed multiplication and extension of improved wheats has been commenced on the basis of the information thus obtained.

The Karachi Chamber of Commerce drew the attention of Government to the importance of extending the cultivation of "strong" wheats with good milling characters in the Barrage areas. Samples of improved types of wheat grown in Sind, both indigenous and imported varieties, have been submitted for milling and baking tests in England, the United States of America, Holland and Scotland and considerable valuable information is now available with regard to the quality of these samples from the milling and baking point of view. The imported Pusa type, viz., Pusa 114, has been most favourably reported upon abroad and

efforts are now being made to cultivate this variety in commercial quantities in the Barrage areas.

A seed multiplication scheme for improved wheat varieties based on "units"—each "unit" representing a final area of 50,000 acres under one improved variety—has been drawn up and the third stage of multiplication is in progress. The programme of pure seed multiplication under this scheme consists of five stages for each "unit", viz., (1) seed patch—5 acres, (2) increase block—50 acres, (3) field scale plantings—500 acres, (4) village groups—5,000 acres and (5) district groups—50,000 acres. The first three stages are under careful departmental supervision; the fourth and fifth stages will be arranged through selected seed-growers and co-operative organizations. Seven and a half such "units" of multiplication have been started to supply different wheat-growing tracts. Arrangements have been made with the Sind Central Co-operative Bank whereby that organization will take a prominent part in the financing and distribution of the fourth stage under the seed multiplication scheme.

With regard to purely botanical work on the wheat crop, trials of different varieties of wheat obtained from other parts of India and from abroad were continued. In general, these newly imported varieties have been found to be decidedly inferior to the improved varieties now being handled by the Department in point of yield. Several, however, possess valuable characters and will be utilised in future hybridization work with Sind wheats. The F 1 generation of the new cross between C.Ph. 47 and Pusa 114 was grown in the rabi season, 1932-33.

70. *Future lines of work in wheat improvement.*—With regard to botanical investigations, it is unlikely that any material improvement in yield over the improved varieties now being handled by the department will result from further selection among indigenous Sind wheats. The possible exception is among the Thoree types of wheat and botanical selection in these varieties will be continued for a few more years. The most profitable and rapid method of improving the quality of the Sind wheat crop is by the continued introduction and acclimatisation of the improved Pusa selections. These selections are being tested further in the different wheat-growing tracts under replicated yield trials. Measures are also being taken to obtain from time to time analytical reports on the nitrogen and protein content and

on the milling and baking qualities of all improved wheats grown in Sind as an essential complement to botanical work.

Experiments are necessary to determine the best seed rate of the improved wheat varieties, under both irrigated and *bosi* conditions, in the main wheat-growing tracts of Sind and work in this connection has been started. The manuring of the wheat crop, both with artificial manures and green manure crops, is under investigation at the Agricultural Research Station, Sakrand. The possibility of altering the spacing between rows with the object of obtaining the maximum stand and final yield per acre will be tested.

In view of the very important place which the wheat crop will occupy in Sind under the Lloyd Barrage and Canal Systems, the detailed study of the world economics of the wheat crop and of internal and external market requirements must be continued. The types of wheat which are required in the world's markets, the economics of production, assembly and distribution and the changing requirements of consumers both in India and abroad are subjects upon which the fullest investigation is needed in the interests of the future of wheat growing in Sind. In addition, efforts are being made in the near future to place commercial quantities of pure superior quality wheats grown in Sind on the market in order that it may be possible to determine the economics of their production in the Barrage areas. These matters are at present receiving careful attention but if they are to be investigated in full detail might finally require the undivided attention of an expert marketing officer, as recommended by the Royal Commission on Agriculture in India (paragraph 348 of Report).

(B) Cotton.

71. *Present position with regard to cotton improvement.*— During the past ten years, the area under cotton cultivation in Sind has averaged slightly over 3,00,000 acres with an average annual outturn of about 1,00,000 bales. With the full development of perennial irrigation under the Lloyd Barrage and Canal Systems, it is anticipated that the cotton acreage will expand to 7,50,000 acres and may even reach 10,00,000 acres. Four main classes of cotton are being dealt with by the Agricultural Department in Sind, viz.,

(*a*) Sind *deshi*, (*b*) Punjab-American cottons, (*c*) imported American cottons and (*d*) imported Egyptian cottons. Among these four main classes of cottons—which include types suitable for all purposes—the Agricultural Department have evolved by botanical selection improved strains which, by reason of high outturn per acre, high ginning percentage or superior quality, appear suitable for extension in general cultivation in the Barrage areas. Among the *deshi* types, the improved variety 27W.N. gives an early and abundant crop (about 16·20 per cent. higher outturn than ordinary *deshi*) and has a 4-5 per cent. higher ginning percentage. This variety is now the standard *deshi* cotton in Sind and is extending rapidly in the cotton-growing areas. Of the Punjab-American types, improved selections in the 285F and 289F varieties have been obtained with a staple length of 1″ to 1-1/8″ which grow well under Sind conditions and would be in great demand by Indian mills. The yield of the Punjab-American varieties is not so great as that of the improved *deshi* 27W.N. Among imported American and Egyptian types, improved selections have been made which are outstanding for staple length and high quality of lint. The yields of these imported varieties are, however, low—about half the yield of the improved *deshi* type. They are also more susceptible to unfavourable environmental or climatic conditions and require more care and attention in cultivation. Thus the Agricultural Department in Sind has already obtained a very wide range of improved cottons, suitable for all purposes, and available for extension under post-Barrage conditions.

72. *The Indian Central Cotton Committee, Bombay, and the extension of improved varieties of cotton in Sind.*—In December 1930, the Chief Agricultural Officer in Sind submitted a Note on the major problems connected with the development of cotton cultivation in Sind to the Indian Central Cotton Committee, Bombay. This note served as the basis for a discussion during which the advice of traders, growers and official representatives on the Committee was given freely. With regard to the problem of which variety or varieties of cotton should be extended under post-Barrage conditions, the general consensus of opinion was that cotton with a full 1″ staple always had a good market and that it would therefore be desirable to go in for more of this type of cotton. It was also recommended that efforts should be made, in so far as it would be possible, to segregate areas for the production of stapled cotton in order to avoid the evils of

mixing and to obtain the best prices for the growers. The Committee made a strong recommendation that a system of licensing of gins and presses should be introduced into Sind as early as possible and that the construction of new gins and presses in the Barrage areas should be controlled to avoid the subsequent formation of "pools" which would operate against the best interests of the growers. Finally, the Indian Central Cotton Committee sanctioned a grant of Rs. 31,000 per annum for a period of three years in the first instance to be devoted to the extension of improved cotton varieties in the Barrage areas. This grant has been utilized for the establishment of a "Sind Cotton Extension Scheme". A cotton supervisor and staff being appointed in both the right and left bank areas to carry out district demonstrations and experiments on the cultivation of improved cottons and to supervise seed multiplication and distribution. In August, 1933, the Indian Central Cotton Committee considered reports on the progress of the work under the scheme and sanctioned a further grant of Rs. 2,96,540 to enable the scheme to be extended for a further period of five years, i.e., till 1939.

73. *The Sind Cotton Committee.*—The formation of a Sind Cotton Committee was approved by Government in March 1931. The committee has considered many matters relating to the welfare of the cotton-growers of Sind including schemes for the multiplication and extension of pure seed of improved varieties, improvements in cotton marketing, regulation of gins and presses, cotton standards, and measures for improving the yield and quality of the Sind cotton crop. The Sind Cotton Committee forms a common meeting ground where all sections of the cotton trade, growers and officials, can discuss matters, relating to the welfare of the cotton growing and trading industries in Sind.

74. *Trade exhibition of improved cottons in Karachi.*—An exhibition of the improved cottons, being handled by the Agricultural Department in Sind was held in Karachi in February 1932. This exhibition was organised in order to bring to the direct notice of the cotton trade the progress which has been made by the Department in cotton improvement work and to ascertain, as far as possible, the future trend of trade requirements in connection with the development of cotton growing in the Barrage areas. The exhibition was held in the hall of the Karachi Chamber of Commerce

and was largely attended by representatives of commercial bodies and of large cotton-growing firms and by prominent cotton growers. A similar cotton exhibition was organised in February, 1933, at the time of the meeting of the Indian Central Cotton Committee which, at the request of the Sind Cotton Committee, was held for the first time in Karachi. The members of the Central Cotton Committee and many other visitors took a keen interest in the exhibits and many valuable suggestions for future work were obtained. This was the third trade exhibition organised by the Department, —a wheat display having been held at Karachi in 1930-31— and the results fully justify the continuance of this valuable method of ensuring a liason between the commercial community and the scientific work of the Department.

75. *Recent progress with regard to cotton improvement, botanical and agronomical investigations.*—The main improved varieties of cotton, being handled by the department, were again tested in replicated series on Government farms and in the districts. The results obtained emphasized the high yielding capacity of the improved *deshi* variety, 27W.N. and the improved Punjab-American selections, viz. 285F-21, 285F-2 and 289F-1 also gave satisfactory results. Adverse climatic conditions which prevail during certain seasons bore severely upon the imported American and Egyptian types and botanical work is in progress to endeavour to obtain hardier and higher-yielding strains of these high quality cottons. Hybridization work was limited to continued study of the crosses already in hand and trials of the most promising of these are now being carried out on a field scale.

Agronomic experiments on sowing dates, distance of planting, interculturing and green manuring of the cotton crop were continued at the Agricultural Research Station, Sakrand.

76. *Physiological investigations on the cotton crop.*—The Cotton Physiological Research Scheme, financed by the Indian Central Cotton Committee, completed its sanctioned period of five years in 1932. A final report on the five years' working of the scheme was submitted to the Central Cotton Committee in August. The Committee approved the report and extended the scheme for a further period of five years at a total cost of Rs. 1,62,854. Valuable practical results have already been obtained from the work under this scheme with regard to the most suitable sowing dates of

different varieties of cotton under post-Barrage conditions of irrigation and in connection with the water requirements of the crop. Experimental work on the best methods of distributing irrigation supply, within a fixed "delta", to the cotton crop in order to increase final yields is in progress. Another major item in the extended research programme deals with the effect on cotton yields of applications of quick-acting nitrogenous manures at critical periods of crop growth. The factors, responsible for the appearance of "red leaf" in American and Egyptian cottons and the problems relating to sound seed development are also being studied.

77. *Cotton extension work in the Barrage areas.*—This work is financed by grants from the Indian Central Cotton Committee and has recently been extended until 1939 at a cost of Rs. 2,96,540. The work is organised in two sections, one in the left bank areas and one in the right bank areas. Each section is under the charge of a Cotton Supervisor with a small subordinate staff. These establishments are carrying out definite programmes of cotton extension and of propaganda and demonstration in connection with the growing of improved cotton varieties and better methods of cotton cultivation. During the year 1932, field trials of improved cottons were laid out at eighteen centres on the left bank and, on the right bank areas—where cotton cultivation was not practised hitherto—thirty demonstration plots of cotton cultivation were organised. In addition, the Cotton Supervisors conducted varietal tests of superior quality cottons, demonstrated improved methods of cotton cultivation, assisted zamindars in marketing their produce, organised seed multiplication and extension work in their respective areas. The development of cotton cultivation on the right bank of the Indus promises to become a feature of post-Barrage agriculture in Sind.

A seed multiplication scheme for improved varieties of cotton—based on "units" as in the case of wheat—has been organised and is now in force. The "unit" in the case of cotton is 25,000 acres finally developed under one variety of improved cotton. The stages of multiplication are the same as in the scheme for wheat seed multiplication. Nine "units" of multiplication—five for improved *deshi* cotton and four for improved Punjab-American varieties—have been commenced and the third stage of development, involving 2,500 acres under improved cottons on the lands of "A"

class registered seed-growers will be entered upon in the kharif season of 1934.

78. *Future lines of work on cotton improvement.*— Botanical research work on the cotton crop in Sind is being concentrated upon (*a*) Punjab-American types and (*b*) Imported American and Egyptian types. With regard to (*a*), botanical selection aims at obtaining higher yielding and hardier strains than at present available while maintaining a staple length of not less than 1". Improvement in the regularity and the "silkiness" of the staple of the Sind-American crop is also being kept in view. With regard to (*b*), the most important requirements are greater resistance to adverse environmental conditions and to white ant attack, earlier maturity and better yields per acre. It is unlikely that further selection work among Sind *deshi* cottons will result in obtaining a higher yielding strain than 27W.N. but it will be necessary to continue botanical work with this improved strain to ensure the maintenance of its high ginning percentage. Further breeding work on high quality cottons is being concentrated at Mirpurkhas with a view to their ultimate extension on the Jamrao Canal area where conditions appear to be most favourable for their successful and profitable cultivation. Work on the existing 4F × Meade, 285F × Sea Island and 285F × Pima hybrids will be continued but the prospects of any important advance by hybridization among improved cottons are not of much importance at present. Good varieties of African cottons have been obtained and tested under Sind conditions.

On the side of cotton agronomy and cultivation, further research work on the manuring of the cotton crop and the effect of manurial applications at critical periods of growth has been commenced in the physiological section, Sakrand. Attention can also be profitably given to investigations into the optimum seed rates of different cotton varieties, technique of sowing and interculturing and irrigational requirements in different cotton-growing tracts in the Barrage areas. Field trials of such agronomic improvements are in progress on Government auxiliary farms. The investigation of the various diseases of the cotton crop in Sind, e.g. wilt disease, "root rot", "red leaf" etc., and of the control of insect pests, e.g. bollworm, white ant, etc., must also be undertaken in the near future.

On the economic side of cotton production in Sind, the marketing of improved varieties of cotton, especially of low

yielding long stapled varieties requires detailed examination if the growers of such superior quality types are to receive an adequate return for their labours. The recommendations of the Indian Central Cotton Committee with regard to the licensing of gins and presses, the segregation of long stapled areas, i.e. "community" cotton growing and the avoidance of the evils resulting from "mixing" and "pooling" in ginning factories must be examined thoroughly. Certain of these problems have already been considered by the Sind Cotton Committee and there is every reason to believe that their solution will be reached with the fullest co-operation between the commercial community and the Agricultural Department in Sind.

(C) Other Crops.

79. *Rice.*—Work on rice crop improvement is being conducted at the Government Farm, Larkana, and three improved strains have been evolved which are much superior to the local varieties and which are rapidly extending in the rice-growing tracts of North Sind. During the past two years, a series of experiments were conducted in the district to ascertain whether the transplanting season of the rice crop could be profitably advanced in view of the fact that irrigation water under Barrage conditions will be available about two months earlier than formerly. The results indicate definitely that early transplanting is not only possible but gives higher yields per acre than by the old method of late transplantation. Similar experiments are being carried on in the present year.

The work of the Agricultural Department on the improvement of the rice crop has so far been entirely concentrated upon the rices of the Upper Sind tract. However there are approximately five lakhs of acres under rice cultivation in the districts of Hyderabad and Karachi and it is essential that scientific research on the improvement of the rice crop in this important area should also be undertaken. Accordingly, work on the botanical improvement of the rice crop of lower Sind and the testing of high quality and early maturing varieties from other rice-growing areas was carried out last year in the Guni taluka of Hyderabad district. The results obtained were promising and the investigations are being continued in the present year. The Botanist in Sind has carried out an extensive tour in Karachi district to study the existing conditions of rice cultivation there, and

has submitted a comprehensive report dealing with all the major problems of the tract and suggesting profitable measures to benefit the cultivators. Arising out of this report, large quantities of seed of early maturing rices have been distributed for extended cultivation in Karachi district. A promising hybrid Kangni 27 × Kolumba 184 appears to offer possibilities of giving a material increase in the yield of the rice crop in north Sind and is now being tested on a field scale. Investigations are being made with regard to the suitability of improved Sind rices for other markets in India and abroad and samples have been sent to trade authorities for opinion and valuation. During the present year, a consignment of five tons of dehusked Kangni rice from north Sind, was sent to a firm of rice millers in London, for valuation and milling tests. The report received from the firm indicated that Kangni rice is too small-grained to suit the European market which demands a bolder sample of the short and flat type. Similarly tests with other varieties of improved Sind rice will be arranged in future.

At Larkana, investigations into diseases of the rice crop are in progress. This work is under the charge of a Rice Mycologist and is financed by grants received from the Sir Sassoon David Trust Fund. Special research work on the control of the "ruro" or "mahlo" disease in the rice crop in lower Sind is most necessary as it has caused tremendous loss to the cultivators and Government in recent years.

Jowar and bajri.—Under perennial irrigations from the Lloyd Barrage and Canal Systems, a considerable increase in the areas under jowar and bajri must be anticipated in view of the increased demand for grain for human consumption and of fodder for work-animals. With regard to jowar, the department have obtained several improved high-yielding varieties which give 20-40 per cent. higher outturns per acre than the ordinary crops in cultivation in Sind. The seed of these improved varieties is being multiplied up and issued for extension in the districts. Hybridisation work on this crop is also in progress and promising material has been obtained. Preliminary work has been started on the botanical improvement of the bajri crop in the Barrage areas.

80. *Oilseeds and pulses.*—The Royal Commission on Agriculture in India raised the question whether it would be prudent, in the left bank area, to rely on cotton only as a main kharif crop or whether efforts should be made to find

alternative money crops which could be grown successfully in this tract. This question has assumed greater importance in view of the extremely low rates prevailing for cotton during the past three seasons. The most likely alternative money crops to cotton, in the kharif season, are the leguminous oil-seeds, e.g. soya beans, ground-nuts, etc. Special investigations into the economic possibilities of the cultivation of oil-seed and pulse crops in the Barrage areas have been started in the botanical section at the Agricultural Research Station, Sakrand, where an "Oil-seed Branch" has recently been established for this work. Numerous varieties of these crops, e.g. ground-nuts, sesame, castor, niger seed, sunflower, etc., were obtained from different parts of India and tested under Sind conditions. The most promising types were retained for further trial and, in addition, samples of their produce were sent to commercial firms in Karachi for valuation in order that the economics of their cultivation on a field scale could be forecasted. Several types of rabi oil-seed crops, viz. torio, jamsho, rape, mustard, linseed, safflower, castor, sunflower etc. were tested at Sakrand by the "Oil-seed Branch" last rabi season and field results, supplemented by trade reports and valuations, indicate that several of these crops will give greater profits to the cultivators in the rabi season than they can obtain from wheat-growing. In addition, the systematic cultivation of rabi oil-seed crops would enable full use to be made of the irrigation supply available from the Barrage Canal Systems from October to December. This important work is being financed by a grant generously contributed by the Trustees of Sir Sassoon David Trust Fund and the results obtained therefrom should be of the greatest value to the cultivators in the left bank Barrage areas. As a corollary to this research work, the Agricultural Department has organised an "Oil-seed Growers' Association" to encourage the cultivation of oil-seed and pulse crops in the Barrage areas and to assist growers in the marketing of these crops.

81. *Soya beans.*—Soya beans are rapidly becoming of first rate importance in international trade. The total quantity of these oil-seeds shipped from the East in 1932 was 22,04,000 tons, compared with 1,705,990 tons in 1930. Shipments to Europe were increased by 47,600 tons, viz. 1,517,600 tons during 1932 compared with 1,470,000 tons during 1931. The great bulk of this import was from Manchuria and the Far East.

The profitable cultivation of this valuable crop in the Barrage areas of Sind is under investigation at the Agricultural Research Station, Sakrand. Last year, extended trials of Punjab and Pusa types of soya-bean were made in the districts and the results obtained show that this crop can be successfully grown in Sind. A number of varieties from South Africa and the United States of America are now being tested at Sakrand with the object of obtaining early, high yielding types with high oil content. Unfortunately, the prevailing market price (about Rs. 2-4-0 per maund) is not sufficiently high to justify the yearly extension of soya-bean cultivation in the Barrage zone until superior quality, high yielding varieties are available for distribution. The work is being continued and developed in the current year and valuations of Sind-grown soya-beans received from London indicate that they compare very favourably with the Manchurian product. It may be pointed out that, in addition to its value as a commercial crop, the cultivation of soya-bean would benefit the cultivator as an excellent leguminous crop in a rotation and as a cleaning crop on weedy lands.

82. *Berseem.*—The Royal Commission on Agriculture drew special attention to the value and importance of berseem. This is a leguminous crop from Egypt which adds to the fertility of the soil and improves its texture. It provides a very valuable fodder and is particularly useful in connection with the reclamation of alkaline lands. Berseem can be grown luxuriantly anywhere in Sind but seed does not set well in Lower Sind. In Central and Upper Sind, however, satisfactory yields of good seed are obtainable. Berseem occupies a very important position in the Sakrand rotations which deal with the reclamation of *kalar* land and the maintenance of soil fertility under perennial irrigation and high intensity of cultivation. Experiments in connection with the seeding of berseem at Sakrand have given good results and the seed produce found a ready market at Rs. 20 per maund. Imported seed of the same quality costs Rs. 45 per maund, so the extension of seed production locally is of great importance if this crop is to be adopted in general cultivation in the Barrage areas. The effects of phosphatic manuring on the seed production of the berseem crop are under investigation at Sakrand and the results so far obtained indicate that applications of super-phosphate to the land before sowing, or bone-meal manuring of the preceding jowar crop, tend to increase the yield of berseem seed and improve its quality

and germinating capacity. Trials of different varieties of berseem imported from Egypt are also in progress.

83. *Miscellaneous crops.*—Experiments in connection with the cultivation of potatoes and onions have shown that there is a wide scope for the profitable introduction and extension of these crops in the Barrage areas. The yields obtained at Sakrand have been remunerative and profits of Rs. 60—Rs. 130 per acre have been obtained. Improved methods of cultivation are under trial and the effect on outturn of manuring with sann hemp, either as a green manure or after composting, is being studied. The area under these crops is bound to increase upon the advent of cheap perennial irrigation and their cultivation on scientific lines will be most profitable. Trials of different varieties of sugarcane, imported from all the main cane-growing tracts of India, are also in progress in the agricultural section where experiments on sowing-date and manuring of the cane crop are also being carried on. Among fodder crops, considerable success has attended the cultivation of oats and the introduction of mangolds as a root crop, especially on *kalar* land, has given good results. Other fodder crops under trial include cowpeas and mung in kharif and tangie pea in rabi. Varietal trials of tobacco and chillie crops have been laid down. As regards tobacco, it has now been proved that high class varieties e.g. Gandiu No. 6 for "bidi" manufacture and Madras types for the cigar and cigarette industries, can be grown in Sind. The fermenting and curing processes on scientific lines under local conditions remain to be studied in order that a high quality leaf may be obtained. Special attention is being given to maintaining accurate costings of the cultivation of these miscellaneous garden crops so that the economics of their cultivation on a field scale can definitely be determined and made available to the cultivators in the Barrage areas.

The Agricultural Department in Sind is now working on definite programmes of research and investigation in connection with all the miscellaneous crops mentioned above, and, in addition, numerous new crops are being imported into Sind and tested at Sakrand to determine their suitability for cultivation on an extended scale in the Barrage areas. Leaflets, in both vernacular and English, on the cultivations of berseem, potatoes, groundnuts, onions, oats and castor have been issued by the department and widely distributed.

(3) *Soil and Irrigation Research.*

84. *Introductory.*—The soil and irrigation research work of the Agricultural Department in Sind is centred in the chemical and agricultural sections at the Agricultural Research Station, Sakrand. The main problems under investigation relate to the prevention of the formation of *kalar* land under conditions of perennial irrigation, the reclamation of *kalar* lands, the maintenance of soil fertility under Barrage conditions of agriculture and irrigation and the water requirements of various crops. The alluvial soils of Sind are so varying in their physical and chemical characters that investigations into soil problems and the practical application of results obtained therefrom are necessarily of extreme complexity. A soil and sub-soil survey has been carried out by the Development and Research Division of the Irrigation Department and the investigations have been completed in the whole of the Barrage command, some 11,600 sq. miles. The field data obtained during the past two seasons are being worked up. Maps have been prepared showing the positions of the sand belts under the surface of the ground and the salinity of the sub-soil water. All the work in connection with sub-soil investigation by the Research Division is being done in full co-operation with the Agricultural Department. The Research Division of the Irrigation Department in Sind has obtained considerable data with regard to *kalar* occurrence and intensity, sub-soil strata and water levels over very large areas. This information is proving to be of the greatest value in dealing with local problems of water-logging and seepage. The research work at Sakrand has resulted in definite treatments, irrigational, chemical and cultural, for the prevention of *kalar* and the reclamation of *kalar* lands, being devised. The next step forward is obviously to test these treatments over a very wide area and to endeavour to correlate the results obtained with the data which have been obtained from the sub-soil survey work conducted by the irrigation authorities.

Co-ordination between the research activities of the Agricultural and Irrigation Departments has been achieved by the formation of a Sind Research Committee, upon which both departments are fully represented. The main functions of this committee which is presided over by the Commissioner in Sind are to settle the main policy of research and to allocate different problems requiring investigation to the organization most suitably equipped with staff

and material to carry them to a successful solution as early as possible. The Research Committee also receives and considers from time to time reports on the results achieved by research workers of both departments and considers the best means of utilising such results to the practical benefit of the Sind cultivators.

85. *The Kalar problem: Progress of experimental work.*—The methods which have been adopted at Sakrand in dealing with this problem may be classified as (*a*) mechanical, (*b*) chemical, and (*c*) agronomical. The mechanical method consists of leaching the affected lands with heavy doses of irrigation water which percolate down to the lower layers of the soil carrying in solution the injurious salts. This method is only applicable by itself where no impervious layer exists near the soil surface and is generally effective where the upper layers of the sub-soil consist of sand or coarse silt. Once improvement by this method is effected, it is most desirable that the land should be frequently cropped. Better and more lasting results have been obtained by the agronomical method, i.e. the cropping of *kalar* lands under a system of rotation which includes a high percentage of crops known to be resistant to *kalar* and which have a beneficial effect on the physical texture of the soil and on the maintenance of its fertility constituents. At Sakrand, most success has attended the use of berseem in this connection though several other salt-resistant leguminous crops are under trial. In Sakrand "A" system, on very bad salt lands, berseem is grown over the whole cropped area every rabi season and records indicate that reclamation under this system is now practically complete. The chemical method of dealing with *kalar* areas consists of the application of dressings of certain chemical substances to the *kalar* land with the object of improving its physical texture and thus increasing the rate of percolation and facilitating the washing out of injurious salts or of neutralising and off-setting the effect of such injurious salts on plant growth. In general, this method is expensive and is unlikely to be economically profitable except on small persistent areas of *kalar* where it could be applied with advantage. The solution of the problem of the reclamation of large *kalar* areas will most certainly be found in a combination of the agronomical and mechanical methods whereby the effects of injurious salts on plant growth will be gradually diminished by their being washed down into the deeper layers of the soil and the general fertility of the land maintained

by the establishment of better physical and chemical conditions in the upper soil layers as a result of good cultivation and cropping under a well-balanced "fertility" rotation of crops.

The experts at the Rothamsted Experimental Station, England, and at the soil physical and chemical laboratories at Groningen, Holland, who were consulted expressed the opinion that the present work being carried out at Sakrand in connection with *kalar* reclamation was on the right lines and suggested additional experiments which are now being undertaken.

86. *The maintenance of soil fertility.*—Under perennial irrigation from the Lloyd Barrage and with a much more intensive system of agriculture, the maintenance of soil fertility in the Barrage areas is a subject of the greatest importance. Hitherto the fertility of cultivated lands in Sind has been kept up by a system of "fallows". The "fallows" must be considerably reduced under post-Barrage conditions of irrigation and agriculture. The main lines along which this problem is being investigated by the Agricultural Department in Sind are (*a*) the adoption of crop rotations in which restorative crops occupy a large proportion, i.e., "fertility" rotations, (*b*) by conserving crop residues and waste organic matter and converting them into useful manures, e.g. compost, and (*c*) by the use of green manure crops and artificial manures.

During 1932-33, the "fertility" rotations under trial in the Agricultural Section of the Agricultural Research Station, Sakrand, were continued in accordance with the cropping schemes originally laid down. These rotations aim at maintaining the fertility of the soil under post-Barrage conditions of perennial irrigation and more intensive cultivation, by the cultivation annually of a percentage of the cropped area with leguminous crops, e.g., ground-nut, guar, berseem, pulses, etc. Such rotations have the additional advantage of providing a regular supply of green fodder for cattle throughout the year and thereby enable the cultivator to increase his manure supply to the advantage of the more exhaustive crops grown on the holding. On the actual area under experiment with "fertility" rotations of Sakrand, the general fertility of the land is being fully maintained and indeed improved by the rotations under test.

Another important method of maintaining soil fertility under the new conditions of agricultural practice in Sind is by green-manuring. In 1931, the Government of Bombay granted an important concession to the cultivators of Sind in permitting green-manure crops, i.e., sann-hemp, guar and indigo, grown for the purpose of green-manuring and ploughed into the soil before the 15th September, to be cultivated free of assessment. This concession is unfortunately not being taken full advantage of owing largely to the existing relations between zamindar and "hari" in Sind, whereby the actual cultivation of the land is left almost entirely to the latter. Intelligent and progressive zamindars will realize that the cultivation of green-manure crops will increase the productivity of their lands and, accordingly, they should encourage their tenants, by financial help or easier terms of tenancy, to adopt this cultural practice wherever possible. The effect of green-manuring with sann-hemp on potatoes and onions at Sakrand and with guar on cotton at Oderolal and Mirpurkhas has definitely shown the value of this method of maintaining soil fertility. Leaflets, dealing with the subject, have been issued by the Agricultural Department.

At Sakrand, manurial experiments, included the trial of crushed bone-meal on cotton, bajri, jowar, wheat, berseem and sugarcane and, in co-operation with Imperial Chemicals (India) Limited, trials of different applications of nitrogen—in the form of ammonium sulphate—*plus* organic manure to the cotton and wheat crops. As these experiments have only been in progress for two seasons, it is not yet possible to express any opinion on the treatments under trial.

87. *The water requirements of crops.*—With the establishment of a system of an assured and perennial supply of irrigation water under the Lloyd Barrage Canal Systems and a greater intensity of cultivation, especially in the rabi season, the general adoption of scientific and economical methods of irrigation are of very great importance. The water requirements of the various crops grown in Sind have been studied in much detail at the Agricultural Research Station, Sakrand. In the annual reports on the work done under the agricultural section during the years 1931-32 and 1932-33 in Sind, will be found details of the irrigational treatments which have been found to be most economical and profitable in the production of all the main crops grown in the dry crop areas under Barrage

conditions. Unfortunately, similar data with regard to rice cultivation are not yet available as similar experimental facilities in the rice-growing tracts have not been provided. Work is now in progress to determine the effect of varying the irrigation intervals within a fixed "delta" on crop yields, both on *kalar* and sweet lands.

The results of the first year's working of the Barrage Canal systems have emphasized the great importance of the early utilization of irrigation water for the preparation of lands for sowing and for sowing operations in both the kharif and rabi seasons. With very few exceptions, late sown crops have suffered much more severely from insect pests, fungus diseases and adverse climatic conditions and have given considerably less yields in comparison with the early sown areas. Particularly in the rabi season, over-irrigation was prevalent and the tendency of the cultivators to excessive watering of dry rabi crops, e.g. wheat, must be corrected by propaganda and education in the districts.

C—Agricultural Propaganda.

88. *The Advisory Committee of 1923 and the development of agricultural propaganda in the Barrage areas.*—The Advisory Committee of 1923 considered fully the question of strengthening the Agricultural Department in Sind to enable it to deal satisfactorily with a greatly extended programme of propaganda and demonstration work in the Barrage areas. The Committee stated that they consider "that the organization of agricultural propaganda had lagged far behind its experimental work and that, at present (i.e. in 1923), the majority of the zamindars in Sind are not aware of the full extent of the activities of the Agricultural Department. This is largely due to the fact that the staff of the Department has never been really developed in this direction." The Advisory Committee considered that an immediately increased provision of Rs. 75,000 per annum for this purpose was necessary. It has however as yet been possible to give effect to this recommendation only to the extent of additional staff for propaganda purposes costing Rs. 14,575 per annum and the provision in 1930-31 and 1931-32 of a grant of Rs. 5,000 for the establishment and organisation of a touring propaganda party in the Barrage areas. The work of this party is being continued in the present year.

89. *Co-ordination of the work of the Agricultural and Co-operative Departments and the association of non-officials in agricultural propaganda and demonstration work.*—Government accorded sanction to the establishment of a Provincial Board of Agriculture in Sind to fulfil the same functions with regard to Sind as the Provincial Board of Agriculture in the Bombay Presidency does for the presidency proper. In addition, a local committee of the Provincial Board has been established to carry on the duties and functions formerly performed by the Divisional Board of Agriculture, Sind, which has been abolished. At a meeting of the local committee held in May 1933, reports on the progress of agricultural and co-operative propaganda work in the districts and programmes of future development were considered and fully discussed. In addition, the non-official members submitted several important subjects for discussion upon which useful decisions were made. The first meeting of the Sind Provincial Board of Agriculture, under the Chairmanship of the Commissioner in Sind, was held in October 1933.

In addition to the co-operation between non-officials and the Agricultural Department which the establishment of the Provincial Board of Agriculture and its local committee has ensured, orders have been issued to district propaganda workers of the department to frame their demonstration tours in consultation with local non-official bodies, e.g., district local boards, and to attend all periodic meetings of cultivators' organisations, e.g., taluka development associations, with the object of achieving a closer touch with local agricultural problems and requirements. The co-operation of the local officers of other departments of Government, e.g. Revenue and Irrigation, in agricultural propaganda work has been willingly given in the past and is being taken full advantage of in extending such work in the future.

Government has recently issued orders that periodic conferences should be held between the heads of the Agricultural, Veterinary and Co-operative Departments in Sind in order to secure co-ordination and unity of policy in these three departments.

90. *Formation of a touring propaganda party in the Barrage areas.*—Government, owing to financial stringency, was unable to provide the necessary funds to enable the proposals of the Chief Agricultural Officer in Sind for the reorganisation of agricultural propaganda and demonstration

to be given effect to in full. Accordingly supplementary proposals were submitted for the establishment of a touring propaganda party. These proposals were sanctioned by Government and the touring propaganda party has been operating in the Barrage areas during the past two cold weather seasons.

The touring party, consisting of a graduate lecturer, a non-graduate assistant, a clerk and fieldman, is equipped with a portable magic-lantern and screen, sets of slides illustrating the work of the Agricultural Department in agricultural improvement and a small exhibit of seeds of improved varieties of crops, improved cottons, wheats etc. and other agricultural materials. In 1932-33, the party commenced work on the 1st October 1932 and continued until the end of April 1933. During this period, the party visited twenty-three centres in Hyderabad district, twenty-one centres in Thar Parkar district, seven centres in Nawabshah district and fourteen centres in north Sind. In all one hundred and thirty-three towns and villages have been visited by the touring propaganda party in the past two cold weather seasons. The average attendance at the magic-lantern lectures and demonstrations has been approximately 170 and, in several centres, the lectures had to be repeated twice to accommodate all who wished to attend. At some of the above-noted centres, the visit of the touring party was arranged to coincide with important local fairs or cultivators' gatherings and, in such instances, demonstrations of improved implements, crops etc. were given prior to the evening lantern lectures.

The success of the party, judged by the size of the audiences obtained and the interest shown in the lectures and exhibits, cannot be doubted but there is still a considerable area to be covered by its operations. It is proposed to restart the work of the touring propaganda party in the cold weather season of 1933.

91. *Local Agricultural Shows.*—During the year 1932-33 local agricultural shows were organised by the department at seven centres in the left bank area, viz. Hyderabad, Sajan-Sawai, Bitshah, Matli, Tando Allahyar, Khan and Pitharo and at four centres in the right bank area, viz. Sehwan, Johi, Mithodero and Jacobabad. Many of these shows were organised at the time of local fairs when large numbers of cultivators were assembled from the surrounding districts. The various types of improved crops

and implements which the department are trying to introduce in the districts were demonstrated and special features were made of horticultural exhibits and technique and of improved varieties of cotton. In most cases, the shows were accompanied by magic lantern lectures on agricultural improvement. The organization of an all-Sind agricultural show, on the lines of the Bombay Presidency agricultural shows, held at Poona and Ahmedabad within recent years, is under consideration.

Vernacular leaflets.—Twenty-nine leaflets have now been issued on various important problems affecting agriculture in Sind.

D—Animal Husbandry and Dairying.

92. *Report of the Sind Cattle Supply and Improvement Committee.*—In July 1928, Government appointed a Committee with the following terms of reference:—

(1) To examine the question of the sufficiency of cattle in Sind, with special reference to the changes in cultivation as a result of the construction of the Lloyd Barrage;

(2) To consider the measures necessary to increase their number and to improve their quality; and

(3) To make any other suggestions relevant to the subject.

The Committee has included in its report many valuable recommendations with regard to cattle improvement in Sind. They have urged the establishment of two Government cattle farms, one for the Thar Parkar breed and one for the Bhagnari breed and the extension of the premium bull system in Sind. Government has issued orders (*vide* Appendix III) on the recommendations of the committee which will form the basis for a definite policy of live-stock improvement in the Barrage areas.

93. *Mixed farming and dairying in the Barrage areas.*—The possibility of the development of a dairy industry based on fodder crops grown on irrigated land is also being investigated as suggested by the Royal Commission. One of the greatest problems which will confront the agriculturist in Sind under perennial irrigation will be to find manure for his land, and an important way of providing this need is through some form of stock farming, such as dairying. Experiments made on the Sukkur Farm show that, if land

is sown with jowar in the kharif season and berseem in the rabi season, it will support the largest type of milch buffalo at the rate of one buffalo per acre of the best land and two acres of inferior land. As the land upon which the Sukkur Farm is situated will not come under the Barrage canal system, the Farm has been closed down and the buffalo herd transferred to the Agricultural Research Station, Sakrand, where further work on the economics of dairying combined with mixed farming under the new conditions is being conducted. Among other fodder crops tested at Sakrand, oats have given a high yield of green fodder and bid fair to be a valuable introduction as a rabi fodder crop in Sind. Enquiries with regard to the establishment of dairy businesses under a system of mixed farming are being made by prospective zamindars and attention is being given to investigating and obtaining the necessary data for the carrying capacity of a unit holding under Barrage conditions.

94. *Future of the development and improvement of live-stock in Sind.*—The Advisory Committee of 1923, emphasised the need for the appointment of a special officer for work on cattle-breeding and live-stock improvement in the Barrage areas. No action in this direction has yet been taken and the activities of the Agricultural Department have hitherto been confined to the improvement of the Red Karachi (Sindhi) breed at the Willingdon Cattle Farm, Malir. This breed is, however, predominantly a milch breed and of comparatively little value for drought purposes. As a result of the recommendations of the Reorganisation Committee, the Willingdon Cattle Farm, Malir, was closed down in 1933 as a measure of retrenchment but scientific breeding work on the red Karachi herd is being continued at the Government Fruit Farm, Mirpurkhas, to which centre the best of the animals have been transferred. The question of the steps necessary to secure the scientific breeding and improvement of the Thari breed, a valuable dual purpose breed for the Barrage area, is receiving attention. Work on the improvement of fodder crops and on the introduction of new fodder crops suitable for the Barrage areas is being undertaken at the Agricultural Research Station, Sakrand, and also at the Seed Farm and Fruit Farm, Mirpurkhas.

E—Agricultural Engineering.

95. *The need for an Agricultural Engineering branch of the Agricultural Department in Sind.*—The necessity of

appointing a duly qualified Agricultural Engineer has been recognised for a long time by Government. With the advent of perennial irrigation under the Lloyd Barrage and the consequent extension of cultivation in Sind, numerous important problems have arisen relating to mechanical cultivation, design and improvement of field implements, water lifts and drainage systems, etc.

During the year 1932-33, a considerable advance in the development of agricultural engineering in Sind was made when Mr. J. Cumming, Executive Engineer, Mechanical Division, was appointed Mechanical Engineer (Irrigation and Agriculture) in Sind. The appointment is for the period of one year in the first instance.

96. *The development of mechanical cultivation in the Barrage areas.*—In the past, both the Bombay and Karachi Chambers of Commerce have emphasised the importance of extending the use of mechanical cultivation in the Barrage areas of Sind. A resolution, stressing the importance of investigating the possibilities of development in this connection, was moved at the annual general meeting of the Associated Chambers of Commerce of India and Ceylon, held in Bombay in December 1929. There are peculiar difficulties in such development in Sind, where, even on the larger estates, the expenses of cultivation are considered to be mainly the concern of the actual cultivator but some progressive zamindars are already experimenting with mechanical cultivation on their own lands. Certain firms, interested in agricultural machinery, are also making a close study of the difficulties and problems relating to this aspect of agricultural development. At present, the main obstacle to more rapid progress is the depressed condition of the cultivating classes and the lack of capital to invest in expensive agricultural machinery. Tractor ploughing tests have been carried out by the Agricultural Department in Sind in co-operation with the Burmah Shell Company (India) Limited on the new areas under development as Government "Auxiliary" Farms in the Barrage areas.

F—"Auxiliary" or Demonstration Farms.

97. *The Six Farm Scheme of "Auxiliary" Government demonstration farms in the Barrage areas.*—The Advisory Committee laid great stress on the necessity for establishing a number of separate areas throughout the Barrage zone whereon the results of research work carried out at Sakrand and other experimental stations could be

tested on a large scale and demonstrated to the cultivators. That is to say, that, when a satisfactory result has been obtained from research work, it should be tried out on separate "auxiliary" farms on an "operational" basis. These "auxiliary" farms would also have a useful part to play in any organization for the production and extension of the seed of improved varieties of crops. In 1930, Government sanctioned a scheme for the establishment of six such "auxiliary" farms in the Barrage area, three on the Right Bank at Dadu, Shahdadkote and Nasirabad and three on the Left Bank at Oderolal, Lundo and Pad Idan.

98. *Progress of development under the "Six Farm Scheme" of auxiliary demonstration farms in the Barrage areas.*—The establishment of the six new demonstration farms under the "Six Farm Scheme" was completed in 1932-33, only the farm buildings at the Shahdadkote site remaining to be constructed in the following year. The objects for which these farms are being established were fully detailed in the report of the Department of Agriculture in Sind for the year 1930-31 which also gave a brief account of the system of cultivation and management which is to be adopted on these institutions. In short, these farms will be utilised to demonstrate under zamindari conditions the large scale introduction of agricultural improvements resulting from successful research work of the Agricultural Department at Sakrand and other research centres. They will also be utilised as centres for the training of zamindars and haris in improved agricultural methods and for the stocking and distribution of improved seeds, implements, etc. In addition it is hoped that these farms will enable accurate "costings" of farm operations and farm production under post-Barrage conditions of agriculture and irrigation.

During the year 1932-33, the construction of all farm buildings, except at Shahdadkote, the lay-out of water-channels, drains and plots and the preparation of the land for cropping was practically completed on all farms. Rotational cropping schemes for both the departmental and haris' areas were drawn up and haris were settled on the portion of the farm sites, set aside for tenant cultivators on the "batai" system under departmental supervision. Cropping was carried out in both the kharif (1932) and rabi (1932-33) seasons on all the farms although, in most cases, it was not possible to reach the full intensity of cultivation as levelling and laying-out of plots were still in progress. The farms

attracted considerable attention from the cultivators and organised demonstrations of improved agriculture were held at Dadu and Oderolal Farms and were largely attended. The work done, during the year, though only a beginning, has shown that this type of farm can have much educative value in the districts. It is the aim of the Agricultural Department that these farms should ultimately become self-supporting as far as possible and if this object can be achieved after full development of the areas, the educative value of these institutions must be considerably enhanced. These auxiliary farms are already taking an important part in the multiplication of pure seed of improved crops under the re-organised departmental seed multiplication schemes.

G—Agricultural Education.

99. *The Advisory Committee of 1923 and agricultural education in Sind.*—The Advisory Committee of 1923 considered the question of the development of higher agricultural education in Sind and recommended the establishment of an agricultural college at Nawabshah in the centre of the left bank Barrage areas. Pending the initiation of such a scheme, the Committee advocated the more liberal provision of scholarships for Sind scholars at the Poona Agricultural College. The prevailing financial stringency has prevented any action being taken towards the establishment of a college for higher agricultural education. Twelve scholarships of Rs. 20 per month are available for Sind scholars tenable at the Agricultural College, Poona.

100. *Future development of agricultural education in Sind.*—In the year 1918, the tenure of scholarships for higher agricultural education of Sind scholars was transferred from Poona to the Punjab Agricultural College at Lyallpur. This change was made as the conditions under which training was given at this latter centre approximated more closely to those prevailing in Sind. In 1922, the scholarships were retransferred to Poona owing to a demand from the Punjab Government that the full cost of the training of such scholars should be paid by the Bombay Government. Under post-Barrage conditions of agriculture and irrigation in Sind, the training given at Lyallpur would be more suited to Sind scholars and the Royal Commission on Agriculture suggested the revival of the arrangement made in 1918 with the Punjab Government. The Reorganisation Committee when recommending the closure of the

Poona College have also suggested that Sind students should be sent to Lyallpur. The idea of closing the College has now been abandoned, and the question of sending Sind students to Lyallpur does not now arise. With regard to the proposal of the Advisory Committee for the establishment of an agricultural college at Nawabshah the present financial situation does not warrant any development on the scale proposed by the Committee, i.e., a capital expenditure of Rs. 7,50,000 and a recurring expenditure of Rs. 1,50,000. Apart from the development of facilities for higher agricultural education in the Barrage areas, it is most essential that technical instruction in separate branches of practical agriculture, e.g. dairying, farm management, horticulture, market gardening, etc., should be arranged for as the demand for the services of men possessing a sound practical training in such specialised subjects is likely to increase considerably in the near future.

H—Miscellaneous.

101. *Horticulture.*—The Advisory Committee laid considerable stress on the development of fruit-growing. For this purpose, the Mirpurkhas Farm is now solely utilised as a Fruit Farm and the work has been placed in the hands of a specialist horticultural officer appointed in October 1925. The work on the farm has been considerably developed and special attention is being devoted to citrus, grapes and date varieties as these fruit trees have very great possibilities in Sind under the new conditions. Probably the most important function of the fruit farm under post-barrage conditions will be the production and supply of reliable fruit stock to zamindars desirous of establishing commercial plantations. During 1932-33, about 8,000 grafts, budded stocks and cuttings were issued to the public from the Fruit Farm, Mirpurkhas and Rs. 2,875 were realized as receipts from this source. The Horticulturist has over 23,000 seedlings, etc., of various improved fruit varieties for issue in 1933-34. As the demand for such material is already considerably in excess of the supply available, arrangements have been made for the extension of this side of the farm's activities, and the co-operation of several zamindars has been obtained in the establishment of commercial nurseries in the districts to facilitate the supply of young fruit trees to intending growers in the Barrage areas. In addition arrangements have been made for the supply of varieties of fruit trees from other parts of the world where environmental conditions approximate to Sind and such varieties are being tested at Mirpurkhas

to ascertain whether they could be profitably introduced into cultivation in the Barrage areas. A sub-station in north Sind for work on date palm culture may eventually be necessary when funds permit, as the tract round the Government Fruit Farm at Mirpurkhas is not suited for this form of horticulture. Arrangements are being made for the establishment of a sub-station for horticultural work in Larkana to serve the North Sind districts.

102. *Central Research Station for Right Bank areas.*—The Advisory Committee recommended the establishment of an experimental station on the right bank of the Indus at Larkana. This station is intended to provide for jowar, wheat and cotton as well as rice, as these crops are likely to become quite as important as rice in this tract. The problems on the right bank are fundamentally different from those on the left bank where conditions of soil and climate are quite different. Such problems as the necessity for the practice of utilising "pancho" water, as followed by the rice-growers at Larkana, the possibilities of early transplanting of rices and the water requirements of the rice crop under post-Barrage conditions of irrigation, require investigation by the Agricultural Department as solutions of these matters are of extreme economic importance. Hitherto, however, the lack of funds has made it impossible to establish this station.

103. *Entomological research work into the major insect pests of crops in the Barrage areas.*—With the extended cultivation of a variety of crops under the new conditions it is necessary to provide against the danger of their damage or destruction by crop pests. In order to deal with some of the crop pests like boll-worm, it is necessary to collect information by local observation during different periods of the season. Similarly, control measures must be devised to deal with the damage caused by white ants to valuable crops in the Barrage areas. Accordingly, establishment of a crop pests section at Sakrand, with an adequate and trained staff, is desirable, when funds permit.

104. *Completion of equipment of Agricultural Research Station, Sakrand.*—The equipment of the Sakrand Station is not yet complete. At present, there are no quarters available for the Assistant Agricultural Engineer at the station and several of the graduate assistants are residing in cooly lines and katcha quarters. The accommodation for the clerical staff is also inadequate. The three small rooms used as laboratories for the chemical, botanical and physiological

sections require to be supplemented and additional storage accommodation for the various materials used on the farm and for its crop products is also required as difficulty is experienced in the separate storage of different varieties of crops, e.g. cotton, which is essential at a Research Station. In addition, the extension of the experimental work under the different sections and the commencement of new research on oil-seed cultivation, tobacco, etc., has necessitated an early expansion of the station area.

I—Expenditure on Agricultural Research and Propaganda.

105. *Departmental Expenditure.*—The financial information contained in the July 1929 issue of this pamphlet and subsequent information are tabulated below :—

Serial No.	Name of section.	Proposed expenditure.		Expenditure incurred up to August 31st, 1933.(*)	
		Capital.	Recurring.	Capital.	Recurring.
		Rs.	Rs.	Rs.	Rs.
1	*Sakrand Station*—				
	As proposed by the Advisory Committee ...	1,53,400*	.....	2,61,369†	...
	Completion of the equipment as per paragraph XXII on page 28 of the White Book published in July 1929 ...	84,925	5,000‡	45,560	...
	Further requirements ...	52,000	8,000	...	...
	Agricultural Engineering section ...	1,00,000	25,000	...	...
	Dairy section ...	20,000	15,000	...	...
	Crop Pest section ...	10,000	10,000	...	...
	Total expenditure since the inception of the scheme.	.....	.....	...	6,11,422
2	*Fruit Farms*—				
	Mirpurkhas Fruit Farm ...	5,000	.....	...	...
	Horticultural Operations (nurseries and sub-stations)	.....	10,000	...	...
	Live stock section ...	1,00,000	60,000	..	...

Serial No.	Name of section.	Proposed expenditure.		Expenditure incurred up to August 31st, 1933.(*)	
		Capital.	Recurring.	Capital.	Recurring.
3	*Other Farms*—	Rs.	Rs.	Rs.	Rs.
	Six demonstration farms (to be also seed farms) ...	2,50,000	4,50,000	2,17,828	1,21,909
	Research Station at Larkana ...	1,50,000	75,000	...	...
	Research Station in East Sind ...	2,00,000	1,00,000	...	...
	Depôts for seeds and implements ...	.....	1,00,000	...	...
4	*Propaganda Operations* ...	.....	2,50,000	...	1,78,916
5	*Agricultural Education* ...	7,50,000	1,50,000	...	...
6	*Chief Agricultural Officer* ...	.....	26,700	...	70,710
	Chief Agricultural Officer's establishment.	.....	{ 10,650§ or 20,000¶ }	...	29,379 ‖
	Additional T. A. ...	.....	.....	...	6,659
	Contingencies ...	.....	3,000	...	3,163
	Total ...	17,21,925	13,07,700	5,24,757	10,22,158

(*) Since the inception of each item shown in columns 1 and 2.

* This is one-third estimates excluding the cost of land as proposed by the Advisory Committee for three stations.

† This consists of Rs. 1,41,132 spent by the Public Works Department and of Rs. 1,20,237 spent by the Agricultural Department.

‡ For minor works.

§ Staff as proposed by the Committee excluding the existing establishment of the Deputy Director and the posts of Price Inspector, Auditor and Artist, etc.

¶ Staff of Chief Agricultural Officer as proposed on page 30 of the White Book published in July 1929.

‖ Includes the pay of establishment of Deputy Director of Agriculture in Sind now merged in that of Chief Agricultural Officer in Sind.

Some of the schemes involve a large capital expenditure and therefore definite continuity of policy in the interest both of economy and of efficiency is essential. In 1932-33, the expenditure on agriculture in Sind, including the Sakrand Farm, under the major head "34-Agriculture" was as under:—

		Rs.
A-1—Agriculture in Sind ..	...	3,04,621
Six Demonstration Farm Scheme	...	1,00,350
Total	...	4,04,971

The cash receipts during the same period were Rs. 44,862.

In the financial year 1933-34, the total budget provision is Rs. 4,16,000, including a special provision of Rs. 91,092

for the Six Demonstration Farm Scheme. Of this special allotment, Rs. 11,400 are for capital expenditure (land, dead-stock, and live-stock), Rs. 71,092 for recurring expenditure (pay and contingencies) and Rs. 8,600 for works (construction of buildings).

A new phase of rural development in Sind has been entered upon and the next few years will constitute a critical period in the agricultural history of the province. The reorganization of the Department in Sind to meet changing conditions has already been taken in hand and various schemes and proposals for the extension of agricultural activities in the Barrage areas are under the consideration of Government, but the extreme financial stringency does not admit of any large amounts being made available for such requirements.

(*b*) *Subsidies and grants.*—With effect from July, 1927, the Indian Central Cotton Committee, Bombay, has been financing the work of the cotton physiological research scheme, carried on at the Physiological Section, Agricultural Research Station, Sakrand. The actual amount of subsidy received during 1932-33 for this purpose was Rs. 24,745. This scheme was sanctioned by the Committee for a period of five years, i.e., till July 1932, but has been extended for a further period of five years, i.e., till July 1937, and a total subsidy of Rs. 1,62,854 granted to finance the scheme during the period of extension.

In addition, the Indian Central Cotton Committee granted in July 1931, a subsidy of Rs. 31,000 per annum for a period of three years, i.e., Rs. 93,000, to assist in the extension of the cultivation of improved varieties of cotton in the Barrage areas of Sind. The Committee has recently sanctioned a further subsidy of Rs. 2,96,540 to finance this work for a further period of five years, i.e., from 1st April, 1934 to 31st March, 1939.

The under-noted amounts were received from the Trustees, Sir Sassoon David Trust Fund, Bombay, for work on pathological research into rice crop diseases in North Sind during the years 1931-32 and 1932-33:—

		Rs.
1931-32	...	8,071
1932-33	...	4,000
Total	...	12,071

Out of this amount, Rs. 8,823, viz., Rs. 5,538 in 1931-32 and Rs. 3,285 in 1932-33, have been spent leaving a balance

of Rs. 3,248 which was refunded to the Trustees. In addition, the Trustees sanctioned a grant of Rs. 9,132 during 1933-34 for investigation into the technique and economics of oil-seed and pulse crop cultivation to be carried on in the Barrage areas. This amount was fully spent during the year.

J—PUBLIC INTEREST IN AGRICULTURAL DEVELOPMENT OF SIND.

106. *Trade organizations and agricultural development in Sind.*—Since 1933, when the Barrage scheme was sanctioned, very considerable interest has been shown by organized trade bodies in Karachi and Bombay in the agricultural development of Sind. The Karachi Chamber of Commerce has set up a sub-committee to deal with agriculture and has made many valuable suggestions in connection with agricultural development. The Chief Agricultural Officer in Sind has been appointed an Honorary Member of the Chamber. The Karachi Indian Merchants' Association and the Buyers and Shippers Chamber, Karachi, have likewise evinced a very keen interest in the work of the Agricultural Department in Sind and the development thereof under the Lloyd Barrage and Canal Systems. Representatives of these trade organizations—and of the Karachi Chamber of Commerce—have paid visits to the Agricultural Research Station, Sakrand, where they evinced the keenest interest in the work in progress and made many valuable suggestions, especially with regard to trade and market requirements in various crops, which have been most helpful in deciding the policy of the work especially in the botanical section. Three trade exhibitions, one of improved wheats and two of improved cottons, being handled by the Agricultural Department in Sind have been organised in Karachi. These exhibitions were well attended by trade representatives and roused much interest in the work of the department in crop improvement.

107. *The Indian Central Cotton Committee.*—Government recognising the advantages and desirability of consulting the Indian Central Cotton Committee on matters affecting the development of cotton cultivation in Sind, agreed to consult them when suitable opportunities occurred, especially in connection with the following points:—

(1) Varieties of cotton most suitable for the trade.
(2) Methods of control of ginneries.
(3) Methods of marketing cotton.
(4) Finance for research connected with cotton.

As mentioned in an earlier paragraph, the Committee, at its meeting in August, 1933, sanctioned a munificent grant of Rs. 2,96,540 for the extension and development of the cultivation of improved cottons in the Barrage areas under the "Sind Cotton Extension Scheme" which is now financially provided for until 1939. In addition, a grant of Rs. 16,030 for a period of three years and a half has been made by the Indian Central Cotton Committee, in conjunction with the Imperial Council of Agricultural Research for the purpose of conducting an economic enquiry into the cost of production of cotton in the main cotton-growing tracts of Sind. This work is part of a comprehensive scheme of enquiry into the cost of production of cotton and sugar-cane in India. In January, 1933, the Indian Central Cotton Committee held its half-yearly meeting in Karachi for the first time thus enabling its members to come in close contact with the cotton-growers and cotton-traders of Sind and with the activities of the Agricultural Department in agricultural improvement, especially in relation to cotton cultivation.

V. Forests.

(A) General Description.

108. The forests of Sind, approximately 1,150 square miles in extent, lie for the most part along the banks of the river Indus from the Punjab frontier to within thirty miles of the mouth of the delta. Inland forests, as distinct from the riverain forests, are mainly in the Sukkur and Larkana districts, while in other districts there are small outlying areas. All these forests were originally "inundation forests", that is to say, they depended for their periodical "water-supply" on the Indus floods which swept unconfined over the country before the protection bunds were constructed. Such inland forests as are now situated outside these bunds have since very materially suffered, especially in the Sukkur District, since no provision could be made for a sufficient supply of canal water in lieu of the flood water these forests received in the past. The forests which remain within the protective bunds receive an annual inundation of varying depths and duration from June to September, and they contain as a whole an excellent growth of trees.

109. The system of working the forests has varied from time to time until the present system of clear cutting, with

subsequent reboisement from seed in the case of babul and a combination of seed and coppice in the case of kandi, was adopted from about the year 1905, when formal "working plans" were introduced. These have been revised from time to time, and the appointment of a Divisional Forest Officer, Working Plans, has been sanctioned recently since further revision is now urgently required in consequence of the havoc wrought by the severe frost of 1929 in combination with the alterations brought about by the vagaries of the river Indus in the allocation of the different age classes.

110. The forest growth consists of very few species of importance, as the peculiar rigours of the Sind climate preclude the growth of any but the most hardy of trees. In the winter the temperature sinks below freezing point and in the summer temperatures of over 125° in the shade are recorded. With these extremes of climate is coupled the precariousness of the water-supply, certain areas are not inundated for several years together, while the rainfall is at the best scanty and always capricious in its incidence. These in particular are the difficulties which beset any attempt to grow the more valuable species of trees. Should the vast area to be brought under irrigation in Sind affect the climate, as it may, by reducing the rigours of the winter and raising the subsoil water level, it is possible that the composition of the forests will change considerably.

111. The major portion of the produce of the Sind riverain forests is fuel, babul being excellent for this purpose, kandi next in importance and tamarisk very fair. Babul also furnishes a very good timber, but the demand for it is not great, as it is very heavy and hard to work. Tali gives an excellent, though heavier, timber. Bahan, in recent years, has been profitably worked on a very short rotation for the production of small rafters. Recent investigation into its possible use as a match-wood has unfortunately proved its utter unsuitability for this purpose. Kirir (Capparis aphylla) also yields a supply of small rafters. The principal markets for fuel and charcoal are Karachi and Quetta, and the export overseas to the Persian Gulf, Kathiawar and even so far as Egypt has been of considerable importance though suffering at present from the effects of world-wide trade depression.

112. Grazing, relatively to the number of cattle in Sind, is of small importance. Most of the cattle which graze in forests belong to professional graziers, or *maldars*, and only

a small proportion belongs to the villagers in the vicinity of the forests. In times of exceptional scarcity of rain, such as during 1931, large numbers of animals from Kohistan are allowed free grazing within forest limits, and very considerable damage to tree growth occurs in consequence as there is little or no grass and therefore innumerable babul trees are lopped to provide the necessary fodder for the starving animals.

113. The rate ordinarily payable by the Forest Department to the Irrigation Department for such supplies of water as are made available when the full supply level is maintained on the existing inundation canals is Re. 1-8-0 per acre of forest irrigated. Surplus supplies of water which are occasionally available for forest lands are generally free of charge, as is also the case for supplies of water for forest through sluices in the protective bunds.

114. The forest area actually irrigated by canal water varies very greatly from year to year according to the flood levels of the river, i.e. the forest area irrigated depends on whether the full supply level is maintained on the canals and also whether the Irrigation Department can spare water for the forests. A scheme for the creation of some 10,000 acres of irrigated forest plantations is now before Government, and under this scheme it is confidently expected that, due to the "assured supply" of water, continuity of management will be possible, and a very valuable forest property will be created and developed. No such scheme has been possible up to now owing to uncertainty of the water-supply.

115. The existing forests may be said to be in excess of the present needs of Sind so far as fuel is concerned. But fuel is an expensive article to transport over any distance and the necessity for creating and maintaining fuel-producing areas, at convenient centres for distribution, must be foreseen and provided for in view of the expected increase of cultivation which the Barrage canals must undoubtedly bring about. Sind being a particularly sparsely populated country, the needs of the existing inland population for fuel have been easily met from the scattered tree growth in the vast areas of revenue waste. With the advent of the Lloyd Barrage Canals and the foreshadowed consequent increase in population, and corresponding decrease in the area of revenue waste lands, the fuel supply

of these inland regions will undoubtedly constitute a very difficult problem. Sind is, at present, a fuel exporting country, and save in abnormal times, such as the period of the Great War, very large stocks remain on the hands of the merchants, neither the export nor the local demand being sufficient to absorb them. The grazing area is, at present, more than ample.

(B) The Future of the Sind Forests.

116. It is now necessary to examine the point whether the existing forests will be adequate to supply the needs of the future under the new conditions, i.e. whether further land should be taken up or whether any land now under forest can be relinquished for cultivation. Under this head the following four schemes require consideration :—

(1) Afforestation in the Thar Parkar District.

(2) The Ghotki Canal Project.

(3) The Begari Canal Remodelling Project.

(4) The Barrage Project.

117. (1) *Afforestation in Thar Parkar.*—The areas in this district notified under section 4 of the Forest Act, 1878, since 1891, comprise some 1,29,616 acres in the talukas of Sanghar, Khipro, Samaro and Umarkot, mostly along the Nara. These areas have never been declared Reserved forest and have always been under the control of the Collector of Thar Parkar. Of this area there was originally a very large area of some 73,629 acres known as the Makhi forest, which is outside the Lloyd Barrage influence but which has from time to time been reduced in favour of cultivation. Mr.G. J. Ramchandani of the Bombay Forest Service was deputed in 1929 to examine all these areas and report which areas should be retained and declared reserved forest and which areas could be relinquished. His recommendations which were based on an exhaustive examination of the whole situation were objected to by the Revenue Officer on financial grounds mainly, and the final conclusion arrived at was that the Forest Department should relinquish all except some 14,123 acres in the Sanghar and Khipro talukas, which should in due course be declared "Reserved Forest", together with some 39,000 acres, known as the Makhi forest which should also in course of time be declared "Reserved Forest". It is not at present contemplated to give any of these forest areas an assured supply of water from

the Barrage Canals, and the matter is not one of any immediate urgency. The Revenue Officer, it is understood, has already arranged to dispose of some of the areas relinquished by the Forest Department.

118. (2) *The Ghotki Canal Project.*—This scheme affects the whole of the inland forests of the Sukkur District on the left bank of the river. These areas, which years ago were subject to river floods from which the river bunds now shield them, are at present little more than scrub jungle. In order to make the Ghotki Canal project a paying scheme, Government have already approved of the proposals to disafforest rather more than half the total area of the existing forest land and a careful examination of all the areas is now being carried out.

The arguments against the wholesale disafforestment arise from the necessity for an adequate fuel supply and for ample grazing ground for cattle. The revenue from these forests is not insignificant. Under proper irrigation they would yield many times the present revenue, and it is very likely that the market will absorb all that the reduced area could supply.

The project is however unlikely to be taken in hand in the near future owing to the financial stringency.

119. (3) *The Begari Canal Remodelling Project.*—The two large blocks of forest in the Shikarpur Division of the Sukkur District, known as the Garhi-Yasin and Kot-Sultan forests, used to receive their periodical water-supply from the Indus river floods up to the time the Kashmore bund was built, and then for a period of about 40 years these forests were deprived of all except an utterly insignificant water-supply till the year 1930 when, owing to serious breaches in the Public Works Department bunds, most of these areas were flooded.

A number of irrigation projects have been considered in the past by which these two forests, or some portion of them at any rate, should receive varying supplies of water, but nothing much came of them. The situation at present is as follows:—

From the Sultan-Kot branch of the Begari Canal Remodelling Scheme, 11,870 acres of the Kot-Sultan forest is to receive an assured water-supply varying from 1 cusec per 120 acres for 5,052 acres, to 1 cusec per 240

acres for 6,823 acres, whilst 5,498 acres is to be disforested. Similarly, of the 12,706 acres of the Garhi-Yasin forest lying to the north of the Khirthar Canal, some 2,055 acres are to receive an assured supply at 1 cusec per 100 acres, 7,220 acres an assured supply at 1 cusec per 240 acres, whilst 3,431 acres are to be disforested.

If and when this Remodelling Project materialises, 8,929 acres of forest will be disforested out of both Kot-Sultan and Garhi-Yasin forests; and of the 21,150 acres remaining, the areas containing the better class soils will in course of time produce valuable forest and the rest will probably only be suitable for pasturage.

There still remain some 7,000 acres of the Garhi-Yasin forest south of the Khirthar Canal and for this area arrangements have already been made for a surplus water-supply from the Shahdadkot branch and its two distributaries as well as from the Khirthar Canal, all of which are included in the Barrage Project.

120. (4) *Barrage Project*—(i) Proposals are under the consideration of Government for the creation of nearly 10,000 acres of forest plantations in the Larkana District, on the Punjab model, for which a regulated and assured supply of water will be possible from the Barrage Canals. These 10,000 acres constitute about 1/6th of the total inland forest area in the Larkana District and the location of the different areas which together amount to that figure has had to be governed chiefly by the capacity of the different canals of the Barrage system to provide the necessary supply of water.

(ii) Forest plantations proper cannot be created on an uncertain supply of surplus water, which, it is reasonable to suppose, must gradually diminish in course of time, as the area under cultivation increases. The necessity for a permanently assured supply has therefore been recognised by the Barrage authorities, who have, in addition, made arrangements for this assured supply to be given in 5 annually increasing instalments, the full supply being reached in the fifth year and continued thereafter. The Barrage authorities have accepted the following conditions governing the assured supply:—(1) that the Forest Department shall pay approximately Rs. 3 per acre per annum for an assured supply of 3-foot delta; (2) that all necessary water channels for the

distribution of such supplies shall be built by the Irrigation Department at the cost of the Forest Department; (3) that surplus water-supply (that is all water surplus to the requirements of cultivation) which the forests may receive, is to be free of cost, but that the cost of sluices for such supplies is to be debited to the Forest Department.

(iii) This is as equitable an arrangement as it is possible to devise, for the Forest Department could not afford to pay anything for surplus supplies of water in addition to meeting the heavy initial expenditure necessary to distribute such supplies over the whole area, without crippling its annual net revenue to a very appreciable extent. On the other hand the Irrigation Department would have either to find areas for the discharge of this surplus water or to close their canal Head Regulators, in which case no one would be any better off whilst the forests would suffer. Again, in so far as the assured supply of water is concerned, the Irrigation Department obtains the same price for its water from the Forest Department as it would from the cultivator, whereas the profits accruing from the forest plantations raised on this assured water-supply ultimately benefit the general revenues of Government.

The availability of surplus water supplies with development of irrigation is however a very uncertain factor. The question whether and, if so to what extent, this source of irrigation can be relied on for established inland forests is receiving further consideration.

(iv) In addition to the proposed forest plantations, other plantations may also be created along or adjacent to the canal banks, not merely to supplement the fuel and timber supply but to improve its accessibility and distribution, in accordance with the decisions arrived at by the Lloyd Barrage Standing Committee on the joint report prepared by the Chief Engineer, the Revenue Officer and the Conservator of Forests.

(C) Summary.

121. The existing forests in Sind are considerably in excess of its present needs as regards fuel, timber and grazing facilities. They contain, apart from supplies from private "huris", zamindari lands, Government waste lands and from Khairpur and Bahawalpur States, a large margin

to meet expansion in the near future, always provided that the centres of such additional demand are accessible by railway or other economical forms of transport.

In order to reap the fullest advantage of the various irrigational projects and at the same time to make them pay, it will be necessary, especially in connection with the Ghotki and the Begari Remodelling Projects, to disafforest some of the land and bring it under cultivation. This policy must, however, be pursued with discrimination in order to maintain and supplement the supply of forest produce and grazing grounds, so that such may not fall short of the larger demand which must result from any extensive development under the Barrage. The possibility of a considerable reduction in the yield from riverain areas of the Karachi and Hyderabad districts, which at present depend for their existence on the height of the annual flood water, must also be taken into consideration, as there appears to be some likelihood of future flood levels in Lower Sind being much lower than was the case in the past, on account of the volume of water taken off by the Barrage Canals, consequently much area which now receives such water will be left high and dry and incapable of producing new tree growth.

It must however be admitted that the " take off " by the Barrage Canals during the *akkulani* season of 1932 did not apparently affect the flooding of the forests in these two districts, a much larger area having received water than for the past several seasons, judging from the gauge readings at Kotri which passed the 22-foot mark.

VI. Administration.

122. (i) All the districts in Sind, except Karachi, are directly affected by the construction of the Barrage, inasmuch as the new canals will flow through them. The Upper Sind Frontier District and the Sukkur District are only affected to a small extent, but in Larkana, Nawabshah, Hyderabad and Thar Parkar the large areas that will become available for cultivation will throw a heavy additional burden upon every branch of the administration. Accordingly the question of the creation of new districts and talukas was under the consideration of the Commissioner in Sind in consultation with the Chief Engineer of the Barrage and the Revenue Officer, and a scheme was drawn up for the creation of two new districts

to be named Dadu and Guni, the former on the right bank of the Indus and the latter on the left bank, and ten new talukas. While recognising the desirability of the whole scheme Government have been unable, in view of the present financial situation, to accept it in its entirety and they have undertaken for the present the creation of only one new district with headquarters at Dadu and of an additional taluka with headquarters at Garhi Khairo in the Upper Sind Frontier District. This has involved the reorganisation of certain districts in the manner shown below :—

	Talukas.
Upper Sind Frontier (2 sub-divisions): Jacobabad, Garhi Khairo,* Thul, Kandhkot, Kashmor.	5
Larkana (2 sub-divisions): Kambar, Warah, Shahdadkot, Miro Khan, Larkana, Rato Dero, Labdarya.	7
Dadu (2 sub-divisions): Mehar, Kakar, Dadu, Sehwan, Johi, Kotri and Kohistan.	7†
Karachi (2 sub-divisions): Karachi, Tatta, Mirpur Sakro, Ghorabari, Ketibandar, Mirpur Bathoro, Sujawal, Jati, Shahbandar.	9

123. (ii) The estimated average annual cost of the new revenue establishments required for the new districts and talukas was calculated at Rs. 6,10,060 and a rough estimate of the cost of the revenue buildings required was Rs. 10,35,000. But the average annual cost of the revenue establishment actually sanctioned by Government on account of the creation of the Dadu District and Garhi Khairo Taluka comes to Rs. 1,30,100. The new district on the right bank came into existence on 5th October 1931.

The following is a summary of the cost of buildings both revenue and police sanctioned by Government and now practically completed.

Headquarters: Revenue Buildings.

	Rs.
Collector's kacheri and subsidiary buildings ...	1,68,099
Collector's bungalow	46,645
Garhi Khairo Taluka Kacheri	46,611
Total ...	2,61,355
Land compensation	9,196
Total ...	2,70,551

* New taluka.

† The creation of the new Sita Taluka has been postponed and Manjhand Mahal has been included in the Kotri Taluka.

Headquarters: Police Buildings.

	Rs.
District Superintendent's bungalow and office ...	30,417
Deputy Superintendent's bungalow and office ...	19,259
Headquarters lines and quarters for Sub-Inspectors	2,89,967
Total ...	3,39,643
Police lines at Garhi Khairo	21,025
Total ...	3,60,668

124. (iii) When it is decided to create the new district on the left bank, the following headquarters buildings will be required :—

	Rs.
Collector's kacheri and treasury	2,00,000
Three District Deputy Collectors' bungalows ...	50,000
One District Superintendent of Police's bungalow	35,000
One District Superintendent of Police's office ...	19,000
One Deputy Superintendent of Police's bungalow and office	20,000
Headquarters Police lines	2,87,600
Total ...	6,11,600

Further, the creation of eight new talukas in the three districts of the left bank will involve an expenditure on buildings of Rs. 8,50,500. The total expenditure on buildings will be Rs. 14,62,100, and the recurring expenditure on establishment will be :—

	Rs.
Revenue establishment	3,40,446
Police establishment	1,06,000

The consideration of these questions has been deferred in view of the present financial position.

125. (iv) In 1930, two Committees were appointed, called respectively, the Lloyd Barrage Standing Committee and the Lloyd Barrage Advisory Committee, to assist Government in the prosecution of the Lloyd Barrage Project Scheme.

The Lloyd Barrage Standing Committee was composed entirely of officials, the heads of the principal departments in Sind, with the Commissioner in Sind as its Chairman.

The object with which this committee was appointed was that any major proposals affecting the project or requiring the orders of Government may reach them in a form giving the considered opinions of all the local heads of the responsible departments.

Owing to the completion of the project, the need for such a committee no longer exists, and it has therefore been abolished.

The Lloyd Barrage Advisory Committee was composed entirely of non-official gentlemen, eight from Sind and four from the rest of the Presidency. The functions of this Committee were

(1) to advise Government generally on all matters connected with the Barrage Project; and

(2) to offer advice on any matter referred to it by Government or by the Lloyd Barrage Standing Committee.

As regards the budget this committee was intended to perform the same functions as the Finance Committee of the Legislative Council does, i.e., to advise as to the attitude which the Legislative Council is likely to take on new items in connection with the scheme.

The term of the members of this Committee appointed in 1930 expired on 31st March 1933. The last Committee held six meetings during its term of office and three joint meetings with the Standing Committee. Government have now appointed a new committee consisting of the following non-official gentlemen :—

Chairman.

Mr. Jamshed N. R. Mehta.

Members.

(1) Sir Shah Nawaz Khan Ghulam Murtaza Khan Bhutto, Kt., C.I.E., O.B.E., M.L.C.
(2) Khan Bahadur Allahbaksh Haji Muhammad Umar.
(3) Rao Bahadur Tharumal Bilaram.
(4) Mr. Darshansing Maluksing Bakhshi.
(5) A representative of the Karachi Chamber of Commerce.
(6) A representative of the Indian Merchants' Association, Karachi.
(7) Seth Haji Abdullah Haroon, M.L.A.
(8) Khan Bahadur M. A. Khuhro, M.L.C.
(9) Sardar Gangadharrao Narayanrao Mujumdar, M.L.A.
(10) Khan Bahadur Abdul Latif Haji Hajrat Khan, M.L.C.
(11) Mr. Ellis Jones, M.L.C.

126. (v) *Constitution of Sind as a Separate Province.*— Sub-Committee No. IX of the Indian Round Table Conference dealt with the question of constituting Sind as a separate Province and, with two dissentients, accepted the principle of separation. The Sub-Committee noted however that no detailed examination of the financial consequences of separation had been made, and observed that on the figures available to them they were unable to express an opinion on the financial aspects of the question. They therefore recommended that an expert committee in India should examine carefully the probable revenue and expenditure of a separated Sind and the security of the debt on the Lloyd Barrage, and should also recommend an equitable adjustment of the financial commitments for which Sind might properly be considered liable. The Government of India accordingly appointed Mr. Miles Irving, C.I.E., O.B.E., Financial Commissioner, Punjab, and Mr. D. G. Harris, C.I.E., Consulting Engineer to the Government of India, as the Sub-Committee to make the necessary enquiries. This Committee known as the "Sind Financial Enquiry Committee" signed their report in September 1931 after an enquiry lasting from July 13th. The report showed that a separated Sind would enter upon its new career with a deficit of Rs. 110·42 lakhs. On the 1st of December 1931 in his statement made at the close of the second session of the Round Table Conference the Prime Minister announced:—

> "His Majesty's Government also accept in principle the proposition which was endorsed at the last Conference, that Sind should be constituted a separate province, if satisfactory means of financing it can be found. We therefore intend to ask the Government of India to arrange for a conference with the representatives of Sind for the purpose of trying to overcome the difficulties disclosed by the report of the expert financial investigation which has just been completed."

In accordance with the above announcement of the Prime Minister, a committee known as the "Sind Conference" was constituted by the Government of India for the purpose of trying to overcome the difficulties disclosed by the report of the expert financial investigation made by the "Sind Financial Enquiry Committee."

This Conference was composed of the Hon. Mr. A. F. L. Brayne, C.I.E, I.C.S., as Chairman, Mr. H. Dow, C.I.E., I.C.S., representing the Bombay Government, and the following non-official gentlemen as members :—

The Hon'ble Mian Ali Bakhsh Muhammad Hussain,
Sir Shah Nawaz Bhutto, Kt., C.I.E., O.B.E., M.L.C.,
Mr. Lalchand Navalrai, M.L.A.,
Seth Haji Abdullah Haroon, M.L.A.,
Mir Bandahalikhan, M.L.C.,
K.B. Muhammad Ayub Khuhro, M.L.C.,
K.B. Allahbakhsh Muhammad Umar, M.L.C.,
Professor H. L. Chablani,
Professor H. R. K. Batheja,
Mr. Hoshang N. E. Dinshaw,
D.B. Murlidhar Jeramdas Punjabi,
Mr. E. L. Price, C.I.E., O.B.E.,
Qazi Abdur Rahman.

The conference sat at Karachi from 25th April to 17th May 1932, and the Report of the Chairman of the conference which was submitted to the Government of India on 6th June 1932 has since been published.

According to the opinion of the Chairman of this conference the probable initial deficit of Sind as a separate province would amount to Rs. 80·65 lakhs.

According to the proposals of His Majesty's Government contained in the document known as the "White Paper" which was published on the 18th March 1933, Sind is to be constituted as a separate Governor's Province and the Governor of Sind will be declared to have *inter alia* special responsibility in respect of the administration of the Lloyd Barrage.

Accordingly with the object of investigating certain administrative questions which will arise in the event of Parliament accepting the proposal of His Majesty's Government that Sind should be created a separate province and, in order to prevent possible subsequent delay, the Government of India have with the approval of the Secretary of State set up a committee under the chairmanship of Mr. Dow to examine these questions during the coming cold weather.

The Committee has been asked to consider and make recommendations as regards the accommodation required at Karachi for a Government House, Council

Chamber, Secretariat and residences for senior officials; the administrative arrangements that will be necessary to secure the effective supervision and co-ordination of work of the Sukkur barrage project; whether and, if so, what affiliation should be made with the existing High Court, University, medical, scientific, veterinary, forest, engineering, agricultural and other institutions in the Bombay Presidency; whether a self-contained cadet should be maintained for the Services in all departments and more particularly for the All-India Services and any other matter that may be referred to the committee by the Government of India.

VII. Financial Summary.

127. The Barrage proper has now been completed but the canals dependent on it will not be finally completed till 1934. So that up to and including that year there will be heavy capital expenditure both upon the project and upon its consequent developments and that expenditure will be in excess of the receipts from land sales.

It will be convenient if an attempt is made at this point to summarise the financial effect of what has been presented in the preceding sections of this memorandum.

128. (i) *Loan-money borrowed for main project including interest.*—In the irrigation section it has been stated that the latest estimate is that the whole project will cost Rs. 20,03 lakhs. Of this Rs. 36 lakhs are indirect charges, namely, land revenue abatement, and audit and accounts charges and Rs. 19,67 lakhs are direct charges for which Government borrow. This is the cost exclusive of the interest charges on the money which has been or will have to be borrowed for the project. Up to 1930-31 nearly Rs. 10 lakhs per annum of the interest charges have been provided from other sources, mainly from the famine fund excess. After allowing for this it is estimated that the amount borrowed for the direct charges up to the end of 1934-35 will be Rs. 26 crores roughly.

129. (ii) *Lower Sind Canals.*—The liability in sight on account of commitments to landholders in respect of canals in Lower Sind, whose water-supply will be affected by the construction of the Barrage, amounts to Rs. 1,31 lakhs. The Fuleli and Kalri Remodelling Schemes are already in progress. The probable expenditure to end of the current financial year on these Projects is estimated at

Rs. 42·42 lakhs (including all charges) and about Rs. 18·26 lakhs will be required till their completion in 1935-36. The commencement of the remaining projects in these divisions will depend on the financial situation. This does not include Rs. 1,25 lakhs, required for canals north of the sphere of the Barrage, and so unaffected by it, and Rs. 26 lakhs for the Mehrani Canal Project in the Fuleli Canals Division of the Hyderabad District, which, although it is in Lower Sind, is not a commitment and need only be taken up on the basis of its merits as a productive project.

130. (iii) *Agriculture.*—Under this head the proposed expenditure and that hitherto incurred are as follows :—

Proposed expenditure.		Expenditure incurred up to 31st August 1933.	
Non-recurring.	Recurring.	Non-recurring.	Recurring.
17·2	13·1	5·2	10·2

The figures of recurring expenditure include no provision for repairs to or replacement of the various buildings and other items included under non-recurring expenditure. The proposed expenditure on seed-farms and depôts for agricultural requisites will be largely set off by receipts.

131. (iv) *Administrative.*—The new district on the right bank of the Indus came into existence on 5th October 1931. On this account plans and estimates of Revenue and Police buildings estimated to cost Rs. 7·1 lakhs have been sanctioned and up to the end of March 1932 expenditure to the extent of Rs. 6·3 lakhs had been incurred. The average annual cost of the Revenue and Police establishments actually sanctioned by Government on this account comes to Rs. 1·3 and Rs. 0·7 lakhs, respectively.

132. (v) *Roads.*—As stated on page 21 the question of Sind Communications has engaged the attention of the Government of India who have appointed an officer with a small staff for a period of six months from November 1933 to conduct an enquiry and to bear the cost of the enquiry.

133. (vi) *Recoupment of cost in Baluchistan and Khairpur.*—Terms have yet to be arranged with the Government of India regarding the Khirtar branch in the Nasirabad tehsil in Baluchistan. A settlement to which the Government of India have agreed is that the Central Government should reduce the debt of the local Government by the proportionate share of the cost of the Nasirabad section of the Khirtar Branch and take the whole receipts accruing from it, less the

cost of management. The Government of India have asked for a self-contained memorandum embodying the precise terms and conditions for the extension of Irrigation from the Khirtar Branch in Baluchistan. The memorandum is under preparation. It is estimated that this branch will have cost about one crore of rupees inclusive of interest and indirect charges and the total borrowings from the Government of India will be reduced correspondingly. A similar question has to be settled with the Khairpur State in regard to its share of the cost of the Lloyd Barrage, but it is proposed to allow the State to repay its share over a period of years.

134. (vii) *Water Courses.*—Government will have to incur an additional cost of Rs. 204 lakhs on account of water courses and rectangulation charges. In so far as new lands are concerned such charges will be recovered as part of the occupancy price. But as indicated in Section A of Chapter I about three-fourths of the land concerned consist of land already occupied. And, as there stated, the Irrigation Act has been amended to provide for the recovery from existing owners of their share of the cost of water courses and two-thirds of the cost of rectangulation charges. The money will be borrowed and most of it recovered, with interest.

135. (viii) The total irrigational expenditure may be summarised as at 1st April 1935, as follows :—

	Lakhs of rupees.
Outstanding debt for Lloyd Barrage and Canals Construction	26,08
Less—Amount to be paid by the Government of India	−1,00
Outstanding debt for Lower Sind Canals ...	1,30
Total ...	26,08

This includes no provision for the agricultural research and propaganda necessary for the project nor for any other expenditure other than that on the Barrage and Canals.

136. (ix) Estimates of realisations, both from land-sales and from increased land revenue, were framed when the project was inaugurated, and have since been revised. But a complete forecast of the financial results is impracticable in the present state of trade, and will be attempted only after conditions and prices show signs of greater stability than at present. A provisional forecast of the expected receipts from land sales in the Barrage area is given in Appendix II on page 99 of this publication.

VIII. Development of Sind under the Barrage conditions.

137. This memorandum brought up to date has been prepared in order to state in a connected form the existing situation and the various problems that await solution in connection with the development of Sind under Barrage conditions. In each principal branch of administration the position is summarized below under the following heads :—

A. Important work done and important changes, developments and economies effected during the past five years.

B. Matters which have been partly considered or dealt with.

C. Questions to be taken up in the near future.

D. Matters the consideration of which has been postponed.

I—IRRIGATION.

A.—(*a*) Important changes and developments and economies carried out during the past five years.

(i) *Lloyd Barrage and Canals Construction Scheme.*—The Barrage, including the Divide Walls, and the Head Regulators of the main canals, has been completed, and also the excavation of practically all the channels, big and small, except a few minors which have subsequently been found necessary. The total expenditure incurred up to the end of September 1933 is Rs. 23·05 crores (including Rs. 393·57 lakhs for interest up to the end of March 1933 and excluding indirect charges and *pro-rata* charges on account of establishment and tools and plant from the 1st of April 1932), which is well within the estimate.

(ii) *Research work.*—With a view to observe the effect of the new canals on the sub-soil water level and inquire into other kindred problems, the Central Designs Division, which was created to work out the most economical designs of masonry structures, was converted into a Research Division on the 1st of October 1930. This division has by now collected most useful data, which will be extremely helpful in taking measures to guard against water-logging.

As a measure of economy the Indus River Gauging Division was subsequently merged into this division on the 26th October 1931 ; since then the functions of the Gauging

Division are also being performed by the new division which has been renamed "Development and Research Division".

(iii) *Establishment.*—In order to effect saving on establishment in the Public Works Department, the Sind Public Works Department and the "Barrage" administrations were amalgamated on the 15th December 1931. To start with, the posts of two Chief Engineers were maintained and only the office of the Chief Engineer in Sind disbanded. From the 1st of April 1933, however, the post of one Chief Engineer, who was working as Joint Chief Engineer, was also abolished.

Substantial economy was also obtained by reducing the scales of pay of temporary Assistant Engineers and other staff on the completion of the Barrage works, which had entailed very hard work, in consideration of which high scales of pay had been allowed during the construction period.

Effect has also been given to the recommendations of the Thomas Committee, wherever possible.

(iv) *Drainage Division.*—A special Drainage Division is now (November 1933) being opened to deal with the preventive and protective works found necessary as the results of investigations conducted into the effect of the Barrage irrigation on the sub-soil water levels and the tendency to water-logging.

B.—Matters which are now under consideration or have been partly dealt with.

(i) *Remodelling of the canals of lower Sind.*—As already stated under Chapter I (C), the whole of the "Fuleli Canal System Project" has been completed except the Mirwah Talhar project and the construction of modules along the remaining canals. The former project is ready, but as several objections to it have been raised by the zamindars concerned, it is being further examined. Plans and estimates for modules are in hand and the work will soon be taken up.

As regards the canals in the Karachi district, the position has been fully explained under paragraph 32 (vi) above.

(ii) *Canals in Upper Sind.*—The position as regards these canals, which are not affected by the Barrage, has been described under Chapter I (B). A small project costing

Rs. 1,05,704 has since been sanctioned by Government for the excavation of two new distributaries out of the Begari Canal and the construction over it of two Cross Regulators which are very urgently required. These works will be commenced during the current financial year.

(iii) *Amendment of the Bombay Irrigation Act.*—A radical amendment of the Bombay Irrigation Act is necessary. The amendments which have been proposed are under the consideration of Government.

(iv) *Settlement with the Khairpur State in regard to the recovery of the share payable by the Durbar towards the cost of the Barrage.*—The question was discussed at a Conference held at Simla where the representatives of the Government of India, the Government of Bombay, and the Khairpur State were present; and it was decided that the question of the exact implications of the understanding between the Bombay Government and Khairpur State as to participation in the Barrage scheme should be further examined.

(v) *Settlement with the Government of India in regard to the recoupment of the cost of the extension of Barrage canals into the Nasirabad Tahsil.*—The memorandum on the subject required by the Government of India is under preparation.

II—COMMUNICATIONS.

(i) *Extension of the Railways.*—A programme for the extension of Railways has been drawn up. Of these the Sind Left Bank Feeder Railways have already been completed and opened for traffic. Any further construction work has been held over due to the existing financial stringency.

(ii) *Roads.*—Information in connection with the progress made on the provincial roads has been given under Chapter II.

The Government of India have under consideration a proposal for the development of roads from loan funds, and in this connection a special officer has been appointed by the Government of India to conduct an enquiry in respect of the roads in Sind with a view to preparing a complete programme of development of roads in that province. The report of this special officer is awaited.

III—LAND POLICY AND REVENUE.

A.—Work done in the last five years.

(i) *Disposal of land.*—The disposal of Government waste lands has proceeded on the principles laid down in paragraphs 45-55 of the handbook; and these principles have been proved in the main to be sound. Up to the present the following areas of land have been disposed of :—

	Acres.
Free and concessionary grants (including free military grants, grants to Junior Talpurs, fallow-forfeited and mohag grants and other miscellaneous concessions) ...	1,22,000
Sales at full rates	2,55,000
Peasant grants	20,000
Leases	1,71,000
Total ...	5,68,000

The main item in the free and concessionary grants is the regrant of fallow-forfeited lands and mohag grants, for which it was originally estimated that 3½ lakhs of acres would have to be reserved. As both of these kinds of grant are now practically completed, it will be seen that a large saving has been made on the estimated amount of land that would be thus absorbed. The balance is available for full rate sales and the financial aspect to that degree is improved. As regards sales at full rates, it has proved possible even during the depression current during the last few years, to sell more than the area programmed for sale, and to obtain approximately the prices estimated before the depression set in. This seems a clear indication that the original estimates were not unduly optimistic.

The sale of leases is a new feature in Sind land revenue administration, which has recently been extended into the non-Barrage areas. So far as the Barrage area is concerned, leases have become very popular, and there is strong demand for the lease of land at rates which are seldom less and often in excess of the land revenue rates, which have to be paid in addition to the lease money.

(ii) *Settlements.*—The resettl ment of the whole Barrage area has been carried out, and new settlements introduced. Owing to that fact that settlement rates are based on a fixed proportion of the zamindar's net assets and that the introduction of the new settlements coincided with a great fall

in the prices of agricultural produce, the rates sanctioned were much lower than had been originally forecasted. The rates were therefore only sanctioned for five years with effect from July 1932, in the hope that prices may improve to the mutual advantage of zamindars and Government.

The indications are that security of water supply and the improvement of agricultural practice have increased outturns to an extent that has largely discounted the fall in prices, so that the new settlement rates are being paid without difficulty.

(iii) *Land acquisition.*—Practically the whole of the land required for head works, canals, distributaries, and all channels other than water-courses has been acquired and paid for. The land for water-courses has also been surrendered and the water-courses constructed and the zamindars are to be paid for the land by credit given to them against the amounts due from them for the construction of water-courses. The Bombay Irrigation Act has been twice amended in 1931 and 1933, in order to enable the cost of construction of water-courses to be levied.

(iv) *Rectangulation.*—

(*a*) The major rectangulation by the Survey of India has been completed.

(*b*) The original programme of sub-rectangulation of 1,500,000 of acres has been extended to 2,300,000 of acres, and will be completed in the current season.

(v) *Establishment.*—Certain economies have been effected in the establishment of the Revenue Officer and the District Officers, the more important of which are as follows :—

(*a*) Amalgamation of the temporary post of Survey Officer, Lloyd Barrage, with that of the Superintendent of Land Records in Sind.

(*b*) Abolition of the post of Chitnis to the Revenue Officer.

(*c*) Daftardars replaced by Chitnises.

(*d*) Huzur Deputy Collectors replaced by Huzur Mukhtiarkars.

(*e*) The post of Political Assistant to the Commissioner in Sind has been held in abeyance.

B.—Matters partly considered and dealt with.

The recovery of the cost of construction of water-courses has been legalised and a scheme for their collection has been worked out, but recoveries have not yet commenced.

C.—QUESTIONS TO BE TAKEN UP IN THE NEAR FUTURE.

(i) A review of the policy to be adopted in regard to the sale of lands, considering whether it is possible and desirable to accelerate sales, and whether lands at present held on leases of terms of years should be released or sold.

(ii) The extent to which sub-rectangulation should be extended in Class II and Class III lands, and the agency by which further sub-rectangulation should be carried out.

(iii) As the existing land revenue settlements expire in 1936-37, proposals for the new settlements will have to be initiated in good time.

IV—AGRICULTURE.

A.—The chief developments and economies which have been given effect to in the Agricultural Department in Sind during the past five years are as follows :—

(i) The unification of control of the Agricultural Department in Sind with the appointment of a Chief Agricultural Officer in Sind, financially and administratively independent of the Director of Agriculture, Bombay Presidency, and subordinate to the Commissioner in Sind, and the separation of the cadres of the Department in Sind from that in the Presidency.

(ii) The establishment of a Provincial Board of Agriculture in Sind and of a Local Committee of that Board, in lieu of the Divisional Board of Agriculture, Sind, to co-ordinate the work of the Agricultural and Co-operative Departments and the association of non-officials in agricultural development work.

(iii) The establishment of a Sind Research Committee, under the chairmanship of the Commissioner in Sind, to co-ordinate and control research work in Sind in all its branches as affecting agriculture and irrigation.

(iv) The formation of a Sind Cotton Committee, upon which the interests of cotton-growers and cotton trade interests are fully represented, and to whom all matters relating to the future of cotton cultivation and marketing up-country will be referred for discussion and advice.

(v) The establishment of six new Government Auxiliary Farms under the "Six Farm Scheme" in the Barrage areas for demonstration purposes.

(vi) The complete reorganization of district propaganda charges in accordance with the new requirements of district work under post-Barrage conditions of irrigation and agriculture.

(vii) The closing down of the Government Farm, Sukkur, the Government Wheat Farm, Jacobabad, and the Willingdon Cattle Farm, Malir, as measures of retrenchment.

(viii) The organization of a special section of the Agricultural Department in Sind, i.e., the "Sind Cotton Extension Scheme" for intensive work towards the extension of the cultivation of improved varieties of cotton in the Barrage areas.

N.B.—The work under this scheme is financed by the Indian Central Cotton Committee, Bombay, who granted a sum of Rs. 93,000 for this purpose from 1931-34 and have extended the scheme for a further period of five years, i.e., till 1939 at an additional cost of Rs. 2,96,540.

(ix) The conversion of the Government Farm, Mirpurkhas, into a horticultural research station to deal with problems relating to fruit culture, etc., in Sind.

(x) The appointment for one year in the first instance of a Mechanical Engineer (Irrigation and Agriculture) in Sind for work on problems relating to agricultural engineering development and research.

(xi) The formation of a propaganda "touring party" with magic lantern slides, exhibits, etc., for propaganda work in the Barrage areas.

(xii) The issue of a new series of vernacular leaflets on agricultural subjects.

(xiii) The establishment of an "Oil-seed Branch" of the Botanical Section at the Agricultural Research Station, Sakrand, for investigation into the possibilities and economics of the extended cultivation of improved varieties of oil seed and pulse crops in the Barrage areas. (This work is being financed by grants from the Sir Sassoon David Trust Fund.)

B.—Matters under consideration and matters partly dealt with.

(i) The expansion and development of the staff and resources of the Department employed upon demonstration and propaganda work in the districts, especially in the

Barrage areas. A detailed scheme and estimates in this connection have been prepared and are being considered by Government.

(ii) The organization of an agricultural engineering section of the Agricultural Department in Sind, under a qualified and experienced Agricultural Engineer, to investigate agricultural engineering problems.

A small commencement has already been made in this direction by the appointment mentioned in item (x) of Section A above of the Mechanical Engineer for Irrigation and Agriculture. A detailed scheme for agricultural engineering development in Sind is now under the consideration of Government.

(iii) Experimental work on the reclamation of *kalar*, i.e., alkali, lands in Sind under post-Barrage conditions of irrigation.

In this case also a detailed scheme has been prepared which Government is considering.

(iv) The question of Supply and Improvement of Cattle was dealt with by a Committee under the chairmanship of the Revenue Officer. Their report has been printed. The decisions taken by Government thereon were summarised in a Press Note, copy of which is attached to this Review as Appendix III. Most of their recommendations have had to be held over owing to lack of funds.

C.—QUESTIONS TO BE CONSIDERED IN THE NEAR FUTURE.

(i) The establishment of a Research Station on the right bank to investigate the agricultural and irrigational aspects of rice cultivation on the Barrage canals and to conduct detailed scientific research into the soil and sub-soil problems of that tract.

(ii) The completion and development of the equipment and the extension of the facilities for research work at the Agricultural Research Station, Sakrand.

(iii) The establishment of sub-stations to investigate—

(*a*) the problems of rice cultivation and irrigation in Lower Sind.

(*b*) fruit culture in North Sind.

(*c*) the improvement of the Thar Parkar breed of cattle for general use in the Barrage areas.

(*d*) economic control measures against the major insect pests and fungus diseases on the main crops.

(iv) The organization of seed supply of improved varieties of crops, based on regular schemes for progressive multiplication of pure seed and the establishment of a series of storage and distributing centres, e.g., seed depôts, etc. (Seed multiplication schemes for improved varieties of cotton and wheat have been already started and are now in the third year stage.)

V—FORESTS.

A.—There is nothing to record under this head.

B.—MATTERS WHICH HAVE BEEN PARTIALLY CONSIDERED OR DEALT WITH.

(i) A scheme has been prepared and is now under the consideration of Government under which it was proposed to create some 10,000 acres of irrigated forest plantations in the Larkana Division, dependent on a regular water supply. Under this scheme suitable timber species would be grown in addition to "fuel producing" species. Some preliminary work has already been carried out by the Irrigation Department in so far as the "layout" of the irrigation system is concerned.

(ii) Minor forest irrigation schemes depending on surplus and unassured water supplies as opposed to regular and assured supplies have been prepared, but their further development awaits the decision on the scheme referred to at (i) above. The main difference between surplus water and regular water supply forest irrigation schemes is that the former are considerably cheaper than the latter, but returns on the money spent on the former take very much longer to realise.

(iii) The Thar Parkar district contains a very large area of "Section 4 Forests" under the management of the Revenue Department. What proportion of these forests should be permanently retained and declared Reserved Forest is now under consideration.

(iv) The revision of the Sind Divisional Forest Working Plans was commenced this year and the preliminary survey work and stock mapping work has been completed in the Hyderabad Division, and commenced in the Karachi Division. This will take at least three years more for the remaining three Divisions of Larkana, Shikarpur and Sukkur.

C.—There are no new questions to be taken up in the near future.

D.—MATTERS THE CONSIDERATION OF WHICH HAS BEEN POSTPONED.

(i) Owing to the indefinite postponement of the Ghotki irrigation project, due to lack of funds, no action can be taken at present to select forest areas within the limits of that project for plantation purposes and to submit proposals for the disforestment of the remaining areas, as until this project is taken up, it is not possible to cultivate these lands.

(ii) The provision of suitable accommodation for the forest protective staff has always been inadequate in Sind, and is now more so as a result of the damage done during the last few years by floods and rains to the existing buildings. But the consideration of this question must await a return to more favourable financial conditions.

(iii) The conversion of the posts of Forest Guards into those of Range Forest Officers where the charge of Rounds is held by the former. There are at least 28 such posts in the Sind Circle, but their conversion cannot be considered at present for lack of money.

VI—ADMINISTRATION.

A.—IMPORTANT CHANGES AND DEVELOPMENTS WHICH HAVE TAKEN PLACE IN THE PAST FIVE YEARS.

(i) The new district of Dadu has been inaugurated and the necessary headquarters buildings constructed.

(ii) The Irving Harris Committee and the Brayne Committee have reported on the financial aspect of the Separation of Sind.

B.—There is nothing to record under this head.

C.—MATTERS TO BE CONSIDERED IN THE NEAR FUTURE.

(i) The future organization of the Revenue Officer's department has to be considered.

(ii) The numerous and difficult problems of administration arising out of the proposed separation of Sind must also be considered in the near future. Many of them in fact are already being considered by the Sind Administrative Committee now sitting at Karachi (*vide* page 165).

APPENDIX I.

Recommendations of Advisory Committee of 1923 regarding development of Agricultural Department in Sind and action taken thereon up to end of September 1933.

Recommendation.	Action taken.
1. The establishment of three experimental stations, viz. one for the area to be irrigated on the Right Bank of the Indus, the second for the area under the Rohri and associated canals on the Left Bank and the third for the area to be fed from the various canals dependent upon the Eastern Nara.	1. The Agricultural Research Station, Sakrand, was established in 1925 in the Nawabshah District of the area under the Rohri and associated canal systems. The establishment of a Right Bank Research Station is under examination.
2. The establishment of several subsidiary stations (five in number) to try out on a large scale and under different conditions the results obtained at the central experimental stations.	2. Government "Auxiliary" Farms have been established under the "Six Farm Scheme" at Oderolal, Lundo and Pad Idan on the Left Bank and at Dadu, Shahdadkote and Nasirabad on the Right Bank.
3. The appointment of an Agricultural Engineer for all problems in connection with land development, pumping and other applications, of mechanical cultivation.	3. The appointment of an officer to hold the post of Mechanical Engineer (Irrigation and Agriculture) in Sind has been made by Government for a period of one year in the first instance.
4. The appointment of a Deputy Director of Agriculture for Animal Breeding specially for Sind.	4. No action has yet been taken owing to the difficulty of finding the necessary funds.
5. The opening of Government Cattle farms for the Thar Parkar breed of cattle, and possibly for the Bhagnari breed of cattle.	5. No action has yet been taken. This recommendation has been endorsed by the Sind Cattle Committee, and the matter is being examined by the Agricultural Department in Sind.
6. The Mirpurkhas farms should be devoted entirely to work on horticultural research and the development of fruit-growing under a horticultural specialist.	6. The Government Fruit Farm, Mirpurkhas, is now solely devoted to horticultural research and the development of fruit culture in the Barrage areas. A Horticulturist has been appointed and placed in charge of the work at this Farm.

Recommendation.	Action taken.
7. With regard to agricultural propaganda and demonstration, an immediately increased provision of Rs. 75,000 per annum for the development of this branch of the activities of the Department is necessary.	7. Additional staff, etc., for district propaganda work have been provided at a cost of Rs. 14,575 per annum. Provision of Rs. 3,000 in 1931-32 and Rs. 5,232 in 1932-33 has been made for the organization of a touring propaganda party in the Barrage areas.
8. The location of an Agricultural College at Nawabshah to provide for the development of higher agricultural education in Sind.	8. No action has yet been taken. In view of the financial stringency it seems doubtful if a separate college for Sind will be possible. Alternative schemes for providing suitable facilities for agricultural education at less cost are under examination.
9. Pending the initiation of (8) above, six scholarships should be awarded annually to scholars from Sind tenable at the Agricultural College, Poona.	9. Six scholarships of the value of Rs. 40 per month were sanctioned in June 1925. The number was reduced to four and the value to Rs. 20 per mensem in February 1931.
10. The separation of the Agricultural Department in Sind from that in the Presidency proper the former being placed under the sole control of a local Director of Agriculture who would deal directly with Government and also with the Commissioner in Sind and the Chief Engineer, Lloyd Barrage and Canal Systems.	10. A Chief Agricultural Officer for Sind was appointed for a period of five years with effect from 1st June 1930. The Chief Agricultural Officer in Sind was made independent of the Director of Agriculture, Bombay Presidency, and subordinate only to the Commissioner in Sind.
11. The development scheme, based upon the recommendations of the Advisory Committee, should be reconsidered after a period of ten years.	11. Does not arise.

APPENDIX II.

Provisional forecast of the expected receipts from land sales in the Barrage area (in lakhs of rupees).

	Sales at full rates.	Fallow forfeited and mohag.	Peasants.	Leases.	Total.
Up to					
1931-32 ...	6·07	6·37	.....	·14	12·58
1932-33 ...	18·33	11·12	·75	·70	30·90
1933-34 ...	27·84	4·78	1·50	4·00	38·12
1934-35 ...	36·60	.....	1·50	4·00	42·10
1935-36 ...	45·36	.....	1·50	4·00	50·86
1936-37 ...	54·12	.....	1·50	4·00	59·62
1937-38 ...	62·88	.....	1·50	4·00	68·38
1938-39 ...	70·64	.....	1·50	3·00	75·14
1939-40 ...	77·15	.....	1·50	3·00	81·65
1940-41 ...	83·41	.....	1·50	3·00	87·91
1941-42 ...	89·67	.....	1·50	3·00	94·17
1942-43 ...	87·60	.....	1·50	2·00	91·10
1943-44 ...	81·35	.....	1·50	2·00	84·85
1944-45 ...	77·35	.....	1·50	2·00	81·35
1945-46 ...	76·85	.....	1·50	1·00	78·85
1946-47 ...	73·85	.....	1·50	1·00	76·35
1947-48 ...	71·35	.....	1·50	1·00	73·85
1948-49 ...	68·85	.....	1·50	1·00	71·35
1949-50 ...	67·60	.....	1·50	1·00	70·10
1950-51 ...	67·60	.....	1·50	1·00	70·10
1951-52 ...	62·60	.....	1·50	1·00	65·10
1952-53 ...	56·34	.....	1·50	1·00	58·84
1953-54 ...	50·08	.....	1·50	.....	51·58
1954-55 ...	43·82	.....	1·50	.....	45·32
1955-56 ...	37·56	.....	1·50	.....	39·06
1956-57 ...	31·30	.....	1·50	.....	32·80
1957-58 ...	25·04	.....	1·50	.....	26·54
1958-59 ...	18·78	.....	1·50	.....	20·28
1959-60 ...	12·52	.....	1·50	.....	14·02
1960-61 ...	6·26	.....	1·50	.....	7·76
Total ...	1,588·77	22·27	42·75	46·84	1,700·63

APPENDIX III.

Press Note No. 248, dated 10th November 1932.

In July 1928 Government appointed a Committee :—

(1) to examine the question of the sufficiency of cattle in Sind with special reference to the changes in cultivation as a result of the construction of the Lloyd Barrage ;

(2) to consider the measures necessary to increase their number and to improve their quality ; and

(3) to make any other suggestions relevant to the subject.

The Committee, under the chairmanship of the Revenue Officer, Lloyd Barrage and Canals Construction submitted their report to Government last year and a Press Note embodying the principal recommendations of the Committee was issued on December 5th, 1931.

The Government of Bombay have now passed orders on the report which have been published in a Resolution dated 13th October.

Government agree with the Committee's view that it will be of value to them to obtain correct figures of agricultural live stock by means of special establishment in one or two typical talukas and are prepared to give effect to the recommendation when funds permit.

Under the Barrage Canals system, owing to the comparatively small proportion of rabi, the Committee anticipate that at the outset there will be no difficulty in getting the cultivation done by the same cattle as are used in kharif and Government agree with the Committee's conclusion that in the first two or three years of the new conditions there are unlikely to be any difficulties on account of shortage of cattle.

The special deficiencies anticipated in the Rohri Canal Circle area can be partly met by an influx of cattle from areas which are better supplied. It is estimated that after the first ten years following the opening of the canals the next twenty years will show an increase in total cultivation of from 40 lakhs to 50 lakhs of acres or a percentage increase of 25. With the development of mechanical cultivation which the Committee expects over this extended period the percentage increase of cattle required will be somewhat less and if the more serious situation of the first ten years can be met the Committee consider that the less rapid development during the next twenty years should not bring any insuperable difficulties.

The Committee recommend that a number of small established breeders should be granted small holdings since they are likely to be crowded out as their present grazing lands are brought under cultivation. Government consider that the object aimed at

will be better achieved if co-operative cattle breeding societies are formed in convenient centres with the assistance of the Deputy Registrar of Co-operative Societies and small holdings allowed in a compact area so that the formation of cattle breeding societies can be readily organised and their working supervised and assisted. Experiments on these lines should be made as far as staff and funds at the present time permit. The Committee propose to develop two of the three well established breeds of Sind cattle, viz., the Thari breed of the Thar Parkar District and the Bhagnari breed of the Upper Sind Frontier, as dual purpose animals, viz., for milch and draught purposes, and suggest that two cattle farms should be established. The schemes appear to be sound but can only be taken up gradually as finances permit. They consider that a farm for the Thari breed is needed more urgently than that for the Bhagnari breed and the former should therefore be given preference when funds for the establishment of such an institution become available. Government accept the Committee's recommendation that Sind should obtain a more adequate share of the grants already available for the Premium Bull system; and that efforts should be made to encourage that system; which in their opinion is an important line of advance. They have under their consideration the revision of the Premium Bull Rules with a view to making the system more extensive in its scope by offering contributions towards the cost price of a Bull or a monthly premium and by granting facilities for loans under the Agriculturists' Loans Act to breeders who combine cattle-breeding with agriculture.

The Committee recommend that the Civil Veterinary Department in Sind should be expanded and that Government should consider the abolition of the present system of dual control over veterinary dispensaries by the Department and the District Local Boards and the assumption of full control by Government. Under present financial conditions Government are, however, unable to accept the additional liability which the acceptance of these proposals would involve.

Government have already given effect to the Committee's recommendation that in the Barrage settlements light rates should be imposed on those leguminous crops, grown either in kharif or rabi, which are valuable as fodder crops and which are, at the same time, useful in restoring the fertility of the soil. There is some misapprehension in the Committee's recommendation that the existing concession of growing natural grass at a light rate of annas 12 per acre should be continued and widely advertised. This concession has not been restricted to the districts of Hyderabad and Nawabshah but it has been extended to Thar Parkar and Sukkur districts.

Government accept the Committee's recommendation that grazing in Government unoccupied lands in the Barrage area should be free and uncontrolled, no fees being levied and no permit being required.

The Committee's recommendation that plantations should be made along canal banks and in the neighbourhood of inspection bungalows and regulators and should be maintained by the Public Works Department is under consideration separately.

The Committee's recommendation that the growth of private huris should be encouraged by concessions, which is supported by the Commissioner, will be examined further. The Agricultural Department in Sind has taken steps in the direction of propaganda regarding the value of fodder storage, cheap form of chaff-cutters and experiments in cheap method of silage, suitable for the country.

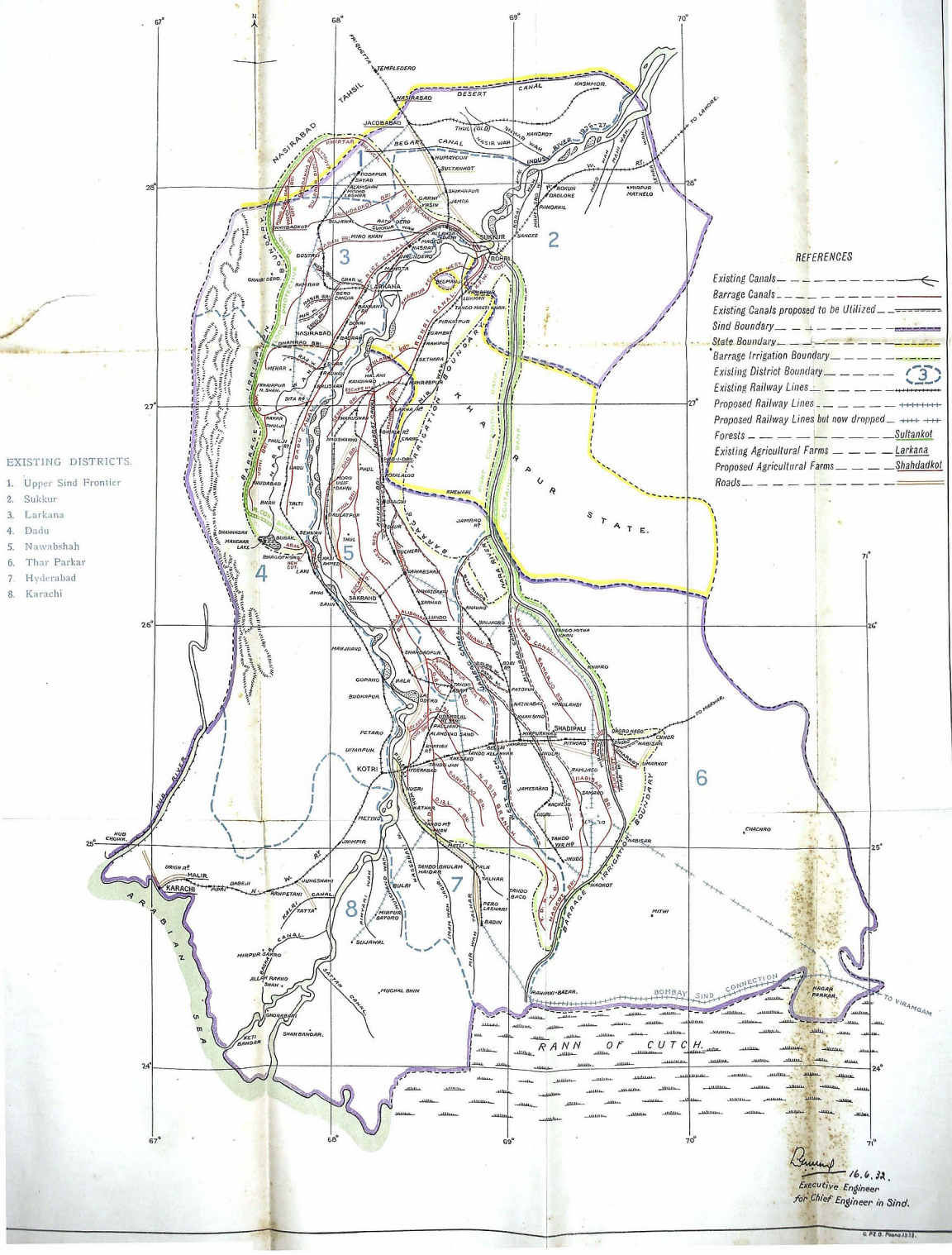
Government agree with the Commissioner in Sind that conditions are not at the moment favourable for the extensive use of motor tractors in agricultural operations in Sind. Further light will no doubt be thrown on this by the data which are being collected by the Agricultural Department as a result of work done on the preparation of the land under the Six Farm Scheme. Encouragement to local bodies and associations to hold cattle fairs and agricultural shows is already being given within the limits of the grant allowed by Government for agricultural demonstrations, shows and exhibitions. In the present state of the finances it is not feasible to make any large increase in this grant.

As regards the Committee's recommendation that the school readers of the elementary schools should be given a more definite agricultural bias the Director of Public Instruction is being requested to take up the matter in consultation with the Chief Agricultural Officer in Sind.

The Committee recommend that the propaganda staff under the Chief Agricultural Officer in Sind should be expanded and should be conversant with the work done for live stock just as much as for other agricultural improvements. Government have already fully considered the future requirements of Sind with regard to agricultural propaganda but regret that they are unable to provide additional funds for expansion in the near future. A Provincial Board of Agriculture in Sind, with a local committee, has recently been constituted which associates non-officials and officials in agricultural propaganda as well as in co-ordinating the activities of the different Government departments towards rural development.

MAP
OF
SIND

Scale:— 20 Miles to 1 Inch.



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III—GREATER BOMBAY

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III—GREATER BOMBAY

I. General.

PRESENT CONDITION.

1. Modifications of existing arrangements in the Suburban district are principally required :

(1) because the present police and, to a less extent, judicial arrangements are not sufficiently effective ; and

(2) because the local self-Government bodies, created under Acts designed for the conditions of mofussil districts, are now an unco-ordinated congeries of adjoining local authorities.

The Bombay Suburban district was formed in 1920 to include first all that part of Salsette island in which suburban development was already advancing rapidly, secondly Trombay, in which early development on an intensive scale was anticipated, and thirdly seven villages around Ambernath in the Kalyan taluka of the Thana district, where it was proposed to establish an industrial colony ancillary to Bombay.

During the thirteen years that this district has existed the development of the suburbs has proceeded steadily, not much faster than it had proceeded during the previous twenty years and much as it will in all probability proceed in the future. All the attempts to open up large new areas at a distance from localities which were already developing have to a greater or less extent failed for the time being ; though apart from the attempted development of central Salsette by the central Salsette tramway none of them have been complete failures.

The Ambernath area still forms part of the Suburban district though its police arrangements have been put back into the hands of the district superintendent of police, Thana. Its magistrates are the magistrates of Thana district but its mamlatdar is the mamlatdar of South Salsette subordinate to the collector of the Suburban district. Trombay is still as rural as it was thirteen years ago. It developes at a snail's

pace, though perhaps a trifle faster now, as regards residential buildings, than when it was being opened up by numerous new works during the early years of the development department.

It is in that part of Salsette which is south of the green dotted line in the map at the end of this volume that development has been intensive. Here, the new development and town planning schemes have urbanised in an orderly and attractive manner a great part of the extensive gaps which existed in 1920 on both sides of the B. B. and C. I. railway between the railway station and in the whole area to the west of that line; and there has been some development also in the east of the sector along the G. I. P. railway. The development which has occurred here in the last thirteen years has been so well ordered that it has brought a transformation. North of this line little change has occurred. Malad and Borivli were already flourishing towns in 1920 and had even then almost reached the extent of their possible development without piped water supply, which is still lacking. The creation of the development department had thus affected them very little.

Population and area.

2. These observations are borne out by a comparison of the census figures of 1921 and 1931. Apart from Ambernath the figures are—

	1921	*1931*
Suburban towns—		
Bandra	27,944	41,189
Kurla	26,059	30,311
Ghatkopar	8,064	8,179
Juhu	1,418	1,203
Santa Cruz	6,092	9,000
Vile Parle	7,479	9,758
Andheri	6,211	11,836
Malad	8,520	7,588
Kandivli	3,444	2,753
Borivli	5,957	5,957
Chembur	3,191	4,304
Mulund	2,653	3,931
Rural areas (including urban localities outside the boundaries of local authorities)	45,808	96,831
	1,52,840	2,32,840

The increase in the population between 1921 and 1931 has been 80,000. Between 1911 and 1921 it was 72,000. The area of the Suburban district, excluding Ambernath, is 142 square miles and it extends 19 miles north and south and 14 miles east and west. The area of Bombay city is 24 square miles, and the total length of Bombay island is 11 miles. Its population is 1,161,383 according to the census of 1931.

REORGANISATION OF THE ADMINISTRATION.

3. The proposals made from time to time for the improvement of the administration of the suburban district have usually proceeded on the lines that the district should be abolished, the southern portion, the area of intense development, with or without Trombay, amalgamated with Bombay city and the remainder of the district restored to Thana district. Arrangements on these lines would practically accept the position of to-day without making provision for the future. They might be well adapted to the police and judicial requirements of the locality for many years to come. But they could not be the best even to-day from the revenue point of view, while in the future when the tide of development flows strongly into Trombay and the suburbs north of Andheri, as some day it doubtless will, their administrative needs will only be satisfied if the revenue authority with which they have to deal is located either in suburbs or Bombay—preferably in Bombay. Even to-day reversion to control from Thana would probably be highly inconvenient to these areas. From the revenue point of view therefore the boundary is best left where it is, because if some parts of Salsette outside the "Greater Bombay" area must remain under the revenue control of a collector located in Bombay there is no advantage in including any part of Salsette in Bombay. The revenue administration of the whole of Salsette is and must continue to be regulated by the Bombay Land Revenue Code and a Greater Bombay would have to be subject to different revenue Acts in its Bombay and Salsette areas.

But the revenue administration is only a part of the administration and is an easily adaptable part. If police and judicial requirements dictate that, when funds are available, a Greater Bombay should come into being, revenue arrangements would without difficulty fall into line. The collector of the suburbs would still be collector of parts of Salsette outside Greater Bombay and the part of Salsette which fell within Greater Bombay. But he could not be district

magistrate in the latter area. As regards local self-government, the time cannot be far distant when all that part of Salsette which is contained within the green dotted line in the map is under municipal governance ; if under that of separate municipalities, these must be correlated either with each other independently of Bombay or correlated with the Municipality of Bombay. But the organisation of the area for local self-government need not necessarily affect its police or judicial or revenue organisation.

II. Revenue and General Administration.

Present organisation.

4. The whole suburban area is about one-third to half the area of one taluka of a mofussil district but its population is exceeded only by those of the talukas in which the important towns of Ahmedabad, Poona, Sholapur, Karachi and Hyderabad are situated. The principal work of the revenue officers here is of a special kind, mainly that connected with the development and administration of the various suburbs.

At present the form of administration of the Bombay Suburban district is outwardly that of the ordinary district. There are a collector and district magistrate, and a district superintendent of police. The post of deputy collector, retrenched in 1931, was restored in 1932 in order to provide for control of the taluka officer's work by outdoor inspection, an essential feature in the district system. The post is now held by the deputy collector of Bombay city in addition to his city duties. He is also additional district magistrate. When the post of deputy collector was retrenched, a mamlatdar was appointed as personal assistant. This arrangement broke down and the mamlatdar retired owing to failure of health through overwork. The post of personal assistant has been retained and its occupant, also a mamlatdar, is wholly engaged upon indoor work of the Salsette development office, i.e., the preparation of sanads, reports on infringement of regulations, the issue of collection orders and the very frequent interviews with tax payers, take up his whole time. There is also in addition to the staff of the kind to be found in the ordinary district a land manager who sells Government lands, does land acquisition work and is the outdoor assistant in the collector's Salsette development office.

The Salsette development office has a special branch for state-aided land and building loans which comprises one side of what would be, in England, a Building Loans Society.

Like several other districts in the presidency, the Suburban district shares a district and sessions judge, an executive engineer and a superintendent of excise with an adjoining district, in this instance, Thana.

This district differs from other districts in that, the collector is directly subordinate to Government except as regards certain statutory powers exercised by the commissioner, central division, e.g., as regards appeals under the Land Revenue Code and in municipal matters. The result is that the district is deprived of the benefits of the supervision and local inspection by the commissioner and his staff. As the cadre of the district staff has been organised on the understanding that it is subject to the supervision of a commissioner, an undue burden has been thrown upon the collector personally. When a further piece of the machinery was removed and the post of deputy collector retrenched, a break-down was inevitable and occurred.

Revenue officers in Bombay and the Suburbs.

5. The revenue and general administration work in Bombay city is entrusted to :—

(1) The collector.

(2) A deputy collector, who also administers the electricity duty work in the city.

(3) A superintendent, Bombay city survey and land records office. He is also in charge, under the collector, of the assessment of land, valuations, sales and tenancies.

(4) A manager for the development department chawls.

(5) A supervisor of the entertainments duty.

(6) A superintendent of excise, who administers also the Bombay Tobacco Act.

The land acquisition work in Bombay city is done by the land manager, Bombay Suburban district.

The revenue and general administration work in the Suburban district is entrusted to :—

(1) The collector (who is also collector of Bombay) and Salsette development officer.

(2) The deputy collector (who is also deputy collector in Bombay). He is the "prant officer" for the Suburban district.

(3) The land manager. He is specially concerned with land acquisition, town planning, the development of the properties acquired by the Bombay development department in the Suburbs.

Amalgamation of the two collectorates.

6. The immediate object served by the amalgamation of the collectorates of Bombay and the Suburban district was economy, but ever since the severance of Salsette or a part of it from the Thana district (to which it belonged up to 1920) was first mooted there have been advocates of the present arrangement of placing the several portions in charge of the collector of Bombay as the best means of securing the co-ordination of government policy in revenue and development matters in the whole area. So long as the development directorate and department were in existence this co-ordination was well provided for, but when the development department ceased to exist, there was complete absence of such provision.

From time to time other and usually more grandiose schemes have been put forward to secure this co-ordination and providing an authority to discharge the functions of a revenue commissioner in the Suburban district. Among such schemes was one for the formation of a new revenue division for Bombay and the Suburbs and another for a new Konkan division. No such scheme has or would gain acceptance while finances are as straitened as they are to-day.

The addition of the charge of the Suburbs to the collector of Bombay was made possible by the removal of a number of extraneous functions which had been added to the collector of Bombay's duties from time to time partly in order to compensate for the removal of duties in connection with central revenues. The new duties added are considerably heavier than the miscellaneous functions (the charge of the factory and boiler departments, chairmanship of the Prince of Wales Museum, etc.) of which he has been relieved. The orders under which the amalgamation was carried out took the form of abolishing the post of collector, Bombay Suburban district, which was a temporary post. The amalgamation may be regarded as an experimental one and the Reorganisation Committee recommended that it should be made permanent (paragraph 326 of report). But, as explained, the amalgamation is permanent until it is reversed. The combined charge is a heavy one but, if it proves unacceptable,

the difficulty would probably be met more cheaply by giving extra assistance to the collector than by again separating the collectorates.

Nature of land revenue work.

7. The systems of land revenue administration in Bombay city and the Bombay Suburban district are different. In Bombay city the assessment and collection of land revenue are governed by the Bombay City Land Revenue Act of 1876. In the Bombay Suburban district, the ordinary survey tenure prevails in 45 Government villages (including the seven villages in Ambernath) and the revenue administration is governed by the Land Revenue Code of 1879. In addition to the Government villages there are 48 villages held under special leases or agreements, and the system of levying non-agricultural assessments differs not only from the practice in Bombay city but in some respects from that followed in districts in the presidency.

Most of the tenures in Bombay city are peculiar to it and are not found either in the Suburban area or in any other part of the presidency. The existing tenures in Bombay city are known as (1) pension and tax, (2) quit and ground rent, (3) toka, (4) foras, (5) inami, (6) Government leasehold, (7) sanadi, (8) newly-assessed and (9) tenancy-at-will. Lands in the possession of the Bombay Government are now generally disposed of on the leasehold tenure, and generally on 99 years' renewable leases. At present apart from the collector, the deputy collector and the officer doing land acquisition work, the revenue staff of the two areas is distinct but further economy may be found to lie in a greater degree of unification.

Future reorganisation.

8. As stated above, from the revenue point of view the most practicable proposal appears to be that the district should remain with its present boundaries. Ambernath taluka might however be excluded and reincorporated in the Thana district because of its distance from Bombay. As regards the question of providing for the exercise of the functions of commissioner in the Suburban district, the difficulty of appointing the collector as commissioner is that he has not the staff either for supervision or for dealing with appeals. He has only one clerk to deal with municipal matters and even he has also other functions. In the Suburban district, where there is no separate

prant office, an appeal from the decision of a prant officer is dealt with by the same office, which prepared the case upon which the decision was based and a second appeal to the collector as commissioner would be dealt with by the same office.

So also as regards local inspection, the office which inspects the work of the mamlatdar for the prant officer, also checks the inspection for the collector. It would be idle to ask it to make a second check for the collector as commissioner.

For the time being, the commissioner, central division, has been appointed to perform the statutory functions of commissioner and the mamlatdars serving in various capacities in the Suburban district are all on the cadre of the central division. But there is nothing in the Suburban district to take the place of the general control by the commissioner or the collector and his subordinates and the inspection of the local offices which is a part of the normal Bombay land revenue system and complementary to the commissioner's statutory powers. The inspection of offices by the commissioner is hardly feasible because there are no facilities in Bombay or the suburbs for the residence of the commissioner's staff. One of the arguments for the creation of the development department was the difficulty of controlling the Suburban area from Ahmedabad. The transfer of the control to Poona meets the difficulty only partially but there seems to be no means for supplying the deficiency except at considerable expense.

III. Police.

Present position.

9. Law and order are maintained in Bombay city by the Bombay city police force, which consists of the commissioner of police, four deputy commissioners and 4,115 other ranks.

In the Bombay Suburban district there are the district magistrate, the district superintendent of police and 442 other ranks. The latter are divided among six police stations :—

Bandra.	Borivli.
Vile Parle.	Ghatkopar.
Andheri.	Kurla.

Ambernath is for police purposes a part of Thana district.

Crime.

10. For its size and population, the Bombay Suburban district has for some years been the most criminal district in the presidency, and the figures below compare it as regards cognizable crime in 1930, with eight mofussil districts :—

District.	Population.	Area in square miles.	Cognizable crime in 1930.
1. Kanara	417,835	3,946	419
2. Kolaba	628,721	2,166	558
3. Ratnagiri	1,302,527	3,989	517
4. Broach	334,170	1,468	695
5. West Khandesh	771,794	6,401	1,250
6. Satara	1,179,712	5,053	1,077
7. Panch Mahals	454,526	1,608	1,064
8. Bijapur	869,220	5,710	1,036
9. Bombay Suburban district	79,524	142	1,179

In non-cognizable crime the disproportion is still greater. There has however been some improvement since 1930. In 1931 cognizable crimes were 759 and in 1932 they were 693. For the first half of 1933 there was a further slight fall.

Previous proposals.

11. Several proposals have been made for the reorganisation of the police in the Bombay Suburban district, the most important of which are :—

(1) That the strength of the police in the Bombay Suburban district should be considerably increased.

(2) That the policing of the Bombay Suburban district should be handed over to the commissioner of police, Bombay.

(3) That Bandra and Kurla should become part of Bombay city and be in charge of the commissioner of police for police purposes and that the remainder of the Bombay Suburban district should be an independent charge or a sub-divisional charge under the district superintendent of police, Thana.

The question of increasing the police force in the Bombay Suburban district has been discussed in the legislative council

on several occasions, as it has been maintained that there is not sufficient police protection for the increasing population in the suburbs. The southern part of the Suburban district is an urban area closely bound to Bombay city and is reported to be the headquarters of many of the city criminals. There would appear to be some justification for an increase in the force in this part to bring it into line with the Bombay city police with the possible exception of the traffic police. This would make for efficiency and a consequent diminution in crime.

The question of handing over the Bombay Suburban district to the commissioner of police was examined in 1928 and both the commissioner and the inspector general considered that while the amalgamation would affect efficiency beneficially, it would result in an unduly heavy charge for the commissioner. Apart from this it was argued that the northern part of the Suburban district is not thickly populated and is more akin to a mofussil district than to Bombay.

If the Bombay Suburban district were amalgamated with Bombay city, it was held that the force required would be twice the then strength: and that it would be essential to bring the whole force on to the same scales of pay as are given in Bombay city. If however only part of the Suburban district were placed under the Bombay commissioner of police the cost would of course be greatly reduced.

As regards superior establishment, no considerable extra cost would be entailed because the district superintendent of police would become a deputy commissioner. There would be no district magistrate, because the commissioner of police and the chief presidency magistrate would exercise the powers corresponding to those exercised by the district magistrate, which they now exercise in Bombay city.

Present proposals.

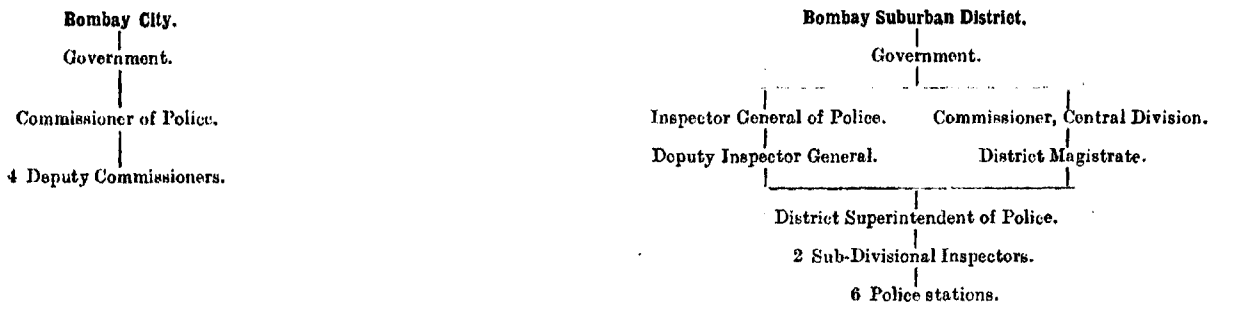
12. If it is not considered feasible to amalgamate the whole of the Bombay Suburban district with Bombay city then amalgamation might be restricted to the areas inside the broken green line on the map. This area reports more crime than other parts of the Suburban district and contains five of its six police stations. These five police stations reported 92 per cent. of the cognizable cases of the whole district during 1929.

In this connection it has been proposed that a new police station should be opened at Malad, where there is now an outpost, and have allocated to it all the villages north of Andheri and that the few villages north of Ghatkopar at present falling under Ghatkopar police station should be transferred from Ghatkopar police station to Mulund outpost. The Malad and Borivli police stations and the Mulund outpost could then be placed in the charge of the district superintendent of police, Thana.

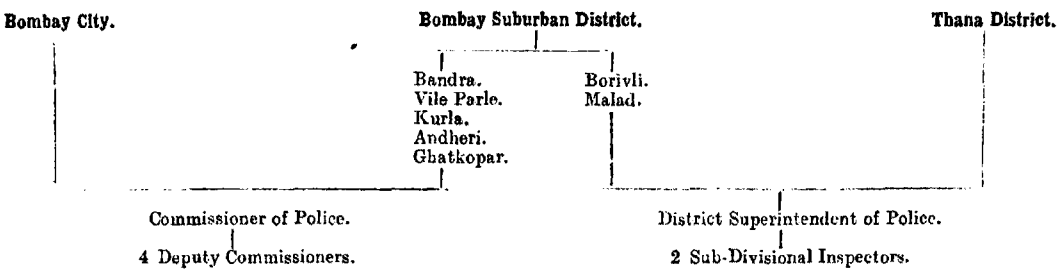
The northern part of the Bombay Suburban district is connected with Thana by good roads running north and south and east and west, while there is also an excellent electric train service between Thana and Ghatkopar. Hence there would be no great difficulty in administering this area from Thana as headquarters. The principal question is however whether Thana with the northern part of the Bombay Suburban district would form too heavy a charge for one district superintendent of police. The Thana district has an area of 3,422 square miles, a population of 836,625 and during 1928 the figures for non-cognizable crime were 1,467. It is not, however, more extensive than several other districts and the addition of the northern part of the Suburban district containing only two police stations and one outpost could not be a serious addition to the responsibilities of the district superintendent of police, Thana.

POLICE.

PRESENT.



PROPOSED.



IV. Judiciary.

Present position.

13. In Bombay City the commissioner of police exercises some of the magisterial powers exercised by district magistrates in the mofussil and the Presidency magistrates exercise the powers of first class magistrates.

Appeals from the presidency magistrates lie to the high court and all cases triable by a court of sessions are tried by a judge of the high court. As regards civil litigation the court of small causes exercises a jurisdiction limited both in respect of pecuniary value and subject matter. The High Court exercises original and appellate jurisdiction as regards all suits in Bombay city except those triable by the Small Causes Court, Bombay. In the mofussil original jurisdiction is exercised by second class and first class subordinate judges and appellate jurisdiction is exercised by the district judge and specially empowered assistant judges and first class subordinate judges in civil suits up to Rs. 5,000 only.

In the Bombay Suburban district the collector is also district magistrate and the deputy collector as an additional district magistrate performs the day-to-day functions of the district magistrate. There is a city magistrate at Bandra and a resident magistrate at Kurla and benches of honorary magistrates with second class powers at Bandra and Andheri. A single sitting honorary magistrate with second class powers in the Bombay Suburban district is also stationed at Andheri. For civil work there is within the district only a second class subordinate judge's court at Andheri. The district and sessions court for the Suburbs is the court at Thana. This causes a great deal of inconvenience because a visit to Thana means the loss of the whole day as a rule for those litigants and witnesses whose offices are in Bombay.

Previous proposals.

14. On the assumption that the jurisdiction of the high court will not be changed, some have proposed a new district and sessions court at Bandra, an arrangement which might not involve much expense beyond finding a suitable building and appointing a sessions judge for Bandra in place of one assistant judge at Thana.

Extension of High Court jurisdiction.

15. The most generally discussed solution has, however, been the extension of the jurisdiction of the high court to

include a part of the Suburban district and the natural line for this extension, as for the extension of the jurisdiction of the city police would be that shown by the green line in the map at the end of this volume. The limits of the jurisdiction of the high court could be extended by an order of the Governor General in council under section 109 of the Government of India Act. Under section 3 (10) of the General Clauses Act the city of Bombay is defined as the area within the local limits for the time being of the ordinary original jurisdiction of the high court. Unless therefore new legislation ordered otherwise, the City of Bombay Police Act would automatically apply to whatever area was included within the high court's jurisdiction.

On the high court obtaining jurisdiction over the new area, the district magistrate would cease to have jurisdiction therein, presidency magistrates would be appointed in place of the existing city magistrate, Bandra, and resident magistrate, Kurla, and appeals would lie from the presidency magistrates to the high court.

One difficulty here is that the time of a high court judge costs more than the time of a district judge but one solution proposed to meet this difficulty is the establishment of a city civil court in Bombay. Recently, the Government of Bombay invited the opinions of public bodies on this proposal and the matter is at present under their consideration. Central legislation would be necessary if it is decided to establish such a court in Bombay city.

The extension of the jurisdiction of the high court might therefore be brought about without increase of cost, but extension of the jurisdiction of the city police would involve extra cost. The two matters are bound up together and it may therefore be said of these proposals for the formation of a Greater Bombay in law and order matters that they must wait upon better times.

V. Public Works Department.

Present position.

16. Co-ordination is more effectively maintained in the public works administration of Bombay city and the suburbs than in the other major departments of Government because both the executive engineer, Presidency, who is the executive engineer for Bombay, and the executive engineer, Thana, who is the executive engineer for the Suburbs, are under the control of the superintending engineer, northern division, whose headquarters are in Bombay.

The Satara Division has been held in abeyance since the 1st June 1932, and from that date the Bombay Government House Sub-division was transferred from the Poona Division to the Presidency Division. Subsequently however, Government decided to amalgamate the Poona and Bombay Government House Sub-divisions and the combined Sub-division, known as the Government House Sub-division is now under the direct control of the Executive Engineer, Poona Division. The Executive Engineer, Presidency Division, has charge of all buildings, recreation grounds, and open spaces belonging to the Local Government in Bombay, the maintenance of the Bombay development department chawls, and of the Back Bay Reclamation.

In the Suburban district, the Executive Engineer, Thana Division, is in charge of all the Suburban schemes, residential and non-residential. The Thana Sanitary and Salsette Water Supply Sub-division, with the exception of the Matheran and Ambernath Water supplies and the Kalyan Water Supply Scheme, has also been retransferred to the Thana Division. Up to October 1930 there was an Executive Engineer, Housing and Suburban Division in charge of the development chawls in Bombay city, the schemes in the Suburban district and the Ambernath and Salsette water supply schemes.

FUTURE POSITION.

17. If the boundaries of Bombay city are extended at some future date for the law and order purposes, it is not clear whether the executive engineer, Presidency, should have charge of the Government roads and buildings included in the Greater Bombay or not. So far as present indications go it does not seem very probable that he would be able to devote the necessary time to the supervision of works in the Salsette area.

VI. Local Self-Government.

POSITION IN 1924.

18. In 1924 there were in the 154 square miles of the Bombay Suburban district and for a population of 154,922, nineteen local authorities, viz.:—

4 Municipalities,
10 Notified area committees,
1 District local board,
1 Taluka local board,
1 Cantonment authority,
1 Sanitary committee, and
1 Village panchayat.

Present position.

19. The position as it stood on August 1st, 1933, was as follows:—

5 Municipalities (2 Boroughs and 3 District).

11 Notified area committees (three are not functioning).

1 District local board.

1 Cantonment authority, and

1 Sanitary committee (Versova Beach).

Government have converted one of the Notified Area Committees, viz., Vile Parle, into a municipality with effect from January 3rd, 1931, while the Santa Cruz cantonment authority has now ceased to exist.

Water supply is perhaps the most important problem as it is one of the main responsibilities of local self-governing bodies, but owing to the multiplicity of separate organisations in the Bombay Suburban district, Government have had to undertake this responsibility. Surface drainage is a problem which is settled not by artificial municipal boundaries but by surface configuration and geographical conditions. Sewerage is becoming an urgent problem, and the disposal of night soil by existing methods is already presenting serious difficulties.

Previous proposals.

20. The proposal of the Local Self-Government Organisation Committee in 1925 was that Western Salsette should come under the control of only two municipalities, one with headquarters at Bandra and the other with headquarters at Andheri. The order of Government on this recommendation was that a referendum should be made to all the house-holders of the areas affected. Communal, religious and sectional differences and even personal ambitions, come into operation. In 1926* Government agreed that the Bandra Municipality should remain as it was, and accepted a proposal that a joint municipality for Santa Cruz, Vile Parle, Andheri and Versova should be established with head quarters at Andheri.

Government Resolution, General Department, No. 152, dated 14th July 1925.

*Government Resolution, General Department, No. 152, dated 6th September 1926.

Government later again gave way to local feelings in the Bombay Suburban district, and in December 1927 cancelled their orders of September 1926 for a joint municipality at Andheri.

Government Resolution, General Department, No. 152, dated 5th December 1927.

Having shaken off the amalgamation with Bandra by declaring for fusion with Andheri, the inhabitants of Santa Cruz then endeavoured to convert their local authority from a notified area committee with its limited powers to a municipal authority. The inhabitants of Vile Parle and Andheri took the same steps.

The existence of strong local feeling is a fact which Government cannot ignore. By taking advantage of this spirit they are able to enlist in the cause of local administration a good deal of civic enthusiasm which might otherwise be wasted. But means must be found of utilising this local consciousness while providing the machinery for the efficient handling of problems of more than parochial importance.

The problem of water supply in the suburbs is one which the existing local authorities have so far failed to solve, and Government have had to incur the responsibility, and it may be added, financial losses in meeting local requirements in this regard. In order to permit the transfer of the responsibility to a local authority it has often been suggested that a Water Board should be created. Government, however, have finally decided against this proposal because of the numerous difficulties which would have to be faced.

Present proposals.

21. In the next chapter is set forth a scheme for the local self-government of the most developed areas of the suburbs as a part of a Bombay County Council drawn up by Mr. A. Master, late Collector of Bombay and the Suburban district. The scheme cannot perhaps be called an ultimate scheme, but it contains the elements of an ultimate scheme for the local self-government of a Greater Bombay, the territorial limits of which would be determined by the conditions existing at the time it was put into operation.

Meanwhile, as is well known, the Bombay Municipal Corporation is not ready to lend itself to a scheme of the kind and the immediate problems of local self-government in Salsette are concerned with the Bombay Suburban district as at present constituted. Neither amalgamation with Bombay nor the

transfer of less developed areas to Thana district are questions of immediate importance.

Since, therefore, the emergence of a Greater Bombay County Council can only be regarded now as a vision of the future, the immediate question is what the aim should be for the local self-government of the developed area beween Mahim creek on the South and Andheri and Ghatkopar on the North. Experience has shown that further co-ordination is required. It could be provided either by constituting a council to look after common interests, as proposed by the Bell Committee, or by amalgamating the local bodies into a large municipality covering the whole area, or such of it as is developed.

The former method has been examined by Government and abandoned, as was announced by His Excellency at Bandra on 14th June 1933. Government have, therefore, now decided to make a move towards the second solution and to issue preliminary notifications for the purpose of testing public opinion on them.

Immediate proposals in detail.

22. The scheme is roughly as follows :—

The area now comprised in the limits of Santa Cruz notified area committee (excluding the southern end of Juhu, known as Juhu Tara) should be joined to Bandra.

Vile Parle municipal limits and Andheri notified area committee limits with certain additional area on the North and stretching on the west up to the boundaries of Juhu municipality and Versova sanitary committee should be joined and formed into one municipal borough with headquarters at Andheri.

Tara, which is at present in Santa Cruz notified area committee limits, should be included in Juhu municipal limits.

The following would remain in *statu quo* :—

Versova beach committee,
Kurla municipality,
Ghatkopar municipality, and
the notified area committees of Borivli, Kandivli, Malad, Chembur and Mulund.

LOCAL SELF-GOVERNMENT.

PRESENT.

Bombay City.

Municipal Corporation.

Bombay Suburban District.

- Municipalities
  - Bandra .. } Boroughs.
  - Kurla ..
  - Vile Parle .. } District municipalities.
  - Ghatkopar ..
  - Juhu ..
- Notified Area Committees.
  - Santa Cruz (including Tara),
  - Andheri,
  - Chembur,
  - Kandivli,
  - Malad,
  - Borivli,
  - Goregaon,
  - Bhandup,
  - Mulund,
  - Ambernath,
  - Vikhroli.
- Beach Committee.
  - Versova.
- District Local Board.
  - Other areas.

PROPOSED.

Bombay City.

Municipal Corporation.

Bombay Suburban District.

- Municipalities
  - 1 Kurla .. } Municipal boroughs.
  - 2 { Bandra .. } Municipal boroughs.
  - { Santa Cruz .. } Municipal boroughs.
  - 3 { Vile Parle .. } Municipal boroughs.
  - { Andheri .. } Municipal boroughs.
  - 1 Juhu (including Tara). } District municipalities.
  - 2 Ghatkopar .. } District municipalities.
- Notified Area Committees.
  - Chembur,
  - Borivli,
  - Kandivli,
  - *Bhandup,
  - *Vikhroli,
  - *Goregaon,
  - Mulund,
  - Malad.
- Beach Committee.
  - Versova.
- District Local Board.
  - Other areas.

* The district deputy collector is the ex-officio chairman; but the committees do not function at all.

VII. Municipal governance of Greater Bombay.

General.

23. The most important scheme for the local self-government of the Suburbs, that of the Bell Committee of 1924, cut out Bombay city altogether and confined alteration to the suburbs alone. This limitation is unsatisfactory because undoubtedly the interests of the City and Suburbs are closely united and the advantages of the combination of the two areas under one authority (not necessarily amalgamation) are becoming more obvious as the experience of the combination of the city and suburbs collectorates under one head increases.

The mere fact that the majority of the suburban residents do their business in the city and that it has been found necessary to situate the office of the collector of the Suburbs in the heart of the city indicates the close connection between the two areas and the necessity for bringing them under one control.

It must be emphasised most definitely that unification of the form of administration does not involve centralisation and if the new proposals involved any increase of centralisation or renunciation of the principles of democracy, they would stand self-condemned as a departure from the existing policy of Government.

Previous proposals.

24. One proposal is that the city and the suburbs should be amalgamated into one large municipality. There are several objections to this proposal not as regards the object in view, but from a practical stand point. In the first place, (a return will be made to this argument), the resultant municipality would be so bulky and unwieldy as to be unmanageable. It would involve centralisation *in extremis* and the investing of almost autocratic power in the executive. Secondly, the local bodies in the suburbs, which have in a large degree the spirit of autonomy and have in many cases done most valuable public-spirited work, would have to be abolished. Not only would intense irritation be caused to the public, but the services of many public-spirited men would be lost. For it would be obviously impossible to include all the members of suburban local bodies in the new municipality thus formed.

Present difficulties in Bombay city.

25. It is, therefore, necessary to look in another direction for the solution. The matter is further complicated by the present situation of the Bombay City Municipality. The administration is growing far too unwieldy and complicated

for a single body and a single municipal commissioner to administer.

The comparative success of the present system in the past does not mean that it will not break down in the future. The difficulties of co-ordination and control will increase. The addition of the Improvement Trust to the sphere of the corporation's duties will intensify this tendency. The specific defect of the Bombay system is the neglect of the poorer areas. Until the plague broke out in 1896 it used to be said that Parel, Dadar, Matunga and Mahim were treated as step children. Locality after locality was allowed to be converted into a slum. The houses which sprang up at Matunga later were allowed to be built anyhow. It was owing to the fact that the corporation was unable to cope with the regulation of housing that the Improvement Trust had to be created. Now that the Improvement Trust is to be administered by the municipality, there is no reason to suppose that the Improvement areas will be neglected, but it is too much to expect that the building policy as regards the developed part of the city will be brought up to the standard of the area under the Improvement Trust. The reverse may be the case or, if not, other popular services may be neglected. It is improbable that the general standard of administration will deteriorate, but it will be concentrated upon semi-national requirements, and the principles of local self-government will suffer. An unduly large municipality cannot have any intimate contact with the needs of different localities and without such contact all areas are subject to a uniform policy, rendered rigid by the needs of administration, which works most smoothly from the administrator's point of view when mechanical. Small areas with the special needs of small areas cannot, therefore, be satisfied. If the special need of one area is met, other areas will claim similar facilities and often a need which would easily be satisfied for one area, if it possessed its own funds, has to be foregone in view of the jealousies of other areas and their equal claims on the common funds. A large body can suitably provide common necessities, but not individual luxuries. To take an instance, main and through roads are necessary and can only be provided by an over-riding authority. Side-roads are often luxuries and many small areas would prefer a bath-house or library or a play-ground to good side-roads. The delegation of minor local matters to small local bodies provides a wider sphere for the discovery of administrative geniuses and any mistakes made by ignorance of administrative needs are of less importance. There is no doubt that the delegation

of all except the most important spheres of administration to smaller local bodies would be welcomed by a large number of voters.

Example of London.

26. At the end of the last century London was faced with a similar problem but of an inverse character which led to the passage of the Local Government Act of 1899. In that case a central body had to be created, not minor local authorities.

Out of the medley of vestries, district boards and other local authorities were founded twenty-eight municipalities. They reproduced so far as possible the existing local authorities as regards areas, in order to conserve local interests. Generally speaking each area is homogeneous, comprising one particular class of population. These municipalities or municipal boroughs have each a mayor and corporation on customary lines and their powers are wide. They administer lighting, cleaning, watering, street improvement (not main highways), public baths, washhouses, public libraries, electric lighting, cemeteries, enforcement of the provisions of the Public Health Act, subsidiary drainage and certain powers in education.

The matters affecting the whole area of 121 square miles are dealt with by the London County Council. The councillors are elected triennially and the aldermen every six years. The Council administers main highways, main sewage, fire protection, transportation and education. It has powers to undertake measures which affect the whole area generally. Police powers and poor relief are outside the scope of both the London County Council and the municipalities. The old City of London which for over a thousand years had retained a particular organisation of its own was excluded from the arrangement. The water supply is managed by a Water Board and covers an area of 500 square miles. This Board is constituted of members appointed by various boroughs and councils in the area. More particulars of local bodies in the area are given in Appendix A.

Paris, etc.

27. A similar problem is solved in Paris by means which are intended to avoid the same dangers to which Governments and Continental Governments in particular are liable, that is excessive centralisation and the consequent weakening of the democratic principle. The area of Paris is 30 square miles and the population in 1891 was 2,500,000. For general

municipal business there is an elected council of which the prefect of the Seine performs the function of mayor. He, therefore, exercises the functions which the mayor, municipal commissioner and collector exercise in Bombay. In addition there are twenty arrondissements each with its own mayor and "commission" or council of citizens nominated by Government or by the prefect. The police work and enforcement of sanitary regulations, supervision over dangerous industries, etc., are carried out by the prefect of police or as he would be called in Bombay the commissioner of police.

There is far more centralisation and government control in Paris than in London and there are differences in details of working, but essentially the principle is the same.

In the United States of America, Washington, the capital against the municipality of which complaints are never heard, is not self-governing (Griffith, Modern Development of City Government, page 329, Note 1) while New York City and Chicago City, against the administration of which complaints never cease, are self-governing. It seems, therefore, useless to attempt to obtain guidance from American conditions. In fact the absence of complaints against the municipal administration of Bombay City will be a great obstacle in the way of future development and it will be argued that difficulties should be met with when they become really serious and not be anticipated. Unfortunately, as experience shows, when once difficulties in administration arise, they tend to increase. The problem of administration of London was considered in 1837 by a commission, in 1854 by a second commission, but the problem cannot be said to have been solved before 1894 when a Royal Commission appointed for the purpose issued its report. Its recommendations were finally carried out into effect in 1900. It is essential, therefore, that consideration of this important matter should not be delayed until the difficulties have become so acute as to make immediate action necessary without allowing time for proper consideration.

As Shaw (Municipal Government of Europe, page 34) observes :—

> "With no conscious interchange of ideas or methods, the best administrative minds of London and Paris have come to a similar conclusion touching the principle of what I have elsewhere called 'sub-municipalities' as local centres for a very large part of the practical Government business of great metropolis. In London it is now proposed to give a mayor and an elective council to each one of these sub-municipalities, and to confer upon them—under the control

and supervision of a great central council and mayoralty—a very considerable range of executive work and authority. The genius of the Paris system is different. All discretionary authority and all deliberative functions belong to the government of the metropolis as a whole. But the carrying out of as large an amount as possible of the executive work is assigned to the agencies or bureaux which the central authorities have established in each one of the sub-municipalities. The title of maire conferred upon the chief functionary at the mairie building of arrondissement is well calculated to emphasise the dignity and permanence of the neighbourhood regime, and the lasting identity of the arrondissement's territorial bounds."

The German (Prussian) system is so different from either the English or French systems that it is hardly worth practical consideration. Providing as it does for two bodies, one elective for legislation (the council) and another appointive (the magistracy) for administration, a large proportion of which consists of paid officials, such a constitution could hardly meet with the approval of the Indian public nor could be easily fitted in with the present constitution.

Attitude of the Corporation.

28. As regards the City of Bombay the question of decentralisation has already been considered by the Bombay Municipal Corporation. On 21st July 1927 a motion was brought forward by Mr. V. N. Chandavarkar, afterwards Mayor of Bombay, that the commissioner be requested to report as to the feasibility of so decentralising the municipal administration of the city, as to run it on lines similar to the London County Council, treating the present wards as independent units under the co-ordinating authority of the City Corporation and asking the municipal commissioner to furnish certain information. The motion was carried. The commissioner after careful consideration reported that the development on the lines suggested was foreign to the spirit of the Municipal Act and also to the line of advance marked out in Sir Visvesvaraya's report and accordingly any suggestions of the nature indicated could hardly fail to be little more than academical. His attitude, therefore, was that there was no reason to question the principles of the Municipal Act which he clearly regarded as being sufficient for the needs of the city. He did not attempt, however, to discuss in detail the question and future needs. He did, however, state that eventually

when the time arrived for Bandra, Kurla and other suburban municipalities to be federated with the Bombay city in respect of municipal administration, the position would be different and the analogy to the London County Council useful, although for the present any development of the description indicated was not feasible. The matter was subsequently considered by various committees and sub-committees and on 26th November 1931, the opinion of the municipal commissioner was finally accepted and it was resolved that the papers should be recorded. The question was not considered from the wider stand-point and decentralisation was contemplated to a greater degree than is provided in the scheme now proposed.

SCHEME PROPOSED FOR EVENTUAL ADOPTION.

29. The general outline of the scheme proposed is as follows :—

The area with which it is proposed to deal is the whole of the present area of Bombay city and of the Bombay Suburban district as at present constituted. It measures 190 square miles in all as compared with 121 square miles of Greater London which is far more densely populated. A large portion of this area is, however, occupied by certain lakes and catchment areas of the water supply of Bombay City and Suburbs comprising the Tulsi, Vihar and Powai lakes and it is desirable not to exclude this area from the jurisdiction of the proposed council.

It is suggested that the present Bombay Corporation might be reconstituted into a "*Greater Bombay Council" with jurisdiction over the whole area. Its functions might be as follows. They are based upon the recommendation of the Bell Committee :—

(1) Main roads.
(2) Public health (mainly advisory, executive powers in regard to the sanitation and health problems of the different areas to remain with the local primary limits), supervision of registration of births and deaths and vaccination.
(3) Water supply.
(4) Main drainage.
(5) Public utility schemes—electricity transport.
(6) Education (with local school boards).
(7) Fire brigade.
(8) Establishment and maintenance of central hospitals, central markets and public parks.

*Hereafter called "County Council".

(9) Weights and measures.
(10) Adulteration of food.
(11) Town planning and improvement schemes.
(12) Power to compel local bodies to make orders and bye-laws and in default to frame them and compel the bodies to adopt them in order to implement the working of the council's functions.
(13) Control and supervision to be generally that mentioned in the Bell report (Appendix J), and dependent upon the status of the various local bodies.
(14) Collection of rates and taxes.
(15) Audit supervision.

An explanation of the last two items is necessary.

It is notorious that in small and even in the larger local bodies in the Bombay Suburban district, there are always large arrears of taxes. The failure to collect the taxes is naturally a great impediment to progress. A central body is better able to arrange for supervision and collection and to advise write-offs. The Bombay Corporation staff would be developed with little trouble to arrange for the collection of all local self-government taxes in the area. The staff would only be concerned with actual collections and it would be left to the local bodies to impose the taxes and to frame rules for remissions and suspensions. (No. 15)—There is at present no regular audit supervision in most local bodies. The auditor, if any, is under the thumbs of the local councillors or the chief officer and cannot exercise any real control over the accounts. If he does, he is liable to removal from his post. All the audit and account staff should, therefore, be under the control of the chief auditor of the county council and his orders should be obtained in cases of doubt or dispute.

The regular government audit would not of course be abolished.

The constitution of the Council might be roughly as follows :—

(1) Representatives appointed by each local body the number of each to be fixed by Government according to population, 52.
(2) 2 representatives from Khots and Inamdars.
(3) 8 members nominated by Government.
(4) 12 representatives of special bodies and interests.
(5) 11 aldermen to be elected for six year periods by the Council. In the first place to be elected 5 by the Bombay Municipal Corporation and 6 by Government.

There will then be 84 members. This number is, of course, only tentative and may need modification.

The chairman of the County Council might be known as His Worship the High President.

The finance might be as suggested by the Bell Committee. The County Council might be authorised to levy upon the Khots and Inamdars a sum equivalent to half the non-agricultural assessment leviable upon similar government lands in the neighbourhood. Government should similarly allot half the non-agricultural tax on government lands. Legislation will be necessary to assign this source of revenue to the County Council and this may be effected in the special Act which it will be necessary to pass. This tax may be assessed and collected by Government on an agency basis.

The local bodies may be constituted as follows :—

Bombay City Municipalities.

Number of members according to population, but not exceeding 40.

The District Municipal Act might be applied with the stipulation that powers reserved for the County Council could not be exercised without express instructions of the County Council. Otherwise all powers might be exercised until a notification was issued by the County Council declaring a particular scheme to be within its own scope. This stipulation will be of general application in the whole area.

The City Municipalities might be as follows :—

(1) Colaba (Military area).
(2) Fort (Ward A) [excluding (1)].
(3) Umarkhadi, Mandvi, Kalbadevi Wards (B and C).
(4) Cumballa and Malabar Hill (Ward D).
(5) Mazagaon, Byculla (Ward E).
(6) Worli and Mill area.
(7) Mahim and Dadar.
(8) Naigaum, Parel, Chinchpokli.
(9) Wadala Sewri.
(10) Dharavi, Sion, Matunga, Gowari.

The Suburban Municipalities might be :—

(1) Bandra.
(2) Andheri.
(3) Ghatkopar-Kirol.
(4) Kurla.

The Seaside Municipalities.

Juhu Municipality and Versova Beach Committee might be remodelled with special constitutions allowing for representation of nominees of Government, the County Council and elected members.

There would then still remain a large number of small local bodies in the Bombay Suburban district but this, it is feared, is inevitable. These are—

The Notified Area Committees—

(1) Chembur.
(2) Malad.
(3) Kandivli.
(4) Borivli.
(5) Mulund.

The Local Board which administers the rural areas. The villages are too scattered to ensure any effective administration. The members are not able conveniently to visit any central village for meetings and the officers employed would have to be continually on the move to keep in touch with their work. Recently the notified area committees of Borivli and Kandivli who were sharing officers had to terminate the arrangement, as it was found unsatisfactory. At present the members of each notified area committee are able to look after their own areas without difficulty and they take an interest in their work, which they would not do, if a large area were involved. They are able to do much executive work, but if villages were combined into an urban committee as proposed by the Bell Committee, all the executive work would have to be entrusted to salaried executive officers and their salaries would be an additional burden on the finances of the villagers.

It is, therefore, best not to attempt to include villages, which are not anxious for urban amenities, but to leave them to the district local board, which, at present, adequately copes with their needs.

METHOD OF TRANSITION.

30. It remains to suggest the method of transition. There are certain proposals with regard to the suburbs which still remain to be carried into effect. The rearrangement of certain areas and the consolidation of administration, where possible, are still live matters. As regards Bombay city, the municipality may consent to the formation of ward committees for

the management of the areas ultimately to be formed into sub-municipalities. Subsequently to one area after another the District Municipal Act with necessary modifications might be applied with the proviso that powers shall not be exercised which are declared to be reserved by the Bombay City Municipality. There should be no difficulty about retaining two jurisdictions in one area, as this is a normal feature of administration. This procedure will afford the minimum of disturbance and render necessary a minimum of legislation. *Pari passu* the Bombay City Municipality might be given powers in the suburbs. First of all, it might be entrusted with the water supply. And as its duties in the city proper lessen, it might take over other duties, such as main roads, drainage and sewerage. By this process the dignity of the corporation would not be diminished and its members would still retain their status. At a suitable point the change might be made from City Corporation to County Council.

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APPENDIX A.

According to the London County Council volume of London statistics, Greater London covers an area measuring 40 miles from north to south and 30 miles from east to west. There are several criteria for deciding whether an area is in Greater London. Any tract which is in the Metropolitan Police District, the Central Criminal Court District, the Metropolitan Water Board area or the London Main Drainage area, none of which are conterminous, is said to be in Greater London. No effort has been made for amalgamation of local autonomous bodies and it has been realised that some public enterprises are better administered by separate bodies. There are, therefore, the large bodies already mentioned and in addition the 28 metropolitan boroughs, 74 borough and district councils, 9 rural district councils and 27 parish councils, besides numerous *ad hoc* committees and boards such as drainage, sewerage and hospital boards, superannuation, navigation, burial and town planning committees. The metropolitan boroughs contain each a population of from 45,000 (Holborn) to 3,30,000 (Islington). The urban district councils deal each with a population of from 1,856 (Kingsbury) to 3,00,000 (West Ham). The rural councils range from 117 (Godstone) to 25,000 (Staines). Amalgamation has not been attempted, but local bodies have been allowed to develop according to their needs without any movement towards uniformity of population or areas. There is wisdom in this restraint, localities increase or decrease in popularity without any fixed principle and it is much easier to allow a body to increase by natural growth rather than by artificial addition or to allow bodies to decrease rather than to attempt to split up large bodies by arbitrary opinion. The tendency has been to create new bodies for new needs of a central character and not to attempt to distribute powers among a multitude of bodies.

VIII. Reorganisation effected.

31. The process of liquidating the Bombay development department and directorate is now complete. Of all the new appointments made in 1921 or thereabout the only ones which remain are those of land manager in the Suburban district and manager of the chawls in Bombay. The former has survived only by absorbing the post of land acquisition officer, Bombay, which existed before the development department.

Though the clerical staff of the Suburban district is naturally somewhat larger than it was before 1920, the abolition of the post of collector of the Suburban district, created out of a post of assistant collector in 1920, has reduced the number and cost of superior posts in the district below the 1920 level. This means that the various departments of Government in Bombay and the suburbs are shouldering the care and maintenance (and in some cases the gradual opening up) of the various development works as part of their ordinary duties.

In local self-government the past few years have seen much controversy but no advance. Meanwhile Government have examined several alternative schemes and reached their own conclusions. They have recently rejected the scheme for a joint drainage and water board and decided to pursue the policy of amalgamating municipal areas under existing Acts. An early first step is anticipated in this direction; and if this step is successfully taken it is anticipated that the local self-government policy in Salsette will be clearly marked out for many years to come.

The reorganisation of the police and judicial arrangements of the suburbs must wait upon funds and is, therefore, not a matter which can be considered now. It is affected only in a secondary way by the question of establishing a city civil court. This is the only important subject affecting the suburbs upon which Government have not for the present reached a conclusion.

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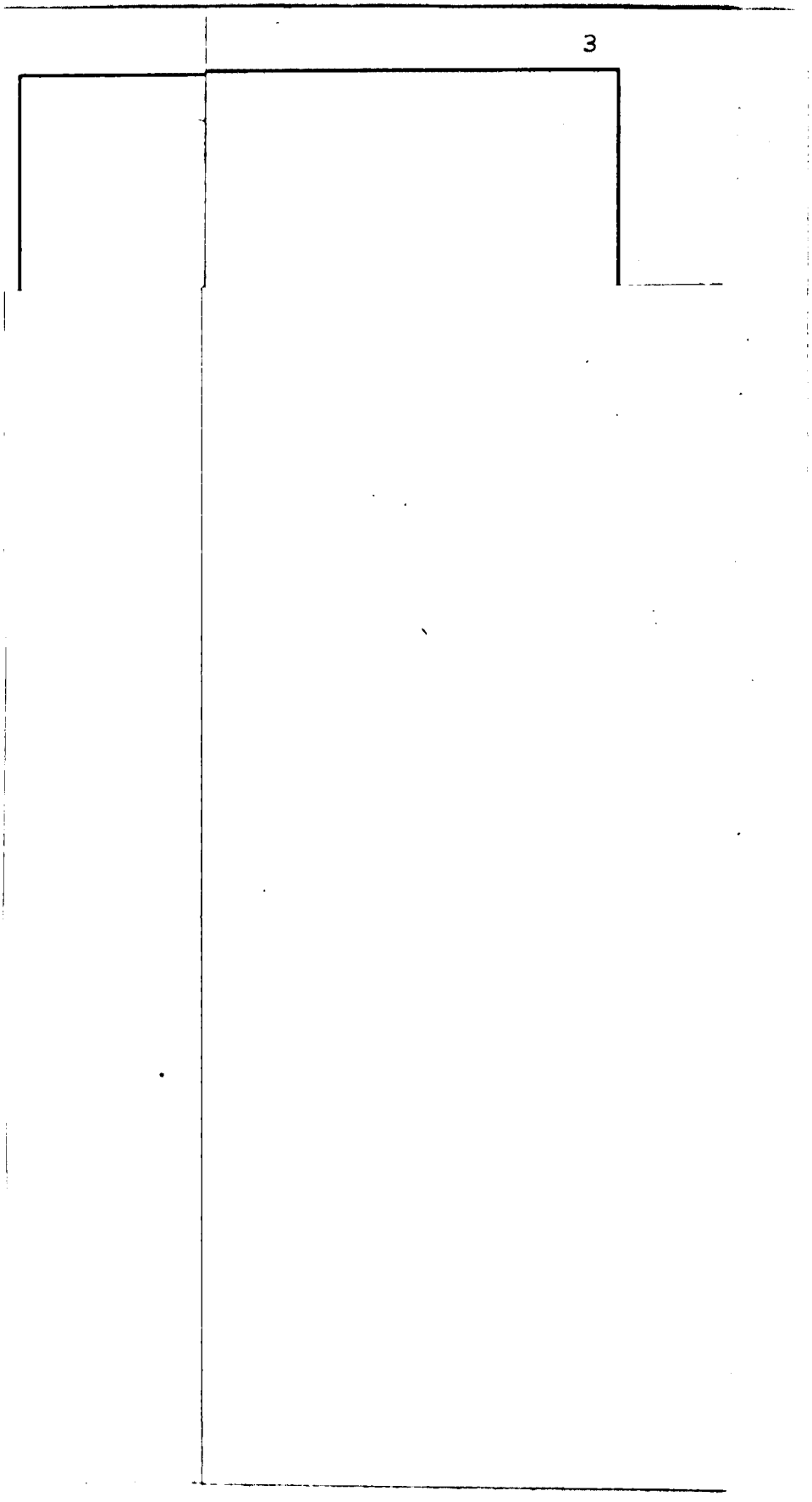

IV—THE SECRETARIAT AND A NOTE ON STATISTICS

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IV—THE SECRETARIAT
and
A NOTE ON STATISTICS

I. Government and the Secretariat.

History of the Secretariat Offices.

1. Before the present secretariat building, which was designed by Colonel Wilkins R.E. and begun in 1867, was finally occupied in 1874, the secretariat or secretary's office occupied a number of different quarters. According to the Bombay Gazetteer these were, up to 1758 some rooms in Bombay Castle, then some warehouses adjoining the Marine Yard; then in 1764 a house known as "Mr. Whitehill's House" bought by Government for Rs. 45,000; from 1798 the old secretariat buildings in Apollo Street (shared with the Collector of Bombay) and from 1828 the old Government House at the south-west end of the Old Cotton Green (present Elphinstone Circle) which Sir John Malcolm vacated on the establishment of a new town Government House on Malabar Point.

It does not seem that any of these buildings contained any accommodation for the governor or the members of the executive council. The members had offices in the Town Hall before their transfer to the present secretariat.

The Cabinet.

2. Bombay has had a governor since 1665. Pitt's Act of 1784 gave the governor three counsellors or members of his executive council, of whom the commander-in-chief of the presidency was one. The Madras and Bombay Armies Act of 1893 abolished the post of commander-in-chief of Bombay and left the governor with two members of Council. The Indian Councils Act of 1909 raised the maximum number of ordinary members of the executive council of the governor from two to four, of whom two were to be persons who had been at least twelve years in the service of the Crown. Actually

from 1909 to 1921 there were always three members of council of whom one was as a matter of practice an Indian. Under the reformed Montagu-Chelmsford constitution the cabinet contained four members of the executive council and three ministers, but was again reduced in size with effect from 15th July 1932 by His Majesty's Government, on the representation of the Bombay Government, to two members and two ministers. It is noteworthy that the reduction in the size of the cabinet, which has yielded very substantial savings in expenditure, was agreed to on the first representation of the Bombay Government on this question though several similar requests for reduction from other provinces in the past had been negatived.

The salary of a member of the executive council of the Governor is Rs. 5,333-5-4 a month. The Government of India Act prescribes that the salary of a minister shall be the same as that of a member of the executive council unless a smaller salary is provided by a vote of the legislative council. The Bombay legislative council reduced the salary of ministers from Rs. 5,333-5-4 to Rs. 4,000 a month with effect from 1st April 1923. The Retrenchment Committee of 1923 recommended a further reduction to Rs. 3,000 and the Reorganisation Committee of 1932 proposed a salary of Rs. 3,000 for the chief minister and of Rs. 2,500 for other ministers under the forthcoming reforms. No action has been taken on these proposals and the salary of ministers remains Rs. 4,000 a month.

Cabinet business.

3. The principle of joint responsibility of the Cabinet has not been established but, as a rule, all important matters of Government are discussed in a meeting of both the members of the Executive Council and the Ministers at which the Governor presides.

Business procedure in the cabinet is regulated by the "Rules of Business" issued by the Governor under the authority of section 49 of the Government of India Act. These rules prescribe, for instance, what cases must be submitted to the Governor. The internal administration of the secretariat is regulated by rules known as "Secretariat Instructions." These deal with matters like hours of work, noting, submission of papers and references between departments and outside the secretariat. Apart from the statutory reference of cases to the finance department, any matter originating in one department which affects another must be referred to the other department.

Disagreement is solved by a reference to the Governor or by discussion in joint council.

When the members of joint council meet to discuss business the secretaries in the departments concerned with items on the agenda list are usually summoned to attend so as to give any information which may be required of them.

Each department is, under the member or minister, in the subordinate charge of the secretary, whose position corresponds closely to that of a permanent under secretary of state in England, except that he is present at council meetings and attends on the Governor, at least once a week, and discusses with him all matters of importance arising in his departments.

Distribution of work.

4. The provincial transferred subjects are divided between the ministers by His Excellency in accordance with his powers under section 49 of the Government of India Act. Among the subjects allotted to the Minister for Education are education, backward classes, stationery (transferred departments) and industries (dealt with in the general department) and agriculture, fisheries, excise, the civil veterinary department, co-operation and registration (dealt with in the revenue department); among the subjects allotted to the Minister for Local Self-Government are local self-government, medical administration, public health and town-planning, water supply, weights and measures, fairs and festivals, registration of births, deaths and marriages and adulteration of foodstuffs (dealt with in the general department) and forests (dealt with in the revenue department) and roads and buildings (dealt with in the public works department). The reserved provincial subjects and central subjects so far as they affect the Bombay Government are similarly divided by His Excellency between himself and the two members of his executive council. Among the subjects allotted to His Excellency are all matters concerning Indian States, Deccan and Gujarat Sardars, ceremonial, naturalisation, passports, and extradition, secretariat standing orders, memorials and petitions, reforms (all of which are dealt with in the political and reforms department), public services commissions, matters affecting the all-India services (excluding administrative matters), associations of government servants and government servants' conduct rules (dealt with in the finance department) and ecclesiastical administration (dealt with in the home department). To the Revenue and

Finance Member are allotted finance, loans, audit, commerce, taxation, financial publications and rules, statistics, customs (dealt with in the finance department), land revenue administration, famine relief, tobacco, stamps, mineral resources, minor ports (dealt with in the revenue department), and electricity (dealt with in the public works department). To the Home and General Member are allotted law and order, police, civil law, prisons, defence, the press and publicity, arms, European and Anglo-Indian education (dealt with in the home department), the drafting of legislation and matters connected with legislation (dealt with in the legal department), Government presses (dealt with in the general department), stationery (reserved departments), port quarantine and supply of books and publications, labour, demarcation of boundaries, petroleum, explosives, major ports, inventions and designs, copyright, emigration, central agencies for research (excluding agricultural research), archaeology, meteorology, Haj pilgrimage, stores, etc. (dealt with in the political and reforms department) and irrigation (dealt with in the public works department).

The chief secretary, by virtue of his office, deals with certain subjects in addition to those of which he has charge as secretary of a department; these include the allotment of government bungalows to officials, matters relating to secretaries and secretaries' meetings, the distribution of accommodation in the secretariat, secretariat standing orders, government servants' conduct rules, official correspondence, associations of government servants, public services commissions, questions affecting all India services, secretariat establishments departmental and other examinations, changes in headquarters of government, dates and agenda of commissioners' conferences.

II. The Secretariat before the Montagu-Chelmsford Reforms.

5. When first constituted not only all the administrative business of Government as at present but also numerous executive functions were transacted in the secretariat. Thus at the end of the eighteenth century one deputy secretary was part-time postmaster general while another was part-time collector of Bombay.

Until the Governorship of Mr. Jonathan Duncan (1795-1811) there was only one secretary controlling all departments, with the help later of various deputy secretaries. The earliest division seems to have been into secret and public departments. Records of the public department exist from 1704. The secret and political departments were formed in 1754, the

revenue department in 1779, the judicial department in 1794, the financial department in 1811, the ecclesiastical department in 1817, the general department in 1821, the public works department in 1860, the educational department in 1860 and the legislative department in 1862. A military department was in existence from 1787 to 1895.

The secretariat was reorganised in 1807 and henceforth ceased to exercise any executive functions. The Court of Directors then ordered that departments should be separated on the analogy of arrangements already in force in Bengal. The organisation finally sanctioned was :—

A secretary,
A deputy secretary in the public, revenue and judicial departments,
A deputy secretary in the military and commercial departments and
A deputy secretary in the secret, political and foreign departments.

The pay of these officers was Rs. 2,166, Rs. 1,000, Rs. 800 and Rs. 600 a month respectively. The secretary had control of the whole secretariat.

A year or two later the secretary was converted into a chief secretary and the three deputy secretaries into secretaries. As a result of this change the chief secretary seems to have been left with little to do and in 1821 one post of secretary was abolished and the chief secretary was given his share of departmental work, an arrangement which has continued ever since. About the same time the increased importance of the secretariat (owing to the absorption of the Peshwa's dominions) was recognised by a general increase of pay.

The pay of the chief secretary was raised to Rs. 34,000 a year in 1819 and further to Rs. 40,000 a year in 1835 and the pay of secretaries to Rs. 28,000 (1819) and afterwards to Rs. 35,000 a year (1835). In 1835 a fourth secretary on Rs. 24,000 a year was added. In 1859 the organisation was :—

Chief secretary, revenue, financial and separate departments.
Secretary, general and ecclesiastical departments and railway branch.
Secretary, political, secret and judicial departments.
Secretary, military and marine departments.

(The pay being Rs. 40,000, Rs. 35,000, Rs. 35,000, and Rs. 24,000 a year respectively.)

In 1860 the public works secretariat work was taken from the civil secretariat and given to the chief engineer who was appointed a secretary to Government and the post of the secretary, general department (who had until then done public works and railways business) was retrenched. There were then two civil secretaries, namely, the chief secretary (with an under secretary) in charge of the political, judicial, legislative, educational and secret departments and the secretary, revenue, financial and general departments; one military secretary (in charge of the military, marine and ecclesiastical departments) and one engineer secretary in charge of the public works and railways departments.

Legislative powers which were taken away from the Bombay presidency by the Charter Act of 1833 were restored to it by the Indian Council Act of 1861. In 1862 the legislative department was formed and a little later, in 1867, an under secretary was appointed secretary to the council of the Governor for making laws and regulations. In 1877 the pay of the chief secretary was raised to Rs. 45,000 a year (Rs. 3,750 a month as at present) and the pay of the other civil secretary to Rs. 37,500 (Rs. 3,125 a month) on the analogy of the scales of pay obtaining in Madras.

With effect from 1st April 1895 the Government of India took over direct control of all military work, the post of military secretary was abolished and a third post of a civil secretary was created on a pay of Rs. 2,500 a month. The organisation was then :—

Chief secretary, revenue, financial and separate departments (with an under-secretary).

Secretary, judicial, political, secret and legislative departments (with an under-secretary).

Secretary, general, educational, marine and ecclesiastical departments.

To this was added in 1907 the legal department. The remembrancer of legal affairs, who had previously been a district judge, was made a secretary on Rs. 2,500 a month and placed in charge of the department and the secretary to the council for making laws and regulations was transferred from the judicial department to the legal department as Assistant Legal Remembrancer.

This remained the structure of the secretariat up to the Montagu-Chelmsford Reforms, although the war and the coming reforms caused a number of temporary secretariat appointments to be added from time to time.

III. Present Organisation.

The Secretariat after the Reforms.

6. The adjustment of the secretariat to the reformed constitution was naturally much discussed, but it was decided to make as few changes of principle as possible and to adjust staff and methods to the needs of the new conditions in the light of experience. In particular it was decided not to attempt to carry down the division into reserved and transferred departments with any exactness below the cabinet. Though adjustments have been made from time to time in order to bring the work of the secretariat departments into allied groups, all members and ministers receive work from several secretaries and most secretaries submit work to both members and ministers. If the temporary existence of the Bombay Development Department, the creation of which had no connection with the reforms, is left out of account, the changes introduced at the time of the reforms were—

(1) the separation of the finance department from the revenue department and its conversion into a strong department with statutory duties in accordance with the new constitution ;

(2) the creation of a separate political department to give relief to the home department with which it was previously conjoint ;

(3) the general substitution of deputy secretaries on the senior time scale of the Indian Civil Service for under-secretaries on the junior time scale of the service. A corresponding change was made subsequently in the public works department.

Secretaries since the Reforms.

7. Before the introduction of the Montagu-Chelmsford Reforms the number of permanent secretaries and under secretaries and their pay were :—

	Rs.
Chief secretary	3,750
Second secretary	3,125
Third secretary—Time scale *plus* a duty allowance of Rs. 250.	
Secretary, general etc. departments ..	2,500

Secretary, legal department and remembrancer of legal affairs—Time scale pay *plus* Rs. 150 judicial pay.

Six Deputy Secretaries—Time-scale pay *plus* Rs. 200 duty allowance.

Two under secretaries—Time scale pay *plus* duty allowance of Rs. 200.

In 1920 the Government of India asked the provinces to formulate proposals for their secretaries under the reformed constitution, suggesting at the same time that—

(1) All boards of revenue and financial commissioners should be abolished.

(2) Heads of departments should to a larger extent be appointed secretaries to Government.

After a good deal of discussion, the Government of Bombay submitted proposals for—

	Rs.
A chief secretary on	3,750
Three secretaries (home, revenue and legal) on	3,000
Two secretaries (political and general) on	2,750—2,875—3,000

In 1925 the Bombay Government recommended that all these five secretaries should be paid Rs. 3,000 on the ground that " the duties of all secretaries are alike in nature and with little variation almost equally onerous." The Secretary of State accepted the rate of pay proposed and it has been in force ever since. The Reorganisation Committee recommended the substitution of a special pay of Rs. 250 in addition to time scale pay as adequate. The subject of the special pay of officers appointed by the Secretary of State is at present under correspondence with the Secretary of State.

Deputy Secretaries since the Reforms.

8. The large increase of work which the reforms were expected to produce did occur, but some of it was only temporary. Excluding the public works and development departments there were in 1921 seven deputy secretaries, while now there are only three; two in the finance department and one, who is also secretary to the legislative council, in the legal department. Deputy secretaries are paid on the senior

scale and have since 1921 received a special pay of Rs. 200 plus a compensatory allowance. They have in times of stress functioned as joint secretaries, that is, they have relieved secretaries of responsibility for definite categories of work. But joint secretaryships have never been adopted in normal circumstances by the Bombay Government.

Interchange with the districts.

9. Secretaryships, deputy secretaryships and under-secretaryships are all tenure posts, the period of the tenure being three years in each case. Interchange with the districts, though it may not be so frequent as some consider desirable, is in fact regularly in operation especially in the case of the junior officers.

Assistant Secretaries.

10. The apex of the permanent secretariat staff is the assistant secretary. He is the main repository of knowledge of methods and precedents. Among his duties are:—

(1) Advising on all questions of establishment, office methods and routine;

(2) Opening the post and supervising its distribution to branches;

(3) Examining all files submitted by the branches to the higher officers, particularly with a view to seeing that the files are in proper form, complete with all the materials necessary that notes are generally sensible and to the point and that when a case has been dealt with in more than one branch the work has been properly correlated;

(4) Noting on some of the important cases and disposing of certain classes of minor cases.

(5) Seeing all files on their return from superior officers; and

(6) Signing letters, etc., for superior officers and assisting the under or deputy secretary in the disposal of routine cases.

In practice an assistant secretary has to adjust the performance of his duties to his knowledge of the superintendents, or he could not carry them all out.

Secretariat staff.

11. As regards the organisation below the assistant secretary each department has a number of branches with a superintendent, a senior assistant and one or two junior assistants

in each of them. The registry (or receipt and issue branch) is in charge of a senior assistant under whom are a number of lower division clerks.

There was a considerable reorganisation of the methods of work and in consequence of the staff of the secretariat after it had been examined in 1921–22 by Mr. Maxwell, now Secretary to Government, Home Department. The system of office procedure introduced by him has been adopted in all Departments except the legal department. Its main feature is that each case is pre-indexed, there being a file with a definite number for every unit of work or case, the same number being continued for all correspondence in the same file. The work of tracing the previous papers of any case has thus been greatly simplified and much of the searchers' time previously spent in examining registers has been saved.

A retrenchment of ten per cent. of secretariat establishments irrespective of the temporary ten per cent. cut in pay was ordered at the end of 1931 but has not yet been fully effected in all departments, as it was found impossible to cope with the work, if the establishment were so drastically reduced.

Secretariat Procedure.

12. Cases which come into the secretariat from outside consist mostly of references from officers subordinate to the local Government, references from quasi-Government offices which correspond directly with Government, references from the Government of India, letters from the public and occasionally letters from other local Governments and political officers. A large proportion of letters from the public are forwarded to local officers for disposal or report. Cases coming from officers subordinate to the local Government usually require eventually a formal order of Government. After their receipt they are first noted upon in the appropriate branch of the department concerned and then go usually through an assistant secretary to the under secretary or deputy secretary or direct to the secretary as may be laid down by the secretary for different categories of cases. An under or deputy secretary frequently submits cases direct to the member or minister, but the papers come back through the secretary so that he may know what is going on. Secretaries and deputy or under secretaries may dispose of cases of a routine character on their own responsibility, but lists of such cases go every week to the member or minister.

Present superior staff.

13. The table printed as Appendix (page 238) shows the superior secretariat staff as it stood after the introduction of the Reforms, before the reorganisation which was carried out in 1926 as a result of Mr. Shillidy's enquiry and at the present day. Changes among the secretaryships in this period are confined to the abolition of the post of secretary, development department, and the conversion of the post of secretary, political department, into one of secretary, political and reforms department. On the transfer of the Indian States to the Government of India from 1st April 1933 a full time secretary, political department, was no longer required. The opportunity has been taken to combine the post with that of reforms officer and thus to save the cost of an additional appointment.

Comparison with other provinces.

14. The total number of superior secretariat appointments including those of the public works department is to-day seven secretaries, five deputy secretaries, three under secretaries, eleven assistant secretaries and one personal assistant to the Remembrancer of Legal Affairs—*vide* Appendix. This is much the same as in the secretariats of other major provinces. Bengal has eight secretaries, four deputy secretaries, two under secretaries and fourteen assistant secretaries, four of the last being in the legislative department. Madras has seven secretaries, three deputy secretaries, four under secretaries and eight assistant secretaries. The United Provinces has nine secretaries, two deputy secretaries, three under secretaries and four assistant secretaries; but in addition there are three ex-officio deputy secretaries and one ex-officio under secretary.

Types of secretariat organisation.

15. To distinguish them from the finance department and the legal department, which are self-contained organisations dealing with matters which affect the whole business of Government, the other departments of the secretariat are sometimes referred to as the administrative departments of the secretariat. The Retrenchment Committee of 1923 pointed out that the following types of organisations exist within the administrative departments, namely :—

(*i*) Where the secretary receives cases submitted to Government by the head of a department who controls and correlates the work of his whole staff, such as the director

of public instruction or the inspector general of prisons. In some cases some degree of co-ordination has to be performed within the secretariat as in the police, where there are three heads under the secretariat, the inspector general, the commissioner of police, Bombay, and the commissioner in Sind and in the revenue department where there are four, the commissioners of divisions and the commissioner in Sind.

(*ii*) Where the head of a department himself acts as secretary to Government and submits cases direct to Government. In this presidency this arrangement is in force only in the public works department.

(*iii*) Where there is no executive head of a department other than the secretary to Government himself—as in the political department, the judiciary and in the case of many miscellaneous offices such as the registrar of companies.

(*iv*) Where the departments are not directly under the Bombay Government and the functions performed are of the nature of agency for the Central Government—as the marine, military, posts and telegraph departments; and also the port trusts.

HEADQUARTER BOARDS *v/s* COMMISSIONERS' CONFERENCE.

16. The Reorganisation Committee recommended the establishment of "headquarter boards" in Poona to mobilise the best administrative experience of the departments and make it readily accessible to Government. Their recommendation has been rejected by Government both on general administrative grounds and because they consider that the boards would cost more than the present system.

Democratic Government in every country has led to a good deal of centralization and though apparently the object of the Committee was to check this tendency as far as possible Government considered that the establishment of the boards would increase rather than reduce it and that the aim should be to simplify the administrative machine by closing down some of the channels of executive action existing at present. They thought that this object could be obtained if the commissioners made it a rule to have regular joint conferences whenever their joint opinion may be required on any important matter of administration or policy. The commissioners are accordingly meeting in joint conference once in two months to consider and report to Government on all such matters as may be referred to them by the various departments of

the secretariat. When matters concerning departments other than the revenue department come up for discussion at any such conference the commissioners co-opt the heads of the departments concerned as members of the conference. When the head of a department who has thus been co-opted as a member differs on any material point from the commissioners he places his views on record and they are forwarded to Government with the commissioners' joint report. By this means a great deal of correspondence between heads of departments *inter se* and Government should be eliminated and the further advantage of personal discussion of the problems on which Government require their advice is obtained.

IV. The Finance Department.

History.

17. The functions of the finance department alone of the departments of the secretariat admit of detailed description, because of their statutory nature.

The finance departments of provincial Governments are for practical purposes creations of the 1921 reforms. Before 1921 provincial resources depended upon the periodical settlements: provincial budgets were subject to the sanction of the central Government and the general power of taxation for revenue resided with the Government of India. Their control, and through them the control of the Secretary of State, over provincial expenditure was close and direct. Financial rules and civil service regulations were framed by the central Government and were uniform throughout British India. Management of ways and means vested entirely in the Central Government, which also controlled borrowing and utilisation of the balances.

The 1921 reforms gave the provinces control of their finances to an extent which is not far short of autonomy, subject to the general power of superintendence, direction and control which is vested in the central Government by section 33 of the Government of India Act. Some of the more important items in regard to which provincial Governments' financial powers fall short of autonomy are that they have no control over the rates of pay and conditions of service of the all-India services, they cannot create permanent posts on a pay of more than Rs. 3,000 a month or temporary posts on more than Rs. 4,000 per month for more than six months and that loans to be raised by provincial Governments, if they are to be raised in India require the sanction of the Government

of India and, if they are to be raised outside India, of the Secretary of State.

Its statutory functions.

18. The finance department, unlike other departments of a provincial Government, has functions and responsibilities specified in statutory rules. These will be found in devolution rules 36-44, of which the most important provisions are :—

"36. (1) In each Governor's province there shall be a Finance Department, controlled by a Member of the Executive Council, with a Financial Secretary, who shall be immediately subordinate to the Member.

* * * * *

"37. The Finance Department shall perform the following functions, namely :—

(*a*) it shall be in charge of the accounts relating to loans granted by the local Government, and shall advise on the financial aspect of all transactions relating to such loans ;

(*b*) it shall be responsible for the safety and proper employment of the famine insurance fund ;

(*c*) it shall examine and report on all proposals for the increase or reduction of taxation ;

(*d*) it shall examine and report on all proposals for borrowing by the local Government ; shall take all steps necessary for the purpose of raising such loans as have been duly authorised ; and shall be in charge of all matters relating to the service of loans ;

(*e*) it shall be responsible for seeing that proper financial rules are framed for the guidance of other departments and that suitable accounts are maintained by other departments and establishments subordinate to them ;

(*f*) it shall prepare an estimate of the total receipts and disbursements of the province in each year and shall be responsible during the year for watching the state of the local Government's balances ;

(*g*) in connection with the budget and with supplementary estimates—

(*i*) it shall prepare the statement of estimated revenue and expenditure which is laid before

the Legislative Council in each year and any supplementary estimate or demands for excess grants which may be submitted to the vote of the council,

(*ii*) for the purpose of such preparation, it shall obtain from the departments concerned material on which to base its estimates, and it shall be responsible for the correctness of the estimates framed on the material so supplied,

(*iii*) it shall examine and advise on all schemes of new expenditure for which it is proposed to make provision in the estimates, and shall decline to provide in the estimates for any scheme which has not been so examined ;

(*h*) on receipt of a report from an audit officer to the effect that expenditure for which there is no sufficient sanction is being incurred, it shall require steps to be taken to obtain sanction or that the expenditure shall immediately cease ;

(*i*) it shall lay the appropriation accounts and the report of the audit officer thereon before the committee on public accounts, and shall bring to the notice of the committee all expenditure which has not been duly authorised and any financial irregularities ; and

(*j*) it shall advise departments responsible for the collection of revenue regarding the progress of collection and the methods of collection employed.

* * * * *

"40. No office may be added to, or withdrawn from, the public service in the province, and the emoluments of no post may be varied, except after consultation with the finance department ; and, when it is proposed to add a permanent or temporary post to the public service, the finance department shall, if it thinks necessary, refer for the decision of the audit department the question whether the sanction of the Secretary of State in Council is, or is not, necessary.

"41. No allowance, and no special or personal pay shall be sanctioned for any post or class of posts or for any Government servant without previous consultation with the finance department.

"42. No grant of land or assignment of land revenue, except when the grant is made under the ordinary revenue

rules of the province, shall be given without previous consultation with the finance department; and no concession, grant or lease of mineral or forest rights, or right to water power or of right-of-way or other easement, and no privilege in respect of such rights shall be given without such previous consultation."

* * * * *

Apart from its functions in relation to provincial revenues which are specified in the above rules, the finance department has somewhat similar responsibilities in regard to central revenues in connection with the central subjects, for the administration of which the Government of India employ the agency of the Bombay Government. But in dealing with central subjects the responsibility for framing financial rules rests with the Government of India.

Classification of statutory duties.

19. The main work of the department falls into two sections, which may be called (*a*) salaries and (*b*) finance. In some provincial Governments the organisation of the finance department is correspondingly split into two sections. The work of the salaries section covers all matters of pay and allowances and conditions of service, and the considerable task of preparing and keeping up-to-date the various manuals of financial rules, in discharge of the department's responsibility under devolution rule 37(*e*) and a scrutiny of cadres and establishments of all departments. The finance side of the work includes the preparation of budget and supplementary estimates, taxation, accounts, control of expenditure, loans, management of funds such as the development loan sinking fund, consideration of audit reports and all dealings with the finance and public accounts committees. A considerable amount of the work of the finance department lies in advising on the financial aspect of the schemes of other departments. There are few administrative matters of importance which are not concerned with finance either for the provision of funds or the determination of establishments required and the rates of pay to be given to them and consequently a large percentage of the files of other departments pass through the finance department at one time or another.

In accounts matters the finance department works in close touch with the accountant general who is the presidency's "chief accounts officer," in addition to being its "principal

auditor" and in this respect the representative of the auditor general. The main heads of account (major and minor) are prescribed either by the Secretary of State or by the auditor general in exercise of his powers under the auditor general's rules. Detailed and lesser heads are prescribed by the finance department in consultation with the accountant general.

Nature of powers and functions.

20. The powers and functions of the department are in general similar to those of the treasury in England. The function of the department is in the main advisory. The Government of India memorandum to the Feetham Committee pointed out that "the function of the Finance Department in truth is not an over-riding power. It is not a body that either dictates or vetoes policy. It watches and advises on the financial provisions which are needed to give effect to any policy. It criticises proposals and can ask for further consideration. It points out defects in matters of assessment and collection; it can demand justification for new expenditure; it can challenge the necessity for spending so much money to secure a given object. But in the last resort administrative considerations must prevail. If there is a dispute regarding expenditure on a reserved subject, the finance member may urge that it is wrong or wasteful or that it will entail fresh taxation. But he can be overruled by the Governor-in-Council. If the dispute relates to expenditure on a transferred subject, the finance department may similarly expostulate. But the minister in charge of the particular subject can overrule it and its objections, taking the full responsibility for so doing. In England he would, in theory, have to get the cabinet to endorse his views in such a case. In an Indian province he would need only the concurrence of the Governor."

Non-financial subjects.

21. The most important of the non-financial items which have been allotted to the finance department are (*a*) commerce, (*b*) companies and associations, and (*c*) statistics. Revenue realisations are closely linked with commodity prices and it is for this reason that (*a*) and (*b*) have been allotted to this department while (*c*) has fallen to its lot because in practice it is the department which makes most use of statistics and statistical analyses. The allocation of commerce and companies and associations to the finance department has resulted in its being the department most concerned with the commercial aspect

of the recent disorganisation of the commodity markets in Bombay. There has, of course, also been an important law and order aspect of these conditions with which the home department has been concerned. The department's responsibility for statistics involves a scrutiny, from the point of view of soundness of statistical analysis of reports in which statistical methods are much used, such as the family budget enquiries of the labour office and the like.

V. The Public Works Department, Secretariat.

22. The Bombay secretariat is also sometimes known as the "civil secretariat" in contradistinction to the public works secretariat presumably because the superior posts in the public works department were generally filled by Royal Engineer officers. Public works and railway matters were handled in the general department of the secretariat up to 1860, when the post of secretary, general department, was temporarily retrenched and the chief engineer to Government became a part-time secretary to Government. This change was made on the analogy of arrangements already in force in some other provinces in the belief that business would be expedited by eliminating the re-examination of the chief engineer's proposals by a "civil" secretary. This is an arrangement which has often been attacked, and almost as often proposed for imitation in other departments. The Public Works Reorganization Committee of 1917 though questioning the principles of the arrangement did not recommend its discontinuance. Some provinces have since abandoned it, but the Bombay Government have no present intention of following suit. They have rejected the recommendation of the Reorganization Committee for a Board of Public Works, but have decided to abolish the post of joint secretary to Government in this department.

The chief engineer and secretary, public works department, was not provided with an office in the new secretariat buildings. It was decided however in 1868 to concentrate the various public works department offices, then housed in numerous incommodious quarters in Bombay, in one building and the present public works department secretariat was accordingly built a few years later, like the secretariat proper, to the design of Colonel Wilkins, R.E.

In 1883 the railway department was separated from the secretary, public works department's charge and placed under a joint secretary. In 1888 the posts of secretary, public works

department and chief engineer were separated and the joint secretaryship was abolished on the assumption by the Government of India of the direct control of railways. In 1892 the posts of chief engineer and secretary to Government were again combined and in 1903 the post of joint secretary and chief engineer was revived and a post of under secretary was added later on.

Separation of the "Roads and Buildings" and "Irrigation" branches.

23. The Public Works Department Reorganisation Committee of 1917, in paragraphs 13–14 and 22–23 of their report, suggested a gradual transfer of the roads and buildings in charge of the public works department to the local bodies—the object aimed at being the encouragement of private enterprise in this country from which would evolve a slow but steady process of local self-Government. In course of time, the chief duty of the public works department would be the supervision of irrigation works, major and minor, and assistance in the development of the agricultural resources of the country. The Committee, however, was not unmindful of the practical difficulties lying in the way of the above process. In some presidencies, as for example the Bombay presidency, both roads and buildings and irrigation works were situated in the same area and could be managed more economically by one local officer doing both types of work than by having two officers working separately in the same division. The Committee, therefore, did not recommend any uniform system of separation of the "Roads and Buildings" and "Irrigation" Branches.

The Bombay Government were at first inclined to separate the two branches and intimated the fact to the Government of India. After a detailed investigation, however, of the various schemes which seemed to be required in consequence of the adoption of such a change it was found that the experiment would entail a heavy extra cost on the already depleted finances of this presidency in addition to involving an extensive over-lapping of charges. The idea was therefore abandoned and the Government of India were informed accordingly.

The Bombay Reorganization Committee of 1932 advocated the transfer of "Roads and Buildings" works (with certain

exceptions) to the District Local Boards, but they have suggested that before doing so, the experiment may be tried in a selected district for a period of five years, and this question is now under the consideration of Government.

24. The chief engineer and secretary to Government is the administrative head of the public works department. He performs dual functions as technical and professional adviser of Government in his capacity as chief engineer and is responsible for the administration of the department as secretary to Government. Since the abolition of the post of chief engineer and joint secretary to Government he is in charge of both the irrigation and the roads and buildings branches of the public works department and deals with all establishment matters pertaining to both branches and all general questions concerning the Indian Service of Engineers, Bombay Service of Engineers and Subordinate Services operating in both the branches.

There are two posts of deputy secretary in the public works department. One deputy secretary deals with roads, buildings, and Back Bay reclamation work, the other with irrigation and railway work. There were, until recently, two posts of assistant secretary, but one of these was abolished from the 1st September 1933, and there is now only one assistant secretary in the department who deals with correspondence and all questions relating to the office establishment, supervises the work of all the noting branches in the office, the records branch and the file bureau. The assistant secretary also deals with all routine cases pertaining to the several branches and he is also responsible for the imprest account.

There is one assistant engineer attached to the secretariat. He is the technical assistant, working directly under the deputy secretaries and the chief engineer. He scrutinises in detail all projects appertaining to both roads and buildings and irrigation, which are received in the secretariat.

VI. Reorganisation effected recently.

25. Two very important retrenchments affecting the Government of Bombay which have been introduced in the last three years have been the abandonment of the move to Mahableshwar and the reduction in the size of the Cabinet by two members of the executive council and one minister. In the

superior staff of the secretariat the principal changes have been the substitution of under-secretaries for deputy secretaries except in the finance, legal and public works departments, the reduction of the political department to a skeleton department on the assumption by the Government of India of direct control of relations with Indian States in April 1933 and the conversion of the post of secretary, political department into one of secretary, political and reforms department, the reforms department being of course temporary, and the retrenchment of the post of joint secretary and one assistant secretary in public works department. One post of assistant secretary in the revenue department is to be held in abeyance from the 1st April 1934. There has also been a reduction of staff below the assistant secretaries in the departments involving in some departments a ten per cent. reduction of cost and in other departments a smaller reduction of cost, a lengthening of hours of work, a reduction of holidays and a fixation of lower rates of pay for new entrants. In business, a delegation of powers and duties from Government to outside officers has already been effected and further action in this direction is still under consideration.

The only proposals affecting the cost of the secretariat which are at present under examination are a reduction of special pay and the further delegation of duties from the secretariat to heads of departments. When the reformed constitution has been established the question of the retention of the post of secretary, political and reforms department, will require further examination. At the moment it does not appear probable that any further substantial economies can be effected or that any important adjustments will be required.

APPENDIX

1st July 1921.	1st April 1925.	1st November 1933.
Secretaries—9	*Secretaries*—9	*Secretaries*—7
Finance Department .. 1	Finance Department .. 1	Finance Department.. 1
Revenue Department .. 1	Revenue Department.. 1	Revenue Department. 1
Home Department .. 1	Home Department .. 1	Home Department .. 1
Political Department .. 1	Political Department .. 1	Political and Reforms Department .. 1
General Department .. 1	General Department .. 1	General Department.. 1
Legal Department .. 1	Legal Department .. 1	Legal Department .. 1
Development Department 1	Development Department 1	Public Works Department 1
Public Works Department 2	Public Works Department 2	
Deputy Secretaries—7½*	*Deputy Secretaries*—6½*	*Deputy Secretaries*—5
Finance Department .. 2½*	Finance Department .. 2½*	Finance Department.. 2
Special Officer .. 1	Revenue Department.. 1	Legal Department .. 1
Revenue Department .. 1	Home Department .. 1	Public Works Department 2
Home Department .. 1	Legal Department .. 1	
General Department .. 1	Development Department 1	
Legal Department .. 1		
Under Secretaries—5 *and Assistant Remembrancer of Legal Affairs*—1	*Under Secretaries*—3 *and Assistant Remembrancer of Legal Affairs*—1	*Under Secretaries*—3
Revenue Department .. 1	General Department .. 1	Revenue Department. 1
Home Department .. 1	Legal Department— Assistant Remembrancer of Legal Affairs .. 1	Home Department .. 1
Development Department 1	Public Works Department .. 2	General Department.. 1
Legal Department— Assistant Remembrancer of Legal Affairs .. 1		
Public Works Department 2		
Assistant Secretaries—11	*Assistant Secretaries*—13	*Assistant Secretaries*—11† *and Personal Assistant to Remembrancer of Legal Affairs*—1
Finance Department .. 1	Finance Department .. 2	Finance Department.. 2
Revenue Department .. 1	Revenue Department.. 2	Revenue Department. 2†
Home Department .. 2	Home Department .. 2	Home Department .. 2
Political Department .. 1	Political Department .. 1	Political and Reforms Department .. 1
General Department .. 2	General Department .. 2	General Department.. 1
Legal Department .. 1	Legal Department .. 1	Legal Department .. 2
Development Department 1	Development Department 1	Legal Department— Personal Assistant to Remembrancer of Legal Affairs.. 1
Public Works Department 2	Public Works Department 2	Public Works Department 1

*Including Financial Adviser in the Development Department.
†Including one post which is to be held in abeyance from 1st April 1934.

A NOTE ON STATISTICS.

General.

1. The subject "statistics" is a central concern under the Devolution Rules, but so far as it comes within the purview of the provincial Government is in the portfolio of the revenue and finance member and is allotted to the finance department. That department therefore deals with any matter involving the consideration of statistical methods which may come before Government.

The principal statistics now published in India, such as the decennial census, the import and export trade figures, the Review of Trade and railway statistics are compiled by departments of the central Government or in the statistical section of the office of the Director-General of Commercial Intelligence and Statistics and published by the central Government. That Government also prescribes the form in which certain statistics should be compiled by many departments of the local Governments and in many cases publishes consolidated statements for the whole of India based upon the statistics published by the local Governments in a common form which it has prescribed, such as those on public health, education, agriculture, finance, revenue, factories and trade unions. In addition the Government of India publishes an annual Statistical Abstract based upon materials collected by its own departments, by departments of local Governments in common form and in some cases on returns made direct to it by departments of local Governments in common form.

Indian Economic Enquiry Committee.

2. Most departments of the local Government publish some statistics in an annual administration report. The common complaint, however, of most committees and commissions which have considered the economic condition of India has been that these periodical statistics serve administrative purposes but throw little light on the economic condition of the people. The Indian Economic Enquiry Committee in paragraphs 21 and 22 of its report classified the then published statistics (both central and provincial) thus :—

(1) statistics which are not of economic significance, such as those of justice, police and prisons, wild animals, pilgrims, medico-legal investigations, lunatic asylums, merchandise marks, meteorology and patents and designs; and

(2) statistics of economic significance.

These are further sub-divided into

(*i*) *General statistics.*

Area, agriculture (tenure crops, etc.), irrigation, live-stock, forests, fisheries, minerals, number of factories and details of some large-scale industries, prices, wages, registration (including land transfer), finance (including income-tax, coinage and currency, banks), co-operative societies, joint stock companies, life insurance companies, production of opium and salt, population, trade (foreign and inland), transport and communications (including posts, telegraphs, telephones and shipping), vital statistics and migration, municipalities, district and local boards and education.

(*ii*) *Local and special enquiries.*

Principally carried out by private individuals, but the enquiries of settlement officers and those of the Bombay Labour Office fall into this class. To this category also would belong the inquiries into cotton marketing which have been financed by the Indian Central Cotton Committee and the recently started enquiries undertaken by that committee and the Imperial Council of Agricultural Research conjointly into the cost of production of cotton, sugarcane and their rotation crops throughout India.

Of these statistics as a whole the committee says (paragraph 102 of its report) " in some respects the statistics of British India have long since attained, both in range and quality, a high state of development. They have not been hitherto designed to indicate the economic trend of the people. They require to be suitably altered to meet this need". As an example of this deficiency the committee quotes the absence of information about pastoral and dairy farming in the agricultural statistics and the absence of statistics about the production of fisheries and, except in the case of cotton goods, of factories, the committee recommends quinquennial wage censuses for large industries, the preparation of estimates of the quantity and value of the total annual production of cottage industries, the value of the raw materials consumed, the number of workmen, etc.

To implement these far-reaching recommendations the committee recommends the establishment of a Central Statistical Bureau costing Rs. 29·15 lakhs a year in addition to an initial outlay of Rs. 16·56 lakhs and provincial Statistical Bureaux costing collectively Rs. 28·40 lakhs a year in

addition to Rs. 15·31 lakhs for initial outlay. It also recommends the constitution of provincial boards of economic enquiry to be associated with the provincial statistical bureaux, while the central bureau would be associated with the publicity advisory committee. Under these provincial bureaux would be inspectors and tehsil clerks to collect and compile statistics of production other than those pertaining to agriculture, forests, mines and large factories, and investigators to make intensive investigations in individual villages and for classes (paragraph 89). The central bureau would publish an annual review of the economic condition of the people.

At the same time the committee recommends legislation to—

(1) place the whole statistical organisation on a legal basis; and

(2) ensure or facilitate the collection of correct economic data from individuals and firms.

Central control of statistics.

3. The establishment of a central bureau is the pivot on which this ambitious scheme depends. "The aim should be to provide a common purpose and a 'central thinking office' on the subject of statistics and to bring the statistics of all the departments, both of the central and of the provincial Governments, under the supervision of one central authority who should be the adviser of Government (i.e. the Government of India) in statistical matters" (paragraph 82 of the report). A statistical bureau to the Government of India was established in 1895. In 1905 it was merged in the commercial intelligence department. In 1914 the department of statistics was created but that department was merged in the commercial intelligence department in 1922. The Royal Commission on Indian Agriculture, 1928, recommended that the department of statistics should be reconstituted as a separate department. The standing finance committee has recently, in April 1933, approved the proposal of the Government of India that the director general of commercial intelligence and statistics should be stationed at the headquarters of the Government of India instead of at Calcutta and that a new department of statistical research should be constituted under him. This proposal, however, although it may point to the increased co-ordination of statistics on which the Economic Enquiry Committee laid stress, appears to have reference principally to the closer analysis of trade statistics.

Views of other committees and commissions.

4. As regards the collection of statistical material to facilitate socio-economic study, the enquiries of the four undermentioned committees cover most of the ground :—

The Indian Industrial Commission (1916-18).
The Indian Taxation Enquiry Committee (1924-25).
The Royal Commission on Agriculture in India (1928).
The Royal Commission on Indian Labour (1931).

Industrial and taxation enquiry committees.

5. The Indian Industrial Commission found the information regarding production and employment in India exceedingly defective (chapter XI). The remedy which it proposed was the institution of a department of industries in each province, with representatives throughout the province who could maintain current and continuous records of what was going on in it. The provincial director would work in conjunction with a director of commercial and industrial intelligence at the centre.

The proposals of the commission in this respect are parallel to those of the Indian Famine Commission of 1880 in connection with agricultural statistics and the appointment of a director of agriculture in every province to deal with them.

The report of the Taxation Enquiry Committee is really of interest here only in its remarks about the lack of reliable statistical material on which conclusions about the distribution of the burden of taxation could be based.

The same sort of complaint is made by the Royal Commission on Indian Currency and Finance 1928 (paragraph 217) and the Bombay Provincial Banking Enquiry Committee 1929-30 (paragraph 4) and the Indian Central Banking Committee 1931 (paragraph 57).

Royal commission on agriculture.

6. The Royal Commission on Agriculture dissociated itself from the recommendation of the Economic Enquiry Committee as to the formation of an elaborate official organisation to deal with statistics with the remark " we are opposed to general censuses of production or large schemes of economic investigation into the condition of the population undertaken with the mistaken notion that the mere accumulation of facts will of itself serve a useful purpose " (paragraph 538).

The commission however strongly recommended the creation of an agency which would extract, collate and when necessary

bring up to date the information which is already available but lies buried in settlement reports and other official papers. It considered however that private enterprise organised by universities or semi-official bodies like the Punjab Board of Economic Enquiry but supplemented if necessary by Government funds was more suitable than official agency for such enquiries as those into indebtedness which it recommended should be undertaken.

The Agricultural Commission emphasises the point that statistics should be collected to serve definite objects. The objects for which Government require statistics are not the same as those of the producer, the trader and the general public, and all the parties interested in the production of and form of statistics ought to collaborate in supplying them. Government have neither the men nor the money to supply all the information required. The commission however recommends the appointment of a statistical assistant under each provincial director of agriculture principally to deal with the compilation of crop forecasts and statistics of agricultural production, the technique and supervision of crop-cutting experiments and the collection of statistics of prices. The Bombay Government have decided that they are unable to afford to make such an appointment at present.

The commission also advocates the appointment of a well qualified statistical officer at provincial headquarters to study all aspects of the economic and social progress of the province as a centre round which voluntary workers in the field of economic and social statistics would gather. Subsequent development, the commission holds, should come as a result of the recommendations of such officers and should be for clearly defined objects which are shown to be both essential and practicable. This provincial development would be made in conjunction with a central bureau of statistical information. The general advice of this commission is that the basis of statistics in India should be broadened so as to rest not on the work of a few officials but on the "support of the informed public and through them on the recognition by the legislatures and by the general public that modern statistic methods are in a position to make an indispensable contribution to the successful development alike of scientific agriculture and of social administration."

ROYAL COMMISSION ON LABOUR.

7. The Royal Commission on Labour in India applied the same practical outlook to urban statistics as the Linlithgow

Commission applied to rural statistics. It makes precisely the same complaint as the Economic Enquiry Committee about existing statistics as "designed mainly for administrative purposes" and as throwing "little light upon the economic position of the worker". (Chapter XXIV of the report.) Existing agricultural statistics are however much fuller than existing labour statistics.

Labour statistics in Bombay.

8. In the domain of urban statistics the Bombay Government have been the pioneers, as the Labour Commission recognised. "So far as wages are concerned, practically nothing has hitherto been achieved with the exception of the enquiries made by the Bombay Labour Office into wages in the cotton mill industry of that province". The commission recommends an organisation of the same character as the Bombay labour office in every province, an expanding policy in connection with labour statistics and an All-India Statistics Act to secure the more complete, accurate and speedy collection of statistics.

Agricultural statistics.

9. The annual "Season and Crop Report of the Bombay Presidency" which is compiled by the director of agriculture reviews the character of the season, the areas under the various crops, the areas irrigated, crop yields, prices etc.; every five years it contains a return of the number of cattle and agricultural implements and wells in the various districts and every ten years a statement of sources of water supply. It thus provides much information on the economic condition of the agriculturists.

The statistical information contained in the report is collected by the village officers under the supervision of the circle inspectors, mamlatdars and other revenue officers and forwarded by the 180 mamlatdars and mahalkaris in the presidency to the director of agriculture who has under him a branch dealing exclusively with agricultural statistics.

On the basis of the information so supplied the director publishes some 32 forecasts on the twelve or more most important crops during the year. In most cases a forecast of the extent of cultivation and condition of the crop is made early in the season and a forecast of the yield is made in the harvesting season; but more than two reports are issued on crops of special economic importance like cotton and wheat. A daily record of rainfall at over 200 stations, including every

taluka headquarters, is maintained and the results are published in the *Bombay Government Gazette*. The director also obtains information weekly from some 250 cotton presses in the presidency of the number of bales of cotton pressed by them and monthly from some 180 mills in the presidency of the amount of loose cotton used by them. This information is published weekly in the *Bombay Government Gazette*. It has been found very useful in checking the cotton forecasts.

The mamlatdars and mahalkaris also supply the director with the prices of the principal articles of food consumed by the agricultural population. On the basis of these reports a monthly return of retail prices and a fortnightly return of retail and wholesale prices is published in the *Bombay Government Gazette*.

STATISTICS ACT.

10. The position as regards the compulsory collection of statistics in this province is this. In 1924 a Bombay Statistics Bill which would extend the scope of compulsory provision of statistical material (which already applies to employers, for instance, under rules under the Indian Factories Act and the Workmen's Compensation Act) to employers regarding wages, hours and conditions of labour, housing, absentees, labour turnover and employers' benefits; to "trading proprietors" regarding prices, etc.; and to landlords regarding rents was introduced in the Legislative Council. This bill, which according to the Royal Commission was in principle a sound one, met with opposition in the Legislative Council and was abandoned by Government in 1926. The present day view of the labour office would be that it was premature. It has hitherto been found possible to collect labour statistics on the voluntary basis to the full extent of the powers of the labour office to make use of them. Steady and increasing co-operation has been secured and the present attitude of the labour office would be that compulsion should not be applied unless its demands for information are for inadequate reasons refused by any important section of the community. Even if this state of affairs were to exist, the further test of public opinion would have to be applied to the question. The education of public opinion to the need of statistics is partly dependent on the skill with which statistics collected by the voluntary system are presented to the public. Success in this depends again on the experience of the labour office and of Government generally. The labour office is still a young and small organisation. The statistics collected

by and the methods of the labour office are discussed in the "Review on Information and Labour". Though some other provinces now have permanent organisations to collect, examine and publish labour statistics, Bombay is still pre-eminent among the provinces of India in this sphere.

Fishery and industries' statistics.

11. The credit which is claimed by the presidency as the pioneer in urban economic enquiries belongs in the field of rural economics to the Punjab. As regards fishery statistics Madras is far ahead of other provinces, but the material provided for the presidency in Mr. Sorley's recent study of the Marine Fisheries of the Bombay Presidency (Government Central Press, Bombay, 1933) which brings the existing information on the subject up to date should serve as a sufficient starting point for any more detailed enquiries which it may be found desirable to make. Government have under consideration Mr. Sorley's proposals for the improvement of fishery statistics.

The industries department has also made a number of surveys of minor industries in the presidency (see paragraph 8 of the "Review of the Industries Department", 1933). As this department expands its capacity for making such enquiries will increase, but the policy of Government has been to make no enquiries of an industrial nature without an immediate object in view.

Punjab board of economic enquiry.

12. The Punjab Government established as early as 1919 a body called "The Board of Economic Enquiry" to enquire into the conditions of living of the poorer classes and other economic phenomena which concern them. (See articles in the Indian Journal of Economics, volume V, part 3, page 247, by Professor Myles and volume VI, page 124, by Mr. Mehta.) Though it was originally intended to deal primarily with rural conditions the board subsequently extended the scope of its work and was divided into two sections, one rural and the other urban. Lala Harkishen Lal, the then minister of agriculture in the Punjab, became the first president of the joint board and the two financial commissioners of the province became the chairmen of the two separate sections. In 1925 the board consisted of 26 members, some of whom were ex-officio members, some nominated by Government while others represented the Punjab University, the banking concerns of Lahore, the press of the province, etc. The establishment charges of the board have been kept down to the minimum

The organisation of the work is in the hands of an honorary secretary and the members of the board receive no payment other than travelling expenses for any service rendered. Since its inception the board has completed many important enquiries and published the result in books and pamphlets. Its enquiries include mortgage enquiries, enquiries into the extent of rural indebtedness, economic surveys of selected rural areas, several enquiries into local industries, an enquiry into the milk supply of Lahore, the size and distribution of agricultural holdings in the Punjab, rates of food consumption of zamindars in the Attock district, the cost of education in the Attock district, housing conditions in certain parts of Lahore, etc., extent of unemployment among the graduates of the province, etc. The rural section has also published a particularly useful questionnaire for village economic surveys.

The board has in the past been dependent on an annual grant from Government, but an endeavour is being made to supplement this by individual donations and subscriptions.

United Provinces board of economic enquiry.

13. A Board of Economic Enquiry and a small department called the Bureau of Statistics and Economic Research were established in the United Provinces in April 1931. In announcing the institution of the board the United Provinces Government remarked that "The mass of useful data which it (i.e. the Punjab Board) has collected has served a double purpose, providing Government with a basis on which to build up an economic policy and creating a well informed public opinion on economic matters....The Punjab Board has become a centre for the exchange of opinions and acquired the authority of an institute of economic research." The functions of the United Provinces board have been laid down as advising the bureau and, either with the bureau's assistance or on its own account, initiating and carrying out economic investigations. The enquiries undertaken by the bureau include enquiries into cottage industries in the United Provinces, into wages and cost of living, the drinking habit, agricultural prices, wastage in Government departments (to assist Government in determining the rate of recruitment), the cost of production of crops, etc. The bureau has also prepared a number of graphs and maps illustrating important economic trends and acts as an information bureau to the departments of the local Government and the public in economic and statistical matters.

Utilisation of published statistics.

14. The case for the provision of means of making more statistical enquiries is not so clear as the case for making a fuller use of the statistics already published. The adequacy of existing statistics, provided they are used by persons competent to understand them, is proved by the publication of such books as "Economic Conditions in India" by Pillai (Routledge, 1925) and "Indian Economics" by Jathar and Beri (Milford, 1931). The census volume of the Bombay presidency (volume VIII, part I, 1931) shows the need for correlating the statistics of different departments and also affords one or two interesting examples of correlation carried out between the census statistics of age and the vital statistics of the public health department and between the literacy statistics of the census and the statistics of the education department. There is room for a great deal of work on these lines to be done by private individuals such as post-graduate and research students. Studies of the nature would be assisted by the publication of a book of collected statistics every year, and it has also been suggested that Government might publish a manual of instructions on where to find and how to use the published statistics.

Matters under consideration.

15. The financial condition of the Bombay Government in any case precludes it for the present from following in the wake of the Punjab and the United Provinces Governments. Its policy is to develop its statistical data on the economic side to the extent possible without increasing the establishment of its agricultural, industries and labour departments. It has before it now the question of issuing an annual statistical abstract which would include, among other statistics, such information about the socio-economic condition of the various classes of the population as is already available but difficult to find.

V—FINANCIAL POSITION OF THE GOVERNMENT OF BOMBAY

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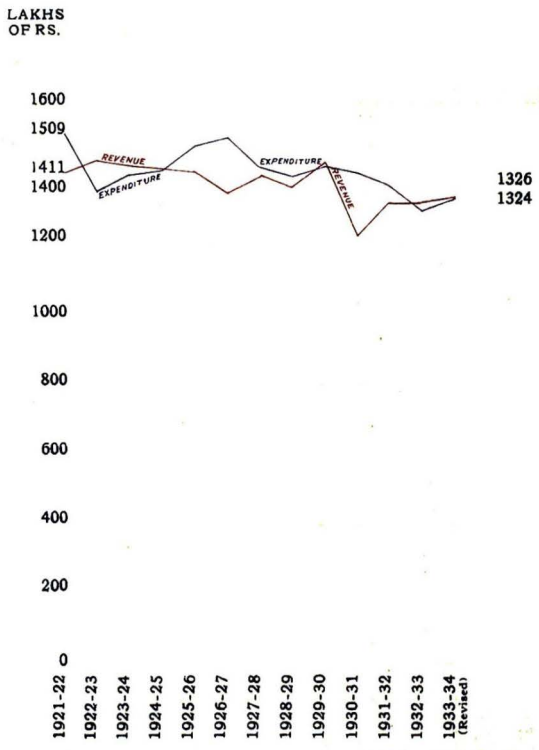
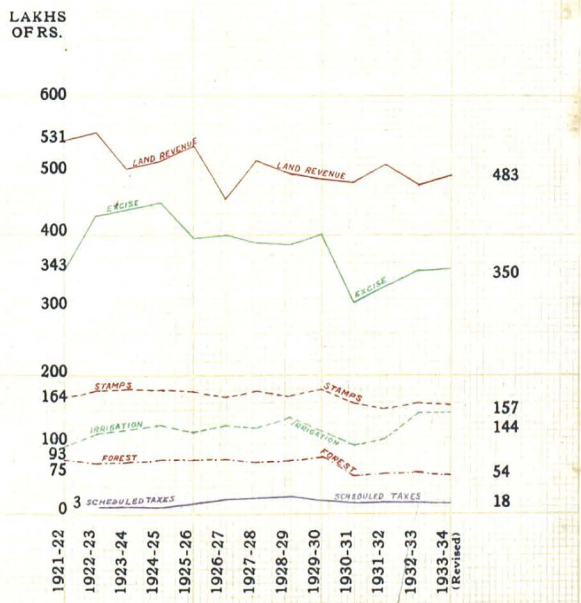
I

TOTAL REVENUE (ORDINARY) AND EXPENDITURE (CHARGED TO REVENUE) OF THE GOVERNMENT OF BOMBAY.



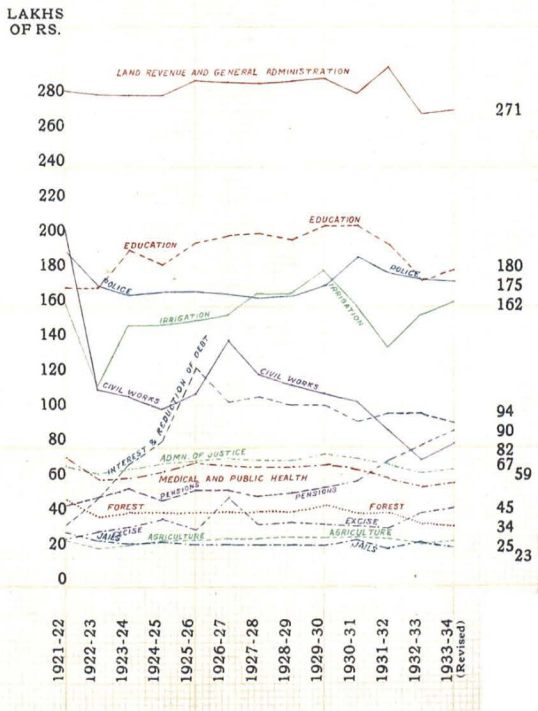
II

CHIEF ITEMS OF REVENUE (ORDINARY) OF THE GOVERNMENT OF BOMBAY.



III

CHIEF ITEMS OF EXPENDITURE (CHARGED TO REVENUE) OF THE GOVERNMENT OF BOMBAY.



V—FINANCIAL POSITION OF THE GOVERNMENT OF BOMBAY

I. Introductory.

1. In the years 1929 and 1931 the Government of Bombay issued two publications in which the financial position of the Presidency as it was at those times was examined and this review is intended to carry the examination yet further. The 1929 review showed how financial difficulties had arisen, and explained the various measures which were then being taken in the endeavour to produce a balanced account. It ended by expressing a hope that these measures would be successful in putting an end to the series of deficits which had been characteristic of the accounts of the preceding years. The second publication, that of 1931, which was prepared at a time of almost unrelieved gloom, surveyed the period from 1921 to 1931 and made it clear that the hope expressed in 1929 would remain but a hope and that the Presidency must either reduce its expenditure in very drastic fashion or discover fresh sources of revenue. This review attempts to summarise the financial history of the past twelve years and to show the efforts Government have made to overcome the many adverse circumstances which arose and by measures of rigorous retrenchment to keep the finances of the Presidency upon an even keel. The three graphs with which it is prefaced are illustrative of the progress of revenue and expenditure during the period and the review is further elucidated by appendices to be found at the end.

2. Of these appendices Nos. I and II are analysed in Chapters II and III. They illustrate the course of revenue and expenditure in this Presidency since 1921-22. Owing to various changes in accounts classification the accounts figures of the different years are not strictly comparable with one another. In the preparation, therefore, of Appendices I and II these changes have been eliminated, so that the expenditure and revenue figures of each year since the introduction of the

Reforms can be compared. The various adjustments that it was necessary to make for this purpose are explained in the note printed after Appendix II. Other adjustments relating to specific items are also explained in the foot-notes to the appendices themselves. Chapter IV deals with taxation imposed since the introduction of the Reforms, and shows that despite additional measures of taxation, the total revenue of the Presidency tends to diminish. Chapter V makes an economic analysis of the period from 1921 to the present day; and Chapter VI indicates the very considerable retrenchment which has already been effected and sums up the financial effect of the major recommendations of the Reorganisation Committee.

II. Progress of Revenue.

3. The chief sources of income are :—

(*a*) Land Revenue, (*d*) Forests,

(*b*) Excise, (*e*) Scheduled Taxes, and

(*c*) Stamps, (*f*) Irrigation.

(*a*) Land Revenue.

4. The figures given in Appendix I show that the Presidency must be prepared to face the fact that this source of revenue must be regarded as one which cannot be expected to be capable of further development. In 1921-22, the total receipts were 531 lakhs, in 1922-23 they totalled 543 lakhs, but from the latter year to the present time they have only in five years reached 500 lakhs, and a comparison of the figures for the years given in the statement shows clearly that the annual receipts are, taking one year with another, never likely to be above that amount but will rather tend to be below it. The gross demand is usually well over 500 lakhs and has actually increased by over 40 lakhs during the period under review, but this head is one which is so liable to be affected by adverse factors such as floods, scarcity of rainfall, visitations of such pests as locusts, etc., that heavy remissions and suspensions are a feature of almost every year and it is safe to assume that about 500 lakhs is the maximum amount that may be expected from it, and that in most years this amount will not be realised.

(*b*) Excise.

5. The receipts under this head were 423 lakhs in 1922–23 and 346 lakhs in 1932–33. The 1922–23 receipts would actually have been higher than 423 lakhs but for the fact that some amount on account of vend fees for that year was recovered in advance and credited in 1921–22. An examination of the receipts during the past twelve years shows that they rose steadily up to 1924–25 and then began to fall until they reached 297 lakhs in 1930–31, recovering in 1932–33 to 346 lakhs, of which however 15 lakhs was due to a change in accounts procedure which swelled both the revenue and the expenditure figures to that extent. The fall in excise revenue has been in the main due to the policy of gradual prohibition adopted by the Bombay Government following a resolution passed by the Legislative Council in 1924. This resolution committed the Presidency to a policy of which the ultimate goal was complete prohibition, and Government therefore had recourse to such restrictive action as rationing, the discouraging of consumption by reducing and withholding facilities for starting new shops and so on. One of the chief results of this restrictive policy has been a phenomenal growth in illicit distillation and smuggling, the latter form of activity being specially noticeable in border localities between British territory and Indian States territory, and there is little doubt that in actual practice the decrease in consumption has not been in any way commensurate with the loss of revenue.

6. The heavy fall in excise receipts in 1930–31 was due partly to general economic depression and partly to the effects of the civil disobedience movement. The consumption figures of the various kinds of liquor shown in Appendix III illustrate how low consumption was in 1930–31. As compared with 1930–31, the receipts in the years 1931–32 and 1932–33 show a slight improvement, but it can be safely assumed that excise receipts will not rise much above their present level and cannot come anywhere near the 1922–23 or 1924–25 figures so long as the prohibition policy with its concomitant deterrent methods of high prices and restriction of facilities continues to be followed.

(*c*) Stamps.

7. Under this head also there has been a pronounced fall in receipts. In 1922-23 the receipts were 177 lakhs but in 1932-33 they had fallen to 159 lakhs. This decrease of 18 lakhs took place in spite of the various steps taken to enhance

the stamp duties during the past eleven years. It has been mainly under non-judicial stamps. In 1922–23, the revenue from stamps was 95 lakhs under non-judicial and 82 lakhs under judicial, while in 1932–33, it was 77 lakhs and 82 lakhs respectively. Thus, while the receipts from judicial stamps have remained constant, those from non-judicial have gone down by 18 lakhs, the main reasons for the decline being the fall in the prices of land and the slump in trade.

(*d*) Forest.

8. Similarly, the revenue derived from the forests of the Presidency has dropped from 70 lakhs in 1922–23 to 60 lakhs in 1932–33. The receipts under this head continued to show satisfactory progress up to the end of 1929–30 and in that year amounted to nearly 80 lakhs; but economic depression took severe effect on this revenue, and when in 1930–31 the political boycott organised by the followers of Mr. Gandhi was superadded to economic conditions, forest revenue declined to 52 lakhs—a fall of 28 lakhs as compared with the previous year. No considerable increase in forest revenue can be expected until a general trade recovery sets in.

(*e*) Scheduled Taxes.

9. In 1922–23 the receipts under this head were only about 3 lakhs but they have risen in 1932–33 to 19 lakhs. The chief items under this head are the Entertainments Duty and the Betting Tax.

(*f*) Irrigation.

10. The revenue under this head, which includes the account heads XIII and XIV, while fluctuating to a certain extent from 1922–23 to 1928–29 was fairly steady throughout that period but in 1929–30 it fell sharply to 47 lakhs and in 1930–31 was as low as 33 lakhs. The sudden decrease was mainly due to the large remissions and suspensions it was found necessary to grant in Sind in those years and occurred despite considerable retrenchment in the Public Works Department which led to working expenses in the Sind Canal system being reduced from 51 lakhs in 1929–30 to 45 lakhs in 1930–31 and further to 35 lakhs in 1931–32. From the latter year, the revenue has increased owing to the extension of the irrigated area under the Lloyd Barrage and in 1932–33 the net income under these combined heads reached 72 lakhs.

General Remarks.

11. The total receipts from all sources of revenue were 1443 lakhs in 1922–23 as compared with 1315 lakhs in 1932–33. It will be noticed that the total receipts for the first four years, beginning with 1922–23, were on an average 1422 lakhs. For the next four years the average figure was about 1385 lakhs but in the disastrous year of 1930–31, owing to the economic depression and the effects of the civil disobedience movement, receipts dwindled to 1220 lakhs—a fall of more than 2 crores as compared with the receipts in 1922–23 or with the average receipts of the first four years.

III. Progress of Expenditure.

12. The principal heads of expenditure are (*a*) Land Revenue and General Administration, (*b*) Police, (*c*) Education, (*d*) Civil Works, (*e*) Pensions, (*f*) Debt Charges. In the succeeding paragraphs the fluctuations in expenditure during the period of review under each of these heads are briefly reviewed.

(*a*) Land Revenue and General Administration.

13. Expenditure under Land Revenue and General Administration was 281 lakhs in 1922-23 and 270 lakhs in 1932-33 and for the past eight years has averaged about 288 lakhs. The low figure in 1930–31 was due to the non-adjustment of an item of 7½ lakhs which had to be adjusted in the accounts of 1931-32 thereby swelling the figures of that year. Compared with the average figure of 288 lakhs, the figure in 1932–33 showed a substantial reduction in expenditure.

(*b*) Police.

14. The figure for 1922–23 under this head was 172 lakhs. Owing to retrenchment the average charges under Police for the next six years were about 167 lakhs. The development of the suburbs of Bombay and unforeseen disturbances, such as strikes in the cotton mills and communal troubles, necessitated expansion of the Bombay City Police in 1929–30. This together with the expenditure on the payment of rent to the Bombay Improvement Trust for the Police Accommodation Scheme at Naigaum is mainly responsible for the increase of

about 6 lakhs in 1929–30. The abnormal increase in 1930–31 was due to the civil disobedience movement. The expenditure under this head has been since cut down to 175 lakhs in 1932–33. There are, however, a number of reorganisation and expansion schemes which have been held in abeyance only on account of the financial stringency, and the time is coming when they will have to be given effect to in order to enable the police to cope with changing conditions.

(*c*) Education.

15. The total expenditure on education in 1922–23 was 171 lakhs but by 1930–31 it had risen to 206 lakhs. The increase has been due to the development and expansion of primary education. Before the introduction of the Primary Education Act of 1923, the expenditure on primary education was 100 lakhs. In 1930–31 it reached 133 lakhs, a rise of 33 lakhs in eight years on this account alone. The expenditure on primary education in 1931–32 and 1932–33 was 124 lakhs and 109 lakhs respectively. The decrease in the last two years was due mainly to the reduction in grants payable to local authorities owing to financial stringency. In the year 1933–34, the cut in these grants has been partially restored and the provision for Primary Education now stands at 116 lakhs.

(*d*) Civil Works.

16. Comparing the figures under this head we find that from 1922–23 to the end of 1925–26 the expenditure was more or less steady. In 1926–27, it increased by about 30 lakhs owing to orders of the Central Government that all expenditure on schemes of an unproductive nature costing below Rs. 5 lakhs must be met from ordinary revenue, instead of from borrowed money. Various retrenchments have been made under this head from time to time and by this means and by the curtailment of building and other activities of the Public Works Department, the expenditure under this head shows a decline in subsequent years. The figure of 72 lakhs for 1932–33 when compared with that for 1922–23 shows a decrease of about 42 lakhs.

(*e*) Pensions.

17. Pension charges, including those paid in England, were 55 lakhs in 1922–23 and have risen to 110 lakhs in 1933–34, an increase of 55 lakhs. Part of this large increase is due to the fact that prior to 1921–22 pensions paid in England were

debited to central revenues and only those paid in the Presidency were met from Provincial revenues. From 1921–22 onwards, however, all newly-sanctioned pensions, wherever paid, on account of officers employed in the Presidency have been debited to provincial revenues. Consequently central revenues have received a steadily increasing relief and the debit to provincial revenues of pensions paid in England has increased from less than one lakh in 1921–22 to 20 lakhs in 1933–34. Over the same period pensions paid in India have increased from 49 lakhs a year to 90 lakhs a year. This is the result of the increased salaries sanctioned in the early years of the present reform period. Pension charges account for an increase of 60 lakhs in the expenditure of 1933–34 as compared with that of 1921–22.

(*f*) Debt Charges.

18. Expenditure from revenue on interest, sinking fund and debt redemption was 94 lakhs in 1922–23 and 161 lakhs in 1932–33, exclusive of interest on borrowings for the Lloyd Barrage and Canals Construction Scheme which are financed either from Barrage land-sales or from borrowings, and of interest charges on pension commutations which have been included under "pensions."

The increase of about 67 lakhs in the debt charges of 1932–33 as compared with those of 1922–23, is analysed under some of the chief items below :—

	Increase.
(1) Interest on charges on ordinary debt ..	48
(2) Interest charges on irrigation works ..	19
(3) Forest Capital Works, Dapuri Workshop and Distilleries	1
(4) Interest charges payable to the Famine Relief Fund	3
(5) Avoidance or Reduction of Debt ..	—4
	67

In the above analysis items (3) and (4) are fresh charges as compared with the year 1922–23. The increase under "14-Interest on Works for which capital accounts are kept," is due to increased irrigation activities in the Presidency including Sind, during the past ten years. During 1932–33, receipts from the sale of lands in the Lloyd Barrage Scheme amounting to about 25 lakhs were utilised in meeting a portion of the

interest charges on the scheme and this item has been shown as expenditure under the head "14" in the budget, but for the purpose of comparison it has been excluded from the above analysis. The increase under ordinary interest charges is mainly on account of the Bombay Development Schemes and increased borrowings, e.g., borrowings to meet a revenue deficit in 1932-33. The decrease under "21-Reduction or Avoidance of Debt" represents the principal portion of the annual instalment repaid by the Bombay Port Trust in repayment of its share of the Bombay Development Loan. This amount is utilised towards the annual provision of 9·39 lakhs for the Bombay Development Loan Sinking Fund, and only the balance is provided from ordinary revenues. In the ordinary course there should have been an increase under this item (5) owing to the annual repayments to the Government of India of advances taken from the Provincial Loans Fund, but on account of the special financial conditions the Government of India allowed provincial Governments to suspend repayments of principal in 1932-33 and no provision on that account was made under this head.

The High Court Funds Enquiry Committee, which was appointed in 1930, suggested the transfer to the local Government of the Suitors Fee Fund, the Pleaders' Examination Fund and the funds consisting of unclaimed dividends, deposits, etc., held by the Official Assignee and the Insolvency Registrar. In accordance with this suggestion the sanction of the Government of India was obtained in 1931 to the transfer of the two former funds amounting to about 4 lakhs on the ground that they represented revenue accruing from definite services rendered and orders were issued that the annual receipts and expenditure of these funds should be taken into the Provincial Account. In regard to the funds held by the Official Assignee and the Insolvency Registrar, an Act providing for their transfer to Government was passed in August last in the Bombay Legislative Council; Government undertaking to meet all lawful claims on these funds and to bear in future the cost of the Official Assignee and his staff. The funds in question are of the value of about 25 lakhs and Government have decided to leave one lakh in the hands of the Official Assignee as a permanent advance to meet claims as they arise and to utilise the balance in reduction of debt.

19. Statement A on the next page gives a general analysis of the present distribution of the Presidency's expenditure in comparison with that at the beginning of the reforms. The

STATEMENT A.

(Lakhs of Rupees.)

	1922-23.	1932-33	Increase (+) Decrease (−).
I. Administration Charges—			
(a) Fundamental Charges—			
(1) Land Revenue and General Administration	2,81	2,70	−11
(2) Police	1,72	1,75	+ 3
(3) Jails	27	25	− 2
(4) Justice	66	64	− 2
(b) Ancillary charges—			
(1) Stationery and Printing ..	15	11	− 4
(2) Civil Works	1,14	72	−42
Total of Administration charges ..	6,75	6,17	−58
II. Unavoidable charges—			
(1) Debt charges (amount debited to Revenue)	94	1,61	+67
(2) Pensions	55	99	+44
Total of unavoidable charges ..	1,49	2,60	+1,11
III. Beneficent activities of the State—			
(1) Education—			
Primary	1,00	1,09	+ 9
Other	71	65	− 6
	1,71	1,74	+ 3
(2) Medical	44	38	− 6
(3) Public Health	17	18	+ 1
(4) Agriculture	23	24	+ 1
(5) Industries	3	3	....
(6) Bombay Development Scheme ..	....	4	+ 4
Total of Beneficent activities ..	2,58	2,61	+ 3
IV. Miscellaneous—			
(a) (1) Scientific Departments ..	1	1	....
(2) Miscellaneous Departments ..	5	5	....
(3) Ports and Pilotage	2	....	− 2
(4) Miscellaneous	11	13	+ 2
(5) Expenditure in England (other than pensions)	17	21	+ 4
(b) Contributions to Central Government..	56	....	−56
Total of Miscellaneous charges ..	92	40	−52

This statement does not present the expenditure of departments which are primarily revenue earning such as Excise, Forests, Stamps, etc.

year 1922–23 has been taken for comparison instead of 1921–22, because owing to the introduction of the reforms many changes in accounts classification were made in that year which make detailed comparison unreliable. The comparison illustrates (*a*) the large rise in unavoidable charges (debt and pensions), and (*b*) that the fundamental cost of administration (mainly general administration and law and order departments) has been much reduced and that the bulk of that decrease has been transferred to expenditure on beneficent activities (education, medical, public health and agriculture). With regard to the large increase in unavoidable charges, it is to be remembered that in the ten years from 1st April 1921 to 31st March 1931 the various schemes undertaken by the Development Department cost provincial revenues a net amount of 718 lakhs. At the present time the annual net debit on account of these schemes to the revenue account of the Presidency (that is to say, the cost of interest and sinking fund less revenue receipts) is about 62 lakhs a year. Pension charges are likely to continue to increase for some time yet but they will gradually be arrested when the lower scales of pay, which were communicated to the Legislative Council at its August session this year, begin to affect pensions.

IV. Recent additional taxation.

20. The review of the revenue and expenditure figures in Chapters II and III clearly shows how the revenue of this Presidency up to 1929–30 remained at approximately the same level and how expenditure showed a steady tendency to rise under most of the important heads. On the revenue side, additional taxes and additions to the existing taxes brought in considerable sums but the effects of these additions to revenue were neutralised by the fall in revenue due partly to the policy of prohibition and partly to the world wide depression of recent years. This chapter gives a brief account of the taxation measures introduced and their effect upon the revenues of the province.

(*a*) Stamps.

21. In the year 1922–23, the Court Fees Amendment Act and the Stamp Amendment Act were brought into force for the first time. At that time they were estimated to produce additional revenue of about 9 lakhs and 12 lakhs respectively.

The Court Fees Amendment Act of 1922 remained in force for two years and expired at the end of 1923–24. It was again introduced in 1926. The Act of 1926 however differed in some respects from the Act of 1922. Under the Court Fees Amendment Act of 1922, rates of court fees were raised when the value of a suit was above Rs. 500, whereas by the Act of 1926 fees were raised only when the value of a suit was above Rs. 5,000. Consequently when the Act of 1922 was reintroduced in 1926, the receipts under that Act were only about 6 lakhs. Under the Bombay Finance Act of 1932 the rates of court fees were raised when the value of a suit was above Rs. 1,000 and the additional yield expected from this measure is about 3 lakhs.

The Indian Stamp Amendment Act of 1922 was sanctioned by the Legislative Council in the first instance for a period of 4 years and has since been renewed from year to year. The additional revenue under this measure was on an average about 12 lakhs a year during the first four years. The enhancement of the stamp duty on transfers of property in the City of Bombay (Bombay Act II of 1926) came into force from 1st April 1926. The stamp duty on transfers of property in the City of Bombay was raised from $1\frac{1}{2}$ per cent. to $3\frac{1}{2}$ per cent. and it was anticipated that this would bring in an additional revenue of about 3 lakhs. The Bombay Finance Act of 1932 levied enhanced stamp duty on certain instruments relating to transfer of property in the cities of Poona, Ahmedabad and Karachi. It has been estimated that this measure will bring in additional revenue amounting to 1 lakh a year.

As has been pointed out in paragraph 7 the total stamp revenue has fallen considerably since 1922–23. The fall would have been much greater but for these various measures, but it is impossible to frame a reliable estimate of how much of the present revenue from stamps may be regarded as due to new taxation.

(*b*) Scheduled Taxes.

22. The chief sources of revenue under this head at present are the Entertainments Duties and the Betting Tax both of

which have been in operation during the period under review, the first from 1922–23 and the second from 1925–26. It was expected that the Entertainment Tax would bring in extra revenue to the extent of 16 lakhs and that the Betting Tax would give approximately 16 lakhs more, but in actual practice the receipts from both these measures have been much below these expectations. For the four years from 1926–27 to 1929–30 the receipts were on an average 8 lakhs under the Entertainment Tax and 13 lakhs under the Betting Tax. These receipts have of late decreased still further and in 1932–33 were about 8 and 9½ lakhs respectively. In the year 1930–31, the Bombay Betting Tax was further amplified by the Bombay Act IV of 1931 introducing what is popularly known as the "Bookies' Tax". This tax realised about one lakh and a half in 1932–33.

(*c*) Motor Fees.

23. Motor licence and registration fees were increased in 1930–31, producing an extra revenue of about 10 lakhs.

(*d*) Electricity Duty.

24. By the Finance Act of 1932 a surcharge on electric energy consumed for purposes of lights and fans was levied. It was estimated to bring in a revenue of 9 lakhs. The actual receipts in 1932–33 were however about 7 lakhs. This measure has been renewed for the year 1933–34.

(*e*) Tobacco Duty.

25. In 1933–34, a duty on the sale of tobacco in the Presidency, other than in the City of Bombay, has been imposed which is expected to yield about 4 lakhs.

(*f*) Tolls.

26. In 1933–34, following the recommendation of the Reorganisation Committee, toll bars have been reimposed at places where they were abolished in the years 1923–25 and certain new tolls have been imposed where bridges have been built and other road improvements effected. The additional revenue likely to be realised from this source is roughly 7 lakhs. The question of abolishing this form of taxation and substituting for it a consolidated tax on motor vehicles is under the consideration of Government.

27. The above description of the various taxation measures imposed since 1921 shows that the Presidency has shouldered additional taxation yielding about 47 lakhs* a year in addition to such share of the stamp-revenue as may be fairly ascribed to the new stamp-duties. Of the total revenue budgeted for 1933–34 that resulting from new taxation imposed since 1921 may be estimated at between sixty and seventy lakhs. In spite, however, of these measures, while the total revenue receipts were 1443 lakhs in 1922–23 they fell to 1315 lakhs in 1932–33, a decline of 128 lakhs.

*Scheduled taxes	..	19
Motor fees	..	10
Electricity duty	..	7
Tobacco duty	..	4
Tolls ..	..	7
		47

28. An examination of the incidence of the new measures of taxation will show that they fall principally upon the shoulders of the wealthy; for example, the amendments relating to court fees and stamps take effect chiefly upon the more wealthy members of the litigating public, and such measures as the Bookies' Tax, the Entertainment Tax, the tax on tobacco and the surcharge on electric energy are items that mostly affect the comparatively well-to-do section of the community, and the same is true of the increase in motor-licence and registration fees. On the other hand, in the Land Revenue, General Administration and Excise Departments, the activities of which affect the mass of the general public, there has been practically no addition to the burden of taxation. In other words, whenever Government have had to look for new sources of revenue such measures only as were not likely to put fresh burdens on the poorer sections of the community have so far as possible been adopted.

V. Economic Review from the year 1921-22.

29. The foregoing analysis of revenue and expenditure and the details regarding measures of additional taxation has cleared the way for a broader economic examination of the years following 1921–22. A glance at the revenue and expenditure statements will show that this period falls naturally into three divisions.

The first from 1921–22 to 1924–25 was a boom period when money was plentiful, the second from 1924–25 to 1929–30 one in which it was gradually realised that our main sources of

revenue were shrinking and in which attempts were made at retrenchment, and the third from 1930–31 onwards a period of economic collapse and depression.

30. Not only was the period from 1921–22 to 1924–25 a boom period of great activity; it was also the beginning of the post-reforms era and during this time of transition the full force of recent financial adjustments was not fully appreciated. During the four years 1921–22 to 1924–25, we find the revenue figure in the neighbourhood of 1425 lakhs while expenditure remained fairly steady. The most striking characteristic of this period was the initiation of a large number of development schemes and the undertaking of such heavy liabilities as those involved by the Primary Education Act and the policy of prohibition.

31. The year 1925–26 brought the first important deficit. The final accounts for this year closed with a revenue of 1402 lakhs and an expenditure of 1478 lakhs. The next year brought a further deficit of nearly a crore and a half. The years 1927–28 and 1928–29 showed a slight improvement, the extent of the deficit being just short of 20 lakhs and 21 lakhs respectively. The four years together thus saw an excess of 266 lakhs in expenditure over revenue. This excess however was not due to inflated or increased expenditure. A glance at the revenue and expenditure statements will show that these deficits are due more to shrinkage on the revenue side than to expansion on the expenditure side. Thus, land revenue which showed a revenue of 525 lakhs in 1925–26 yielded only 484 lakhs in 1928–29 and whereas the total revenue amounted to 1402 lakhs in 1925–26, the figure was only 1366 lakhs three years later. As against this, the expenditure figures for the two years, 1925–26 and 1928–29, are 1478 lakhs and 1388 lakhs respectively. In other words, while there was actually a decrease of 90 lakhs in expenditure during the four years, revenue shrank during the same period by 36 lakhs.

The initial deficit of 1925–26 and the staggering deficit of a crore and a half in the following year brought home to this Presidency the perilous state of its financial condition under the reformed constitution and attempts were at once made to retrieve the position. Continued representations were made, unfortunately without avail, to the Central Government not only by the Government of the day but by the Legislative Council and non-official bodies, pointing out the obvious unfairness of the Meston Financial Settlement which deprived

Bombay of any share in the only readily expansible sources of revenue, namely Income Tax and Customs. Retrenchment of expenditure was also taken in hand; the savings thereby effected from time to time being described in the next chapter.

In the year 1930 came the cataclysmic fall in prices. The general trade depression affected the yield of all revenue-earning departments and some of the receipt heads such as Stamps showed continued diminution in spite of enhancement of duties. Faced with a sudden and apparently a prolonged shrinkage in revenue, this Presidency was set the task of re-organising its system of administration in such a way as to make expenditure square with revenue. How far the efforts in this direction have succeeded will be shown in the following chapter.

VI. Retrenchment.

32. As has been indicated in the preceding chapter, many attempts have been made from time to time since the introduction of the Reforms to reduce expenditure. On three occasions prior to 1931 retrenchment committees or officers were appointed, and effected savings in expenditure estimated at about 63 lakhs. In 1931 Government appointed a Retrenchment Committee and the retrenchments which Government were able to effect on the basis of its recommendations together with further reductions in expenditure made independently were estimated as follows :—

	Lakhs of Rs.
I. Recommendations made in the *ad interim* Report of the Retrenchment (Vakil) Committee and accepted by Government.	61
II. Recommendations made in the final report and accepted by Government ..	57
III. Action taken independently by Government	40
	158

These amounts included among other items, reduction in P. W. D. grants for Works—Roads and Buildings (21), reductions

in grants for Irrigation (16) and reduction in Public Works Department Establishment (7); reduction in grants for primary education (24), similar reductions in other heads under Education (6) and general reduction of establishments under Land Revenue and General Administration (6). It also included the 10 per cent. cut in salaries. It may however be observed that all the above retrenchments were not of a maintainable nature and about 15 lakhs as shown below have since had to be restored in the budget estimates of 1933–34 :—

	Rs. in lakhs.
15-Irrigation—Floods in Sind	6
31-Education—Primary Education ..	6·5
41-Civil Works—Repairs	2
Total ..	14·5

33. In 1932 Government appointed another expert Reorganisation Committee to investigate the whole of the administrative working of the Presidency with a view to a permanent reduction of expenditure in order to bring it into line with their seriously diminished revenues. The report of this Committee was received at the end of 1932 and in it the Committee estimated that the full acceptance of their proposals would bring an eventual betterment of two crores. A rough classification of the Committee's proposals will indicate however that only a small part of that two crores can be produced at the volition of this Government. The betterment of two crores is analysed as below :—

(*a*) Savings on pay and pensions	82 lakhs.
(*b*) Savings dependent on the sanction of the Secretary of State or the Government of India	20 ,,
(*c*) Savings dependent on the efforts of local bodies	38 ,,
(*d*) Betterment which it is within the power of the local Government and Legislature to secure in the near future ..	60 ,,

With regard to (*a*) the saving of 82 lakhs estimated by the Committee consists mainly of :—

(1) a saving of 57 lakhs by the introduction of new scales of pay for subordinate and provincial services and for special posts,

(2) 8½ lakhs on account of reduction in pension charges, and

(3) 15 lakhs from reduced grants to local authorities in view of a reduction in the pay of primary school teachers.

Government have recently sanctioned revised scales of pay for most of the provincial and subordinate services and the application of these scales is expected to result in an ultimate saving of about 34 lakhs under pay and 7 lakhs in pensionary charges. Revised scales of pay for the remaining provincial and subordinate services are under consideration and will be sanctioned shortly. The difference between the Committee's figures and those given above is due to the fact that the Committee when arriving at their figure of 57 lakhs based their estimate upon a comparison of the cost of the services if reorganised according to their proposals, i.e., if all the All-India Services except the Indian Civil Service and the Indian Police are replaced by Provincial Services, with their actual cost in the year 1929–30.

In the case of (*b*) the saving of 20 lakhs includes a sum of 3½ lakhs expected by the Committee to result from the overhaul of special pay in accordance with the principles laid down by them. All cases of special pay are now being scrutinised by Government but in many instances the sanction of higher authorities is necessary before such pay can be reduced and it is not at present possible to state the saving which may be effected. Of the balance part was estimated by the Committee to be capable of being secured by recovering from the Government of India the difference in cost between employing I.M.S. or I.M.D. officers and B.M.S. officers and by recovering from the same Government a share of the cost of Railway Police. The Committee's proposals are under consideration and steps have been taken to provincialise such posts as those of Superintendents of Mahableshwar and Matheran and the Secretary of State has been asked to sanction the abolition of the post of Director of Public Health. Government are however unable to state the savings which will ultimately be made. Three and a half lakhs of the remainder was expected to result from the suggestion of the Committee that Government should set up

headquarters boards and thereby effect economy in the revenue, public works and police departments but investigation has convinced Government that the acceptance of the suggestion would on the whole mean additional expenditure without any corresponding administrative benefit.

(*c*) The local bodies, which at present have no surplus funds, are expected according to the recommendations of the Committee to contribute ultimately a saving of not less than 38 lakhs. It was the opinion of the Committee that district local boards rely far too much on Government assistance. They accordingly considered whether the contributions now made by Government could be reduced by increasing the income of the boards themselves from other sources. The Committee thought it possible for the district local boards to raise an additional revenue of 20 lakhs by increasing the local fund cess to two annas in all districts; 4 lakhs by imposing a professional tax; and about 3 lakhs by imposing tolls. With regard to municipalities they also recommended that in all cases where Government were convinced that a municipality was not taxing itself adequately all grants from Government should be withdrawn until the municipality increased its own resources, and strongly urged that municipalities should, if necessary by legislation, be compelled to raise their revenues by at least 10 lakhs. These methods were expected to enable Government to reduce their grants to local boards and municipalities by about 38 lakhs but it is quite clear that it would be well nigh impossible in existing circumstances for Government to adopt them.

Of the 60 lakhs under (*d*) roughly 20 lakhs consist of new revenue and 40 lakhs of reduction of expenditure. The important items of new revenue are :—

(1) Increase of registration and copying fees ..	5
(2) Removal of exemptions in Entertainment Duty Tax	5
(3) Re-introduction of the one-anna stamp duty on cheques	$2\frac{1}{2}$
(4) Cancellation of the exemption of Co-operative Societies from stamp duty and registration fees	2
(5) Imposition of additional tolls	1
and (6) Increase of fees in Government Colleges ..	1

Government have already accepted the recommendations regarding the increase of registration and copying fees, the imposition of tolls and the increase in fees in Government Colleges, and a betterment of 13 lakhs is anticipated from these sources. The proposal to reimpose the one-anna stamp duty on cheques has been rejected by the Legislative Assembly. The recommendation regarding the abolition of exemption of co-operative societies from stamp duty and registration fees has been rejected by Government and the remaining suggestions are under consideration.

The saving of 40 lakhs from reduction in expenditure recommended by the Committee consists of the following main items :—

Reduction in travelling allowance ..	7
Reduction in compensatory and house rent allowances	3
Reduction in the number of peons ..	5
Transfer of all Government secondary schools to non-official management ..	3
Closure of Agricultural and Veterinary Colleges and the School of Art ..	3
Replacement of circle inspectors by a smaller number of revenue inspectors ..	4
Reduction in the Public Works Department ..	4·5
Reduction of grants to local boards in consideration of additional revenue from tolls	3.

Government have accepted most of these recommendations and others are undergoing consideration or experiment. Government have rejected the suggestion regarding the closure of the Agricultural and Veterinary Colleges and the School of Art. The suggestion regarding the transfer of Government secondary schools to non-official management has been accepted in principle but it has been decided that such transfer should be gradual. Government have decided tentatively to give a trial to the proposal of the Committee to replace circle inspectors by revenue inspectors and have introduced the new system in selected talukas.

The total ultimate betterment anticipated from the recommendations under (*d*) above so far accepted by Government comes to 33 lakhs.

34. A summary of the financial betterment anticipated in 1933-34 and ultimately from the action so far taken by Government on the recommendations of the Reorganisation Committee and also from additional measures of retrenchment is given below :—

Head.	1933-34.	Ultimate.
	Rs.	Rs.
Allowances	4,43,600	5,78,000
Pay	15,400	34,16,000
General	1,23,000	7,32,900
Agriculture	10,500	18,900
Co-operation	....	....
Education	44,500	1,15,300
Excise	10,000	10,000
Forestry	7,300	10,100
Industries	....	....
Jails	....	....
Judicial	22,400	20,900
Land Revenue and General Administration ..	34,173	39,962
Medical	....	30,000
Police	4,100	4,200
Printing Presses	3,596	5,760
Public Health	25,000	25,000
Public Works	10,14,214	11,67,300
Registration	5,06,000	5,10,000
Stamps	16,000	16,000
Veterinary	....	2,500
Miscellaneous Departments and Appointments ..	11,660	13,500
Local Self-Government	....	....
Estimated savings in pension charges due to introduction of revised pay scales	....	7,00,000
Total financial betterment anticipated from action taken on the Report of the Reorganisation Committee.	22,91,443	74,16,322
Savings anticipated from other retrenchment measures taken by Government—		
1. Amalgamation of Broach and Panch Mahals Districts	48,835	1,17,200
2. Reduction of revenue establishment in Kolaba District	12,600	21,600
3. Reduction of certain Public Works Department sub-divisions	31,608	31,608
Grand Total ..	23,84,486	75,86,730

It is hoped that given normal conditions throughout the year, these reductions in expenditure will result in the 1933-34 budget being balanced.

VII. Conclusion.

35. From the preceding paragraphs it is clear that although many of the recommendations made by the Reorganisation Committee are not capable of producing immediate benefit, Government's efforts at retrenchment have met with a real measure of success and that a very substantial reduction in expenditure has been effected. The total expenditure, excluding debt and pension charges, in 1933–34 is 11,20 lakhs as compared with the corresponding figure of 12,32 in 1929–30, which was the last year before the onset of the adverse financial conditions of the recent past, and as compared with 13,28 lakhs in 1921–22. The final accounts figures for 1932–33 show a revenue surplus of 26 lakhs instead of the deficit anticipated when the budget was framed and the six-monthly revised estimates for the current year reveal the probability of this year's account being balanced. It should however be borne in mind that this balanced account in the current year will have been made possible by a number of emergency measures which cannot be maintained—*inter alia* the non-repayment of debt. But it can fairly be claimed that the Government of Bombay are gradually re-establishing a secure basis for their finances and that with the removal of the drain of the Sind deficit upon its resources and given a return to conditions of normal trade the Presidency may look forward to entering in the near future upon a period of fully balanced budgets.

36. Looking into the future it may be anticipated that, as indicated in paragraph 34 of this review, retrenchments recently ordered will produce a recurrent saving of Rs. 52 lakhs a year in addition to the savings realised in the current year. Of this sum Rs. 34 lakhs a year will arise from the new pay-scales and Rs. 7 lakhs a year from the reduction in pension charges which will result from them. These savings will only be realised gradually and over a period of years. In the immediate future, the retrenchments are expected to realise a further Rs. 11 lakhs a year and in 1935 a betterment of Rs. 17 lakhs may be expected when the development debt has been funded. The Presidency will, however, have to face replacement of certain of the emergency retrenchments which are considered to be unmaintainable. These are estimated at about 62 lakhs a year, made up of the following items :—

	Rs. (lakhs)
emergency cut in pay	17
debt redemption	12
educational grants	13
repairs to buildings and roads	17
medical—closing of hospital beds, etc.	3

Pension charges are increasing at the rate of five lakhs a year. And there are certain items on the revenue side of the budget whose future is uncertain, such as electricity duty, tolls etc. Thus while a balanced budget has, Government have every reason to believe, been achieved in the current year, it will be realised that there are considerable adjustments yet to be made and a gradual programme of expansion to be provided for. It is reasonable to expect that the new financial settlement will enable the Presidency to begin the programme but its full realisation must depend upon a return to general prosperity.

37. In conclusion, readers may be reminded that in reviewing the finances and the needs of this Presidency its special character should be borne in mind. It is unique among the Indian Provinces in including within its territory two of the four major ports of India (excluding Burma), namely, Bombay which is also a large industrial centre and Karachi, and in addition two other of India's important industrial centres, namely Ahmedabad and Sholapur. This Presidency not only has to provide at these places for considerably more service of the classes whose expenditure falls upon the Provincial Government, such as police, roads, hospitals and the like, but the general cost of administration throughout the Presidency is inevitably raised by the effect throughout the area of the higher wage-rates current at such centres. It is for this reason that the Government of Bombay has pressed on all occasions that this important industrial province should share in the Government revenue which is drawn from trade and industry. Governments realise revenue from trade and industry mainly in the form of income-tax and custom duties. As trade and industry are developed, and that is India's urgent need, more revenue will be realised from income-tax and customs. Under the present distribution of resources the expansion of revenue will be central while the corresponding expansion of expenditure will fall upon the provinces, particularly upon the Bombay Presidency. The adjustment of the growth of expenditure caused by expanding trade and industry to the revenue derived from them can only be made, if it is to work at all automatically, through income-tax; and accordingly this Presidency looks forward to receiving after the next financial settlement a fair share of the income-tax revenue collected from its residents.

APPENDICES

APPENDIX

ORDINARY

Adjusted figures on

Heads of Revenue.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
II—Taxes on Income ..	1,14·6	3·0	..	..	..
V—Land Revenue	5,31·4	5,42·7	4,92·9	5,00·5	5,25·1
VI—Excise	3,42·7 (a)	4,22·8	4,34·6	4,43·0	3,95·0
VII—Stamps	1,64·4	1,76·6	1,79·9	1,78·1	1,76·3
VIII—Forest	74·9	70·4	71·5	73·1	75·3
IX—Registration	13·3	13·0	12·9	12·5	12·8
IX-A—Scheduled Taxes ..	..	2·7	9·4	9·0	15·3
XIII—Irrigation Works for which capital accounts are kept. Total Revenue.	76·1	96·2	1,03·4	1,11·0	1,00·5
Working expenses.	—41·7	—43·9	—50·1	—58·4	—59·2
Net ..	34·4	52·3	53·3	52·6	41·3
XIV—Works for which no capital accounts are kept.	17·3	17·0	16·7	16·7	16·8
XVI—Interest	17·1	22·1	19·9	15·7	14·8
XVII—Administration of Justice ..	10·7	13·9	14·8	15·1	16·5
XVIII—Jails and Convict Settlements.	4·6	4·8	5·2	4·6	5·0
XIX—Police	2·4	7·7	5·9	5·0	7·9
XX—Ports and Pilotage ..	0·4	0·4	..	..	..
XXI—Education	7·7	9·6	10·0	11·2	10·5
XXII—Medical	5·7	6·5	6·5	6·3	6·6
XXIII—Public Health	0·2	4·8	8·4	5·7	6·1
XXIV—Agriculture	2·9	3·5	3·6	3·4	3·2
XXV—Industries	0·2	0·4	..	..	..
XXVI—Miscellaneous Departments..	1·1	1·2	2·0	2·0	2·0
XXX—Civil Works	20·9	16·4	17·9	15·4	16·1
XXXI—Bombay Development Scheme.	20·5	27·9	28·4	24·3	28·0
XXXII—Transfers from Famine Relief Fund.	..	..	..	..	..
XXXIII—Receipts in aid of Superannuation.	9·4	13·9	14·5	14·1	14·6
XXXIV—Stationery and Printing ..	2·3	2·9	2·7	2·4	3·7
XXXV—Miscellaneous	11·5	6·3	14·3	7·3	9·3
XL—Extraordinary Receipts ..	..	..	..	..	..
Grand Total ..	(a) 14,10·6	14,42·5	14,25·3	14,18·1	14,02·2

(a) Part of the excise receipts properly creditable to this year were credited in the previous year. that the figure is 80 lakhs less than the figure in the following year.

*The increase is due to the change in the accounting procedure of the Nasik Distillery introduced to be put to vote instead of only taking net profit into account as hitherto.

†The decrease under "XIX-Police" in 1931-32 and onwards is due to the transfer of receipts

‡The increase under "XXIII-Public Health" is due to the transfer of receipts amounting to about Scheme".

§This includes 16 lakhs received as an interest free loan from the Petrol Fund eventually to be

‖(i) This excludes the amount of Tobacco Excise Duty which is passed on to the Bombay Municipal

(ii) With effect from 1933-34 receipts from Electricity Duties are to be shown under "XXXV- necessary adjustment has been made in this statement in the 1932-33 figures which differ therefore

*Excludes 25 lakhs in 1932-33 and 35 lakhs in 1933-34 from sale of lands under the Barrage.

I.

REVENUE.

a comparable basis.

(Lakhs of Rupees.)

1926–27.	1927–28.	1928–29.	1929–30.	1930–31.	1931–32.	1932–33.	1933–34 Revised.
..	..	..	..	..	..	..	..
4,50·9	5,07·2	4,84·2	4,79·1	4,74·5	5,01·3	4,70·1	4,82·7
3,97·2	3,84·1	3,83·4	4,00·2	2,97·4	3,21·2	3,46·0*	3,49·5
1,67·6	1,75·4	1,68·4	1,77·2	1,58·1	1,50·3	1,58·8	1,57·0
76·6	72·9	73·4	79·8	52·2	56·7	59·7	54·0
12·0	11·8	11·8	12·3	10·9	11·4	12·5	16·0
19·6	21·2	21·5	20·1	16·4	19·2	18·8	17·9
1,09·0	1,04·0	1,18·2	97·9	79·0	92·6	1,26·5	1,27·5
—60·7	—61·9	—68·9	—68·2	—61·7	—50·1	—71·7	—73·5
48·3	42·1	49·3	29·7	17·3	42·5	55·8	54·0
17·0	16·9	16·4	17·1	15·9	15·9	16·0	16·2
25·1	21·3	13·6	12·9	17·2	14·7	16·6	13·7
17·9	14·8	15·5	17·3	17·4	20·2	20·8	18·8
5·7	6·0	5·4	5·5	4·5	4·4	4·1	3·9
7·8	7·3	8·0	8·7	18·2	5·2†	4·4	3·9
..	..	..	..	..	..	..	..
10·9	11·1	11·9	16·6	15·3	16·6	15·8	15·8
5·5	5·9	5·7	6·2	5·9	6·0	6·4	7·2
6·3	6·4	8·4	6·2	6·8	7·4	13·5‡	12·6
3·0	2·7	2·3	2·4	2·0	2·4	2·9	2·9
0·1	0·1	0·1	..	..	..	0·1	0·1
2·0	1·8	1·8	1·8	1·8	15·4	15·2	15·2
16·4	17·0	19·4	19·0	19·2	34·8§	19·0	25·5
25·5	26·4	26·7	32·6	29·6	24·2	18·9	18·2
..	9·8	16·2	50·4	10·7	14·7	12·9	11·9
15·3	14·7	15·4	23·1	14·3	13·0	13·5	11·4
4·0	3·7	3·4	3·2	2·9	2·0	2·1	1·7
10·7	5·7	2·4	4·8	4·6	4·4	10·1‖	15·0
2·6	7·9	2·0	3·7	7·0	9·6	1·0¶	0·5¶
13,47·8	13,94·2	13,66·5	14,30·0	12,19·6	13,13·0	13,15·0	13,25·6

There is no record of the amount of this under-credit but that it was large is evident from the fact with effect from 1932–33 owing to orders requiring the gross expenditure of commercial concerns from inspection of motor vehicles to the head "XXVI-Miscellaneous Departments".

4·8 lakhs under "Ambernath and Salsette Water Supply Schemes" from the head "XXXI-B. D. repaid, and treated as a special addition to revenue.

pality and the Bombay Improvement Trust.

Miscellaneous". In order that the 1933–34 figures may be comparable with those of 1932–33 the from those given in the Blue Book for 1932–33.

APPENDIX

EXPENDITURE CHARGED

Adjusted figures on

Heads of Expenditure	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.
2—Taxes on Income	1·7	..	..	..	..
*5—Land Revenue and 22—General Administration.	2,83·7	2,81·3	2,81·2	2,81·4	2,89·1
6—Excise	28·7	32·8	35·3	40·2	33·8
7—Stamps	3·5	3·6	3·9	0·9	1·4
8—Forest	50·0	39·7	43·6	43·0	40·9
8-A—Forest Capital Outlay ..	..	..	..	..	2·0
9—Registration	6·7	7·4	6·7	6·8	6·7
9-A—Scheduled Taxes	..	..	0·2	0·2	0·2
14—Interest on works for which capital accounts are kept.	39·5	42·7	49·2	57·2	62·4
15—Other Revenue expenditure financed from ordinary Revenue.	42·8	30·1	21·1	34·4	31·8
15 (1)—Other Revenue expenditure financed from Famine Relief Fund	..	..	..	..	..
16—Construction of Irrigation Works ..	41·9†	..	30·0	..	..
19—Interest on Ordinary Debt¶ ..	26·4	41·8	62·7	73·0	1,07·8
20—Interest on other obligations ..	..	..	..	..	..
21—Reduction or Avoidance of Debt ..	9·4	9·4	9·4	11·9	18·2
24—Administration of Justice ..	70·1	65·6	68·9	71·4	72·7
25—Jails and Convict Settlements ..	31·3	26·6	24·7	26·0	25·3
26—Police	1,90·6	1,72·4	1,66·7	1,69·0	1,69·4
27—Ports and Pilotage	1·5	1·7	0·4	0·2	0·2
30—Scientific Departments ..	1·3	0·8	0·7	0·7	0·8
31—Education	1,71·7	1,71·1	1,91·8	1,84·0	1,95·8
32—Medical	45·1	44·4	43·2	43·9	47·2
33—Public Health	28·8	17·4	19·4	22·3	24·6
34—Agriculture	29·3	23·4	23·8	26·1	26·8
35—Industries	7·6	2·7	1·5	0·2	0·7
37—Miscellaneous Departments ..	4·5	4·8	5·9	4·8	4·5
41—Civil Works	2,03·0	1,14·3	1,08·9	1,02·9	1,10·3
42—Bombay Development Scheme‡ ..	..	..	..	..	..
43—Famine Relief	27·3	63·5	33·6	57·2	53·6
45—Superannuation Allowances, etc. ..	48·5	52·5	57·8	50·9	56·3
45-A—Commutation of Pensions financed from ordinary revenue.	..	..	..	..	..
46—Stationery and Printing ..	22·5	15·2	15·8	11·4	12·8
47—Miscellaneous	23·6	10·8	11·6	11·6	17·5
51—Contributions to the Central Government by Provincial Governments.	56·0	56·0	56·0	56·0	34·0
52—Extraordinary charges ..	..	..	..	..	..
Expenditure in England	12·1	19·4	22·6	24·3	31·5
Total expenditure charged to Revenue ..	15,08·9	13,51·2	13,96·5	14,11·6	14,78·4

*A number of changes in accounts classification were effected between these two heads under are grouped together for purposes of comparison.

†Financed from Famine Contribution.

‡The head "42-Bombay Development Scheme" was opened in 1927–28 for all schemes of the schemes of the Development Department except the Back Bay Scheme which is shown under the capital

§The increase is due to the change in the accounting procedure of the Nasik Distillery introduced commercial concerns to be put to vote instead of only taking net profit into account as hitherto.

‖Excludes 25 lakhs in 1932–33 and 35 lakhs in 1933–34 from sale of lands under the Barrage

¶Orders have been passed during the current year that the interest charges on "42-B. D. Scheme" the necessary adjustment has been made in this statement in the figures for 1927–28 onwards.

**This excludes the amount of Tobacco Excise Duty which is passed on to the Bombay

II.

TO REVENUE.

a comparable basis.

(Lakhs of Rupees.)

1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	1932-33.	1933-34 Revised.
..	..	..	..	..	..	..	..
2,88·6	2,86·9	2,87·7	2,89·5	2,80·6	2,95·6	2,69·6	2,71·2
51·8	35·8	37·4	36·6	34·7	34·2	§41·9	44·9
1·8	1·3	2·7	2·7	2·4	2·3	2·4	2·4
41·4	40·6	41·3	43·3	40·7	40·1	35·1	34·1
2·2	2·4	2·3	2·2	1·8	0·6	1·1	0·7
6·7	6·5	6·6	6·7	6·4	6·3	6·0	6·3
0·2	0·2	0·2	0·2	0·2	0·3	0·2	0·3
54·1	54·8	55·5	78·1	68·1	60·4	61·9‖	62·7‖
24·3	30·1	23·5	17·2	24·7	12·3	9·0	15·3
7·1	10·3	10·0	17·0	6·9	13·3	12·0	10·9
10·0	10·0	10·0	..	..	..	..	..
90·7	94·9	92·0	89·4	78·3	81·8	90·3	86·7
..	..	..	1·0	2·1	3·2	2·9	2·6
16·1	14·7	12·9	14·1	14·7	15·3	4·9	4·6
74·1	73·3	72·9	75·3	74·6	70·6	64·2	67·3
24·7	24·3	23·7	24·4	27·5	22·1	25·4	23·4
1,67·1	1,64·8	1,66·6	1,72·9	1,89·1	1,78·4	1,75·0	1,75·1
0·2	0·2	0·2	0·2	0·1	0·1	0·1	0·1
0·6	0·6	0·5	0·6	0·6	0·6	0·6	0·6
1,99·6	2,01·9	1,97·8	2,06·2	2,06·4	1,94·1	1,73·6	1,80·3
49·9	46·4	45·3	46·3	45·5	42·7	37·8	39·0
20·0	21·8	23·0	23·6	21·2	18·6	18·3	20·0
26·9	27·4	28·3	29·2	28·8	27·7	24·2	24·6
0·9	0·7	0·8	1·1	1·2	1·2	3·4	3·6
4·3	4·3	4·5	4·5	4·3	5·0	4·8	4·8
1,41·1	1,22·6	1,16·0	1,10·8	1,07·3	90·7	72·5	82·1
..	3·5	4·1	4·5	7·2	9·4	4·0	3·6
46·5	23·0	1·4	6·0	2·1	0·1	..	..
55·7	51·9	54·3	56·7	61·2	72·5	79·1	88·7
..	..	..	..	..	..	1·8	1·8
15·5	13·9	13·9	12·7	12·7	11·9	10·8	11·8
13·8	7·9	9·9	6·4	10·7	8·3	**12·9	11·6
28·0	..	..	..	..	..	..	..
..	..	..	..	..	..	3·2	2·9
32·6	37·3	42·3	40·2	38·9	40·8	39·7	40·4
14,96·5	14,14·2	13,87·7	14,19·2	14,01·1	13,60·5	12,88·7	13,24·4

Instructions from the Auditor-General and hence the figures of expenditure under these two heads

Development Department on which capital expenditure was complete. Since 1928-29 it includes all head "59".

in the budget with effect from 1932-33 owing to orders requiring the gross expenditure of

earmarked for payment of interest under this head.

are to be included under this head with effect from the year 1931-32. For purposes of comparison

Municipality and the Bombay Improvement Trust.

Note explaining the adjustments made in Appendices I and II.

For various reasons, mainly changes of accounts classification, the figures of different years are not always comparable one with the other. The statements in these Appendices have therefore been prepared eliminating the effect of such changes so that the expenditure and revenue of each year since the introduction of the Reforms may be more strictly comparable. The following are the main changes which have been effected: some minor factors are referred to in the footnotes:—

(1) Until the year 1924–25 the contribution to the Central Government was shown as a deduction from revenue and thereafter as an addition to expenditure. In the adjusted Statement in Appendix II it has been shown throughout as an addition to expenditure.

(2) Receipts from the Development head XLII have now been included as revenue throughout. Revenue accounts for development schemes were first opened in 1927–28. Until that year all revenue receipts, including the cotton cess, had been included in the capital accounts only. The true revenue has now been included throughout against the head XXXI.

(3) From the year 1928–29 recoveries have been shown as revenue instead of as deductions from the expenditure. The total difference amounted up to that time to about 21 lakhs, and it has been assumed that this figure may be applied to subsequent years; therefore this figure has been deducted from the heads concerned in Appendices I and II.

(4) In 1925–26 the cost price of opium supplied to Local Governments was added to both sides of the accounts under the head 6-Excise. The figures have now been deducted from all years.

(5) There have been several interchanges in the record of expenditure between the heads 5-Land Revenue and 22-General Administration. For convenience, these two heads have now been added together.

(6) In the early days of the Development Department joint borrowings were entered into by the Government of Bombay and the three corporations of the Bombay City, namely, Improvement Trust, Port Trust and the Municipality. The debt charges of the three corporations are passed through the provincial accounts under the heads "XVI" and "19". They thus unduly swell the budget on both sides and have for comparative purposes been omitted.

(7) The miscellaneous adjustments between Central and Provincial in the early years of the Reforms have been excluded.

(8) An item of about 15 lakhs has since 1928–29 been transferred to the credit of XIV-Irrigation from V-Land Revenue. The same adjustment has been made in the earlier years also.

(9) Grants-in-aid to Local Bodies for public works which since 1927–28 are shown under 41-Civil Works have been transferred to this head for previous years also.

APPENDIX III.

EXCISE.

Consumption—Presidency Proper.

—	1922-23.	1929-30.	1930-31.	1931-32.
	Gallons.	Gallons.	Gallons.	Gallons.
Country Liquor	1,791,898	1,288,907	965,853	1,035,686
Toddy	12,792,591	12,465,156	7,724,247	9,758,502
Foreign Liquor—				
(1) Fermented Liquors ..	890,359	1,023,899	1,128,998	948,153
(2) Wines	85,450	44,207	39,575	31,460
(3) Potable spirits ..	452,077	295,409	256,051	193,614
(4) Denatured spirits ..	323,007	251,016	230,478	254,137
Intoxicating Drugs (other than Opium)—	Seers.	Seers.	Seers.	Seers.
(1) Ganja	44,602	31,584	21,777	19,042
(2) Bhang	8,989	7,902	7,962	7,623
Opium	28,292	21,350	18,446	18,084

Sind.

—	1922-23.	1929-30.	1930-31.	1931-32.
	Gallons.	Gallons.	Gallons.	Gallons.
Country Liquor	133,290	108,061	66,848	72,221
Toddy	8,427	21,934	17,035	20,973
Foreign Liquors—				
(1) Fermented Liquors ..	238,206	371,266	288,883	260,397
(2) Wines	9,137	10,095	6,263	4,735
(3) Potable spirits ..	40,055	53,863	31,522	21,069
(4) Denatured spirits ..	9,200	22,589	23,377	27,540
Intoxicating Drugs—	Seers.	Seers.	Seers.	Seers.
(1) Ganja	1,118	500	287	177
(2) Bhang	104,985	72,613	65,951	60,591
(3) Charas	5,053	6,964	7,180	6,884
Opium	6,086	5,096	4,522	4,108

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VI—STAMP DEPARTMENT

I. Organisation.

SCOPE AND FUNCTIONS OF THE DEPARTMENT.

1. Stamp duties were imposed in Bombay for the first time by Regulation No. XIV of 1815. The provisions of the Regulation were improved upon by an Act passed in 1860. This measure was, however, repealed and replaced by Act XVIII of 1869. The Court Fees Act was passed in 1870 (Act VII of 1870). A more elaborate Stamp Act was passed in 1879. By the latter Act the distinction between the nature of documents was made final and duties were made leviable on some instruments not included in the previous Act. A further Stamp Act was passed in 1899 (Indian Stamp Act II of 1899). This was a more complete production than its predecessors, though in some cases, owing to representations made by the Bombay stamp office and to other causes, subsequent amendments, which have been embodied in several small enactments, were considered necessary.

With the introduction of the Reforms, the stamp and court-fees revenue has been assigned wholly to provincial Governments, and the provincial legislatures have been empowered to vary rates of duty subject to certain restrictions.

The following is a provincial subject according to item 20 in part II of schedule I to the devolution rules :—

> "Non-judicial stamps, subject to legislation by the Indian legislature, and judicial stamps, subject to legislation by the Indian legislature as regards amount of court-fees levied in relation to suits and proceedings in the High Courts under their original jurisdiction."

It is a reserved subject and has been allotted to the Honourable Member, Revenue Department.

With a view to finance the enlarged activities of the reformed Government, the Government of Bombay carried through the local legislature in 1922 an amending Act (Bombay Act II of 1922) enhancing the stamp duties initially for a period of two years. The enhanced stamp duties, however, continue to be in force to this day, as the legislature has extended the duration of the amending Act from time to time. By local Acts passed in 1926 and 1932 (Bombay Acts II of 1926 and II of 1932) the rate of stamp duty on instruments relating to transfers of

immoveable property in the town and island of Bombay and in the cities of Ahmedabad, Poona and Karachi were further enhanced. Similarly court-fees (which are recovered in the shape of special judicial stamps) have been enhanced by local amending Acts passed during the reforms period.

In 1927 the Indian Finance Act embodied an amendment of the Indian Stamp Act by which a one anna duty on cheques which previously existed was abolished. This involved an annual loss of revenue to this Government of about Rs. 2½ lakhs a year, this sum being the average receipts from this source for the four years 1923–24 to 1926–27. The Reorganisation Committee recommended that the Government of India should be asked to reimpose the one anna stamp duty on cheques. The proposed reimposition of the duty was, however, rejected by the Legislative Assembly in March 1933.

Rules regulating the custody, supply and sale of all kinds of stamps have been framed by the Government of India under the powers vested in them under the Indian Stamp Act, the Court Fees Act etc.

Before the establishment of the Government of India's security printing press at Nasik Road, stamps were manufactured abroad and were stocked on import at the central stamp depôts at Calcutta, Rangoon, Madras, Bombay and Karachi. The stamp depôt at Calcutta was in the personal charge of the controller of printing, stationery and stamps, while the other four central depôts were each in charge of a superintendent of stamps. The central stamp depôt at Bombay used to supply stamps to the local depôts at the treasuries in the presidency proper and to the Central Provinces, Berar, the Cantonment of Secunderabad, the Hyderabad Residency Bazaars, the railway lands in the Nizam's Dominions, Abu and Anandra and the connected areas of Rajputana. Ordinarily treasuries have to supply stamps to the branch depôts at sub-treasuries under their control, but certain sub-treasuries on the coast line and railway junctions were supplied with stamps directly from the central stamp depôt at Bombay in order to secure economy in packing, freight and other charges. The central depôt at Karachi used to supply stamps to the treasuries in the province of Sind, Baluchistan, the North-West Frontier Province, the Punjab and Rajputana and the residency treasuries in Kashmir, the Khorasan Agency treasury, the Muskat treasury, and the areas under the jurisdiction of the Political Resident in the Persian Gulf. After the security printing press at Nasik Road began to manufacture stamps, the central depôts at Bombay and Karachi were abolished with effect from the

1st April 1928 and stamps are now supplied directly from Nasik Road to the local treasuries. The stamp depôts at Bombay and Karachi have now become local depôts only and, like other depôts, supply revenue stamps direct to the public and postage stamps to the post offices, which in turn sell them to the public. The superintendents of stamps, Bombay and Karachi, are however responsible for obtaining annual forecasts from district treasuries and for forwarding a consolidated annual forecast of the requirements of the presidency and Sind to the controller of stamps, central stamp store, Nasik Road, in order to enable the latter to arrange his programme of printing stamps to meet indenting officers' indents during the following year. The superintendents are also responsible for seeing that all the depôts in the presidency and Sind maintain a sufficient stock of stamps for the requirements of the public. To enable them to do this all treasury officers in the presidency and Sind submit their quarterly indents to them for scrutiny and onward transmission to the controller of stamps. Indents received in this manner are scrutinised by the Bombay and Karachi stamp offices and the stock at each treasury is, where necessary, regulated by revising the indents before transmitting them to the central stamp store, Nasik Road. After stamps are supplied by the central stamp store to the treasury officers concerned, copies of invoices are sent to the Bombay and Karachi stamp offices for information. Copies of monthly memoranda submitted by the treasury officers to the accountant general showing the receipts and issues of stamps are also supplied to the Bombay and Karachi stamp offices, and the account of the stock of stamps supplied by the controller of stamps to treasury officers during the month to which the memorandum relates is checked from the invoices which are received by the superintendents from the controller. Discrepancies, if any, are pointed out to the treasury officers concerned or to the controller. The Bombay and Karachi stamp offices have also to audit transactions of refunds and exchange of stamps which take place at the district treasuries. Monthly statements of these transactions are submitted to those offices by the district treasuries along with the vouchers for payments made and the cancelled stamps of values of over Rs. 10 relating to those transactions. The statements, after examination, are transmitted to the accountant general, duly countersigned by the assistant superintendents of stamps, Bombay and Karachi. The discount schedules showing stamps sold on payment to stamp vendors, and without discount to the public, are also received from the district treasuries; after

scrutiny and audit they are transmitted to the accountant general, Bombay, duly passed by the assistant superintendents of stamps, Bombay and Karachi.

THE SUPERINTENDENT OF STAMPS, BOMBAY.

2. The functions at present performed by the superintendent of stamps, Bombay, are, briefly stated, as under :—

(1) Custody and sale of stamps, viz. postal, non-judicial (revenue), court-fee, entertainments duty stamps.
(2) (*a*) Adjudication of stamp duty on documents produced for the purpose.
(*b*) Recovery of stamp duty on insufficiently stamped or unstamped documents.
(*c*) Stamping of documents with impressed labels under rule 10 of the Indian Stamp Rules, 1925.
(3) Disposal of applications for allowances for stamps spoiled or not required for use.
(4) Scrutiny as chief controlling revenue authority of schedules of assets of deceased persons in matters of applications for probates and letters of administration to the High Court of Bombay.
(5) Recovery of additional probate duties in cases of under-valuations of estates of deceased persons.
(6) Grant of refunds claimed on account of excess payment of probate duties.
(7) Disposal of applications for refunds or exchange of entertainments duty stamps no longer required by purchasers.
(8) Compilation of the annual stamp statistics of the transactions of the stamp department in the presidency proper.

THE BOMBAY STAMP OFFICE.

3. The Bombay stamp office staff consists of the following :—

1 The collector of Bombay who is ex-officio superintendent of stamps.
1 Assistant superintendent of stamps.
1 Storekeeper and office superintendent.
1 Accountant.
1 Chief clerk.
15 Clerks.
15 Stamp vendors.

The superintendent of stamps has, in his capacity as collector of Bombay, multifarious other duties, and he can therefore

spend little time in looking after the affairs of the stamp office. Most of the functions of the superintendent are therefore exercised by the assistant superintendent on his behalf. The superintendent normally confines himself to the general supervision of the stamp office, to guiding the assistant superintendent in intricate or important questions coming up for decision and to the disposal of important references from Government. The superintendent of stamps personally inspects monthly all stock books, sale registers and cash registers of the office. He also retains the key of the opened reserve stock of stamps. The superintendent also attends personally to questions requiring his decision as chief controlling revenue authority.

The assistant superintendent of stamps, being a whole-time officer, attends to the details of the work connected with the Bombay stamp office. In 1920, the assistant superintendent of stamps, Bombay, was appointed to be a collector for purposes of chapters II, III, IV, V and VIII of the Indian Stamp Act within the limits of the town and island of Bombay and in the same year the superintendent of stamps was authorised to delegate to the assistant superintendent, within his discretion, any or all such powers as were conferred on him by the rules for regulating the custody and sale of stamps. The assistant superintendent of stamps at present exercises all the powers of a collector under the Stamp Act except those of the chief controlling revenue authority (chapter VI of the Stamp Act). All correspondence in matters of recovery of additional probate duty and refunds of that duty (under chapter III-A of the Court Fees Act) with district collectors, solicitors, petitioners, and the High Court registrar is carried on by the assistant superintendent and cases are submitted for final orders to the superintendent as the chief controlling revenue authority under the Court Fees Act. The assistant superintendent also countersigns, under the power delegated to him by the superintendent, all certificates of refunds issued by the High Court either under section 13 of the Court Fees Act or under rule 6 of the rules regulating the supply and keeping of accounts of stamps used in the High Court. He has also been authorised by the superintendent to discharge the functions of the officer empowered to affix and impress labels on documents mentioned in appendices II and III of the Indian Stamp Rules, 1925. The keys of the unopened reserve godowns of stamps are retained by the assistant superintendent, who has to attend at the time of putting in and taking out closed and entire cases of stamps received from the security printing press, Nasik Road. The assistant superintendent sanctions all applications from clerks

and menials for leave of all kinds. He also verifies the entire stock of stamps at the Bombay stamp office and also with the salaried vendors every six months and submits his report thereof to the accountant general, Bombay. The assistant superintendent is the district registrar for the city and island of Bombay.

Up to 1926, stamps were sold to the public in Bombay city by (1) salaried stamp vendors at the stamp office and at the courts and the Bombay Stock Exchange and by (2) licensed stamp vendors at different centres in the city. In order to reduce the expenditure on the sale of stamps by licensed stamp vendors (the discount paid annually aggregated Rs. 15,000) and to eliminate the competition of the licensed stamp vendors (who were believed to pass on some of their discount to their vendees) with the salaried stamp vendors, the licenses for the sale of stamps in Bombay city were abolished and the sale was entrusted entirely to salaried stamp vendors. In all there are 15 stamp vendors, six of whom are at the stamp office, three are stationed at the High Court, three at the Small Causes Court, two at the Bombay Stock Exchange and one at the Bullion Exchange. The daily collection at the stamp office on account of the sale of stamps is on an average Rs. 40,000. The vendors at the stamp office do not handle this cash, but they issue stamps on production of receipts signed by one of the two office cashiers. The vendors working in the courts and Bullion and Stock Exchange buildings collect about Rs. 15,000 a day and transmit the cash collected by them to the cashier in the morning of the following working day. The cashiers and the stamp vendors furnish a security of Rs. 1,000 each.

The superintendent of stamps, Karachi.

4. The superintendent of stamps, Karachi, is in charge of the depôt; the detailed work is performed by the assistant superintendent of stamps, Karachi.

The functions at present performed by the superintendent of stamps, Karachi, are, briefly stated, as under:—

(1) Custody and sale of postal, non-judicial, court-fee and unemployment insurance stamps.

(2) Disposal of applications for allowances for stamps spoiled or not required for use.

(3) Compilation of annual stamp statistics of the transactions of the stamp department in the province of Sind.

The superintendent is consulted by Government on questions arising on the working of the Indian Stamp Act and the rules thereunder.

The Karachi stamp office.

5. After the security printing press at Nasik was established, the central stamp depôt at Karachi ceased to exist and there is now at that place only a local depôt which receives its supplies from the central stamp store at Nasik. The stock now held at the Karachi depôt is sufficient for the needs of the local post offices, the public of Karachi and the 8 sub-treasuries of the Karachi district and the post office at Bahrein.

The establishment of the Karachi stamp office was reduced first in 1928 and even more recently and now consists of the following :—

1 The superintendent of stamps (ex-officio) the collector of Karachi.
1 The assistant superintendent of stamps (ex-officio) the city deputy collector, Karachi.
1 Storekeeper and accountant (furnishes security of Rs. 5,000).
3 Clerks.
5 Ex-officio vendors, including cashier (furnishing securities ranging from Rs. 2,000 to Rs. 5,000).

The assistant superintendent of stamps, Karachi, is not a full-time officer. In addition to his own duties as city deputy collector etc. he has been in charge of the stamp office since its creation and has been performing the functions of the "proper officer" under rules 10 and 11 of the Indian Stamp Rules, also impressing one anna and two annas coloured impressions on documents for the province of Sind as well as for Baluchistan and Ajmer under the Indian Stamp Rules. In 1918, he was appointed to be a collector for the purposes of chapter V of the Indian Stamp Act and for granting refunds of court-fee stamps. He was further empowered by the commissioner in Sind to perform the functions of the chief controlling revenue authority under section 51 of the Stamp Act. In 1920, he was further invested with powers of a collector under sections 18 and 41 of the Indian Stamp Act. Since 1930, he has been required to conduct the six monthly verification of stock of stamps held at Karachi stamp office.

District treasuries.

6. In the district treasuries the bulk of the stock of stamps is kept under double lock, while stamps required for immediate

issue to the public are kept under single lock. The treasury officer, who is either a huzur mamlatdar or a huzur deputy collector, is the officer in charge of the local depôt except at Karachi where he has no concern with stamps. He keeps the keys of the double lock store, while the treasurer, or such other officer as the collector may appoint, is ex-officio stamp vendor and keeps the keys of the single lock store. Stamps required for sale at the sub-treasuries are usually issued from the head treasuries and the sub-treasuries submit their account of stamp transactions every month to the head treasury. The head treasuries send a monthly memorandum showing the receipts and issues of stamps to the accountant general, Bombay, and to the superintendents of stamps, Bombay and Karachi.

Rates of discount.

7. Outside Bombay city and Karachi stamps are sold solely by private persons, often petition writers, licensed by the collectors and remunerated by a fixed commission on sales prescribed by Government. The discount rates per Rs. 100 of stamps sold are as follows. The earnings of licensed stamp vendors are at present subject to the emergency cut of 5 per cent :—

Kind of stamps.	Discount in the cities of Poona, Ahmedabad and Karachi.	Discount at other places.	
		Where stamps are sold by ex-officio vendors.	Where stamps are not sold by ex-officio vendors.
	Per cent.	Per cent.	Per cent.
1	2	3	4
General stamps.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Adhesive stamps.			
On stamps not exceeding in value 8 annas each in quantities of not less than Rs. 5 in amount ..	2 1 4	2 13 0	3 12 0
On stamps exceeding in value 8 annas each, but not exceeding in value Rs. 5 each, in quantities of not less than Rs. 50 in amount ..	1 0 8	1 6 6	1 14 0
On stamps exceeding in value Rs. 5 each, but not exceeding in value Rs. 50 each, in quantities of not less than Rs. 100 in amount ..	0 11 0	0 15 0	0 15 0
Impressed stamps.			
On stamps embossed or engraved on stamped paper (including such stamps bearing the word "Hundi").	2 1 4	2 13 0	3 12 0

Rates of discount on the sale of court-fee stamps.

Kind of stamps.	Discount in the cities of Bombay, Poona, Ahmedabad and Karachi. Per cent.	Discount at other places. Per cent.
	Rs. a. p.	Rs. a. p.
On stamps of the value of Rupee one or less ..	0 11 0	0 15 0
On stamps of the value of more than Rupee one, but less than Rs. 50 each	0 8 4	0 11 3

Rates of *discount* to Post Office officials—

	Per cent. Rs. a. p.
I. General stamps.	
(1) *Adhesive stamps.*	
On stamps not exceeding in value 8 annas each in quantities of not less than Rs. 5 in amount ..	3 12 0
On stamps exceeding in value 8 annas each, but not exceeding in value Rs. 5 in quantities of not less than Rs. 50 in amount	1 14 0
On stamps exceeding in value Rs. 5 each, but not exceeding in value Rs. 50 each, in quantities of not less than Rs. 100 in amount	0 15 0
(2) *Impressed stamps.*	
Stamps embossed or engraved on stamped paper (including such stamps bearing the word "Hundi").	3 12 0
II. Court-fee stamps.	
On stamps of the value of Re. 1 or less ..	0 15 0
On stamps of the value of more than Re. 1 but less than Rs. 50 each	0 11 3

In Poona there are 17 licensees, not all working regularly, and earning on the average Rs. 20 per mensem each. In Ahmedabad there are 13 licensees, at eight different places, earning on the average Rs. 55 per mensem each. A comparison with Bombay suggests that a reduction of licensees should be possible in important cities. Such a reduction would, in addition to ensuring that the remaining licensees work more regularly, add some monopoly value to the license and make possible a reduction of discount rates in such places. The question has been referred to all collectors for examination.

Recent increases in stamp duties have enhanced the receipts of salaried stamp vendors. The Reorganisation Committee

propose a reduction of discount rates of 25 per cent. or more in Poona and Ahmedabad and suggest that an examination should be made of the possibilities of reduction of rates in other towns. Elsewhere they recommend that the temporary ten per cent. reduction should be made permanent. Government have issued orders that the rates of discount should be reduced by 33⅓ per cent. at Bombay, Poona, Ahmedabad and Karachi and by ten per cent. elsewhere, with effect from 1st March 1933, as a permanent measure. The rates given above are the reduced rates.

II. Relations with other departments and offices.

Relations with other departments.

8. Outside Bombay and Karachi, stamp work is part of the duties of the revenue department. A suggestion that all stamp work should be transferred to the registration department was considered, but dropped as not being feasible.

Relations with the High Court.

9. The testamentary registrar of the Bombay High Court sends to the superintendent of stamps, Bombay, schedules of assets and liabilities of deceased persons, enclosed with applications for probate or letters of administration, for scrutiny. Extracts from the schedules relating to immoveable properties situated in districts are sent by the Bombay stamp office to the collectors of the districts concerned with a request to ascertain whether the valuation given in the schedules is correct or not. The values of the shares and securities shown in the schedules of assets are checked in the Bombay stamp office and if it is found that they have been undervalued or if a district collector reports any undervaluation the petitioner or petitioners are called upon to pay additional probate duty and to amend the schedule filed in the High Court.

Relations with the posts and telegraphs department.

10. Postage stamps and stationery are supplied to the post offices in Bombay and Karachi through the local stamp offices and to post offices in other places through the local treasuries. Monthly account of postage stamps is submitted by the superintendent of stamps, Bombay, to the post master general, Bombay.

Relations with the shipping master, Bombay.

11. The unemployment insurance stamps are supplied to the shipping master, Bombay, by the central stamp store, Nasik. The shipping master submits his accounts to the

assistant superintendent of stamps, Bombay, on the last working day of the month and pays into the stamp office on the same day the cash realised by him on the sale of these stamps during the month. Monthly accounts of these stamps are sent by the general stamp office to the accountant general, Bombay, and the auditor general, New Delhi. The Karachi stamp office holds stock of unemployment insurance stamps for sale to masters of vessels. Monthly accounts of the stamps are sent to the accountant general, Bombay, and the auditor general, Delhi. Six monthly account is also sent to the accountant general, Bombay.

III. Important changes made during last five years.

12. Since the abolition of the central depôts at Bombay and Karachi in 1928, the following important measures have been adopted :—

(1) In 1930 a pamphlet showing documents liable to court-fee stamps was prepared and supplied to all officers dealing with court-fee stamps. This pamphlet shows in a convenient and handy form the various kinds of documents and the amount of court-fees chargeable thereon. The object of the issue of the pamphlet was to ensure that proper stamps are affixed in all cases and thus to prevent a possible leakage of revenue. It is meant for official use only.

(2) As a result of a recommendation of the Reorganisation Committee, the rates of discount admissible to licensed stamp vendors for the sale of general and court-fee stamps were further reduced by $33\frac{1}{3}$ per cent. at Bombay, Poona, Ahmedabad and Karachi and by 10 per cent. elsewhere with effect from 1st March 1933. The reduced rates are shown in the statement on pages 286 and 287.

(3) Government have now decided that important matters affecting the Stamps and other departments should be considered in the commissioners' conference. When questions affecting the Stamps department are considered in that conference, the superintendent of stamps, Bombay, sits as an additional member of the conference.

The following important proposals of the Reorganisation Committee could not be carried out :—

(1) Reimposition of stamp duty on cheques. This required central legislation. The Legislative Assembly rejected the proposal in March 1933.

(2) Cancellation of the exemption of co-operative societies from stamp duties (see Review of the Co-operative Department).

13. Unified stamps are at present used for purposes of both postage and revenue. The Government of India have decided to abolish these stamps and to introduce separate stamps for purposes of postage and revenue with effect from 1st April 1934. The revenue stamps will be the concern of this Government but arrangements will be made for their sale at post offices.

APPENDIX.

Receipts and expenditure of the stamp department.

Year.	Receipts.	Expenditure.
	Rs.	Rs.
1904-05	64,10,000	2,34,000
1905-06	64,80,000	2,38,000
1906-07	62,62,000	2,10,000
1907-08	64,45,000	2,20,000
1908-09	64,21,000	2,22,000
1909-10	72,51,000	2,22,000
1910-11	81,96,000	2,33,000
1911-12	76,64,000	2,28,000
1912-13	82,07,000	2,39,000
1913-14	88,80,000	2,45,000
1914-15	80,59,000	2,37,000
1915-16	85,28,000	2,39,000
1916-17	97,65,000	2,59,000
1917-18	1,01,53,000	3,13,000
1918-19	1,17,53,000	3,41,000
1919-20	1,58,12,000	3,73,000
1920-21	1,77,29,000	3,62,000
1921-22	1,64,36,000	3,52,000
1922-23	1,76,62,000	3,59,000
1923-24	1,79,89,000	3,87,000
1924-25	1,78,06,000	2,44,000
1925-26	1,76,34,000	2,75,000
1926-27	1,67,57,000	2,89,000
1927-28	1,75,40,000	2,35,000
1928-29	1,68,40,000	2,63,000*
1929-30	1,77,15,000	2,31,000*
1930-31	1,58,06,000	2,14,000*
1931-32	1,50,28,000	2,05,000*
1932-33	1,58,77,000	2,07,000*

*Exclusive of the cost of stamps supplied from the central stamp store.

Remarks.—The departmental expenditure has been reduced from Rs. 3,87,000 for 1923-24 to Rs. 2,07,000 for 1932-33,—a reduction of Rs. 1,80,000 which is due to the abolition of the central stamp depôts at Bombay and Karachi and to stringent economy and retrenchment. The principal items of

retrenchment effected since 1923-24 and the savings which accrued therefrom are as follows :—

Item of retrenchment.	Approximate annual saving effected.
	Rs.
(*a*) Reduction in the rates of discount allowed to licensed stamp vendors on the sale of certain non-judicial stamps	20,000
(*b*) Substitution of official stamp vendors for licensed stamp vendors in Bombay city	15,000
(*c*) Reduction in the establishment of the Bombay stamp office on account of the opening of the central stamp store at Nasik	9,800
(*d*) Reduction in the establishment of the Karachi stamp office on account of the opening of the central stamp store at Nasik	14,300
(*e*) Introduction of the system of debiting to the posts and telegraphs department the freight charges on consignments of postal stamps supplied to treasuries	22,700

Further retrenchment for 1933-34 and subsequent years has been effected by a reduction in the rates of discounts allowed to licensed stamp vendors on the sale of both judicial and non-judicial stamps. The reduced rates are shown in the table on pages 286 and 287. This reduction is expected to result in a saving of about Rs. 16,000 a year. A reduction of pay of the establishments at the Bombay and Karachi stamp offices is also under consideration.

VII—THE JUDICIAL SERVICES

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VII—THE JUDICIAL SERVICES

I. Organisation and staff.

CLASSIFICATION AND NUMBER OF COURTS.

1. The various types of courts having civil and criminal jurisdiction are as follows :—

Civil (original).

Subordinate judges' courts, first class and second class.

Courts of small causes (Bombay, Ahmedabad, Poona and Karachi).

Court of judicial commissioner of Sind (for Karachi city and taluka).

High Court (for Bombay city).

Civil (appellate).

Courts of first class subordinate judges specially empowered to hear appeals.

Courts of assistant judges specially empowered to hear appeals.

District courts.

Court of the judicial commissioner of Sind.

High Court.

Criminal (original).

Magistrates, first class.

Magistrates, second class.

Magistrates, third class.

Presidency magistrates in Bombay.

Honorary and special magistrates.

Sessions courts.

Court of judicial commissioner of Sind (for Karachi city and taluka).

High Court (for Bombay city).

Criminal (appellate).

District magistrates.
First class magistrates specially empowered to hear appeals.
Sessions courts.
High Court.
Court of the judicial commissioner of Sind.

The number of each kind of court in existence in 1923 and 1932 was as follows :—

Civil (presidency proper).

	1923.	1932.
High Court judges	9	10 and one temporary judge.
District judges	17 (including 2 joint judges).	17
Assistant judges	7 (including one under training).	10 (including 3 under training).
Presidency small causes court judges	5	5 and one temporary since made permanent.
Provincial small causes court judges	2	2
First class subordinate judges ..	21	22
Second class subordinate judges.	105	88

Criminal (presidency proper).

	1923.	1932.
High Court judges	9	10 and one temporary judge.
Sessions judges	15	17
Additional sessions judges ..	5	6
Assistant sessions judges ..	2	2
First class magistrates ..	354	337
Second class magistrates ..	344	396
Third class magistrate ..	239	225
Honorary magistrates ..	414	430

Civil (Sind).

	1923.	1932.
Judicial commissioners ..	4 (and one temporary judge.)	4
District judges	4 (including one joint judge).	3
Assistant judges	1	4
Small causes court judge ..	1	1
First class subordinate judges ..	3	4
Second class subordinate judges..	13	10

Criminal (Sind).

	1923.	1932.
Judicial commissioners ..	4 (and one temporary judge.)	4
Sessions judges	3	3
Additional sessions judges ..	2	4
Magistrates (first, second and third class).	182	163
Honorary and special magistrates	296	89

Constitution of courts.

2. The High Court is constituted by letters patent (dated 20th December 1865 and amended 9th April 1886) which provide for the appointment of the chief justice and judges, ministerial officers and clerks, admission of advocates, vakils and attorneys and for the exercise of civil and criminal admiralty, matrimonial and other jurisdiction. The powers of the Indian legislature to legislate for the High Court have been preserved. The High Court is also governed by Part IX of the Government of India Act, 1915, relating to the Indian High Courts. Section 102 of the Act provides that High Court judges shall hold their office during His Majesty's pleasure and any judge of the Bombay High Court may resign his office to the local Government. Section 104 provides that the emoluments of High Court judges may be fixed or altered by the Secretary of State, but any such alteration shall not affect the salary of any judge appointed before the Act came into force. Sections 106 to 108 provide for the exercise of the several jurisdictions vested in the High Court and the power to make rules for that purpose and confer on the High Court powers of superintendence over all courts subject to its appellate jurisdiction. The Bombay High Court has jurisdiction only in the presidency proper. A description of the administrative and judicial functions of the High Court is contained in the memorandum submitted by the High Court to the Simon Commission.

The court of the judicial commissioner of Sind, which under the General Clauses Act is the High Court for Sind, and the district and subordinate judges' courts in Sind are constituted by the Sind Courts Act, Bombay Act XII of 1866. This Act provides that the judicial commissioner and the district judges shall be appointed by the local Government by whom alone they shall be liable to be suspended or removed. The commissioner in Sind is competent to suspend or remove any judge of a subordinate court. The court of the judicial commissioner of Sind is invested with the power to make rules for the distribution of the civil and criminal business of the court, the declaration of vacations and holidays, the exercise by itself and by the district judges of general control and supervision over subordinate courts and for the admission of pleaders.

The district and subordinate judges courts in the presidency are constituted by the Bombay Civil Courts Act, 1869. This Act contains provisions for the appoinment of district judges,

joint judges, assistant judges, subordinate judges and joint subordinate judges. As regards the suspension or removal of any subordinate judge, section 33 provides that a commissioner or commissioners may be appointed to hold an enquiry and report and that on receipt of the report the High Court may remove or suspend any subordinate judge. This does not interfere with the right of Government to suspend or remove any subordinate judge at their discretion.

Changes in jurisdiction of courts.

3. In 1925 Khandesh was divided into two judicial districts, East Khandesh and West Khandesh.

In 1926 Kaira was separated from Ahmedabad and made a separate judicial district.

Considerable economy has however been achieved by linking or abolishing subordinate courts and the removal of joint subordinate judges from certain courts. Ten posts of subordinate judge in the presidency and one in Sind have been placed in abeyance in this way. The changes effected were :—

Ahmedabad district.—Linking of Dholka and Dandhuka courts.

Ratnagiri district.—Abolition of Vengurla court.

Poona district.—Linking of Vadgaon and Junnar courts.

Kanara district.—Linking of Kumta and Sirsi courts.

Ahmednagar district.—Abolition of Jamkhed court and linking of Karjat and Parner courts.

Nasik district.—Reduction of a joint subordinate judge from the Malegaon court.

Belgaum district.—Abolition of Hukeri court.

Thana district.—Linking of Pen and Roha courts.

Satara district.—Abolition of Tasgaon court and reduction of a joint subordinate judge from the Satara court.

Sholapur district.—Abolition of the linked court of Sangola and Malsiras and the transfer to Pandharpur of the sub-judge as a joint sub-judge.

Hyderabad district.—Abolition of Tando Muhammad Khan court.

The following courts of resident magistrates have also been abolished :—

Resident magistrate, Naushahro.

Resident magistrate, Rohri.

There are at present in existence two temporary posts of additional city magistrate, Ahmedabad, and resident magistrate Hubli. The former has been extended to 31st December 1934 and the latter to 30th June 1934.

High Court.

4. Under section 101 of the Government of India Act :—

" Each high court shall consist of a chief justice and as many other judges as His Majesty may think fit to appoint : provided as follows :—

(*i*) The Governor-General in Council may appoint persons to act as additional judges of any high court, for such period not exceeding two years, as may be required ; and the judges so appointed shall, whilst so acting, have all the powers of a judge of the high court appointed by His Majesty under this Act ;

(*ii*) The maximum number of judges of a high court, including the chief justice and additional judges, shall be twenty. A judge of a high court must be—

(*a*) a barrister of England or Ireland or a member of the Faculty of Advocates in Scotland, of not less than five years' standing ; or

(*b*) a member of the Indian Civil Service of not less than ten years' standing, and having for at least three years served as, or exercised the power of, a district judge ; or

(*c*) a person having held judicial office, not inferior to that of a subordinate judge or a judge of a small cause court, for a period of not less than five years ; or

(*d*) a person who has been a pleader of one of the high courts referred to in this Act, or of any court which is a high court within the meaning of clause (24) of section 3 of the Act of the Indian legislature known as the General Clauses Act, 1897, for an aggregate period of not less than ten years :

Provided that not less than one-third of the judges of a high court, including the chief justice but excluding additional judges, must be such barristers or advocates as aforesaid, and that not less than one-third must be members of the Indian Civil Service."

Of the eleven judges now in the High Court of Bombay, one is chief justice, nine are permanent puisne judges and one is a temporary additional puisne judge. Of these, five including the chief justice are barristers, four are members of the Indian Civil Service and two including the temporary additional judge are non-barrister lawyers.

The term of the appointment of the additional judge is due to expire on the 28th February 1934.

Permanent judges of the High Court are appointed by His Majesty and they hold office during His Majesty's pleasure. Under executive orders of the Secretary of State they are required to give an undertaking at the time of their appointment that they will vacate their office on attaining the age of 60 years. Barrister and pleader judges are required to give a further undertaking at the time of their permanent appointment that they will not resume forensic practice in the High Court or in courts subordinate thereto on vacating their office. Officiating appointments of High Court judges to fill temporary vacancies are made by the Governor in Council. Appointments of additional judges are made by the Governor-General in Council for periods not exceeding two years. The salaries, leave and pensions of the judges are regulated by statutory rules made by the Secretary of State. The salaries at present fixed are :—

Chief justice .. .. Rs. 5,000 p.m.
Puisne judges and additional judges Rs. 4,000 p.m.

Superior High Court staff.

5. The following High Court appointments are included in the general provincial service :—

Designation.	Rate of pay. Rs.
(1) Administrator general and official trustee, Bombay, and registrar of companies and registrar of firms.	2,250—100—2,750 p.m. (with an allowance of Rs 150 p.m. for holding the office of registrar of firms).

Designation.	Rate of pay.
	Rs.
(2) Editor of the Indian law reports, Bombay series.	1,000 p.m. (including Rs. 490 spent by the editor every month towards the pay of his establishment.)

These appointments are made by the Governor in Council. The holder of the post of administrator general is ordinarily required to be a barrister and is debarred from private practice. In his capacity as registrar of companies and registrar of firms he is an officer under the central Government and of his pay a sum of Rs. 1,200—50—1,800 and an allowance of Rs. 150 are debitable to central revenue. The post of editor, Indian law reports, is filled from the bar.

Appointments to the following gazetted posts on the original side are made by the chief justice :—

Designation.	Rate of pay.
	Rs.
(3) Prothonotary and senior master	1,700—60—2,000 p.m.
(4) Master and registrar in equity and commissioner for taking accounts and local investigation ..	1,700 p.m.
(5) Taxing master	1,000 p.m.
(6) Insolvency registrar ..	950 p.m.
(7) Master and assistant prothonotary	1,000 p.m.
(8) Assistant taxing master ..	700 p.m.
(9) First assistant master ..	600—20—700.
(10) Second assistant master ..	500—20—600.
(11) Third assistant master ..	400—20—500.
(12) to (16) Associates, 5 posts ..	325 p.m.
(17) Clerk of the crown ..	500 p.m.

Of these posts Nos. (3) to (6) inclusive are in the general provincial service and the remainder are not.

The rates of pay shown above are, pending their revision, subject to a cut of two annas in the rupee for "new entrants".

Of posts on the appellate side, that of registrar, High Court, appellate side, was until recently included in the list of posts

reserved for members of the Indian Civil Service, but it has now been removed from that list and is open to members of the Indian Civil Service, Bombay Civil Service and others. The Reorganisation Committee would go further and not select the registrar from the judiciary in any case. They consider that in that event a pay equal to that of the master and registrar in equity would be adequate for the post.

There are two other gazetted posts on the appellate side. They are not included in the general provincial service. They are :—

	Pay. Rs.
Deputy registrar, appellate side ..	700—50—900.
Assistant registrar, appellate side..	550—50—700.

The post of deputy registrar is ordinarily filled from among subordinate judges and the post of assistant registrar is filled by promotion from the subordinate establishment of the High Court. Appointments to both these posts are made by the chief justice.

Control exercised by High Court and by Government.

6. The High Court has power of superintendence under section 107 of the Government of India Act over all courts subject to its appellate jurisdiction, but any rules framed in exercise of this power require the previous approval of the local Government. This section refers mainly to the procedure of the courts and other court matters. As regards control over establishments, clause 8 of the letters patent provides that the chief justice shall appoint as many clerks and ministerial officers as may be found necessary, subject to any rules or restrictions prescribed by the Governor in Council, and that these clerks and officers shall receive such reasonable salaries as the chief justice may appoint for each office and as the Governor in Council subject to the control of the Governor-General in Council shall approve.

As regards establishments under district courts and subordinate courts section 38 of the Bombay Civil Courts Act, 1869, provides that all ministerial officers in civil courts in each district shall be appointed and may be fined, suspended

or dismissed by the district judge subject to such rules as the High Court may from time to time prescribe. The rules prescribed by the High Court are on pages 221 to 223 of the High Court civil circulars. It is provided in the rules that every ministerial officer shall have a right of appeal to the High Court against any order of punishment passed by the district judge. Section 9 of the Act also provides that the district judge shall have general control over all civil courts and their establishments within the district and that it shall be his duty to inspect or cause to be inspected the proceedings of all courts subordinate to him. Similarly under section 10 of the Sind Courts Act, Bombay Act XII of 1866, it is lawful for the judicial commissioner and for the judge of a district court in Sind to appoint so many and such officers as the local Government acting under the general control of the Government of India shall from time to time direct and for misbehaviour to suspend or remove any such officer, provided that no officer on a pay of Rs. 30 per month or more shall be removed without the sanction of the judicial commissioner. In cases of individual appointments or suspension or removal an appeal lies to the judicial commissioner of Sind and the High Court, but no appeal lies to Government. The local Government has unfettered discretion in prescribing the number and pay of ministerial establishments in all courts except the High Court.

Court of the judicial commissioner of Sind.

7. The judicial commissioner's court consists at present of one judicial commissioner and three additional judicial commissioners. The post of the judicial commissioner and one of the posts of additional judicial commissioner are reserved for members of the Indian Civil Service under executive orders of the Secretary of State. Two posts of additional judicial commissioner are open to non-Indian Civil Service men and, of these, one must invariably be filled by a barrister of not less than 5 years' standing in accordance with the requirements of the Sind Courts Act. The appointments of the judicial commissioner of Sind and the additional judicial commissioners of Sind are made by the Governor in Council. In the case of persons not belonging to the Indian Civil Service the

appointments are made from among the persons recommended by a selection board consisting of—

(1) The commissioner in Sind,

(2) The judicial commissioner of Sind, and

(3) An additional judicial commissioner of Sind nominated by the judicial commissioner of Sind.

A new "Sind Courts Act" providing for the establishment of a chief court for Sind in the place of the present court of the judicial commissioner of Sind was passed in the Bombay legislative council on the 21st August 1926, but it has not yet been brought into force on account of the prevailing financial stringency. Section 4 of the new Act, which provides for the constitution of the chief court, runs as follows:—

"(1) The chief court shall consist of a chief judge and three or more judges who shall be appointed by the Governor-General in Council and shall hold office during his pleasure.

(2) The chief judge and judges must each be either:

(*a*) barrister of not less than five years' standing; or

(*b*) a member of the Indian Civil Service of not less than ten years' standing and having for at least three years served as or exercised the powers of a district judge; or

(*c*) a person having held judicial office not inferior to that of a subordinate judge or a judge of the small cause court for a period of not less than five years: or

(*d*) a person who has been an advocate or a pleader of any court which is a high court within the meaning of clause (22) of section 3 of the Bombay General Clauses Act, 1904, for an aggregate period of not less than ten years.

Provided that the chief judge and judges counted together must include not less than two such barristers, advocates or pleaders and not less than two members of the Indian Civil Service.

(3) Additional judges duly qualified as aforesaid may be appointed for such period not exceeding two years as may be required by the Governor-General in Council and shall each of them during such period have all the powers of a judge of the chief court."

The existing rates of pay of the judicial commissioner and the additional judicial commissioners of Sind are as follows :—

	Rs.
Judicial commissioner of Sind ..	3,500 per mensem.
Additional judicial commissioners of Sind	3,000 per mensem.

The Indian Civil Service incumbent of the post of additional judicial commissioner of Sind is allowed, in addition to the pay of the post, overseas pay at £13–6–8 per mensem provided his domicile is non-Asiatic.

SUPERIOR STAFF IN THE JUDICIAL COMMISSIONER'S COURT.

8. The following gazetted posts are included in the general provincial service :—

Designation.	Existing rates of pay.
	Rs.
(1) Registrar of the court of the judicial commissioner of Sind and clerk of the crown	750—50—1,000.
(2) Second registrar of the court of the judicial commissioner of Sind ..	300 pay per mensem ; 100 special pay per mensem.

The appointments are made by Government from among candidates recommended by a selection board consisting of—

(*a*) The judicial commissioner of Sind.

(*b*) Two additional judicial commissioners nominated by the judicial commissioner.

(*c*) Two members nominated by the judicial commissioner from among district judges, practising barristers, advocates or pleaders.

The selection of candidates for appointment to the post of registrar is made either from among persons already in Government service including members of the Indian Civil Service or from among members of the bar of not less than five years' standing.

District judges.

9. The existing sanctioned strength of the cadre of district judges is 21. This number provides for 20 district judgeships in the Bombay presidency including Sind and one post of judicial assistant at Aden. The Government of Bombay have also to lend two Indian Civil Service officers from the judicial side to the Government of India for employment in the Western India States Agency, but those two posts are not included in the sanctioned strength of the cadre of district judges. All the posts of district judge are ordinarily reserved for members of the Indian Civil Service, but nine of them have been listed as open to persons not of that service. Indian Civil Service district judgeships are filled from among assistant judges in that service. The number of Indian Civil Service officers actually on duty at present in the twelve posts in the cadre of district judges reserved for that service is seven of whom two are Europeans and five Indians. Of the nine listed posts, four are reserved for direct recruits from the bar and five for officers of the provincial service who have served as assistant judge.

Of the 21 posts of district judge, one is a selection grade post carrying a fixed pay of Rs. 3,000 per mensem *plus* overseas pay at £13-6-8 per mensem, if admissible, and the remainder are posts on the senior time-scale of pay of the Indian Civil Service (Rs. 1,000 to Rs. 2,250). Judicial pay at Rs. 150 per mensem was formerly admissible to officers on the general time-scale holding posts of district judge except the selection grade post, but this special pay has been discontinued with effect from the 9th December 1924, except in the case of officers who drew it before that date or have been certified by Government to have elected definitely for the judicial department before that date. Officers holding listed posts of district judge draw pay under the senior time-scale of pay for the Indian Civil Service, their initial pay being fixed in accordance with rules made by the Secretary of State.

The following views were expressed by the Government of Bombay on the proposal made by the services sub-committee of the Round Table Conference regarding stoppage of recruitment in the Indian Civil Service for judicial posts :—

"In regard to the merits of the proposal the considered view of the Governor in Council is that Indian Civil Service judges have contributed an element to the general judicial administration which is well worth retaining and that, in

particular, they have been specially valuable on the criminal side. At the present time however there is great danger that the class of men who will enter the Indian Civil Service in future may not be as good as it has been in the past. On the other hand the retention in the Indian Civil Service cadre of a fair number of judicial appointments and the continued eligibility of Indian Civil Service judges for promotion to the High Court would have a marked effect in maintaining the standard of recruitment. On the assumption, which is important, that this standard will be maintained the Governor in Council is in favour of continuing recruitment for judicial posts through the Indian Civil Service."

The Reorganisation Committee have proposed a scale of pay rising from Rs. 450 a year in the fourth year of service to a maximum of Rs. 1,200 in the twenty-third year of service for a wholly provincialised service of district judges, should such a service come into being. They also propose that all new entrants to the service should serve first as assistant judges and draw pay in the junior time-scale of the service of Rs. 250 in the first rising to a maximum of Rs. 600 in the fourteenth year of service. Under the committee's scheme three-quarters of the appointments to this provincial judicial service would be made from among candidates who had at least six years' practising experience at the bar and one-quarter by the promotion of selected subordinate judges. For subordinate judges a pay ranging from Rs. 200 to Rs. 700 is proposed. Candidates recruited from the bar would enter the junior time-scale at Rs. 400 and promoted subordinate judges would draw the rate of pay next above the pay they were drawing in their own cadre before promotion. The proposed part recruitment of district judges from the cadre of subordinate judges is coupled with the recommendation that all subordinate judges should be invested with magisterial powers, not only to relieve the magistracy but also to provide subordinate judges with experience of the criminal law. Fifteen subordinate judges in the presidency proper have been invested with first class magisterial powers as an experimental measure, but the consideration of the recommendations of the Committee in regard to the recruitment of the judiciary has been held over till the future constitution of the judicial service under the reforms is decided.

The committee also suggest that the following rates of pay for posts outside the time-scale would be in proper relation with their scale of pay for the provincial judicial service and

with the pay which they propose for ministers. The proposals for the pay of the High Court are based on the assumption that its judges will hereafter all be locally recruited :—

	Rs.
Chief justice, Bombay ..	3,000
Judge, high court, Bombay ..	2,500
Judicial commissioner, Sind ..	1,750—50—2,000
Additional judicial commissioner, Sind	1,500—50—1,750

ASSISTANT JUDGES.

10. The sanctioned permanent strength of assistant judges is fourteen. Of these seven are recruited from the Indian Civil Service and seven from the Bombay Civil Service and the bar. So far as recruitment from the Indian Civil Service is concerned, selections are ordinarily made from among officers of from five to eight years' standing. The selected officers are placed under training for a period of eighteen months, of which fifteen are spent in a district court and three in the High Court. In making selections the wishes of individual officers are respected as far as possible. On the completion of their training, they are invested with the powers of an assistant sessions judge and, after they have gained sufficient experience, with those of an additional sessions judge and with civil appellate powers.

The seven appointments outside the Indian Civil Service are included in the provincial service. The main avenue of recruitment for the posts of non-Indian Civil Service assistant judges is from the cadre of subordinate judges, the selection being made from men of ten to fifteen years' standing, i.e. of forty to forty-five years of age. A few posts of non-Indian Civil Service assistant judge are filled by recruitment from the bar. The recruitment of members of the bar as assistant judges traces from a recommendation of the Public Service Commission that a certain number of posts of district judge should be filled by direct recruitment from the bar. But the Government of India have recently decided that superior posts on the judicial side reserved for members of the bar should be filled by direct recruitment and that members of the bar tried first as assistant judges and assistant sessions judges should not be confirmed as assistant judges if they are to be considered eventually for district judgeships. In 1918

three members of the bar were appointed to act as assistant judges and assistant sessions judges and it was then discovered that bar recruits do not always make good criminal judges and that previous trial in the capacity of assistant judge and assistant sessions judge serves not only to test their capacity, but also to give them the benefit of consultation with and advice from a more experienced colleague. Government propose to formulate a scheme for the training of bar candidates in criminal work, but, as the proposed scheme involves extra expenditure, its further consideration has been held over for the present. There is also uncertainty about the future of the judiciary under the Reforms.

Assistant judges draw pay under the junior time-scale of pay for the Indian Civil Service, but the three most senior among them, if exercising the powers of an additional sessions judge and civil appellate powers, are entitled to pay under the senior scale, subject to a maximum of Rs. 1,600 per mensem in their basic pay.

The existing scale of pay for non-Indian Civil Service assistant judges is Rs. 750—75—1,200, but is subject pending its revision to a diminution of two annas in the rupees for new entrants after 4th August 1931.

Small cause courts.

11. In the Bombay presidency there are courts of small causes in Bombay city, Poona, Ahmedabad and Karachi. The court of small causes, Bombay, is constituted under the Presidency Small Cause Courts Act (XV of 1882). Appointments of judges of the court are made by the Governor in Council in accordance with the provisions of section 7 of the Act, which runs as follows :—

"The local Government may from time to time, by notification in the official gazette, appoint a person to be chief judge, and so many other persons as it thinks fit to be judges of the small cause court :

Provided that—

(1) no person shall be appointed to be chief judge of a small cause court unless he is—

(*a*) an advocate of a high court of judicature established under the Indian High Courts Act, 1861, or the Government of India Act, 1915, or

(*b*) a vakil or attorney of one of the said high courts ;

(2) no person shall be appointed to be a judge of a small cause court unless he is—

(*a*) an advocate, vakil or attorney of one of the said high courts, or

(*b*) a judge of a court of civil judicature of not less than five years' standing ; and

(3) of the persons so appointed to be judges, including the chief judge, not less than one-third shall be advocates of one of the said high courts.

The local Government may by a like notification suspend and remove any judge so appointed."

The appointment of the small cause court judge, Karachi, is made—

(*a*) by promotion from among subordinate judges who have served for not less than five years as judges of courts of civil judicature, or

(*b*) by nomination.

To be eligible for nomination candidates must have been advocates, attorneys, vakils or pleaders of any court which is a High Court within the meaning of clause 22 of section 3 of the Bombay General Clauses Act, 1904, for an aggregate period of not less than seven years.

Appointments of judges of the courts of small causes at Poona and Ahmedabad are made by promotion from among subordinate judges.

The pre-existing rates of pay for small cause court judges (A) the rates of pay for new entrants as they stand provisionally reduced by 12½ per cent. (B) and the rates proposed by the Reorganisation Committee (C) are shown side by side below :—

	A.	B.	C.
	Rs.	Rs.	Rs.
Chief judge, Bombay ..	2,000	1,750	1,250—50—1,500.
Other judges, Bombay..	1,000—50—1,500	875—43¾—1,312½	1,000—50—1,250.
Judge, Karachi ..	1,000—50—1,500	875—43¾—1,312½	850—50—1,000.
Judges, Poona and Ahmedabad.	1,200	1,050	750—50—900.

POSTS IN SMALL CAUSE COURTS.

12. The following gazetted posts are included in the general provincial service :—

Designation.	Pay.
	Rs.
Registrar, court of small causes, Bombay	500—25—650.
Registrar, court of small causes, Karachi	300—25—500.

The pay of the post of registrar, court of small causes, Bombay, has been recently revised. Appointments are made by Government on the recommendation of the chief judge, court of small causes, Bombay, either by promotion from the subordinate establishment of the court, or by the nomination of a candidate from among persons recommended by a selection board consisting of—

(1) The chief secretary to Government.

(2) The secretary to Government, home department.

(3) The chief judge, court of small causes, Bombay.

The appointment of registrar, court of small causes, Karachi, is made by the judicial commissioner of Sind with the previous sanction of the Governor in Council under section 40 of the Karachi Small Causes Court Act, 1929.

SUBORDINATE JUDGES.

13. The cadres of subordinate judges in the presidency proper and in Sind are separate. The existing sanctioned permanent strength of the cadres is :—

Presidency proper.

First class	22	posts.
Second class	122	,,
	144	

Of these, ten posts in the second class are in abeyance as a result of the suspension of the scheme of appointing registrars for district courts and ten more have been placed in abeyance owing to the linking and abolition of subordinate courts. One permanent vacancy has also been left unfilled as a measure of economy. The actual strength of second class subordinate judges in the presidency proper at present is therefore 101.

Sind.

First class	4	posts.
Second class	13	,,

The cadres of subordinate judges in the presidency proper and in Sind include reserves of thirteen and two posts respectively for leave and deputation.

Appointments of subordinate judge in the presidency proper are made by the Governor in Council from among candidates recommended by a selection board consisting of—

(*a*) Three High Court judges nominated by the chief justice, and

(*b*) Two non-officials nominated by the chief justice from among practising barristers, advocates or pleaders.

Appointments of subordinate judge in Sind are made by the commissioner in Sind from among candidates recommended by a selection board consisting of—

(*a*) The judicial commissioner of Sind, and

(*b*) Two additional judicial commissioners of Sind nominated by the judicial commissioner.

Revised scales of pay for subordinate judges have been fixed for new entrants appointed on or after the 4th August 1931. These scales, the scale which preceded them and the scale recommended for adoption by the Reorganisation Committee, are shown side by side below :—

Before revision.	Revised scales.	Reorganisation Committee's scale.
First Class.	*First class (26 posts).*	*First class.*
Selection grade— Rs. 1,000—100—1,200 (4 posts).	Selection grade abolished ..	....
Ordinary grade— Rs. 750—50—850 (22 posts).	Rs. 640—40—800 ..	Rs. 600—25—700.
Second class.	*Second class.*	*Second class.*
(125 posts.) For two years of probation —Rs. 300.	Second grade 200 for 2 years of probation. 240—20—380.	Rs. 200—20—380.
	First grade 410—25—610 (42 posts).	400—20—560.
Rs. 350—50/2—650 with an efficiency bar at 550.	....	....

PRESIDENCY MAGISTRATES.

14. The sanctioned permanent strength of presidency magistrates including the chief presidency magistrate is six. Appointments of presidency magistrate other than that of chief presidency magistrate are ordinarily made by nomination from among practising advocates and vakils of the High Court of not less than five years' standing; appointments of chief presidency magistrate are made either by nomination from the same field of recruitment or by promotion from among the presidency magistrates. Members of the Indian Civil Service are also deemed eligible for nomination to the office of chief presidency magistrate, though one has not been so appointed hitherto.

The scales of pay of presidency magistrates as they exist at present (less a 12½ per cent. reduction for "new entrants") and as proposed by the Reorganisation Committee are :—

	Present pay.	Pay proposed by Committee.
	Rs.	Rs.
Chief presidency magistrate ..	1,500—100—2,000	1,250—50—1,500.
Other presidency magistrates ..	1,000—50—1,500	1,000—50—1,250.

There is a post of registrar for the courts of presidency magistrates which is a gazetted post included in the general provincial service. Its pay as recently revised is Rs. 500—25—650. Appointments are made by Government either by promotion from the subordinate establishment of the chief presidency magistrate, Bombay, or by nomination of a candidate from among persons recommended by a selection board.

CITY AND RESIDENT MAGISTRATES.

15. With the exception of the post of city magistrate, Karachi, city magistrates are of the grade of deputy collectors and resident magistrates are of the grade of mamlatdars and mukhtiarkars and draw the pay of their grade. The city magistrates at Poona and Ahmedabad and the additional city magistrate, Karachi, receive in addition to the pay of their grade special pay of Rs. 100 per mensem.

The post of city magistrate, Karachi, is open both to persons who are or have been in Government service and to members of the bar. The pay of the post is Rs. 1,000—50—1,500.

RECRUITMENT OF CLERKS.

16. As regards the recruitment of the non-gazetted clerical staff, a departmental examination is prescribed in Sind which the clerks concerned have to pass before being confirmed in their appointments or being granted permanent promotion. In the presidency proper a departmental examination is not universally prescribed, but it is open to any district judge to introduce a system of departmental examination subject to rules laid down by the High Court. It is not intended that this departmental examination should be compulsory for entrance into the service, but those who have entered the service after 1st May 1908 are held to be ineligible for promotion beyond Rs. 80 unless they pass the examination. There are no departmental examinations for the clerical staff in the High Court.

II. Expenditure in the Department.

17. Since the introduction of the Reforms, the actual expenditure incurred in this department is as follows :—

Year.	Figures of actual expenditure in thousands of rupees.	
	Total.	Non-voted.
1921–22	70,99	(12,44)
1922–23	67,00	(12,22)
1923–24	68,87	(10,88)
1924–25	71,37	(11,68)
1925–26	72,74	(10,99)
1926–27	74,05	(11,03)
1927–28	73,25	(10,73)
1928–29	72,92	(8,73)
1929–30	75,33	(8,90)
1930–31	74,64	(9,16)
1931–32	70,56	(7,97)
1932–33	64,22	(7,06)
1933–34 (Budget)	66,79	(7,40)

The pay of the subordinate judicial establishment was revised in 1922 and 1923 and the increase of expenditure from 1924–25 onwards is mainly due to this cause.

In 1929–30 an official was appointed to work as the court receiver and liquidator, Bombay, and heavy expenditure was incurred under the head of law officers and also for temporary

appointments of special magistrates. In the estimate for the year 1932–33 there is a reduction of Rs. 5,20 (thousands) on account of the ten per cent. cut in pay, and of Rs. 2,27 (thousands) in that for the year 1933–34 at ten per cent. for one month and five per cent. for eleven months.

The details of the budget estimates of 1933–34 by minor heads under "24-Administration of Justice" are given below:—

Minor head.	Budget estimate for 1933–34 (in thousands of rupees).	
	Total.	Non-voted.
High Court	12,02	(4,59)
Law officers	4,99	(28)
Administrator general and official trustee.	38	
Coroner	13	
Presidency magistrates' courts ..	2,24	
Judicial commissioners	2,73	(75)
Civil and sessions courts	34,76	(1,78)
Courts of small causes	4,10	
Criminal courts	5,38	
Pleadership examination charges ..	6	
	66,79	

The figures of receipts and expenditure of the High Court for the year 1932 were:—

Receipts.

	Rs.
Original side	20,71,879
Appellate side	1,79,360
	22,51,239

Expenditure.

Original side	7,72,565
Appellate side	4,05,295
	11,77,860

The receipts on the original side include an item of Rs. 9,89,436 on account of probate and administration duty which is really of the nature of a tax levied by Government. If this is excluded, the surplus of receipts over expenditure comes to Rs. 83,943, but the expenditure does not include any charge on account of the cost of the construction or upkeep of the High Court building or of the pensionary charges of the staff.

III. High Court and official assignee's funds.

18. In the High Court there are several funds which are at present kept out of the provincial balances and have accumulated by the lapsing of deposits and the accrual of interest on deposits into large sums. Some of these funds are held by the official assignee. The total of the balances of all these funds is about Rs. 2¼ crores. The High Court Funds Committee appointed by Government in 1930 recommended that Government should take over the High Court funds in accordance with English precedent and pay interest of 2 per cent. only to the funds. The result would be a saving of interest charges to this Government at present rates of interest of about five lakhs of rupees a year, in addition to the regular accrual of lapsed deposits to Government. Government are anxious to secure the funds at the earliest possible date and have drafted a bill for submission to the Government of India with a view to its being placed before the central legislature within whose province it falls.

Assumption of the official assignee's funds involved an amendment of the Presidency Towns Insolvency Act. The amendment was made by Bombay Act No. XX of 1933. The sum involved is about 28 lakhs (face value) which has been transferred to Government. The staff of the official assignee will now be paid from provincial revenues instead of from the funds themselves as hitherto.

The balances of the Pleadership Examination Fund and the Suitors' Fee Fund in the High Court amounting to 3 lakhs were transferred to provincial revenues in the year 1931–32 and the expenditure on account of the establishment charges of the High Court section of the Accountant General's office which was previously met from those funds is now being met from provincial revenues.

IV. Retrenchment.

19. The retrenchments effected as a result of the recommendations of the retrenchment committee of 1931 are estimated at Rs. 3 lakhs. The main items of retrenchment were :—

(*i*) A reduction in the rates of bhatta to witnesses.

(*ii*) A reduction of nine subordinate judges' courts as a result of the linking or abolition of subordinate courts.

(*iii*) A reduction of establishment in the High Court, the court of the judicial commissioner of Sind, presidency magistrates' courts, courts of small causes, Bombay, Poona, Ahmedabad and Karachi, and district and subordinate courts.

(*iv*) The abolition of two posts of resident magistrate in Sind.

[The following measures were introduced in 1931 involving an increase of about Rs. 1,20,000 in 1932-33 in the receipts under "VII-Stamps—A—Non-Judicial and B—Judicial—Sale of Stamps".

(*i*) An increase in the scale of process fees on summonses and warrants in criminal cases.

(*ii*) The levy of a fee of Re. 1 on vakalatnamas in the court of small causes, Bombay. These were formerly filed without any court fee.

(*iii*) The introduction of a revised scale of process fees in civil courts in Sind.]

Before these retrenchments were effected Government had reduced, between 1928 and 1930, 87 posts of clerks and 113 posts of bailiffs after an examination of the strength of clerks and bailiffs in a number of districts. In addition to this retrenchments were effected as a result of the recommendations of a Retrenchment Committee appointed in 1922 and of Mr. Shillidy's recommendations of 1926.

At the same time that Mr. Shillidy examined the organisation of the courts, Mr. K. K. Sen examined their contingent expenditure and made suggestions which resulted in a reduction of the charges on account of (1) diet and road money to witnesses, (2) audited contingencies and (3) contract contingencies in the offices of the judicial commissioner of Sind, the district judges of Ahmedabad and Poona and the district magistrates of Ahmedabad, Poona and Karachi.

The following retrenchments have been effected as recommended by the Reorganization Committee :—

Item.	Annual saving.
	Rs.
(*i*) The abolition of the High Court press.	12,000.
(*ii*) Adoption of the scheme of keeping unfilled leave vacancies of additional judical commissioner of Sind subject to the conditions that the scheme should be reviewed periodically in the light of the state of arrears in the judicial commissioner's court and that the period for which the leave vacancies should be left unfilled should not exceed six months.	The saving cannot be stated, as it depends on the leave programme in any particular year. If the vacancy left unfilled in any year is for six months the saving will be Rs. 18,000.
(*iii*) Amalgamation of the posts of nazirs of district court and first class court at Ahmednagar and the abolition of separate posts of clerks of the court in the sub-courts at Jacobabad, Viramgaum, Dapoli and Ratnagiri.	2,900.
(*iv*) Investment of some subordinate judges in certain districts in the presidency proper with magisterial powers.	The saving cannot be stated at present.
(*v*) Reduction in the number of peons for personal attendance on officers and for service in offices of the judicial department.	35,300.

The Reorganisation Committee thus found little scope for further retrenchment in the judicial department. In addition to the retrenchments outlined above, they have proposed new scales of pay which are under consideration. They have suggested, with reference to the abolition of and linking of subordinate courts, that further exploitation of this source of economy should be postponed till the question of utilising the spare time of subordinate judges by investing them all with criminal powers in order to facilitate a reduction in the cadre of sub-divisional revenue officers and magistrates has been fully examined.

A proposal to amalgamate Broach with Surat and Kaira with Panch Mahals was considered by Government in 1930–31 but

rejected because no substantial savings were anticipated. At the instance of the Bombay Retrenchment Committee of 1931 the question whether any two judicial districts could be combined, one of them being placed in charge of an assistant judge subordinate to the district judge in the other, was investigated. The High Court was definitely of opinion that it was undesirable to make the experiment The proposal did not involve substantial savings and was dropped.

V. Matters before Government.

20. The principal matters now under the consideration of Government in this department are :—

(*i*) Assumption of the High Court funds.

(*ii*) The reorganisation of cadres and scales of pay proposed by the Reorganisation Committee.

(*iii*) The establishment of a city civil court for Bombay. This proposal is being examined to see whether it is financially sound. The carrying of it out would involve central legislation.

21. The following further matters will come forward for consideration when the financial situation of the province improves :—

(*i*) The establishment of a chief court in Sind.

(*ii*) The building of a number of judicial offices, in particular—

District and subordinate courts at Larkana.

District and subordinate courts at Sholapur, where at present a hired bungalow is used.

District and subordinate courts at Dharwar.

Subordinate judge's court at Mehar.

Additions and alterations to the sessions court and district judge's bungalow at Godhra.

Subordinate judge's courts at Roha, Pen and Mahad.

APPENDIX.

District and sessions courts and subordinate courts in each district.

Judicial district.	District and sessions courts.		Subordinate judges' courts.				Small causes courts.
	District judges' courts.	Assistant judges' courts.	First class courts.	Joint first class courts.	Second class courts.	Joint second class courts.	
Presidency proper.							
Ahmedabad ..	1	1	1	1	2	3	1
Kaira ..	1	..	1	..	4	1	..
Broach and Panch Mahals ..	1	1	1	..	4	1	..
Surat ..	1	..	1	1	1	2	..
Thana ..	1	1	1	..	8	..	..
Ahmednagar ..	1	1 (under training).	1	..	4	1	..
West Khandesh ..	1	..	1	..	3	1	..
East Khandesh ..	1	..	1	1	4	4	..
Nasik ..	1	1 (under training).	1	..	5	1	..
Poona ..	1	2 (one under training).	1	1	4	2	1
Satara ..	1	1	1	..	5	1	..
Sholapur ..	1	1	1	..	3	2	..
Belgaum ..	1	1	1	1	4	1	..
Bijapur ..	1	..	1	..	2	2	..
Dharwar ..	1	..	1	..	3	2	..
Kanara ..	1	..	1	..	2	..	..
Ratnagiri ..	1	..	1	..	6	..	..
Sind.							
Hyderabad ..	1	2	1	..	4	1	..
Sukkur ..	1	1	1	..	3	1	..
Larkana ..	1	1	1	..	3	..	..
Karachi ..	1	..	..	..	..	..	1

VIII—POLICE

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VIII—POLICE

I. General organisation.

Organisation and functions.

1. The police force in the Bombay presidency consists of two distinct bodies, the stipendiary and the village police. The stipendiary force is divided into several branches, namely, the Bombay city police, district police, railway police and criminal investigation department.

The primary functions of the police are the prevention and detection of crime, the maintenance of order, the apprehension of offenders, escorting and guarding prisoners, treasure or private or public property of which they may be placed in charge and the prosecution of criminals. They have however various other duties to perform, of which some such as control of traffic, censorship of plays and other performances, service of summonses in criminal cases and destruction of stray dogs are imposed upon them by law and others, such as aid to refugees and pilgrims and passport and naturalization enquiries, are entrusted to them for administrative reasons.

The principal Acts under which miscellaneous statutory duties additional to their primary functions are imposed on the police are the following :—

The Bombay Public Conveyance Act,
The Indian Arms Act,
The Prevention of Cruelty to Animals Act,
The Indian Lunacy Act,
The Indian Motor Vehicles Act,
The Bombay Prevention of Prostitution Act,
The Bombay Prevention of Gambling Act,
The Criminal Tribes Act,
The Cattle Trespass Act,
The Indian Explosives Act,
The Indian Petroleum Act,
The Poisons Act,
The Cinematograph Act, and,
The Bombay Children Act.

Bombay city police.

2. The entire control of the Bombay city police force vests in the commissioner of police, Bombay. He is independent of the inspector general of police, but must carry out his orders and assist officers deputed by him in respect of the detection of crime committed in the mofussil and cases or matters under investigation by the criminal investigation department, Poona. Under the commissioner of police there are four deputy commissioners of police, one in charge of the criminal investigation department, special branch, the second in charge of the criminal investigation department, crime branch, the third in charge of divisions and the fourth in charge of the Bombay harbour and docks.

The force is controlled under the City of Bombay Police Act, 1902, and its jurisdiction extends to the town and island of Bombay.

For the convenience of police administration Bombay city is divided into six divisions, each comprising three or more police stations. The total number of police stations is 18. Superintendents of police are in charge of divisions, while inspectors of police are in charge of police stations. Inspectors are mainly responsible in their charges for the prevention and detection of crime and for seeing that the orders of their superiors are carried out and the discipline of the police under them is properly maintained and they are assisted in their work by police officers of the rank of deputy inspector, sergeant, sub-inspector, jemadar, head-constable and constable.

Before the passing of the Police Charges Act, 1907, the municipal corporation bore a share of the expenditure of Government on the police of the city. The share was fixed by Government, in accordance with powers given under the Municipal Act, at three-quarters. The system led to a great deal of friction. In 1907 Government made proposals to the municipality which involved the complete assumption of police charges in Bombay city by Government in return for the assumption by the corporation of charges hitherto borne by Government on education, medical relief and similar objects. The proposals were agreed to by the municipality and embodied in the Police Charges Act. But for this Act the municipal contribution on the three-quarter basis would have risen from Rs. 5,10,000 in 1905–06 to Rs. 29,92,833 in 1931–32.

In Bombay city there is a police hospital receiving on the average 75 to 100 patients a day. Its retention is justified by the improvement which it has produced in the general health of the police. It is in charge of a police surgeon.

The total permanent strength of the police of all ranks serving in Bombay city at the close of the year 1932 stood at 4,120 as shown below :—

1	Commissioner of police, Bombay.
4	Deputy commissioners of police.
10	Superintendents of police.
40	Inspectors of police.
25	Deputy inspectors.
101	Sub-inspectors.*
95	Sergeants.
32	Jemadars.
371	Head constables.
3,441	Constables.
4,120	

The cost of the entire police force is borne by the Government of Bombay with the exception that part of the cost of the dock and harbour police is recovered from the Port Trust and the cost of police used in guarding buildings belonging to the Government of India in Bombay city is recovered from that Government.

Superior control outside Sind.

3. The district police are governed by the Bombay District Police Act, 1890. The entire control of the district police force in the presidency proper vests in the inspector general of police, who is assisted by three deputy inspectors general of police, the deputy inspector general of police, criminal investigation department, and the deputy inspectors general, northern and southern ranges, who have jurisdiction only in the presidency proper. The northern range comprises the districts of Ahmedabad, Broach, Kaira, Panch Mahals, Surat, Thana, Bombay Suburban district, Ahmednagar, East Khandesh, West Khandesh and Nasik and the B. B. & C. I. Railway : the southern range comprises the districts of Poona, Satara, Sholapur, Belgaum, Bijapur,

*These include subedars, risaldars etc.

Dharwar, Kanara, Kolaba and Ratnagiri and the G. I. P. and M. & S. M. Railways. The duties of the range deputy inspectors general include the inspection of accounts in the superintendents' offices, the inspection of the crime work of districts and the hearing of appeals in disciplinary matters.

The inspector general and the deputy inspectors general meet twice every year to select candidates for the police training school and sometimes on other occasions.

The Reorganisation Committee proposed that in the police as in other major departments the administrative officers of the presidency proper should all be located in Poona and form an administrative board with a single office. The range deputy inspectors general would continue to have territorial charges. The deputy inspector general, criminal investigation department, would also be a member of the board. This proposal however has not been accepted by Government who are of opinion that the balance of advantage lies with decentralisation and not with centralisation. The inspector general of police has sufficient opportunity to discuss problems of police administration with the deputy inspectors general when they visit Poona, and the value of the advice given by the latter must depend on an intimate knowledge of conditions in their territorial charges. Orders have however been passed that the inspector general of police should be a member of the commissioners' conference whenever questions affecting the police or law and order are under discussion and this arrangement will serve the major purpose of the committee's recommendation.

Sind.

4 The commissioner in Sind exercises the powers of a local Government for police purposes, subject to the general control of the Governor in Council. The powers of the inspector general are subject to the general control of the commissioner, exercised by the deputy inspector general in Sind. In matters connected with police funds, uniforms, arms and accoutrements, the commissioner in Sind generally adopts rules prescribed by the inspector general of police for the presidency proper with such variations as local circumstances may require and on all matters he consults the inspector general of police when necessary. Since 1922 the inspector general of police has been vested with general control over certain administrative matters pertaining to the police in Sind and, with a view to enabling him

to perform those functions more efficiently, the inspector general of police has been authorised to spend at least one month in a year on a tour of inspection of the police in Sind. Nearly all the provisions of the Bombay District Police Act have now been extended to Sind.

District organisation.

5. The police in this presidency are organised on a district basis generally. In each district a district superintendent of police is the executive head of the force. He is assisted in certain districts, according to criminality or other local conditions, by one or more subdivisional officers of the rank of assistant or deputy superintendent. The inspector general, deputy inspectors general, superintendents and assistant superintendents of police are of the Indian Police, while the deputy superintendents of police are provincial service officers. Inspectors and police prosecutors above the efficiency bar are gazetted officers, but all officers below them are non-gazetted. Police prosecutors, who conduct all serious cases and such other important cases as may be entrusted to them in the magistrates' courts, have since 1924 been recruited on a separate scale of pay. Before then there were prosecuting inspectors and prosecuting sub-inspectors who were graded with inspectors and sub-inspectors of police.

The district superintendent of police is subject to the control of the district magistrate in matters relating to the preservation of peace, maintenance of order and control of crime, but as regards the internal organisation and discipline of the police force he is under the control of the deputy inspector general concerned and the inspector general of police. The commissioners of divisions also exercise general supervision and control over the district magistrates in respect of the administration of police and criminal justice. Commissioners are responsible for the police administration of their divisions according to sections 13, 17, 18 and 19 of the Bombay District Police Act, 1890, and have to advise Government on all matters of importance connected therewith. Should any dispute arise between the district superintendent of police and the district magistrate on any subject unconnected with the internal organisation of the force, the commissioner of the division is the referee and his decision is final, but the commissioner cannot interfere with the details of the interior organisation of the police and in no case can he issue circular orders on subjects falling within section 12 or section 27 of the Bombay District Police Act,

1890, without previously consulting the inspector general of police, who may require a reference to Government in the event of a difference of opinion. It is the duty of the commissioner to inspect police offices with a view to the fulfilment of his duties under sections 17 and 19 of the Bombay District Police Act. The inspector general of police must obtain the views of the district magistrate and the commissioner before submitting to Government any proposal for the permanent strengthening, reduction or abolition of any police post or station or for the permanent establishment of a new outpost or station.

Police stations.

6. For administrative purposes every district is divided into police-stations, each in charge of a sub-inspector of police. The "police-station" as defined in section 4 (*s*) of the Code of Criminal Procedure is notified by Government. The limits of outposts and subdivisions of police-stations are prescribed by the local authorities. The notification of a police-station provides proper sanction for the use of the powers assigned under the Criminal Procedure Code to the officer in charge of it.

There are in all excluding the railways 331 police-stations and 338 outposts in the presidency excluding Sind and there are 109 police-stations and 151 outposts in Sind.

Strength of the police.

7. The total permanent strength of the police of all ranks serving in the district police in the presidency excluding Sind at the close of the year 1932 stood at 16,900 as detailed below :—

20	District superintendents of police.
5	Assistant superintendents of police.
16	Deputy superintendents of police.
48	Police prosecutors.
59	Inspectors of police.
465	Sub-inspectors of police.
28	Sergeants.
3,600	Head constables.
12,594	Constables.
65	Mounted police.
16,900	

The total permanent strength of the police of all ranks serving in the district police in Sind at the close of the year 1932 stood at 5,461 as detailed below :—

8	Superintendents of police.
3	Assistant superintendents of police.
8	Deputy superintendents of police.
11	Police prosecutors.
23	Inspectors of police.
174	Sub-inspectors of police.
22	Sergeants.
649	Head constables.
3,332	Constables.
1,231	Mounted police including Camel levy.
5,461	

The foot police in each district is separated into two branches, the armed and unarmed. At the headquarters of every district there is a force consisting mainly of armed reserves including a small force known as the "rifle squad" and the reserve for leave, sickness and training. The cost of the entire district police force is borne by the Government of Bombay.

SUBDIVISIONAL ARRANGEMENTS.

8. In 1925 the "subdivisional scheme" was introduced throughout the presidency including Sind. Its principal object was to give effect to the suggestion of the Islington Commission that deputy superintendents of police should have district work. Before the introduction of the scheme the superintendent had direct supervision over crime in the whole district or in a subdivision of the district only according to whether an assistant superintendent was allotted to the district or not. There were assistant superintendents in Ahmedabad, Kaira, Thana, Ahmednagar, East Khandesh, Nasik, Poona, Satara, Sholapur, Belgaum and Dharwar. There was also a deputy superintendent in every district. The deputy superintendent's principal duty was the supervision of the headquarters police and the headquarters office, though on occasions he was sent out by the superintendent to investigate serious crime.

Under the subdivisional scheme the deputy superintendent became a subdivisional officer interchangeable with an assistant superintendent. The scheme also provided a home inspector, interchangeable with the subdivisional inspectors, for headquarters work. The scheme was however introduced in such a way as to involve no additional cost over that of the pre-existing arrangements. The superior staff available was allotted to

each district according to the amount of crime to be dealt with and has been redistributed from time to time according to changing conditions. All subdivisional officers live at the headquarters of their district, the only exception being the Kaira district, where the subdivisional officers are stationed at Nadiad and Anand.

Under the scheme in those districts in which the allotment of subdivisional officers is sufficient to enable the whole district to be parcelled out among them, the superintendent has only indirect supervision over crime. In districts in which there is only one subdivisional officer the superintendent has indirect supervision of crime in that officer's subdivision and direct supervision over crime in the rest of the district. If there is no subdivisional officer in the district, the superintendent has direct charge of crime in the whole district.

The present arrangements in the presidency proper are as under :—

(1) Districts having no subdivisions :—

Broach,
Surat,
Kanara,
Kolaba,
Bombay Suburban,
Ratnagiri.

(2) Districts which are divided into two subdivisions, in one of which the superintendent directly supervises crime :—

Panch Mahals,
West Khandesh,
Sholapur,
Bijapur.

(3) Districts which are divided into two subdivisions, in neither of which does the superintendent directly supervise crime :—

Ahmedabad,
Kaira,
Thana,
East Khandesh,
Nasik,
Ahmednagar,
Poona,
Satara,
Belgaum,
Dharwar.

In addition Ahmedabad city, Poona city and cantonments and Sholapur city have been formed into sub-divisions. The superintendent of Poona district has an officer of deputy superintendent's rank as his personal assistant.

Experience has disclosed some defects in the "sub-divisional scheme" as introduced. There is for instance overlapping of inspection between superintendents and sub-divisional officers. But its introduction has resulted in a great advance in crime work generally. In Satara district serious crime has fallen from an average of 2,000 a year to an average of 800 or 900 a year in ten years and this is attributable principally to the increased superior control of crime. The scheme has not been introduced to the extent required in Sind, a fact to which the backward state of crime work in Sind can be largely attributed. Except in the lightest districts the scrutiny of case diaries and control of crime work generally is more than a superintendent can perform without detriment to his other duties. Distribution of this supervision is therefore essential in most districts and the supervision of each superior officer, to be effective, must be continuous.

The Reorganisation Committee considered that the sub-divisional scheme was inelastic and led to duplication of inspection and they proposed the substitution of an arrangement by which sub-divisional officers would share the superintendent's office and, instead of being allotted territorial jurisdiction, should divide up the work with the superintendent and be available for service throughout the district when required. Government have however decided in favour of the present system of territorial sub-divisions whereby sub-divisional officers are kept in close individual touch with the police stations in their charges. They are however investigating an alternative proposal that in districts where the district superintendent of police is in direct charge of one sub-division, this should be smaller than the other sub-division in order that the superintendent may have time to supervise effectively the general administration of the district. Further, with a view to eliminating any duplication of inspection which may exist, enquiries are being made as to the extent to which it is feasible, without loss of the sub-divisional officer's control, to limit detailed inspections of police stations to one in each year.

Inspectors of police.

9. Inspectors now do no inspection of offices. They supervise the investigation of serious crime and the control of criminal tribes and bad characters and do other special work.

They are always attached to a sub-division, in which they live, and thereby acquire local knowledge.

The sub-divisional scheme as originally proposed provided an inspector for every sub-division. It is solely in the interests of economy that inspectors have not been provided in all sub-divisions.

The Reorganisation Committee proposed that inspectors should, like sub-divisional officers, be attached to headquarters and form what would practically be a crime branch of the office of the superintendent. While the need is recognised of a local crime and intelligence branch in most districts for the proper collation of information regarding crime and criminals, it has been decided that this should be dealt with as a separate proposal and that in the meanwhile an inspector working at headquarters would be less useful than in a territorial charge.

Taluka organisation.

10. The old arrangement was one police station in each taluka. As a means of improving the administration, additional police stations were created from time to time and talukas sub-divided between them, but in no case does a police station overlap two talukas. The Police Commission of 1902-03 laid down 150 square miles as the proper area for a police station. In this presidency the area varies from 150 to 600 square miles and in the Deccan many are of over 400 square miles. Subsidiary to the police station there are often outposts, each of which consists usually of one head constable and two constables. The number of outposts has been much reduced. Outposts are not expensive and their removal from an area is usually resisted by the population affected, but they are open to objection from the point of view of discipline, training and efficiency generally.

The Reorganisation Committee recommended the fullest possible reversion to the system of one police station in each taluka, with the addition to the station of an assistant sub-inspector where necessary. Government however have accepted the opinion that the proposal to concentrate sub-inspectors in taluka headquarters is unsound. The proposal would lead to complaints of insecurity, and experience has shown that sub-inspectors work better when they are in exclusive charge of a police station. Government moreover are not prepared to recognise that an officer below the rank of sub-inspector is fit in ordinary circumstances to conduct investigations. The Reorganisation Committee further advocated the substitution

of patrols for outposts wherever possible. Patrolling has been generally discontinued as a measure of economy, but the desirability of its re-introduction is admitted. Since however in present financial conditions this could only be achieved at the cost of abolishing outposts, which is not considered practicable, it has been decided to retain outposts wherever necessary in the light of modern conditions.

II. Special departments and branches.

Mounted police.

11. Government have recently abolished the last of the mounted police in Bombay city. As an instrument for quelling disturbances they were far inferior to mechanical transport and part of the money set free by their abolition has been utilised in providing additional motor vehicles in Bombay city.

In the districts, apart from Sind, the following is the sanctioned mounted cadre :—

	Head constables.	Constables.
Ahmedabad	5	25
Surat	2	8
Panch Mahals ..	1	4
Rewa Kantha Agency ..	2	11
Poona	3 (sergeants)	7

In the Ahmedabad and Kaira districts mounted police are the only instrument which has been found effective in dealing with the raids which are frequently made by well equipped and well mounted gangs from across the frontier. Footpolice are useless to counter them and motors are impossible owing to the nature of the country. Of the Rewa Kantha mounted police one head constable and seven constables are required purely for political purposes and paid for by the States. The Surat and Poona mounted police are used to control crowds and traffic. In Surat they have been invaluable in disturbances. The Poona mounted police are also used to clear areas for field firing.

In Sind there are pony police. The ponies are necessary as a form of conveyance. There is also at the Upper Sind Frontier a well equipped mounted force of selected men which was provided in 1914 when the cavalry were withdrawn from Jacobabad. It consists of 1 sub-inspector, 6 head constables and 42 constables. Its continuance is necessary in view of the possibility of dacoities and tribal warfare. The force is continually being called out.

The Reorganisation Committee, after examining the whole question of mounted police, recommended the reduction of one head constable and four constables in the Panch Mahals district and three sergeants and seven contables at Poona, with an estimated saving of Rs. 18,000 a year. Government have accepted the proposal to abolish the mounted police in the Panch Mahals district, but decided to retain the seven mounted constables at Poona and to convert the posts of mounted sergeants there into posts of foot sergeants from 1st March 1933.

Railway police.

12. The railway police force in the Bombay presidency was first organised in 1866. Before then there was no homogeneity among the police employed by the railway companies and they were subject to very little control by Government. They were simply a branch of the railway establishment. All the railway servants in the inferior grades at a station belonged to one caste or family and robberies were frequent as well as difficult of detection.

In order to remedy the situation Government appointed in the year 1865 a committee to consider and report on the best method of regulating the police of the railway. The committee submitted a scheme which was generally approved by Government. The most important reform was the appointment of two officers as superintendents of police on the B. B. & C. I. and G. I. P. Railway lines respectively. They were however assistants to the superintendents of police in the districts through which the lines of railway passed. Until 1872 the G. I. P. Railway police continued to form part of the district police. This system did not work well. Government therefore effected a separation of the two police forces. The G. I. P. Railway was formed into a separate police unit under a superintendent graded with other superintendents in the presidency. In ordering the separation of the railway and district police Government urged upon both branches the necessity for cordial co-operation. The separation of the G. I. P. Railway police from the district police having proved a successful experiment, the same system was adopted in 1877 on the B. B. & C. I. Railway and later also in Sind. Thus the three posts now existing, of superintendent of police, G. I. P. and M. S. M. Railways, superintendent of police, B. B. & C. I. Railway and superintendent of police, Sind Railways, came into being.

The direction and regulation of the railway police is vested in the superintendent of police concerned under the general control in the presidency proper of the range deputy inspector general of police and the inspector general of police and in Sind of the deputy inspector general of police for Sind and the commissioner in Sind. The superintendent spends about fifteen days a month on tour. Office work is heavy. A home inspector at headquarters deals with urgent work in the superintendent's absence. The superintendent must obey the instructions of the agent of the railway, but may appeal to the inspector general afterwards, if appeal is in his opinion necessary. Inspectors are placed in charge of the police of such stations on the line of railway as the inspector general of police may apportion as a divisional charge. The pay and prospects of the police staff on the railways are the same as those of the police staff of the same ranks in the district police.

At first all the expenses connected with the police force on the B. B. & C. I., G. I. P. and M. S. M. Railways were defrayed by the railway companies. As the cost of the railway police increased, the companies began to raise objections and the Government of India laid it down in 1872 that the total cost of the railway police should be distributed in the proportion of 3/10ths and 7/10ths between the local Government and the railway companies, such distribution having been found to represent roughly the ratio of the cost of the establishment required to maintain "law and order" and "watch and ward" respectively. This arrangement continued up to 1919. Since that year revised orders passed by the Government of India have directed that the railway companies should meet the whole cost of "watch and ward" staff and the local Government that of the "crime" and "law and order" police and that the companies should pay in addition to the local Government a fixed annual contribution to meet the obligations imposed on them by their contracts. This arrangement still continues and the Government of Bombay annually receive a contribution of Rs. 1,76,000 from the B. B. & C. I., M. S. M. and Barsi Light Railways combined. The contribution is proportionately increased whenever an addition is made to the mileage of these railways. The G. I. P. Railway, which was paying an annual contribution of Rs. 57,380 until June 1925, when it became a state railway, now pays no contribution. The N. W. Railway also being a state railway pays no contribution to the Bombay Government. The Reorganisation Committee consider that the Bombay Government have an equitable claim to a contribution

from the state railways and recommend that the claim should be pressed. They estimate the amount at stake to be about Rs. two lakhs a year. A representation has already been submitted to the Government of India in the matter and their reply is awaited.

The total permanent strength of the police of all ranks serving on the railways passing through this presidency at the close of 1932 stood at 1,598 as shown below :—

B. B. & C. I. Railway (*Mileage* 1,305).

1	Superintendent of police.
5	Inspectors of police.
2	Police prosecutors.
19	Sub-inspectors.
2	Sergeants.
150	Head constables.
397	Constables.
576	Total.

There are 11 police stations and 12 outposts on this system.

G. I. P. and M. S. M. Railways (*Mileage* 1,876).

1	Suprintendent of police.
1	Deputy superintendent of police.
4	Police prosecutors.
6	Inspectors of police.
24	Sub-inspectors.
11	Sergeants.
178	Head constables.
586	Constables.
811	Total.

There are 13 police stations and 22 outposts on this system.

Sind Railways.

1	Superintendent of police.
2	Inspectors of police.
2	Police prosecutors.
12	Sub-inspectors.
1	Sergeant.
54	Head constables.
158	Constables.
230	Total.

There are ten police stations and ten outposts on this system.

CRIMINAL INVESTIGATION DEPARTMENT.

13. The criminal investigation department consists of three separate organisations, the Bombay city, the presidency and the Sind criminal investigation departments.

The Bombay city criminal investigation department is under the control of the commissioner of police. It deals with all crime and not merely with serious crime. The control of the activities and personnel of the criminal investigation department of the presidency rests with the deputy inspector general of police, criminal investigation department, and of Sind with the superintendent of police, Sind criminal investigation department, subject to the general control of the deputy inspector general of police for Sind and the commissioner in Sind. The functions of the criminal investigation department in the presidency and Sind in dealing with crimes are :—

(*a*) The control of specialised or professional crime throughout the presidency.

(*b*) The investigation of specialised or professional crime, when of sufficient importance, and of specially important cases.

There is also under the control of the deputy inspector general of police, criminal investigation department, a special branch, known as the crimial tribes' branch, which co-ordinates the work done in connection with members of criminal tribes outside settlements throughout the presidency. No investigations can be undertaken by the criminal investigation department in the interests of an Indian State without the orders of Government. In important and difficult cases of offences against excise laws the assistance of the officers of the criminal investigation department can be requisitioned by the excise department.

The total permanent strength of the police of all ranks serving in the criminal investigation departments in the Bombay presidency and Sind respectively at the close of the year 1932 was as under :—

Presidency proper excluding Bombay city.

1 Deputy inspector general of police.
1 Superintendent of police.
3 Deputy superintendents of police.
11 Inspectors of police.
23 Sub-inspectors of police.
10 Head constables.

49 Total.

Sind.

1 Superintendent of police.
2 Deputy superintendents of police
4 Inspectors of police.
12 Sub-inspectors.
16 Head constables.

35 Total.

The entire cost of the criminal investigation departments is borne by the Bombay Government.

There are three finger print bureaux attached to the three criminal investigation departments at Bombay, Poona and Karachi, the first two being under the control of the deputy inspector general of police, criminal investigation department, and the Karachi bureau under that of the superintendent of police, Sind criminal investigation department. The question of combining the Bombay and Poona finger print bureaux has been examined more than once. The existence of a bureau in Bombay enables prisoners arrested ove night to be placed before a magistrate next morning with their complete criminal history and so saves much expenditure in remands. Duplication of records between the two offices has been reduced to the minimum. The separation of the Poona bureau from the criminal investigation department at Poona with a view to its amalgamation with the Bombay bureau would involve great inconvenience and no saving in view of the higher rates of pay in Bombay. Transfer of the Poona criminal investigation department to Bombay would involve considerably increased expense. The proposal is therefore not a live issue.

POLICE TRAINING SCHOOL.

14. In 1906 a school was opened by Government for the first time at Bhamburda (Poona) in temporary quarters pending construction of permanent buildings at Nasik, to which it was transferred in 1909, for the training of probationary assistant and deputy superintendents, candidates for direct appointment as inspectors and candidates for appointment as sub-inspectors, whether in the department or not when nominated. Students admitted to the school come from the whole presidency including Bombay city and Sind and candidates from the Indian States are also admitted on certain conditions. Candidates from Indian States pay fees of

Rs. 120 p.m. for the deputy superintendent's course and Rs. 90 p.m. for the Sub-inspector's course. These fees cover the whole cost of the training. The general control and the management of the school vests in the principal, who is of superintendent's rank. Candidates are admitted to the school twice a year in January and July and receive the allowances prescribed by Government. Candidates already in service are, when sent to the school, treated as on deputation, their places in their districts or railways being filled by officiating promotion. The school course for all students is of 18 months. There are three terms, each of five months' duration. A final examination in all subjects is held at the end of each term for those students who have completed their course of 18 months by a board consisting of a deputy inspector general of police, the principal, a superintendent of police selected by the inspector general of police and an assistant or deputy collector nominated by the commissioner, central division. The entire cost of the working of the school is borne by the Bombay Government. In addition to the principal, the staff at the school consists of the following :—

1 Chief instructor ..	Graded as deputy superintendent of police.
2 Law instructors ..	Usually graded as police prosecutors.
2 Practical instructors ..	Both graded as police inspectors.
1 Language master ..	Graded as police inspector.
1 Head drill instructor ..	Graded as police inspector.
1 Chief assistant to the head drill instructor ..	Graded as police sub-inspector.
5 Assistant drill instructors ..	Graded as head constables.
1 Riding master ..	Graded as police sub-inspector.
1 Farrier ..	Graded as head constables.
1 Armourer ..	
1 Sub-assistant surgeon.	
1 Accounts clerk.	
1 Clerk.	

The necessary staff of menials.

All officers except the language master and the head drill instructor are interchangeable with officers of their grades in the districts.

Village police.

15. The control of the village police vests in the district magistrate and not in the district superintendent of police, subject to the general control of the commissioner of the division, under the Bombay Village Police Act (Bombay Act VIII of 1867). Village police receive perquisites from the inhabitants of their villages and rent-free land or small sums of money from Government. The duties and responsibilities of the village police patils are manifold and Government have issued a pamphlet containing detailed instructions for their guidance. Their most important duty is the maintenance of peace and order in their villages. There are no village police in Sind, but only trackers (paggis). The creation of the uniformed police has led to the atrophy from the police point of view of the village police. Occasionally however they provide useful assistance and information. Up to 1924–25 the cost of the village police was debited partly to the head "5, Land Revenue" and partly to the head "26, Police", but since that year the whole cost of the village police has been debited to the head "22, General Administration".

A scheme has been under trial since 1922 in several districts by which the village police were entrusted with the service of summonses in criminal cases on payment of a fee of four annas for each process served. In the districts where it has hitherto been tried, the scheme has proved economical, since the cost of service of processes by the village police is very much less than the cost of the regular police allotted for this purpose. The scheme has however hitherto only been worked fully in the Ahmednagar district and the main difficulty which has prevented its introduction elsewhere has been the difficulty of dispensing with the full number of police who were employed part time on this duty. Recently, on an examination of the whole question and a review of the results of the experiments which have been made, Government have accepted the principle that the scheme deserves the widest possible extension in the districts of the Presidency, excluding Sind, both as a measure of economy and as a means of increasing the status and emoluments of the village police. The inspector general of police, in consultation with the divisional commissioners, has now been directed to report the areas to which the scheme can be extended and the reductions of strength of the regular police which will be necessary to cover the cost of the scheme. In so far as the economies effected are more than sufficient to cover the cost, the posts reduced will be held in abeyance and ultimately transferred to places where schemes requiring additional police are necessary.

III. Staff.

INDIAN POLICE.

16. Recruitment for the Indian (Imperial) Police which was originally almost wholly made in England, is now made both in England and in India. In England it is made on the results of an open competitive examination and in India on the results of an open competitive test and by promotion from the provincial service. In exceptional cases recruitment is also made in India on the results of a competitive examination limited to a certain class of candidate, for instance, those belonging to a particular community and in still rarer cases by nomination. Probationary assistant superintendents of police are, on appointment, attached to the central police school, Nasik. After completion of their training, during which they pass tests in law, languages, drill and equitation, the Police Manual, miscellaneous police subjects and first aid to the injured, these officers are posted to districts for active duty as assistant superintendents.

The present state of the Bombay cadre of the Indian Police is such that difficulty is likely to be experienced in suitably manning superior posts in the near future. Taking into account the temporary appointment of superintendent of police, Bombay Suburban district, and the appointment of superintendent (commandant) of police, Aden, which will in all probability continue to be provided from the Bombay presidency, the cadre consists of :—

	47	appointments of and above the rank of superintendent of police.
	30	appointments of assistant superintendent of police.
Total ..	77	

Of the 47 superior appointments, six are at present held by officers promoted from the provincial police service, leaving a balance of 41 appointments to be provided from the directly recruited cadre. On the average of the five years 1927–1931 fifteen officers of the Indian Police of four years' service and upwards are on leave in each year for four months or over, and the average number of officers on leave *throughout* the year comes to between 12 and 13. Thus 54 (41 plus 13) officers are needed to fill the 41 superior posts continuously. The normal seniority at which an officer should be acting

continuously in superior posts has been taken in the past to be eight years' service. But it has for some time been impossible to adhere to this principle, and it has been recently laid down as a working principle that, as a rule, no officer of the Indian Police of less than five years' standing should be appointed to officiate in a superior post and that appointments of officers of less than that standing should be made only in exceptional circumstances or when the Provincial Police Service already hold either substantively or in an officiating capacity nine superior posts, which number represents 20 per cent. of the existing superior posts in the Bombay cadre of the Indian Police.

Grades of police, Bombay city.

17. The commissioner of police and the deputy commissioners of police are members of the Indian Police.

There are no officers of the grade of deputy superintendent in Bombay city. The only gazetted officers of the provincial service there are the superintendents, city police force. Their appointments are made by Government by promotion from the subordinate ranks of the city police force. Appointments of inspectors other than those in the motor vehicles' department are made by the commissioner of police by promotion from among deputy inspectors fit to hold charge of a section and of those in the motor vehicles' department by nomination from members of the Bombay city police force or from persons outside the force who have had a training in motor mechanics. Appointments of police prosecutors, of whom there are six, are made by the commissioner of police by nomination from among practising pleaders. The appointments are subject to termination by six months' notice on either side. Police prosecutors rank with inspectors. Appointments of deputy inspectors are made by the commissioner of police by the promotion alternatively of sub-inspectors and sergeants who have passed the inspectors' qualifying examination in law and procedure and general knowledge. Recruitment to posts of sub-inspector is made by the commissioner of police—

(*i*) by the nomination of students who have successfully passed out of the central police training school, Nasik, or

(*ii*) by the nomination of ex-military officers for appointments in the armed police only.

Appointments of sergeants are made by the commissioner of police from among candidates of British parentage who must--

(*i*) ordinarily be of not less than 19 or of more, in the case of ex-army men, than 35 and in other cases 25 years of age ;

(*ii*) have passed the Bombay University matriculation examination or the European high school examination or the Cambridge senior local examination or have obtained a first or second class army education certificate.

Sergeants are placed on probation for not longer than two years, during which period they must pass a colloquial test in Hindustani and a departmental examination in law and procedure. Appointments of jemadars are made by the commissioner of police by promotion from the rank of head constables of the Bombay city police force. Those of head constables are made by the commissioner of police only by promotion from among constables. Appointments to posts of constable are made by the commissioner of police, subject to certain qualifications as to physical fitness, age etc. prescribed by Government.

GRADES OF POLICE ELSEWHERE.

18. Appointments to posts of deputy superintendent are made by Government (*i*) as to three quarters, by promotion of meritorious officers from the lower ranks of the district police force or in exceptional cases from the cadre of police prosecutors, and (*ii*) as to one quarter, by nomination. Direct nominees are, on appointment, attached to the training school, Nasik. After completion of their training during which they pass tests in law, language, drill and equitation, the Police Manual, miscellaneous police subjects and first aid to the injured, these officers are attached to a district for practical training for a year.

European inspectors are eligible for promotion to the deputy superintendents' cadre. The number of appointments so made is strictly proportioned to the sanctioned European strength in the cadre of inspectors.

Appointments to the posts of inspector of police are made in the presidency proper by the inspector general of police and in Sind by the deputy inspector general of police for Sind, subject to the approval of the commissioner in Sind. Appointments to the rank of inspector are, as a rule, made by promotion of sub-inspectors, direct appointments being rare.

Police prosecutors below the efficiency bar, that is drawing pay in the grade of Rs. 90—10—180, belong to the subordinate service and their appointments in the presidency proper are made by the inspector general of police and in Sind by the deputy inspector general of police for Sind, subject to the approval of the commissioner in Sind, by nomination from—

(*a*) Graduates in law.

(*b*) Qualified pleaders and High Court vakils.

(*c*) Police officers of the executive branch who have shown a marked aptitude for law and qualifications for prosecution work.

Appointments of police prosecutors above the efficiency bar are made by the promotion of police prosecutors below the efficiency bar.

Recruitment to posts of sub-inspector is made in the presidency proper by the inspector general of police and in Sind by the deputy inspector general of police for Sind, subject to the approval of the commissioner in Sind—

(*i*) by the nomination of students who have successfully passed out of the central police training school, Nasik,

(*ii*) by the promotion of head constables of the district police force, and

(*iii*) by the promotion of armed head constables in the district police force or by nomination of ex-military officers.

Appointments of sergeants are made in the presidency proper by the inspector general of police and in Sind by the deputy inspector general of police for Sind and their conditions of recruitment are the same as those for the sergeants in the Bombay city police force.

Appointments of head constables are made by the district superintendents of police ordinarily by promotion from among constables and by nomination with the previous sanction of the deputy inspector general of police of the range.

Appointments to posts of constable are made by the nomination by district superintendents of police of men selected from among those possessing the qualification of physical fitness, age etc. prescribed by Government.

Public Service Commission.

19. A difficult question which will arise under the reformed constitution is the scope of the functions of the public service commission in this department. The Reorganisation Committee have proposed that the commission should advise on all promotions from subordinate to provincial services, and in

provincial services to posts above the time-scale. It is frequently held that in the case of a disciplined force the final word as to promotions should rest with the head of the force.

IV. Reorganisation and finance.

Miscellaneous.

20. The Reorganisation Committee have suggested an increase in the fees charged for impounded cattle in Bombay city.

Cost of police.

21. The actual expenditure under the whole major head "26, Police" since the introduction of the Reforms, i.e. from the year 1921–22 is given below :—

Year.	Expenditure in lakhs of rupees.
1921-22	1,90·6
1922-23	1,72·4
1923-24	1,66·7
1924-25	1,69·0
1925-26	1,69·4
1926-27	1,67·1
1927-28	1,64·8
1928-29	1,69·7
1929-30	1,76·0
1930-31	1,91·7
1931-32	1,81·5
1932-33	1,78·0
1933-34 (budget estimates)	1,79·8

These are net figures arrived at after deducting contributions recoverable from the Government of India, local bodies etc. The figures for 1930–31, 1931–32, 1932–33 and 1933–34 include about Rs. 14,00,000, Rs. 7,08,000, Rs. 4,45,000 and Rs. 4,94,000 respectively of emergency expenditure in connection with the civil disobedience movement.

Description of the primary unit.	Budget estimates for 1933–34 in lakhs of rupees.
Pay of officers	13,44
Pay of establishment	1,14,45
Allowances and honoraria, etc.	26,26
Contingencies	26,54

The average cost per policeman in Bombay city on the basis of the figures of 1931–32 amounts to Rs. 941-8-0. Comparative statistics from other important cities in India are not available. The average cost per policeman on the basis of the figures of 1931–32 amounts in the presidency excluding Sind to Rs. 522-3-10 and in Sind to Rs. 634·5. The cost in Bombay city is so high as to bear no comparison with the districts and the conditions of service for policemen there are more exacting. Hence the rates of pay, house rent allowance and other allowances, clothing charges etc. sanctioned for police officers and men in Bombay city are higher than those for the mofussil police. The main reason for the higher average cost per policeman in Sind than in the presidency proper is that 21·72 per cent. of the force in Sind is mounted, while the percentage in the presidency proper is 0·49. Another reason is that the Karachi city police have been organised on a footing similar to the Bombay city police.

The average cost per policeman in the provinces of India in 1931–32 was :—

	Rs.	a.	p.
Burma	772	13	6
Bengal	670	14	2
North West Frontier Province ..	604	0	10
Madras	582	6	4
Assam	577	13	6
Bihar and Orissa	568	10	2
Punjab	535	4	1
Bombay presidency proper.. ..	522	3	10
Central Provinces	519	14	9
United Provinces	461	10	11

The figure of average cost per head of the police in the counties and boroughs of England and Wales for the year ending September 1932 was Rs. 4,599-4-5. The cost of a policeman in England and Wales was thus nearly nine times that of a policeman in Bombay presidency.

Other statistics.

22. The proportion of police to area and population in the different portions of the presidency varies greatly, being determined by a consideration of the nature of the country,

the density and character of the population and the neighbourhood of Indian States.

In Bombay city the strength of the police works out to 187·2 per square mile or one to 281·8 of the population and to 20·50 cognizable crimes on the basis of the figures of 1932.

In the presidency excluding Sind, on the basis of the figures of 1932, the proportion of police to area, population and cognizable crime investigated is one policeman to 4·28 square miles, 2·29 railway miles, 916 persons and 1·68 cognizable crimes investigated. In England and Wales the proportion in 1932 was one policeman to 1·54 square miles and 851 persons.

The latest figures available for comparison from other provinces as to the incidence of cognizable crime per thousand of population are those of 1931. They are given below and compared with the figures of the presidency excluding Sind :—

(1)	North West Frontier Province ..	3·66
(2)	Burma	3·48
(3)	Central Provinces	2·31
(4)	Punjab	1·84
(5)	United Provinces	1·52
(6)	Assam	1·41
(7)	Bengal	1·29
(8)	Bombay presidency excluding Sind ..	1·20
(9)	Bihar and Orissa	1·14
(10)	Madras	1·04

In Sind on the basis of the figures of 1932 the proportions are one policeman to 8·45 square miles, 677·89 persons and 2·3 cognizable crimes investigated. The incidence per 1,000 of population of cognizable crime reported in Sind in 1932 works out to 3·51.

Retrenchment and reorganisation since 1921.

23. In May 1921 Mr. F. G. H. Anderson was asked by Government to examine the system of financial control in the police department with a view to better control of expenditure combined with economy of labour. Mr. Anderson in his report emphasised the need for better trained and more efficient clerical staff in the account offices and a reduction of the work involved in the passage of all bills etc., first through a police

account office and then through the treasury and the accountant general's office. Mr. Anderson's suggestions were worked out in detail by a small official committee in 1922 and, after receipt of their recommendations through the inspector general of police in 1923, Government issued orders on a number of the recommendations during the years 1924 to 1926. The committee expressed its opinion that the changes in procedure which it recommended would make possible a reduction of 10 per cent. in the strength of the clerical staff of the department, but also recommended the introduction of a 10 per cent. leave reserve in the clerical establishment in the mofussil. Government decided that no reduction was possible in the clerical staff in the mofussil but that a leave reserve at five per cent. should be provided in its cadre.

Next came the Retrenchment Committee of 1921, which made recommendations estimated to yield an annual total saving of Rs. 27,48,828. Those of its recommendations which were accepted by Government in whole or part were :—

(1) The abolition of 3,178 posts of unarmed constable and head constable and of 498 posts of constable and head constable at rural police stations and outposts in the presidency proper and Sind respectively.

(2) The abolition of 400 posts of unarmed constable and head constable and of 215 posts of constable and head constable at urban police stations in the presidency proper and Sind respectively.

(3) The abolition of 62 posts of executive sub-inspector in the presidency proper and of 21 in Sind.

(4) The abolition of 16 posts of prosecuting sub-inspector in the presidency proper and two in Sind.

(5) The retrenchment of 60 district inspectors of rural circles in the presidency proper and 20 in Sind.

Recommendation (1) was made on the principles that—

(1) The abolition or conversion into outposts of rural police stations where the crime figures are light, i.e. appreciably below the average number of 100 cognizable offences which was laid down by the Indian Police Commission as being within the capacity of one sub-inspector.

(2) The reduction at rural stations and outposts of all staff maintained for the specific purpose of beat patrolling.

(3) The abandonment of all outposts as such except where special reasons exist for their retention.

(4) The transfer of certain duties such as service of summonses in criminal cases, calling witnesses for investigation etc. from the regular to the village police.

Recommendation (2) was made on the principle that in urban areas in the mofussil a strength of one constable to 600 of population would be adequate, but the committee at the same time recommended an increase of 25 per cent. in the armed police at headquarters, on the ground that armed police were more economical for the preservation of order than unarmed police They pointed out that the unarmed police distributed in rural areas were largely responsible for the heavy travelling allowance and hutting charges in the police budget.

Recommendation (3) followed from recommendations (1) and (2).

Recommendation (4) was made on the principles that—

(1) An average of one prosecuting sub-inspector a district would be sufficient.

(2) Wherever there is a subordinate judge's court the local sub-Government pleaders might be used for prosecution work on a system of payment of a lump sum for each case together with a monthly retainer.

Recommendation (5) was made on the view that the posts of district circle inspector were unnecessary.

The action taken by Government on these recommendations resulted in the reduction of the following posts :—

In the presidency proper :

700 unarmed head constables.
1,480 unarmed constables.

2,180

effected by the

(*a*) abolition of four police stations.

(*b*) conversion of 48 police stations into outposts.

(*c*) abolition of 175 outposts.

13 inspectors of police (executive).
48 sub-inspectors of police (executive).
2 reader sub-inspectors.
2 prosecuting inspectors.
3 prosecuting sub-inspectors.

In Sind :

101 unarmed head constables.
785 unarmed constables.
19 mounted head constables.
50 mounted constables.
73 camel mounted constables.

1,028

effected by the abolition of

(*a*) 25 police stations and

(*b*) 185 police outposts.

21 sub-inspectors of police (executive).
1 prosecuting inspector.
4 inspectors of police (executive).
1 sergeant.

These reductions saved some Rs. 12,22,697 a year. The armed police at the same time were increased in the presidency proper by 257 head constables and 1,006 constables and in Sind by 19 head constables and 14 constables.

The committee also examined the sub-divisional scheme which was then under the consideration of Government and while recommending it suggested means of making it less expensive. The full scheme proposed by the inspector general, Mr. L. Robertson, involved 28 additional posts of deputy superintendent of police and a large addition of office superintendents, headquarters inspectors, readers and clerks. The committee considered the employment of a deputy superintendent of police at the headquarters of the district a luxury. It recommended :—

(1) the employment of deputy superintendents of police in the same way as assistant superintendents of police for subdivisional work, leaving the superintendent of police free for supervision of both ;

(2) an amalgamation of the clerical staff of superintendents and subdivisional officers' offices ;

(3) omission of office superintendents for district superintendents' offices ; and

(4) omission of headquarters inspectors.

Recommendations (1) to (3) were accepted, but as regards (4) Government considered a responsible officer at headquarters necessary to permit of the district superintendent

of police and the subdivisional officers, if necessary, being away from headquarters at the same time. The post of a home inspector in each district was accordingly included in the scheme. The existing circle inspectors were utilised to fill the posts of home inspector and subdivisional inspector. The modified scheme sanctioned by Government resulted in the reduction of three posts of deputy superintendent of police and effected a saving of Rs. 17,000 per annum.

The next review of the department was made by Mr. J. A. Shillidy as retrenchment officer in 1926. The most important of his recommendations which Government accepted was—

> a reduction in the Bombay dock police by 8 head constables and 171 constables and in the Bombay harbour police by one inspector, one sub-inspector, four sergeants, one jemadar, 5 head constables, 29 constables and three drivers of motor boats.

The result of these measures was a saving of Rs. 73,000 a year.

In the same year Mr. K. K. Sen, the then assistant accountant general, Bombay, examined the contingent expenditure of the department with the result that a saving of Rs. 80,000 a year was effected.

The only recommendation of the Retrenchment Committee of 1931 in this department which Government accepted was the abolition of the post of district superintendent of police, Karachi (Tatta) district, by the amalgamation of the police charges of Karachi headquarters and Karachi district, which resulted in a saving of Rs. 4,000 a year.

Recent administrative changes.

24. The following important changes have taken place in police administration since 1922 :—

(1) Separation of Karachi town and the Karachi district for police purposes in 1922 and their amalgamation in 1931, after the creation of the Dadu district and the transfer of the Kotri subdivision from Karachi district to Dadu district.

(2) Replacement of constable orderlies in police offices in the mofussil by puttawallas in 1922 as an economy.

(3) Introduction of primary schools for police children in the headquarters police lines at Kaira, Godhra (Panch Mahals), Thana and Ratnagiri in 1923. The application of the scheme has not been extended owing to want of funds.

(4) Employment of additional police staff for detective work, training courses and guards on night passenger trains on the G. I. P. and M. & S. M. Railways, B. B. & C. I. Railway and Sind Railways in 1924 on the recommendation of the Railway Police Committee appointed by the Government of India. The total average annual cost of this additional staff amounted to Rs. 1,05,629 per annum.

(5) Reorganisation of the staff of the finger-print bureaux at Poona, Bombay and Karachi in 1927 by the substitution of special clerical staff for the police executive staff to secure a reduction in expenditure.

(6) Introduction of a combined patrol and fixed post system in Bombay city in 1928 at an annual average cost of Rs. 85,000.

(7) Increase in the Bombay city police force and police motor transport in 1929 at an average annual cost of Rs. 2,55,000 as a result of the recommendations of the Bombay Riot Inquiry Committee of 1929.

(8) Reorganisation of the police force in the districts of Sukkur, Larkana and Upper Sind Frontier and in the Dadu district on its creation at a total average annual cost of about Rs. 2,87,000.

(9) Rearmament of the police force in the presidency including Bombay city and Sind with B. L. 410-bore muskets, which began from 1930–31 and is to be completed in 1933–34 at a total cost of Rs. 5,65,900.

Proposals rejected by Government.

25. The following important recommendations of the Retrenchment Committee of 1921 have not been accepted by Government for the reasons given below :—

(1) Abolition of the deputy inspectors general, northern range and southern range.

(2) Employment of local sub-Government pleaders in the place of prosecuting sub-inspectors.

(3) Reduction in the clerical staff of the commissioner of police, Bombay.

(4) Amalgamation of the staff of Bombay city and Bombay presidency criminal investigation departments.

(5) Substitution of clerks for sub-inspector readers in the offices of the assistant superintendents of police.

Government considered recommendation (1) impracticable.

As to recommendation (2), Government have already tried the experiment of the employment of sub-public prosecutors in the place of police prosecutors for the last eight years in Hyderabad district and there are at present three sub-public prosecutors in Sind, two in Hyderabad and one in Karachi. The experiment has been a success in Karachi but not in Hyderabad. The system involves economy and the Reorganisation Committee carefully considered it, but did not recommend its adoption elsewhere.

As to recommendation (3), during the last three years clerical work in the commissioner's office has considerably increased and temporary additional clerks have had to be sanctioned in consequence.

As to recommendation (4), Government agreed with Mr. J. A Shillidy, who considered the suggestion in 1926, that it did not involve any economy.

Recommendation (5) was rejected by Government as involving a serious loss of efficiency.

The following important recommendations made by Mr. Shillidy were rejected by Government for the reasons assigned :—

(1) Abolition of one post of divisional superintendent by the amalgamation of "E" and "F" divisions of the Bombay city police department.

(2) Reduction of 3 head constables and 40 constables among those stationed for duty at the courts of the presidency magistrates, Bombay.

Recommendation (1) was first accepted by Government and one post of divisional superintendent was abolished in the year 1926, but the need of the appointment was so keenly felt during the mill strikes and riots in Bombay in 1929 that it was temporarily restored in that year and made permanent from 1930.

Recommendation (2) was rejected as not feasible.

The following recommendations made by the Retrenchment Committee of 1931 were not accepted by Government —

(1) Abolition of the posts of deputy inspectors general of police, northern and southern ranges.

(2) Reduction of ten per cent. in the number of inspectors in the district police.

Police buildings.

26. Funds for police accommodation schemes in Bombay are provided by the Bombay Improvement Trust under the Bombay Improvement Trust Act and the buildings are rented by Government. The Bombay city police are on the whole well accommodated and less than 600 of them are in quarters which have not been built for them on Government's behalf. The need of proper housing for the district police has often been stressed by the inspector general of police and the commissioner in Sind.

Up to 1926-27 from rupees five to ten lakhs were allotted annually for police major works in the presidency proper and from two to four lakhs in Sind. No funds at all were allotted for this purpose in the presidency proper in 1927-28, 1928-29 and 1931-32 or in Sind in 1928-29, 1931-32 and 1932-33. A total of Rs. 1,49,600 was sanctioned during the three years 1929-30, 1930-31 and 1932-33 in the presidency proper and a total of Rs. 5,75,200 (including Rs. 4,00,000 for the construction of new police buildings at Dadu) during the three years 1927-28, 1929-30 and 1930-31 in Sind. In 1930 the Government of India drew the attention of this Government to the unsatisfactory housing of the police in the mofussil and recommended a special effort to improve matters in spite of the prevailing financial stringency. This was also discussed at a conference of police officers at Delhi in 1931 and the Government of India in passing their orders on the recommendations of the conference again stressed the necessity for adequately housing constabulary in mofussil areas.

A comprehensive survey of the position in regard to police buildings in the presidency proper was called for by Government and submitted by the inspector general of police in 1930. It showed that in order to house the whole police force in the presidency proper in Government quarters 236 projects costing Rs. 1,05,44,167 were required. The preparation of new type designs of quarters for police officers and men with a view substantially to reduce the expenditure at present incurred by Government on police residential quarters is under the consideration of Government.

Rearmament.

27. Most of the police in this presidency are at present armed with Martini-Henry ·476 B.L. muskets, some of which have been condemned as unserviceable, others are so inaccurate

as to be practically useless, while the rest are rapidly approaching the same state. The Government of India informed the Government of Bombay in 1929 that no Martini-Henry muskets could be supplied in future, since the stock in the arsenals was just sufficient for replacements for another year, after which the supply of Martini-Henry muskets would cease altogether. They also stated that no further components of Martini-Henry muskets would be manufactured, because the machinery for their manufacture was nearly worn out and would be replaced by machinery for the manufacture of ·303 and other arms. It was also anticipated that the plant for the manufacture of ammunition for Martini-Henry muskets would be worn out during the course of the next few years and it is expected that the supply of the ammunition will be discontinued from the year 1934. The military authorities therefore suggested the replacement of B.L. ·476 muskets for the police by B.L. ·410-bore muskets. Their suitability for police purposes was accepted by the conference of police officers held at Simla in July 1929 and the proposal was approved by both the Government of India and the Government of Bombay.

The total requirements of the presidency are 11,318 weapons. Since it was not practicable to buy them all at one time, it was decided in 1929 to replace existing muskets in four instalments and complete the rearmament within four years as follows :—

	Number of muskets.
1st year (1930–31)	2,000
2nd year (1931–32)	2,600
3rd year (1932–33)	3,100
4th year (1933–34)	3,618

The total cost of the 11,318 weapons required amounts to Rs. 5,65,900. The first three years' programme was successfully completed and for 1933–34 Government, with the sanction of the Legislative Council, have provided the necessary funds for the purchase of 3,314 weapons only. The remaining 304 weapons are intended for the Mahi Kantha Agency police and funds have been provided for them in the central budget estimates for 1933–34.

Police reorganisation of the last five years.

28. (*a*) *New schemes.*

(1) Introduction of combined patrol and fixed post system in Bombay City at an average annual cost of Rs. 85,000.

(2) Increase in the Bombay City Police force and Police Motor transport at an average annual cost of Rs. 2,55,000 as a result of the recommendations of the Bombay Riot Inquiry Committee of 1929.

(3) Creation of 17 additional posts of sub-inspectors of Police to form a reserve for leave vacancies in the cadre of the Indian officers of the Bombay City Police at an average annual cost of Rs. 51,340.

(4) Increase in the strength of certain Police stations in the Bombay Suburban District at an average annual cost of Rs. 43,000.

(5) Reorganisation of the Police force in the districts of Sukkur, Larkana and Upper Sind Frontier and the formation of the Police force necessitated by the opening of the new district of Dadu at a total average annual cost of about Rs. 2,87,000.

(6) Permanent retention of the additional Police force in the Kaira District owing to the criminality of that District at an average annual cost of Rs. 35,000.

(7) Decision to grant allowances at the following rates to the recipients of the King's Police Medal when it is awarded for an act of gallantry :—

	Rs.	a.	p.
Inspectors	25	0	0
Deputy Inspectors, Sub-Inspectors and Sergeants	15	0	0
Jemadars	10	0	0
Head Constables	7	8	0
Constables	5	0	0

(8) Institution of a new medal designated Indian Police Medal and the grant of allowances at half the rates mentioned above to the recipients of the medal when the medal is awarded for an act of gallantry.

(9) Permanent retention of the additional staff at Sholapur at an average annual cost of Rs. 50,000.

(10) Abolition of the mounted police in Bombay City and the purchase of light motor trucks for light motor patrols. The scheme involved expenditure as shown below :—

	Rs.
Non-recurring expenditure ..	40,000
Recurring expenditure ..	25,000

The saving effected by the abolition of the mounted police amounted to Rs. 45,000 per annum.

(11) Reorganisation of the Police force in the Dadu District at an average annual expenditure of Rs. 15,000.

(12) Introduction of the scheme for the rearmament of the Police force in the Presidency including Bombay City and Sind with B. L. 410 bore muskets which commenced from the year 1930–31 and will be completed in the year 1933–34, the total cost of the four years' supply of the muskets being Rs. 5,65,900 approximately.

(13) The splitting up of the old "E" Division of the Bombay City Police into two Divisions "E" and "F" Divisions and the creation of an additional appointment of a superintendent of Police for Bombay City to control the mill area more effectively.

(14) Widest possible extension of the scheme for employment of the village police to serve processes in criminal cases.

(*b*) *Important economies effected.*

(1) The amalgamation of the Karachi town and Karachi District for Police purposes as a result of the recommendation of the Retrenchment Committee of 1931.

(2) Reduction in the Mounted Police force of the Panch Mahals District by 1 head constable and 4 constables as a result of the recommendation of the Reorganisation Committee of 1932.

(3) Reduction in the rate of conveyance allowance of Rs. 25 per mensem of sub-inspectors of Police in the Presidency Proper to Rs. 20 per mensem on certain conditions as a result of the recommendation of the Reorganisation Committee of 1932.

(4) Reduction in the rate of permanent travelling allowance of railway sub-inspectors in Presidency and Sind from Rs. 40 per mensem to Rs. 30 per mensem as a result of the recommendation of the Reorganisation Committee of 1932.

(5) Reduction in the rate of conveyance allowance of sub-inspectors of Police in Sind other than those in the Karachi and Tatta Districts, Sind, Criminal Investigation Department and the headquarters sub-inspector, Karachi, from Rs. 18 to Rs. 15 per mensem in view of the fall in prices of fodder.

6) Reduction in the number of office peons in Police offices and orderlies for personal attendance on Police officers as a result of the recommendation of the Reorganisation Committee of 1932.

(7) Reduction in the rate of horse allowance of Rs. 25 per mensem admissible to the members of the mounted police force in Sind except in the case of the Headquarters Reserve to Rs. 18 per mensem in view of the fall in price of fodder.

(8) Reduction in the rates of conveyance allowance of the following Police officers :—

Name of the officer.	Rate before reduction.	Reduced rate sanctioned.
	Rs.	Rs.
(*a*) Commissioner of Police, Bombay	250	200
(*b*) Four Deputy Commissioners of Police, Bombay ..	250 each	200 each.
(*c*) Superintendent of Police, Criminal Investigation Department, Bombay City.	150	140
(*d*) District Superintendent of Police, Bombay Suburban District.	250	200
(*e*) District Superintendent of Police, Ahmedabad ..	200	160
(*f*) Superintendent of Police, Karachi Headquarters ..	200	160
(*g*) District Superintendent of Police, Poona ..	200	160
(*h*) Superintendent of Police, Sind Criminal Investigation Department.	200	160

(*c*) *Important measures of legislation.*

The following three important measures of legislation were passed since 1929 :—

(*i*) The amendment of the Bombay Prevention of Prostitution Act, 1923, with a view to eradicate the commercial aspect of the evil of prostitution by making brothel-keeping illegal.

(*ii*) The amendment of sections 27 and 128 of the City of Bombay Police Act, 1902, and section 46 of the Bombay District Police Act, 1890, with a view to deal more effectively with habitual criminals in Bombay City and Bombay Suburban District.

(*iii*) The Bombay (Emergency Powers) Whipping Act, X of 1933, with a view to suppress quickly and effectively the hooliganism during riots.

(*d*) *Schemes which have been considered but not adopted.*

The following recommendations made by the Retrenchment Committee of 1931 were not accepted by Government on

the ground that they would reduce the efficiency of police administration :—

(1) Abolition of the posts of deputy inspectors general of police, northern and southern ranges.

(2) Reduction of 10 per cent. in the number of inspectors in the district police.

The following recommendations of the Reorganisation Committee have been considered but have not been accepted by Government for the reasons already mentioned :—

(1) The formation of a police board at headquarters.

(2) The abolition of fixed subdivisions and amalgamation of superintendents' and subdivisional officers' offices.

(3) The proposed grouping of circle inspectors at district headquarters.

(4) The proposed reduction of three posts of subdivisional officers, or four if Poona ceases to be a headquarters of Government.

(5) The adoption of the scheme of having one police station for each taluka wherever possible and stationing two sub-inspectors or one sub-inspector and one assistant sub-inspector at the station if necessary.

(6) Partial reintroduction of patrolling, and abolition of outposts.

(*e*) *Schemes which have been postponed.*

The accompanying statement shows the more important schemes relating to the Police department which either have been administratively approved by Government or have been under contemplation since 1921, but are held up owing to want of funds.

(*f*) *Matters under consideration.*

The matters under the immediate consideration of Government in the department include :—

(1) An amendment of the Bombay City Police Act to permit of cattle pound fees being increased.

(2) Making a claim upon the Government of India towards the cost of law and order police on State railways.

(3) New type designs for police quarters.

(*g*) *Questions to be taken up in the near future.*

(1) Establishment of a local crime and intelligence branch in most districts consisting of a sub-inspector with a small staff under the home inspector.

This proposal, as noted in paragraph 9 above, has been put forward as an alternative to the proposal of the Reorganisation Committee to locate inspectors at headquarters for a smaller purpose.

(2) Increase of personnel to deal with motor traffic.

The great increase of motor traffic and the burden which its control imposes on the police will require early attention. Under present conditions the staff provided for the prevention and detection of crime has been seriously depleted to meet this new and growing call, and it is recognized that the interests of the public and the continued efficiency of the police in their primary duties urgently demand an increase of personnel to deal with this important and comparatively new sphere of police activity.

(3) While in the orders passed on the recommendations of the Reorganisation Committee the existing structure of the district and taluka organisation of the police has been upheld as best suited to the needs of the Presidency, certain further questions affecting the distribution and training of the police appear to demand study in the light of modern conditions and requirements, more particularly before buildings and police lines determining the present location of the police are reconstructed. It is felt that the development of motor traffic has altered transport conditions for the police, and advantage should be taken of this fact in any future distribution. At the same time the possibility of a development of types of crime in which motor cars are used or attacked requires to be envisaged and the scheme of distribution of the police adjusted accordingly. Apart from these facts, the present system by which the rank and file of the police are trained in their own districts makes it difficult to preserve uniform standards of training. While central courses for the training of head constables are already recognised as necessary and provisions for them will be made when funds permit, an additional requirement is the provision of a common training centre through which men drawn from the districts would be passed in batches, thus spreading a common standard of efficiency throughout the Presidency. At the same time it is recognised that such a training camp would form a useful emergency reserve both for Bombay City and for any part of the Presidency. Instructions have accordingly been issued recently to the inspector general of police to take up the study of these subjects with a view to their future consideration by Government.

STATEMENT.

Statement showing the schemes relating to the police department which either have been administratively approved by Government or have been under contemplation since 1921, but are held up owing to want of funds.

Serial No.	Description of the scheme.	Approximate amount of extra cost involved in the scheme.	The stage at which the scheme is at present.
	Bombay city.		
1	A special whole time investigating police staff consisting of an inspector, a deputy inspector, 3 sub-inspectors, 4 head constables and 8 constables to work effectively the Bombay Prevention of Prostitution Act, 1923.	Rs. 23,100 per annum.	Administratively approved by Government in 1930, but no funds have been provided for it yet.
2	Staff consisting of a manager, assistant manager, 8 clerks, one photographer and one inspector for the formation of a *modus operandi* system in Bombay city criminal investigation department.	Rs. 22,905 (Rs.16,905 recurring per annum, Rs. 6,000 non-recurring).	Administratively approved by Government in 1927, but no funds have been provided yet.
3	Creation of leave and training reserve for the criminal investigation department and the criminal tribes' branch and grant of criminal investigation department allowance to certain constables of the criminal investigation department in Bombay city.	Rs. 5,887 per annum.	Administratively approved in 1929, but funds have not been provided for it.
4	Additional staff of an inspector, four sub-inspectors, 9 head constables and 16 constables for the special branch of the Bombay city criminal investigation department to serve as watchers.	Rs. 36,000 per annum.	Administratively approved in 1930, but owing to financial stringency the commissioner of police has been asked to meet the cost from savings available from vacancies in the force.

Serial No.	Description of the scheme.	Approximate amount of extra cost involved in the scheme.	The stage at which the scheme is at present.
5	Remaining part of Sir P. Kelly's scheme for the increase in the Bombay city police force submitted after Bombay riots of 1929.	Rs. 2,45,911 per annum.	The commissioner proposed a total increase of 34 sergeants, 29 head constables and 491 constables in the Bombay city police force after the Bombay riots of 1929. Of these Government sanctioned in July 1929 the entertainment of 34 sergeants and 59 constables and with the opening of a new police station at Kalachowki an increase of an inspector, a deputy inspector, two sergeants, three sub-inspectors, one jemadar, 11 head constables, and 102 constables. The remaining staff has not been sanctioned but 100 temporary armed policemen entertained in Bombay city in 1930 for the civil disobedience movement have been retained.
	Presidency proper.		
6	Opening of a detective training school at Nasik.	Rs. 1,20,000 (Rs. 80,000 recurring per annum, Rs. 40,000 non-recurring).	The scheme has been under consideration since 1921 and is considered an urgent administrative necessity.
7	Partition of Poona into two police districts.	Rs. 46,000 per annum.	The scheme has been held back since 1925 owing to the introduction of the sub-divisional scheme but it may have to be taken up in the near future.
8	Restoration of eight appointments of inspectors cut out in the sub-divisional scheme.	Rs. 32,000 per annum.	The inspector general of police pressed for these appointments in 1926. The proposal is being re-examined by the inspector general of police and will be submitted to Government in the near future.
9	Opening of a branch for the training of head constables at the police training school, Nasik.	Rs. 11,170 per annum.	This was sanctioned in the year 1931-32, but has been postponed.

Serial No.	Description of the scheme.	Approximate amount of extra cost involved in the scheme.	The stage at which the scheme is at present.
10	Reorganisation of the police force of Ahmedabad city.	Rs. 1,14,670 per annum.	Administratively approved by Government in 1933.
11	Education and training of police constabulary.	Not estimated ..	The Government of India have made certain recommendations on this subject, but owing to financial stringency it has not been possible to do anything in the matter.
	Sind.		
12	Police reorganisation schemes in the districts of Nawabshah, Thar Parkar, Karachi, Hyderabad and Sind Railways.	Rs. 2,07,206 per annum.	The consideration of these schemes has been postponed owing to the present financial stringency. The schemes for the reorganisation of the police force in the Sukkur, Larkana and the Upper Sind Frontier districts have been sanctioned in the year 1931-32 and of the reorganisation of the police force in the Dadu district was sanctioned in 1932-33.
13	Proposed creation of the special inter-district police force to suppress cattle-lifting in Sind.	Not estimated ..	Consideration of the scheme has been postponed.

IX—JAIL DEPARTMENT

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IX—JAIL DEPARTMENT

I. Organisation.

Classes of prisons.

1. The prisons in the presidency of Bombay are classified into :—

(1) Central prisons.
(2) District prisons.
(3) Special prisons.
(4) Extra-mural prisons.
(5) Subsidiary jails.
(6) Lockups.
(7) Civil jails.
(8) Temporary prisons.
(9) Borstal schools.

The five central prisons are at :—

Yeravda.
Ahmedabad.
Hyderabad.
Belgaum.
Nasik Road.

Central prisons are intended for the confinement of persons sentenced to terms of imprisonment of not less than two years, but are also used as district prisons for prisoners from adjoining districts in which no district prison exists.

Nasik Road central prison is ordinarily used solely for the confinement of Indian male habitual prisoners.

Yeravda central prison has special accommodation for non-Asiatic prisoners. All prisoners of this class, except those convicted in Sind whose sentences exceed three months, ordinarily undergo their imprisonment at Yeravda.

District prisons are of two classes :—

(*a*) First class (having 500-600 inmates) :—
Sukkur.
Karachi.
Dhulia.
Thana.

(*b*) Second class (having about 300 inmates) :—
Bijapur.
Ratnagiri.
Karwar.

The following may be confined in district prisons :—

(*i*) Criminal prisoners sentenced to death.

(*ii*) Criminal prisoners sentenced to imprisonment for less than two years but more than one month.

(*iii*) Criminal prisoners in transit to central or special prisons (for a period not exceeding one month).

(*iv*) Criminal prisoners awaiting trial before a court of sessions or, where special accommodation is provided, before a magistrate.

Special prisons include His Majesty's House of Correction, Bombay, Arthur Road prison, Bombay, Yeravda female jail and the Shikarpur special prison.

Special prisons are provided for the accommodation of such classes of prisoners as Government order from time to time. They may, if necessary and to such extent as accommodation is available, be used as district prisons.

The Sind Convict Gang at Hyderabad is classed as an extra-mural prison and receives convicted prisoners on transfer from other prisons.

There are 241 subsidiary jails in which are confined undertrial prisoners and convicted prisoners sentenced to terms of confinement not exceeding one month. The staff in the case of the more important subsidiary jails is under the jail department.

There are 228 lockups in which persons arrested by the police are detained until they are committed to jail under the orders of a magistrate. They are in charge of the police for guarding purposes and under the inspector-general for other purposes.

There are 20 civil jails for the confinement of civil prisoners. They are always separate from ordinary jails and do not come under the Prisons Act. They are at :—

(1) Arthur Road, Bombay.
(2) Poona.
(3) Dhulia.
(4) Nasik.
(5) Ahmednagar.
(6) Satara.
(7) Sholapur.
(8) Jalgaon.
(9) Belgaum.
(10) Bijapur.
(11) Dharwar.
(12) Karwar.
(13) Ratnagiri.
(14) Thana.
(15) Ahmedabad.
(16) Surat.
(17) Kaira.
(18) Karachi.
(19) Hyderabad.
(20) Sukkur.

In 1932 four temporary prisons, the Yeravda extension camp prison, the Visapur temporary prison, the Nasik Road extension camp prison and the Worli temporary prison, were opened in consequence of the renewal of Civil Disobedience and the communal riots in Bombay. Barring the temporary prison at Visapur, they have since been closed.

The Borstal school at Dharwar provides accommodation for juveniles detained under the Borstal Act and is run on special lines under the Borstal system.

Future jails.

2. The most economical unit is a jail with accommodation for 1,500 inmates. If the department were starting with a clean sheet the best arrangement would be to build jails of that capacity. This unit was adopted in the case of the Nasik Road jail which was recently constructed, but departed from in the case of other recently built jails such as the Belgaum jail and the Arthur Road jail. The Reorganization Committee have recommended that the question whether any savings are obtainable by scrapping the Arthur Road jail, the House of Correction (which is approaching dissolution) and the Thana district prison and building a new jail for 1,500 inmates outside Bombay in their place should be investigated.

Organisation of the department.

3. The general control of the Bombay jail department vests in the inspector-general of prisons, who is appointed under Section 5 of the Prisons Act of 1894 and is an Indian Medical Service officer. He is assisted by a personal assistant with an authorised establishment of clerks.

Each of the larger prisons is controlled by a full-time superintendent who is vested with the executive management of the prison in all matters relating to internal economy, discipline, labour, expenditure, punishment and general control, subject to the orders of the inspector-general. He has under him a senior or head clerk and an authorised establishment of clerks.

In his executive duties he is assisted by one or more jailors, whose principal duties are to secure the safe custody of prisoners and to enforce discipline among subordinates and staff. The senior jailor is second in command of the jail.

The medical officer, when not himself superintendent of the jail, is subordinate to the superintendent, except as regards

the medical treatment of the sick. He also is under the general control of the inspector-general of prisons.

Medical subordinates are at all times subordinate to the jailor in all matters outside the hospital, but in all matters connected with the care of the sick or other professional duties are under the orders of the medical officer.

In every central and in certain district and temporary prisons there is an authorised number of armed sepoys of the Bombay jail department who serve as a reserve guard. Their duty is to reinforce the unarmed sepoys of the Bombay jail department in immediate charge of prisoners inside the prison or in extra-mural gangs in the event of assault, mutiny, escape or other emergency. They are also available to mount guard over particularly dangerous criminals or criminals sentenced to death.

Each prison has its authorised establishment of unarmed sepoys who carry a baton only. These have assigned to them from time to time immediate charge of such prisoners and of such parts of the prison, as the jailer, under the orders of the superintendent, may direct. Those in charge of work-sheds are responsible for all tools and property kept in them. Their duty is not merely to prevent escape, but also to aid their superior officers in seeing that prisoners conform to the rules of the prison, that they are industrious, apply themselves to their work, do not waste material and complete their allotted tasks.

There is a specially selected and authorised staff of teachers and technical instructors for the Borstal school, which as far as possible is run on public school lines.

The total permanent strength of all ranks of the Bombay jail department at the end of October 1933 stood at 1,295 as shown in detail below :—

1 Inspector-general of prisons.
1 Personal assistant to the inspector-general.
3 Indian Medical Service superintendents of prisons.
6 Non-Indian Medical Service superintendents.
7 Part-time superintendents.
3 Resident medical officers.
2 Non-resident medical officers.
2 Jailors (selection grade).
9 Jailors, group I.

16 Jailors, group II.
10 Jailors, group III.
35 Medical subordinates (including 13 compounders).
3 Part-time Subordinate Medical Service officers.
71 Clerks (all grades).
173 Armed guards (all grades).
840 Unarmed guards (do.)
35 Unarmed guards for civil jails.
16 Matrons.
7 Menials.
4 Technical establishment.

Establishment, Borstal school—

1 Governor.
1 Deputy governor.
1 Part-time medical officer.
1 Subordinate Medical Service officer.
1 Compounder.
3 Clerks.
1 Agricultural instructor.
1 Mali.
4 House masters.
1 Carpenter instructor.
10 Senior supervisors.
16 Junior supervisors.
10 Sweepers.

Deputation to Rajkot, Wadhwan and Palanpur—

1 Jailor (group II).
1 Jailor (group III.)
1 Head clerk (pay Rs. 85—5/2—100).

There is no training school for prison personnel and no reserve of any grade of staff provided. If a superintendent falls sick or is granted leave, his duties have to be undertaken by a senior jailor, who in turn is replaced by a junior jailor and so on right down the line, the last vacancy being filled by a raw recruit with no previous jail experience. A small reserve of trained personnel is very badly required.

Superintendents of jails.

4. Superintendents are primarily divided into two classes :—
   (1) Resident.
   (2) Non-resident.

The resident superintendents are again subdivided into officers of the Indian Medical Service, on loan from the military department of the Government of India, who perform the dual duties of superintendent and medical officer and officers of the provincial jail department who, with one exception, have no medical qualifications. The exception is the superintendent of Belgaum central prison who, after many years' service as prison medical officer, was specially selected for service as a superintendent in the Bombay jail department. He was recruited to the jail department from the Bombay Medical service.

There are resident superintendents in charge of all the central prisons and of the larger district prisons.

The non-resident superintendents are the civil surgeons of the station where the district jail is situated. They perform the duties of part-time jail superintendent and medical officer in addition to their duties as civil surgeons. A scheme to relieve some of the civil surgeons of their executive and medical duties of prisons is under the consideration of Government.

It has always been difficult to obtain Indian Medical Service officers of the right type for service in the jail department. The service is unpopular because it has not the same attractions to offer as the other branches of civil employment. Indian Medical Service superintendents are debarred from private practice, promotion is usually extremely slow, hours of duty are long and responsibilities onerous. A whole-time jail superintendent can never get away from the prison atmosphere, as he must live in quarters on the prison premises. These quarters are in most cases some distance away from places which offer the ordinary social amenities.

The usual manner of recruitment is for the local Government to apply to the Government of India for an Indian Medical Service officer to fill an existing vacancy. The director-general, Indian Medical Service, then details an officer who accepts such employment to serve as a superintendent in the jail department. The officer is attached for three months to an experienced senior superintendent for training. If at the end of this period he is found fit to assume the responsibilities of the post, he is posted as a superintendent on probation to a central prison. The probationary period is of two years.

If the officer is found satisfactory and capable of performing all the duties required of him, he is confirmed in his appointment by the local Government, his services being placed by the Government of India permanently (subject to certain reservations in respect of general mobilization) at the disposal of the local Government.

Non-Indian Medical Service superintendents are usually officers who have served in the executive branch of the department as jailors and who have been specially selected for advancement. They are, in the first instance, posted to district prisons. Again, promotion is very slow and it is only in very exceptional cases that an officer finds himself in charge of a central prison until very late in his service.

The non-resident superintendent is not recruited, and is scarcely ever selected, because of any special aptitude for jail work. He is simply appointed *ex-officio* superintendent because he happens to be civil surgeon of the station and in most cases he is a mere figurehead. An officer without special training in jail technical duties cannot possibly be expected to make a really efficient superintendent.

As regards subsidiary jails the mamlatdar, mukhtiarkar or mahalkari of the taluka or mahal in which the sub-jail is situated, or in his absence from headquarters the aval karkun or head munshi is the superintendent—so there is once again no question of special recruitment in this case.

Lockups are guarded by the police, but all expenditure connected therewith is debited to 25-Jails and Convict Settlements.

JAILORS.

5. Jailors are either members of the clerical establishment of the jail department specially selected for promotion or direct recruits. Appointments to the rank of jailor are made by the inspector-general of prisons, who is authorised to recruit to either group direct. A group III jailor takes charge of one of the more important subsidiary jails, usually situated at district headquarters. A group II jailor is attached as an assistant jailor in a central prison and is usually placed in charge of a prison factory, for which he is directly responsible to the superintendent. A jailor in group I is posted to a central prison or to a district prison which is in charge of a non-resident superintendent. He exercises general supervision over the prison factories and the subordinate personnel and assists the superintendent in all his duties.

Jailors in the selection grade are officers specially selected for advancement for merit and efficiency. It is from among them that promotion is usually made to the rank of superintendent.

In the smaller subsidiary jails one of the junior karkuns or munshis on the establishment of the mamlatdar, mukhtiarkar or mahalkari is usually deemed to be the jailor.

Other staff.

6. In those prisons the superintendent of which is not a medical man a medical officer is appointed by the surgeon-general under the instructions of the local Government. The officer appointed is usually a member of the Bombay Medical Service. Subordinate Medical Service officers are appointed by the surgeon-general for duty for two years with the jail department. They assist the medical officer in his professional duties. Every such officer so transferred is placed unconditionally at the disposal of the inspector-general of prisons who may post and transfer him at discretion.

Candidates for employment as compounders are selected by the inspector-general of prisons from applicants who have passed the tests required by the medical department.

The appointment of clerks requires the sanction of the inspector-general of prisons. A candidate must have passed at least the matriculation examination of the Bombay University or school final examination.

The superintendent is empowered to recruit the junior ranks of both armed and unarmed sepoys of the Bombay jail department, but direct recruitment to the ranks of jemadar or subedar can only be made by order of the inspector-general of prisons.

The matron in charge of the Yeravda special female prison is a qualified sick nurse and midwife and was selected after advertisement. Female wardresses or junior matrons are selected by the superintendent for duty in the female yards of the prisons concerned. It is impossible, for the pay sanctioned, to get women with any special qualifications and in most cases this department has to be satisfied if it can procure the services of a woman who is physically fit and literate.

Work in the jails.

7. The primary duty required to be performed by all ranks in the jail department is to ensure the safe custody of all prisoners committed to prison and to see that the terms of

commitment in accordance with the committal warrant are strictly enforced. The warrants have to be checked and the prisoner verified. Entries have to be made in all the ledgers and registers concerned. These duties are performed by a specially trained staff, as a mistake in calculation may have serious consequences, resulting possibly in the illegal detention of a prisoner whose release may be due years after the initial check. Under this heading clerical work is usually very heavy.

Under the general heading discipline may be summarised practically all the routine duties in the prison including such items as parades and inspections of prisoners, enforcement of rules and regulations in respect of both prisoners and staff, search of prisoners, censoring of letters, interviews, classification of prisoners and allotment of barracks and cells according to the type or class of prisoner. These duties engage all the executive staff from the superintendent downwards.

Their duties however do not end here. The superintendent and his staff are required to attempt as far as possible the reformation of the prisoners committed to their charge, and to teach them usefully to employ their time, so that they may return to society better citizens than they left it. With this object in view, and as far as possible to lessen the burden of the tax-payer by the sale of jail manufactures, prison industries were started. All the executive personnel of a prison are required to have a working knowledge of the usual handicrafts taught in a prison. The superintendent, assisted by the jailor, has to gauge his requirements of raw materials to meet possible demands during the year. He then submits his indents in this respect to the inspector-general of prisons in the case of purchases involving moneys over a certain prescribed sum. The indents are scrutinised by the inspector-general who arranges for the supplies which he considers necessary to be made to the jail concerned. The jail staff is responsible for the storage of all such raw material. Duties and tasks have to be allotted to the various types of prisoners according to their mental and physical ability, so that each can be employed in the way most profitable to the State, with due regard to the interests of the prisoner himself. Endeavour is made to teach the prisoner a trade which he may reasonably be expected to follow on release or, at any rate, one which will ensure him an honest livelihood.

The junior jailor is usually in direct charge of the prison godowns and factories and is responsible to the superintendent that orders are correctly and economically carried out.

The general supervision, accounts, and ledgering in the finance section entail an enormous amount of clerical labour and employ a large staff.

The superintendent and his officers are responsible for the efficient upkeep of the prison gardens, so that as far as possible all supplies of vegetables to the jail come from the prison garden and that nothing which can be grown there is unavoidably purchased. Specially trained members of the guarding staff of jail sepoys are employed here, with prisoners drawn from the agricultural classes or short-term prisoners who cannot otherwise be usefully employed.

The very important matter of the general hygiene and sanitation of the prison and prisoners demands the close and constant attention of all the executive officers in a prison. Daily inspections are made of prisoners, all barracks and premises. In the larger prisons a great deal of time is taken by these inspections.

The rationing of a large prison demands careful thought and experience. Large stocks of grain, etc., have to be purchased and maintained and supplies of fresh vegetables, milk and meat arranged daily. All this entails an enormous amount of clerical labour. The cost of rations runs into several thousands even in a district prison.

The clerical work demanded from all ranks including the executive officers is very great and unfortunately ties to their desks the superintendents and jailors when they would be better employed inside the prison amongst the prisoners directly supervising their work and leisure. Clerical work has greatly increased in recent years. The authorised staff of clerks in most prisons work overtime every day of their lives to keep pace with the increasing volume of correspondence. A question asked possibly out of sheer curiosity by a member of the legislature often means hours of hard work to an already overworked staff. The average working day for a member of the jail staff is seldom less than twelve hours and is more often than not longer. Again, no member of the jail staff can leave jail precints without the previous sanction of the superintendent, as every member, executive and clerical, is required to attend at the prison at any hour day or night in the event of an alarm or other emergency.

MEDICAL OFFICERS.

8. The Indian Medical Service superintendents of central prisons and the part-time non-resident superintendents of district prisons perform the dual role of superintendent and medical officer of the prisons of which they are in charge.

The medical officer, whether he is also superintendent or not, is responsible for the hygiene and sanitation of the prison, the health of the prisoners and the treatment of the sick, both prisoners and staff, and the maintenance of a sufficient supply of drugs and appliances for the use of the sick and their correct and economical expenditure. He has also to submit to the inspector-general the cases of all prisoners whom he considers should be prematurely released on medical grounds.

Previous training counts for a great deal in the proper performance of the duties of medical officer of a jail. The expertness of the "old lag" at malingering results, if the medical officer is inexperienced, in waste of man power and the unnecessary expenditure of special medicine and diet.

The system of placing medical men in charge of jails is economical and saves friction, because medical men can be in complete charge of every department of a jail. A non-medical superintendent must be in the hands of his medical adviser on medical matters. This advice is not always reinforced by the sense of personal responsibility for the administration of the jail. It is however necessary to reserve posts of superintendent for jailors in order to provide them with an incentive, but the system of having medical men specially trained as jail officers possesses great advantages.

In view of these considerations the Reorganization Committee have suggested the formation of a jail medical service. The service would not only provide for the filling up of Indian Medical Service posts if it is decided to stop recruitment to that service, but would replace the present arrangement by which Bombay Medical Service and Subordinate Medical Service officers are loaned to the jail department and the civil surgeons of certain stations automatically become part-time superintendents of the district jails in their stations. The principal object of the proposal is to substitute the experience, discipline and *esprit de corps* of a self-contained cadre for a system in which jail service is a temporary and unpopular interlude in the life of a medical officer.

The committee propose that the service should contain a superior and subordinate class corresponding respectively

(*vii*) To supervise the manufacturing departments of all the prisons under his control and to possess sufficient technical knowledge to organise and direct prison industries.

(*viii*) As far as practicable to inspect all subsidiary jails.

(*ix*) As a medical officer, to control a vital part of the work of jail administration in respect of food, clothing, sanitation and medical administration on which only a medical man is competent to give an authoritative opinion.

The prevention of disease is a most important branch of prison administration and one in which a high standard of efficiency is maintained. Modern penology requires that much greater attention than was bestowed on it in the past should be paid to the training of the prison staff to look on each man as a separate entity. No two patients are alike in mind, constitution or physical strength and there is no greater probability that any two prisoners will be alike. Modern theory tends to the belief that mental deficiency and abnormality play a great part in the production of crime. Medical experience should therefore be regarded as an essential qualification in an inspector-general of prisons.

(*x*) To perform the duties of an *ex-officio* visitor of all reformatories and mental hospitals in the presidency and Sind.

(*xi*) To act as the medium of communication between Government and every officer in the prison department.

Duties of the personal assistant.

10. The post of personal assistant to the inspector-general of prisons was sanctioned in 1886. It was raised to the status of a gazetted post in August 1927.

The duties of the post are to assist the inspector-general of prisons in all except his professional duties and to dispose of all questions and correspondence of an urgent nature, not involving a change of policy, which cannot be referred to the inspector-general of prisons without adversely affecting efficiency, during the absence of the latter on tour.

He exercises general supervision over the staff and office.

Duties of the head accountant.

11. The post was created in March 1888. Its duties are :—

(1) The disposal of audit notes from the accountant general.
(2) The checking of judicial returns.
(3) The checking of labour and financial returns.
(4) The checking of cash balance reports.
(5) The checking of memoranda of factory receipts and payments.
(6) The preparation of statement of invoices (B).
(7) The checking of sick returns (monthly and annual).
(8) The checking of the abstract monthly statement.
(9) The preparation of annual tabular statements.
(10) The preparation of health statistics for sub-jails.
(11) Assisting in the preparation of the jail administration report.
(12) Assisting in the preparation of the sanitary reports (annual).
(13) Maintaining the cash book.
(14) Preparing office contingent bills.
(15) Supervision and checking of the monthly and quarterly expenditure statements.
(16) Supervision of appropriation report.
(17) Checking of office accounts.
(18) Accompanying the inspector-general when considered necessary on his inspections to assist in the inspection of registers and accounts.

Duties of the auditor.

12. The post of auditor was created in March 1929. Its duties are as follows :—

(1) The audit of all jails at frequent intervals.
(2) The preparation of Indian State prisoners' bills.
(3) The preparation of pay-bills for office establishment.
(4) The preparation of all annual indents.
(5) The preparation of superannuation statements.
(6) The preparation of office establishment returns A, B, C.

(7) The preparation of all travelling allowance bills concerning the office of the inspector-general of prisons.
(8) The auditing of all travelling allowance bills from prisons and jails.
(9) The auditing of all pension papers.
(10) Dealing with all correspondence affectng establishment.
(11) Auditing all contingent bills and extra establishment statements.
(12) Preparing income-tax returns for the income-tax collector.
(13) Auditing the half-yearly establishment rolls of all jails.
(14) Dealing with confidential documents in respect of certain members of the prison staff.
(15) Making the audit account of stores.

If the accountant general took over the whole audit of the jail department there might be some saving, but it is absolutely necessary to retain a special jail audit staff because the accountant general has no staff trained in the audit of technical matters, the audit of which is the function of the special auditor under the inspector-general.

III. Retrenchment and reorganisation since 1921.

13. In June 1922 Lieutenant-Colonel G. E. Stewart, I.M.S., was appointed by Government as retrenchment officer. His terms of reference were to consider in respect of jails :—

(1) The total expenditure on diets, the cause of its increase as compared with the course of prices.
(2) The reason for the variation in expenditure at different jails.
(3) (*a*) Whether the sanctioned scale of ordinary diets should be or could be modified.
(*b*) Special diets and the rules under which they are allowed.
(4) The system of giving out supply contracts for diets, with particular reference to the question whether supplies could not be more economically obtained departmentally in the market.
(5) If contracts are to be continued, the system of distribution and control over consumption.

(6) The extent to which supplies required could be provided directly by jail labour.

(7) The possibility of effecting economies in these and any other directions.

His recommendations, which dealt mostly with the dieting of prisons and the grant of special diets and extras to prisoners, were in practically every instance accepted by Government in February 1923.

Mr. J. A. Shillidy, I.C.S., was appointed by Government as retrenchment officer in June 1926 and he was assisted in his review by Mr. Sen appointed special officer in June 1926. Their recommendations are enumerated below :—

(1) The abolition of one post of superintendent in Bombay city, the Arthur Road jail and the House of Correction being placed under one superintendent.

(2) The reduction of two out of the five posts of jailor at Yeravda central prison.

(3) The abolition of the House of Correction on the opening of Nasik Road central prison and its sale to recoup the expenditure incurred on building the Arthur Road prison.

(4) The abolition of one of the two posts of jailor at Arthur Road prison.

(5) The abolition of the post of Bombay Medical Service officer at Yeravda central prison and substitution of a Subordinate Medical Service officer.

(6) Except at Yeravda central prison, where there is an Indian Medical Service officer, there should be in central prisons two Subordinate Medical Service officers, but where there is a non-medical superintendent there should be one Bombay Medical Service and one Subordinate Medical Service officer.

(7) At jails such as Dharwar and Dhulia which are situated near civil hospitals there should be a part-time Subordinate Medical Service officer with an allowance of Rs. 50 p.m.

(8) The abolition of the post of the Bombay Medical Service officer at Karachi.

(9) The reduction of one of the two posts of Subordinate Medical Service officer at Arthur Road prison.

(10) The reduction of the post of Subordinate Medical Service officer at the House of Correction and replacement by the Subordinate Medical Service at Arthur Road prison or any hospital.

(11) Reduction in the warder staff at the civil jail, Bombay.

(12) Both Messrs. Shillidy and Sen suggested that out of 14 meals, 11 should be of the cheapest and 3 of the second cheapest instead of 10 and 4 respectively.

(13) The reduction of the issue of firewood to 12 ozs.

(14) Gardens should be expanded and vegetables grown as more water becomes available.

(15) The institution of departmental purchase at Sukkur.

(16) The institution of departmental purchase at sub-jails.

(17) A curtailment of extras and special diets.

(18) A curtailment in medicines.

(19) A *per capita* amount to be fixed for clothing and bedding.

(20) The introduction of honorary lecturers at all jails.

The action taken on these recommendations is as under :—

(1) Accepted by Government.

(2) One post was reduced.

(3) Not accepted, as the House of Correction is meant for undertrial prisoners for whom there is no suitable accommodation at the Arthur Road prison.

(4) Not accepted, because since the superintendent was to be in charge of both jails, both posts were considered necessary.

(5) Accepted.

(6) Not accepted.

(7) Not accepted.

(8) Not accepted. Government considered the appointment essential.

(9) Not accepted. Government considered that the two posts were necessary.

(10) Not accepted.

(11) Not accepted.

(12) Not accepted.

(13) The scale has been reduced in practice from 1 lb. to 14 ozs. at some jails and to 12 ozs. at others.

(14) Not possible at all jails owing to scarcity or expense of water.

(15) Desirable, but not possible with the present staff.

(16) Now in force at Ahmedabad, Ahmednagar, Satara, Surat, Broach, Larkana and Sholapur.

(17) Already in force as far as possible. No further economy possible.

(18) Medical indents were formerly sent to and passed by the surgeon-general. They are now passed by the inspector-general after careful scrutiny.

(19) Not agreed to owing to varying conditions of climate and work.

(20) The right type is not easily obtained.

IV. Matters of importance done in the Jail Department during the last five years.

Building.

(*i*) The extension of the Karachi district prison was completed in 1928, raising the accommodation from 368 to 652. This has proved useful in reducing, to a slight extent, the great overcrowding in Sind jails.

(*ii*) Part of the Dharwar juvenile jail was converted in 1929 into a sub-jail for undertrial and convicted prisoners *en route* to the Belgaum central prison.

(*iii*) The work of extending the Hyderabad central prison was taken in hand in 1930 and completed in 1931 raising the accommodation from 1,126 to 1,592.

(*iv*) Work sheds in the prison factory at Nasik Road central prison were completed in 1930, since when intra-mural work has been in full swing.

(*v*) During the last five years the jail department has been called upon many times to organize temporary prisons to accommodate chiefly civil disobedience prisoners and to a lesser extent those arrested during the riots in Bombay. These were abandoned as soon as the need for them disappeared.

Discipline.

A separate jail manual for the use of sub-jails was published and brought into use in 1928.

CONFERENCES.

A conference was held at Delhi to consider the revision of jail rules as a result of which special treatment was accorded certain classes of prisoner of superior status and habits of life. Rules dealing with the revised classification of prisoners into A, B and C classes were issued during the year 1930.

GENERAL PROGRESS AND REFORMS.

(*i*) With the object of preventing girl children being sent to prison (there being reformatories only for boys) Government arranged with certain institutions to receive girls under the age of 16 liable to be imprisoned or committed to custody.

(*ii*) A Borstal Act was passed during the year 1929 and the rules for the control and management of the Borstal school were framed and published in 1930.

(*iii*) With effect from the 1st April 1931 the Borstal Act was brought into operation throughout the Presidency and the juvenile jail at Dharwar was converted into a Borstal school.

(*iv*) In May 1931 was founded the Bombay Presidency Borstal Association which aims at providing aftercare for boys released from the Borstal school.

(*v*) A hand book for probation officers was printed and supplied to all district and other magistrates.

(*vi*) With effect from the 16th November 1931 section 4 of the Bombay Children Act was extended to the remainder of the Presidency, thus making the Reformatory Schools Act applicable to all children under 16 years of age throughout the Bombay Presidency.

INDUSTRIES.

(*i*) In February 1929 Government passed orders that henceforward all departments of Government should obtain as far as possible such textile and other goods as they required from the prisons of the Presidency.

(*ii*) A dairy and bakery were started at Yeravda central prison in 1929. Dairies at Ahmedabad central prison, Nasik Road central prison and Hyderabad central prison were also started.

MEDICAL.

(*i*) Classes in "First Aid" and Hygiene were started under the auspices of the St. John Ambulance Association at the Karachi district prison, with good results.

(*ii*) A motor ambulance was stationed at the Visapur temporary prison for the conveyance of cases requiring special treatment to the civil hospital at Ahmednagar.

(*iii*) A marsh in the vicinity of the Sind Convict Gang was reclaimed in 1930, a favourite breeding ground for mosquitoes being thus turned into a very fine garden.

(*iv*) The water supply at the Hyderabad central prison was obtained from the city main in 1932; till then all water used in the prison was obtained from the Fuleli canal.

(*v*) Bolton elevators were supplied to the prisons at Karwar, Ahmedabad, Yeravda, Bijapur and to the Borstal school, Dharwar, in 1928-29.

Establishment.

(*i*) A permanent reserve of one jailor, group II, and 20 sepoys was sanctioned in 1933.

(*ii*) The old terms jail warders and head warders were abolished during the year 1932, this class of personnel now being called jail guards and ranking from sepoys to subedars.

Retrenchment.

Audit of prisons by the outside audit department of the Accountant General was ordered to be carried out biennially instead of annually with effect from the 1st April 1932.

Economies.

Very strict economy is being exercised all round as a result of which there has been a continuous fall in the cost of the maintenance charges of prisoners. This is shown as under :—

Year.	Average cost per prisoner.		
	Rs.	a.	p.
1928-29	158	15	2
1929-30	159	2	1
1930-31	158	10	1
1931-32	125	15	3
1932-33	117	9	11

Reorganization.

Administration of the Aden district prison was transferred from the control of this department from 1st April 1932. The supervision of the prison continues to be done by the inspector-general of prisons at an annual cost of Rs. 1,000.

V. Matters of importance considered or dealt with including a reference to reports of committees of inquiry.

(*i*) The question of substituting a combined central jail outside Bombay for the Arthur Road jail, the House of Correction, Bombay, and the Thana prison as recommended by the reorganization committee is under the consideration of Government. Plans and estimates from Public Works Department are awaited.

(*ii*) The inspector-general of prisons has forwarded a proposal for the permanent retention of the Visapur temporary prison and the conversion of the district prisons at Karwar and Ratnagiri into third class subsidiary jails. The question is under the consideration of Government.

(*iii*) A committee was appointed in March 1933 to examine questions connected with the care of destitute children and young offenders. Their Report, Part I, has since been published, and is now under the consideration of Government.

VI. Matters the consideration of which has been postponed.

(*i*) Constitution of a regular medical jail service side by side with the existing service of jailors and recruitment of superintendents from each service, and

(*ii*) Scheme to relieve some of the civil surgeons of their executive and medical duties of the smaller prisons.

Proposal (*i*) cannot be considered until the Secretary of State for India passes orders on the proposals submitted to him in regard to the future of the I.M.S. and a decision is reached in regard to the proposed amalgamation of small prisons. The proposals will be costly, and the estimated expenditure cannot be ascertained until the question of the amalgamation of small prisons is decided.

As orders on proposal (*i*) will take time, the scheme mentioned at (*ii*) has in the meantime been partly considered, and its further consideration has been postponed till a decision is reached in regard to the proposed permanent retention of the Visapur prison, since such retention will affect the scope of the scheme, entailing the conversion of the small prisons of Karwar and Ratnagiri into sub-jails.

VII. Questions to be taken up in the near future.

The following question arising out of the recommendations of the committee referred to at (*iii*) above :—

(*i*) Establishment of a juvenile branch under a chief inspector and an inspector to deal with the matters affecting juveniles, including institutions for the care of juvenile offenders.

APPEN

Expenditure in the jail department

Year.	Daily average number of prisoners.	Establishment charges.		Total establishment charges.	T.a., passage money, house rent, clo. allce. d. pay, com. a., etc.	Dietary charges.	Hospital charges.	Clothing and bedding.	Sanitation charges.
		Executive.	Clerical.						
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1921-22 ..	14,507	5,32,855	68,420	6,01,275	27,746	13,79,088	1,24,544	1,18,762	31,355
1922-23 ..	13,083	5,59,461	78,619	6,38,080	24,834	10,48,786	93,708	82,616	26,557
1923-24 ..	12,138	5,44,162	68,075	6,12,237	33,272	8,54,114	71,597	1,16,122	28,571
1924-25 ..	12,466	5,55,222	73,794	6,29,016	63,646	8,18,331	86,204	1,32,660	39,834
1925-26 ..	12,324	5,89,619	68,184	6,57,803	56,939	8,18,994	49,186	1,02,717	34,125
1926-27 ..	12,829	5,92,522	70,385	6,62,907	64,020	8,36,745	42,504	80,999	51,257
1927-28 ..	12,979	5,95,244	68,784	6,64,028	68,463	7,90,064	40,792	75,709	54,695
1928-29 ..	12,898	6,01,665	65,823	6,67,488	63,304	7,21,817	38,190	85,780	47,779
1929-30 ..	13,204	5,96,211	74,061	6,70,272	72,111	7,53,994	37,991	74,802	54,948
1930-31 ..	16,161	6,61,548	80,857	7,42,405	83,204	8,52,675	43,831	1,25,385	79,786
1931-32 ..	14,864	6,11,485	81,502	6,92,987	75,139	5,95,850	30,328	72,434	73,484
1932-33 ..	19,100	Details not available.		7,51,841	89,065	7,23,731	39,741	92,393	94,689

DIX.

and average cost per prisoner.

Charges for moving prisoners.	Misc. services and supplies.	Contingent charges.	Extraordinary charges.	Total.	Raw material for factories.	Grand Total.	Average cost per prisoner.	Net profit from factory.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs.
1,13,659	94,843	41,667	21,059	25,53,998	2,85,009	28,39,007	195 11 2	2,45,583
1,07,414	92,274	44,387	7,387	21,66,043	1,98,331	23,64,374	180 11 6	2,47,887
72,611	1,42,555	24,464	22,212	19,77,755	1,70,560	21,48,315	176 15 10	2,45,383
68,599	1,23,340	20,551	18,119	20,05,300	2,29,568	22,34,868	179 4 5	2,42,938
74,707	1,32,984	17,466	20,955	19,65,876	1,71,726	21,37,602	173 7 2	2,50,569
73,203	80,265	17,344	11,210	19,20,454	1,75,444	20,95,898	163 5 11	2,89,837
75,573	1,01,433	16,416	12,412	18,99,585	1,63,375	20,62,960	158 15 2	2,58,143
70,465	85,653	14,612	11,358	18,06,445	2,16,002	20,22,447	159 2 1	2,32,557
66,608	87,042	18,709	9,044	18,46,051	2,49,194	20,95,245	158 10 1	2,15,611
1,67,001	86,784	53,120	28,320	22,62,511	1,63,081	24,25,592	150 1 5	2,29,634
90,325	76,686	33,638	9,659	17,50,529	1,21,610	18,72,139	125 15 3	2,12,507
1,52,974	96,645	49,697	12,398	21,03,174	1,43,334	22,46,508	117 9 11	1,93,647

X—DEPARTMENT OF THE BACKWARD CLASS OFFICER

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APPENDIX I.

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X—DEPARTMENT OF THE BACKWARD CLASS OFFICER

I. Backward classes.

1. The term "backward classes" has been used in the past in a variety of ways in both official and non-official documents, but with effect from February 1931 the Bombay Government have adopted for all purposes the general scheme of classification proposed by the Depressed Classes and Aboriginal Tribes Committee 1930. The classification includes within the backward classes persons of three different categories; namely,

(1) Untouchables, hereafter to be called officially "depressed classes";
(2) Aboriginal and hill tribes; and
(3) Such other tribes as Government may class as backward.

Under this scheme a particular caste may at any time cease to be officially a backward class. The criterion will be the necessity for a continuance of special protection. It is to secure this special protection to those who require it that the backward class officer and his department have been formed. As soon as any caste or section of the population ceases to require such protection it will be removed from the list* of backward classes and cease to have any special connection with the backward class department.

II. Criminal tribes.

(*i*) General.

2. Criminal tribes are those tribes which have been notified as such by Government in exercise of their power under the Criminal Tribes Act. The notification may apply to a section of a caste only. The persons however who at any particular time are members of a tribe notified as criminal are all of castes which fall within the classification of backward classes and it was with this section of the backward classes that the department of the backward class officer, heretofore known as the criminal tribes settlement officer, was until August 1931 solely concerned. It is to the weaning of the criminal tribes from crime that by far the great part of the funds and activities of this department are still devoted. These activities will be first described.

Vide Appendix I.

(*ii*) USE OF VOLUNTARY AGENCY.

3. In relation to the criminal tribes, the primary duties of the department are the internal management, working and control of settlements established under section 16 of the Criminal Tribes Act and the after-care of persons discharged from settlements. The settlements are of three types, namely, reformatory, industrial and agricultural. Most of them are under direct Government control, but those at Sholapur, Hubli, Baramati, Belgaum and Jalgaon are under the control of voluntary agencies, the first three being under Christian missions Belgaum being under the Social Service League of Bombay, and Jalgaon being under the Servants of India Society.

The terms on which a settlement is handed over to a voluntary agency are as follows :—

(*a*) If the buildings for the settlements are constructed and repaired by Government the property belongs to Government, but if the voluntary agency constructs its own buildings, half their cost is provided by Government as grant-in-aid and the property vests in the voluntary agency.

(*b*) Government give capitation grants as follows :—

(1) for the general control and management of settlements :—

Rs. 17 per head per annum for the first 500 persons,

Rs. 12-8 per head per annum for the next 1,500 persons and

Rs. 9-8 per head per annum for any number above 2,000 persons ;

(2) for visiting the settlers released on license to their village during the period of probation :—

In all 17 visits are paid during the normal period of 6 years, of which 14 are paid by the settlement staff of the voluntary agency concerned, four in the first year and two in each of the next five years. The voluntary agency concerned is paid Rs. 4-4-0 per visit for each registered settler visited ; and

(3) for the education of the children of criminal tribes who attend the settlement schools but do not live in the settlements an annual grant is paid at Rs. 13 for each child attending the day school and Rs. 5 for each adolescent attending the night school. Capitation grants and grants for visiting those discharged on probation are not paid in respect of persons for whom educational grants are paid.

Settlements managed by voluntary agency are subject to general Government supervision. The voluntary agency may collect a sanitary tax or a small supervision charge from the settlers subject to limits prescribed by the backward class officer. In the event of either Government or the voluntary agency desiring to terminate the arrangement, six months' notice must be given on either side.

(*iii*) GOVERNMENT STAFF.

4. The present backward class officer is an Indian Civil Service officer on the senior scale. Under present orders the appointment is open to an officer either of the Indian Civil Service or the Indian Police. The Reorganisation Committee suggest in paragraph 509 of their report that, on Mr. Starte's retirement, an officer should be selected from the provincial service to succeed him and that the department should then be subordinated to the director of agriculture. Government have considered the recommendation of the Reorganisation Committee and have decided that the *status quo* should be continued. The headquarters of the department are at Dharwar. It is under consideration to remove it to Poona. The backward class officer's staff for criminal tribes' work consists of (1) two gazetted officers, one called assistant backward class officer (settlements), northern circle, and the other assistant backward class officer (settlements), southern circle—they are provincial service officers; (2) non-gazetted staff comprising an office superintendent, managers, assistant managers, inspectors, and assistant inspectors of settlements, educational staff for settlement schools, guards and head guards for watch and ward work, settlement inspectresses and menials.

In addition there has been a lady superintendent of settlements (also included in the provincial service). Her duties have been the supervision of schools in Government settlements, the superintendence of children's homes established in Government settlements and the organisation of welfare work amongst the women of Government settlements. It has been decided to retrench this post as a measure of economy from the date on which Mrs. Lamb the holder of the appointment proceeded on leave, and the work described above has been and in future will be done by part-time lady superintendents.

The Assistant Backward Class Officer (Settlements), Northern Circle, has in his charge the settlements in the Northern and Central Divisions except those at Sholapur,

Ahmedabad and Dohad, and the work of the uplift of the backward classes in the Ratnagiri, Kolaba, Poona, Ahmednagar, Satara, Nasik, East Khandesh, West Khandesh and Thana Districts. He has his headquarters at Poona. The Assistant Backward Class Officers (Settlements), Southern Circle, has in his charge the free Colony at Hotgi, the settlements in the Bijapur and Sholapur Districts and the work of the uplift of the backward classes in those districts. He has his headquarters at Bijapur. The office superintendent supervises the settlements in Dharwar and Belgaum districts under the direct orders of the backward class officer. The settlements supervised by the office superintendent comprise the home circle.

The duties of the assistant backward class officers are :—

(1) touring within their respective charges, keeping in touch with and supervising the work of the managers of settlements,
(2) auditing accounts of the settlements in their charge,
(3) arranging for the supply of labour for settlers,
(4) dealing with the grievances of settlers and checking their history sheets,
(5) organising search parties to trace absconders,
(6) inquiring into the conduct of settlers through the police and other authorities,
(7) encouraging the settling of disputes among the settlers by panchayats,
(8) organising co-operative credit and industrial societies in settlements,
(9) recommending the increase or decrease of settlement restrictions,
(10) organising and supervising probation work.
(11) supervising education and boy scout work, and
(12) magisterial work pertaining to the settlements.

All appointments and promotions in the department are sanctioned by the backward class officer except those of the gazetted officers and the office superintendent.

(*iv*) Activities of the department

5. The Criminal Tribes Act is applied to those who are addicted to the systematic commission of non bailable offences. Members of the gang, tribe or class who are so notified are subjected to various types of restriction according to their individual criminal records. The first step is registration. The movements of those whose record warrants it are restricted by requiring them to attend roll-call in their villages and to keep the local police informed of their changes of residence.

Those for whom these restrictions are inadequate are forbidden to move beyond certain prescribed limits fixed with due regard to their being able to earn their livelihood within the limits of the area of restriction. Only the most criminal are placed in settlements and it is with these primarily that the department is concerned. The object of placing these persons in settlements is to—

(1) prevent them preying upon society, and

(2) reform their criminal tendencies with a view to their being released at the end of their training, when they can be absorbed among the body of respectable citizens.

To secure the first object an elaborate system has been devised which will be found in rules 46–67 of the Bombay Criminal Tribes Rules, 1930. Provision has been made in these rules for checking the presence of settlers in settlements, detecting and regulating the arrival of outsiders, determining the limits within which a settler may move during the day time without a pass and allowing settlers to go outside settlement limits under passes issued to them if and when necessary. With this object in view the staff of each settlement works in liaison with the other settlements and with the police department.

To further the second object education has been made compulsory among the children of settlers, the use of intoxicants is prohibited and the adults are taught various crafts and provided with means of livelihood by the aid of those who are willing to employ their labour. Those who are not able to do anything else than manual labour are employed on such works as metal breaking for the public works department or for municipalities or local boards and on wood cutting for the forest department; others are employed in match factories, railway workshops, spinning and weaving mills, agriculture and the like. All building and similar work required by the department is carried out with criminal tribes' labour, plans for minor construction works being prepared by the members of the settlement staff who have passed the necessary departmental examination. The assistance of the public works department is made use of in more important projects. Settlers retain all their own earnings subject to the payment of a light sanitary tax or supervision charge. Provision for medical aid is usually made by arranging for the local Subordinate Medical Service officers to pay periodical visits, for which they are remunerated by duty allowances. Medicine is supplied by Government.

The settlers are encouraged to join co-operative societies which are organized on their behalf. The local settlement staff co-operates in running these institutions by doing the clerical work for the settlers' societies. The more intelligent and reliable settlers are helped to take petty contracts for construction work in the neighbourhood of the settlements.

For persons who require to be separated from the rest because of their troublesome character or because of their need special arrangements have been made as follows :—

(*a*) *Reformatory sections of the criminal settlement at Bijapur and Nira-Projects settlement.*—These are meant for persons with specially bad criminal records and their dependents. They are not allowed to go out of the settlement limits at all unless under escort until they have proved themselves more reliable. Then they are tested by being allowed to go out without escort under strictly limited conditions and then if their record remains good they are transferred to more open settlements.

(*b*) *Home for women.*—This home is intended for women of bad moral character from the settlements. It is managed by the Society for the Propagation of the Gospel's Mission in the Hubli settlement. The mission is remunerated as follows :—

> Rs. 190 per mensem so long as the average number of women in the home does not exceed 20. An additional grant of Rs. 8 per mensem per head in the event of the average number exceeding 20.

(*c*) *Children's homes.*—These homes are intended for orphans or children who have been forsaken, or whose parents are unfit to take care of them or who have themselves shown marked criminal tendencies. There are four such homes in the Sholapur, Hubli, Baramati and Bijapur settlements, but at present the first three only are in use, for reasons of economy. They are recognised as schools under section 17 of the Criminal Tribes Act. When children's homes are established in settlements managed by the voluntary agencies, the latter are given a capitation grant at Rs. 8 per mensem.

The Hubli children's home has been declared by Government to be an institution where girls below 16 years of age are liable to be imprisoned under section 541 (1) of the Criminal Procedure Code. A grant of Rs. 15 per mensem is payable for every girl sent to this home. Only two girls have been sent under this order so far.

A settler has normally to spend six years in a settlBack-after which he is deemed fit to be discharged on probatioLift of has had no disciplinary action taken against him during the the three years of his stay in the settlement and is in the opinion of the backward class officer able to maintain himself outside the settlement. This period is extended to eight years in the case of wandering tribes. He has further to spend six years on probation, either in his own village or in one of the colonies for settlers released on probation which have organised alongside of the settlements. There are at present such free colonies of ex-settlers attached to settlements at the following places in the presidency :—

Sholapur, Bijapur, Bagalkot, Gadag, Hubli, Dohad, Baramati, Belgaum and Ambernath.

There are also free colonies without an adjacent settlement at Hotgi, Kerur, Indi, Barsi and Dharavi. The management of the free colony at Dharavi has been transferred to the Social Service League at Bombay. It is obligatory on settlers released on probation to send their children to school, if there is a primary school within two miles of their homes, until they attain the age of 12 years or until the period of probation has expired, whichever may occur first. Ex-settlers are encouraged as far as possible to take Government plots on lease so that they may adopt a settled life.

The activities of the settlement department have spread over the whole presidency proper. There are at present twelve settlements at the following places :—

Sholapur, Bijapur (with separate industrial and reformatory sections), Bagalkot, Gadag, Hubli (including the agricultural sub-settlement of Kambharganvi), Khanapur, Belgaum, Nira-Projects (with separate industrial and reformatory sections), Baramati, Ambernath and Jalgaon. The settlement at Dohad has been made a sub-settlement and a settlement has been established at Ahmedabad, intended mainly for Charas. Charas have lately been giving much trouble to the inhabitants of Ahmedabad city and their settlement thus became a matter of urgent necessity.

The criminal tribes of Sind are controlled by the police unaided by a settlement department. The problem of more effectively controlling the criminal tribes of Sind has been investigated twice during recent years and both of the investigating officers and the Commissioner in Sind are of opinion that the organisation of a criminal tribes' settlement department for Sind is necessary. Mr. Starte has prepared a scheme for a

The recurring cost of Rs. 2,000, but the non-recurring charge which Rs. 20,000 has been the chief difficulty. Certain buildings constructed in connection with the Lloyd Barrage Scheme are now available and their utilisation would relieve Government of the non-recurring cost. The final decision on this matter is awaiting a decision on the question of the separation of Sind from the presidency.

The following figures indicate the extent of this branch of the department's activities :—

—	1928-29	1929-30	1930-31	1931-32	1932-33
Population in settlements ..	8,964	8,905	8,842	7,786	7,839
Population in free colonies ..	4,065	4,269	4,982	5,752	5,622
Number of boys and girls in settlement and free colony schools.	3,048	3,198	3,177	3,516	3,305
Number of apprentices in trade (other than mill work).	115	87	209	182	67

The following trades are at present taught in the various settlements :—

Masonry, carpentry, tailoring, agriculture, weaving, blacksmithy, shoe-making, rope weaving, stone quarrying and chappal making. The backward class officer's department at present supplies chappals to all Government offices in the Bijapur, Dharwar and Sholapur districts and bedsheets and pillowcases to all the Government hospitals of the presidency.

III. Backward classes other than criminal tribes.

6. The duties which have been added to those of the criminal tribes settlement officer since his appointment as backward class officer in August 1931 are to act as adviser to Government on all matters specially or differentially affecting the backward classes in the presidency proper and to investigate and report on any question relating to them that may be referred to him by Government. He is also charged with the general duty of enquiring into their needs and grievances and, when he considers it necessary, of making suggestions or representations to heads of departments and offices. His jurisdiction in this respect is the whole Presidency excluding Sind. To assist the backward class officer in his duties Government have sanctioned a staff of one assistant backward class officer, one

organiser, three clerks and two peons. This Assistant Backward Class Officer has in his charge the work of the uplift of the backward classes in Gujarat, Bombay City, and the Bombay Suburban District and the Settlement work at Ahmedabad, Dohad, and Bombay City. The Backward Class Officer himself has in his charge the work of the uplift of the backward classes in the districts not assigned to any of his assistants. Government have also sanctioned the appointment of a Backward Classes Board, on the lines recommended by the Depressed Classes and Aboriginal Tribes Committee, consisting of ten members who meet four times a year and hold office for two years.

The Board ordinarily consists of—

(*i*) The Backward Class Officer as Chairman,

(*ii*) All Backward Class Members of the Council,

(*iii*) Three non Backward Class members of the Legislative Council to represent general interests. These are elected by the Legislative Council.

(*iv*) Other persons nominated by Government as having special knowledge of the needs of the Backward Classes.

The functions of the board are consultative and advisory. The members of the board are eligible for travelling allowances. A sum is provided annually to meet the cost of the staff of the backward class officer, travelling allowance, contingencies, etc.

In some districts, there are district committees who do propaganda work and help the department to gather facts about the backward classes.

IV. Borstal after-care.

7. A third branch of the backward class officer's duties consists in the after-care of boys discharged from the Borstal school, Dharwar. The backward class officer is concerned with the whole subject of 'probation', but whereas it is anticipated that in time the care of probationers from settlements will become a purely local problem, the after-care of Borstal boys is an essential part of their training and must be regarded as a permanent and increasingly important branch of Government's activities. The backward class officer is ex-officio secretary and treasurer of the Borstal Association, Bombay presidency, and as such he has to find probation officers in the districts to which the boys discharged on license from the Borstal school wish to proceed on discharge. These probation officers are usually found through the district magistrates, but in those districts in which the number of lads now discharged on license warrants it, the district magistrates have

either adapted existing prisoners' aid societies to this purpose or have organized new societies or branches of the central Borstal Association to help them in this work. The association is financed partly from private subscriptions and partly by a grant-in-aid from Government. It is encouraging to note that in almost every district public spirited gentlemen have come forward to act as probation officers to these lads who sorely need guidance and encouragement when they first return to the outer world after their training in the Borstal school.

V. Important developments in the Department during the last five years.

(1) Framing uniform rules for the working of the Criminal Tribes Act both inside and outside the settlements throughout the Bombay Presidency.

(2) Release of settlers on probation to their native districts in some cases and to free colonies adjoining the settlements in other cases.

(3) Organising agricultural settlements in addition to Industrial Settlements organised in earlier years.

(4) Framing and encouraging Industrial Societies of settlers which would take work on contract and thus prepare the settlers for similar work they might do outside settlements on release.

(5) Extension of the activities of the Settlement Department from the Southern Division to the Northern and Central Divisions.

(6) Extension of activities of the department from criminal tribes to backward classes who are not criminal tribes and to the after-care of juveniles who would otherwise drift into a career of crime.

(7) Retrenchment of the post of the Lady Superintendent of settlements.

(8) Redistribution of the criminal tribes work and the backward class work between the Assistant Backward Class Officers in consequence partly of the organisation of the Backward Class Department and partly of the extension of the activities of the Criminal Tribes Settlement Department from the Southern Division to the Northern and Central Divisions.

It will appear thus that the Department began with the problem of the control and reformation of the Criminal Tribes within the meaning of the Criminal Tribes Act in most criminal districts in the Presidency and has spread its activities to the remaining districts gradually. It has tried to control their

criminal tendencies by the dual method of control of movements and discipline on one hand and compulsory education and provision of work on the other. The work at first provided was of an industrial type, e.g. on the Public Works Department works, in the railway workshops and mills. To provide work for the tribes belonging to the agricultural class agricultural settlements were next started. Those who have gone successfully through the requisite period of discipline are released on probation to free colonies where they are under supervision of a milder type than in the settlements before they are finally absorbed among free citizens. The Industrial Societies organised in Settlements help to train settlers for doing organised industrial work such as taking contracts when released from Settlements. The statistics show that the number of persons in settlements steadily decreases while that of those in free colonies increases indicating that the process of absorbing criminal tribesmen in the category of free citizens is well in progress. To combat economic and social disabilities which generate crime the department has now taken up the work of uplift of backward classes which are not criminal tribes and is also attending to the after-care of juvenile offenders who without such care would take to a career of crime. Thus the department has launched an all round campaign against crime both actual and potential.

VI. Matters the consideration of which has been postponed.

Creation of a criminal tribes settlement department in Sind :—This question had to be held in abeyance on account of the present financial position. Even if the jurisdiction of the Backward Class Officer, Bombay Presidency, is extended to Sind, the charges involved in starting the department in Sind would amount to Rs. 21,300 non-recurring and Rs. 2,000 recurring. Besides, this arrangement would not be possible in future if Sind is separated from the Bombay Presidency.

VII. Questions under consideration.

Removal of the headquarters of the Backward Class Officer from Dharwar to Poona :—

This question has arisen as a logical consequence partly of the organisation of the Backward Class Department and partly of the extension of the activities of the Criminal Tribes Settlement Department from the Southern Division to the Northern and Central Divisions

APPENDIX I.

Schedules of Backward Classes for the Bombay Presidency excluding Sind.

Schedule I—Depressed Classes.	Schedule II—Aboriginal and Hill Tribes.	Schedule III—Other Backward Classes.
1. Asodi.	1. Advichincher (Section of No. 19).	1. Alitkar.
2. Bakad.	2. Barda.	2. Bahurupi.
3. Bhambi.	3. Bavacha.	3. Bajania.
4. Bhangi.	4. Bhil.	4. Balsantoshi.
5. Chakrawadya-Dasar.	5. Chodhra.	5. Bandi.
6. Chalvadi.	6. Dhanka.	6. Battal.
7. Chambhar (Same as Nos. 35 and 38).	7. Dhodia.	7. Bava.
8. Chena-Dasaru.	8. Dubla.	8. Bazigar.
9. Chuhar (Same as No. 10).	9. Gamit (Same as No. 10).	9. Bedar (Same as Nos. 11, 78, 79, 110 and 121).
10. Chuhra (Same as No. 9).	10. Gamta (Same as No. 9).	10. Beldar.
11. Dakaleru.	11. Gond.	11. Berad (Same as Nos. 9, 78, 79, 110 and 121).
12. Dhed.	12. Kathodi (Same as No. 13).	12. Bhamta (Same as Nos. 36, 109 and 114).
13. Dhegu-Megu.	13. Katkari (Same as No. 12).	13. Bhand.
14. Dhor.	14. Konkna.	14. Bharadi.
15. Garode.	15. Koli Mahadev.	15. Bhavaiya.
16. Halleer.	16. Mavchi.	16. Bhavin.
17. Halsar. }	17. Naikda (Same as No. 18).	17. Bhisti.
18. Haslar. } Same caste.	18. Nayak (Same as No. 17).	18. Bhute.
19. Hulsavar. }	19. Pardhi.	19. Budbudki.
20. Holaya.	20. Phanse Pardhi (Same as No. 1 and Section of No. 19).	20. Burud.
21. Khalpa.	21. Patelia.	21. Chamtha.
22. Kolcha (Same as No. 23).	22. Pomla.	22. Chandlagara.
23. Kolgha (Same as No. 22).	23. Powara.	23. Charan.
24. Koli Dhor.	24. Rathawa.	24. Chhapparband.
25. Kotegar (North Kanara only).	25. Tadvi Bhil.	25. Chhara (Same as Nos. 53, 54 and 100).
26. Lingader.	26. Thakur.	26. Chitrakathi.
27. Madig (Same as No. 29).	27. Valvai.	27. Dasa.
28. Mahar.	28. Varli.	28. Davari.
29. Mang (Same as No. 27).	29. Vasava.	29. Depala.
30. Mangarudi.		30. Dholi.
31. Meghval (Same as No. 32).		31. Dombari.
32. Menghwar (Same as No. 31)		32. Futgudi.
33. Mini Madig.		33. Gabit.
34. Mochi (Except in Gujarat).		34. Gandhrap.
35. Mochigar (Same as Nos. 7 and 38).		35. Garudi (Same as No. 77).
36. Mukri.		36. Ghantichor (Same as Nos. 12, 109 and 114).
37. Nadia.		37. Ghisadi.
38. Samagar (Same as Nos. 7 and 35).		38. Golla.
39. Shenva (Same as No. 42).		39. Gondhali.
40. Shingdav (Same as No. 41).		40. Gopal.
41. Shingadya (Same as No. 40).		41. Halepaik.
42. Shindhava (Same as No. 39).		42. Helav.
43. Sochi.		
44. Timali.		
45. Turi.		
46. Vankar.		
47. Vitholia.		

APPENDIX I—*contd.*

Schedule I—Depressed Classes.	Schedule II—Aboriginal and Hill Tribes.	Schedule III—Other Backward Classes.
		43. Jatia. 44. Jatigar. 45. Javeri (Same as No. 48). 46. Jogi. 47. Jogtin. 48. Johari (Same as No. 45). 49. Joshi. 50. Kahar. 51. Kaikadi. 52. Kammi. 53. Kanjari (Same as Nos. 25, 54 and 100). 54. Kanjar Bhat (Same as No. 25, 53 and 100). 55. Kapdi. 56. Katabu (Same as No. 59). 57. Kattai. 58. Khavas. 59. Kiliket (Same as No. 56). 60. Khelkari (Same as No. 61). 61. Kolhati (Same as No. 60). 62. Koli Malhar. 63. Koli Suryavanshi. 64. Kongadi. 65. Korava (Section of No. 51). 66. Korcha (Section of No. 51). 67. Kotwal (Same as No. 68). 68. Kotwalia (Same as No. 67). 69. Kunchi Korava (Section of No. 51). 70. Lamani. 71. Mairal. 72. Manbhav. 73. Mangela. 74. Me. 75. Miana (Muhammadans). 76. Mochi (In Gujarat). 77. Modikar (Same as No. 35). 78. Naikmakkalu (Same as Nos. 9, 11, 79, 110 and 121). 79. Naikwadi (Same as Nos. 9, 11, 78, 110 and 121).

APPENDIX I—*concld.*

Schedule I—Depressed Classes.	Schedule II—Aboriginal and Hill Tribes.	Schedule III—Other Backward Classes.
		80. Namdhari (Same as No. 81).
		81. Namdhari-paik (Same as No. 80).
		82. Nandiwale.
		83. Nat.
		84. Nath.
		85. Od.
		86. Padharia.
		87. Padiar.
		88. Pangul.
		89. Patharvat.
		90. Patradavaru.
		91. Phudgi.
		92. Rachevar.
		93. Raikari.
		94. Ramoshi.
		95. Ravalia.
		96. Sahadev Joshi.
		97. Salat.
		98. Sangar.
		99. Sanjogi.
		100. Sansia (Same as Nos. 25, 53 and 54).
		101. Sarania.
		102. Sarodi.
		103. Sarvade.
		104. Shikari.
		105. Shikligar.
		106. Sudgadsidhar.
		107. Suler.
		108. Suppaling.
		109. Takari (Same as Nos. 12, 36 and 114).
		110. Talvar (Same as Nos. 9, 11, 78, 79 and 121).
		111. Thakar.
		112. Tirgar.
		113. Tirmali.
		114. Uchlia (Same as Nos. 12, 36 and 109).
		115. Vaddar.
		116. Vadi.
		117. Vaghri.
		118. Vaidu.
		119. Vaiti.
		120. Valhar.
		121. Valmiki (Same as Nos. 9, 11, 78, 79 and 110).
		122. Vanjari.
		123. Vasudev.
		124. Vir.
		125. Wansfoda.

XI—PRINTING, PUBLICATION AND STATIONERY DEPARTMENT

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XI—PRINTING, PUBLICATION AND STATIONERY DEPARTMENT

I. Relations with Government and the secretariat.

PRINTING AND PUBLICATION.

1. Provincial Government presses and the supply of books and publications are reserved provincial subjects and are now included in the portfolio of the honourable home and general member. The provincial presses under his control are :—

The Government Central Press, Bombay.
The Yeravda Jail Press, Poona.
The Commissioner in Sind's Press, Karachi.

Besides these three provincial presses there are two departmental presses which form as it were part of the machinery of the departments to which they are attached and are controlled by the honourable member in charge of the departments. These presses are :—

The Photozincographic Press, Poona.
The Alienation Press, Poona.

The photozincographic press and the alienation press are administered in the revenue department of the secretariat and are in the portfolio of the honourable revenue and finance member. The high court press which was administered in the home department of the secretariat and was in the portfolio of the honourable home and general member has been abolished with effect from 1st October 1933.

STORES AND STATIONERY.

2. Stationery is a transferred provincial subject in the portfolio of the honourable minister for education so far as the supply of provincial transferred departments is concerned. The supply of stationery to reserved departments of the provincial Government is a reserved subject in the portfolio of the honourable home and general member. The subject is administered in the general department of the secretariat so far as day to day administration is concerned and in the political department of the secretariat so far as the general regulation of the purchase of stores is concerned.

II. Printing at departmental presses and Sind press.

Departmental presses.

3. The alienation press is a small press costing about Rs. 3,000 a year housed in the alienation office, Poona, and used solely for the printing of copies of documents housed in that office. The documents are too fragile to be permitted to be taken outside the building and the press, therefore, must continue to exist. The charges made for copies of documents by the press have recently been raised and the press will in future pay its way. In the year 1932–33 the net receipts for printing copies of documents amounted to Rs. 3,184 against an expenditure of Rs. 2,532 on establishment and other charges on account of the Press, which shows that the Press is self-supporting and leaves a small margin to cover overhead charges.

Photozincographic press.

4. The photozincographic press, Poona, was originally started in 1867 by the survey and settlement commissioner purely for the reproduction of survey and village maps. It was then a very small affair under a Royal Engineer officer. In 1885 a specialist manager was appointed to take charge of it and from that date and more especially since Mr. Audy was recruited in England for the press in 1899 it has developed until it now undertakes all the most up-to-date methods of reproduction. Its principal work is the production of maps and of copies of registered documents. The system of photo-copying of documents was worked out by Mr. F. G. H. Anderson as settlement commissioner and director of land records and inspector general of registration in 1923. Methods have since been improved and this branch of the work is now most successful and economical.

Though the *raison d'être* of the press is thus the work which it does for the land records and registration departments and though for that reason it remains under the control of the revenue department, it is the only Government press in the presidency which can execute work requiring a more technical process than the ordinary type process and thus serves all departments of Government. The work done at the press includes the preparation of original maps in different languages, revising them, designing and reproducing delicate colour charts including medical charts, school wall pictures in colour, anatomical pictures, certificates of merit, architectural

drawings, diagrams for the scientific volumes published by the Indian meteorological department, the printing of daily weather reports, fine art reproductions of microscopical, medical, geological and archæological illustrations including the reproduction in natural colours from the actual objects themselves of articles of archæological interest, such as ancient vases, silk and embroidery work in silver and gold, carpets etc. A great deal of work is done for the finger print bureaux and advice is given on notes suspected to be counterfeit.

The survey and settlement commissioner was in administrative control of the press until 1894, when the commissioner, central division, was placed in charge of it. In 1907 the press was re-transferred to the settlement commissioner and director of land records until his post was placed in abeyance in 1932, when the commissioner, central division, again became the controlling authority.

The appointments of the assistant managers are made by Government. The commissioner, C. D., makes the appointments of the head draftsman and head clerk, and all other appointments are made by the manager of the photozinco press. The manager is in complete control of the technical process and obtains his own materials either from England or locally. It is now proposed that the superintendent, Government printing and stationery, should supervise the indents for purchase of stores required by the press from England and locally. The superintendent exercises supervision over the press in regard to its commercial side and in these matters he acts as the expert adviser of the commissioner, C. D.

The processes now in use include the Helio, Southampton transfer, Vandyke, line, half-tone and tri-colour block making. One offset machine was installed in 1924 and a second in 1927 These machines are most economical and satisfactory. Some of the processes are not in use in any other press in the presidency.

The annual cost of the press is about Rs. 1,10,000 and the receipts from private work done at the press are about Rs. 26,000 a year. Revised rates for private work, with a view to making them more consistent and attractive, have been sanctioned with effect from 1st April 1933.

In pursuance of the policy of Indianization of superior services in Government presses, the present manager, Mr. D. K. Pradhan, was selected for training in England in

photozincographic and allied processes and on his return was appointed assistant manager and subsequently confirmed as manager in July 1930. Since the Indianization of the post of the manager the expenditure incurred on management and supervision has been considerably reduced.

This department has of late proved of some help to the Army. In the year 1931 two non-commissioned officers of the Bombay Sappers and Miners, R.E., were trained in Photo work and the commandant of the corps has expressed his thanks for the valuable assistance rendered to them by this department in improving their knowledge and bringing it to-date. He, also, mentioned that what they had learned about the Typon process would be of the greatest benefit to the army.

In May 1933, His Exalted Highness the Nizam's Government sent two of their probationers for training in press accounts. Besides giving them training in press accounts they were also given an insight into all the technical processes.

At present one apprentice is being trained in the press for the post of the head photographer. This is due to the fact that it is not possible to get from outside men who are trained in the processes used in this department.

During the last five years some of the latest machinery has been introduced in this press, thereby greatly minimizing the cost of production and increasing efficiency.

The system of indenting for stores has been greatly improved. The old practice of locking up unnecessary capital in the form of excess stores has been abolished. Articles just enough for 1½ years are kept in stock thereby saving a considerable amount which would be lost as interest on dormant capital.

Government photo registry.—The working of the photo system of copying documents has been considerably extended in recent years. Nearly half the presidency is working under this system.

Commissioner in Sind's press.

5. The Sind press is a half-way house between the departmental presses and the provincial Government presses in that, although it is subordinate to the superintendent, Government printing and stationery, in technical matters, it is administratively subordinate to the commissioner in Sind. This system of control is of course designed solely to meet the geographical difficulties. This press was originally started with two printers in 1843 and was first named

the "Government lithographic press in Sind." It was subsequently handed over under Government orders to the collector of customs, Karachi. In 1864 at the instance of the commissioner in Sind Government sanctioned the substitution of a printing press with founts of English and Sindhi type to replace the laborious and expensive lithographic press in order to print circulars, orders, forms, reports and returns. Accordingly a Royal Imperial hand press, type and other material of the value of Rs. 2,083-8-0 were obtained by the commissioner from a private firm at Bombay and a small staff was engaged for the press. The present press building was built in 1873, extended from time to time and provided with electric light and fans in 1920 to 1924. Its present value is Rs. 90,000.

In 1873 another press called the "Sind educational lithographic press" was installed to execute only the Sindhi work of the educational department and the book depôt which was attached to the press. In 1874, at the suggestion of the commissioner, Government deputed Mr. Kingsmill, the then superintendent, Government central press, Bombay, to examine the two Government presses in Karachi. Mr. Kingsmill reported that considerable economy could be effected by the amalgamation of the two presses and Government sanctioned the amalgamation from 1st April 1875.

As work increased some five hand presses and one litho press were added in 1876. In 1897 three printing machines were bought. In 1917 there were some fourteen machines and ten hand presses working, but on the transfer of some of the standard forms to the Yeravda press in that year the number of machines and presses was reduced and at present stands at seven machines and three hand presses. A stereo-foundry was added in 1911 for the printing of forms and has been found most efficient and economical. In 1910 a small mechanical shop for the repair of plant and machinery was added. Up to 1918 the press was a steam press. It was converted to electricity in 1918 and in 1927 a 21 horse power electric motor was installed.

The piece-work system was introduced into the English composing departments of the press in 1895 and into the vernacular branch in 1900. At present there are three English and one Sindhi companionships each with a company foreman as its head. These four companionships are supervised by a foreman printer whose appointment was created in 1914.

WORK DONE AT SIND PRESS.

6. The publication of the *Sind Official Gazette* was started in 1869. It is now published every Thursday and contains the following parts :—

Part I—Notifications, rules, appointments etc. by the Governments of India and Bombay and the commissioner in Sind and miscellaneous notifications, appointments, notices etc.

Part I-A—Notifications under the Bombay Local Boards, Municipal Boroughs, District Municipal and Primary Education Acts.

Part III—Bills and Acts issued by the Governments of India and Bombay.

Part IV—Sindhi translations of Bills, Acts, ordinances, press notes, notifications etc. issued by the Government of Bombay and the commissioner in Sind.

The publication of the *Sind Police Gazette* was started in 1913 and has continued regularly ever since.

The bulk of the Sind standard forms were printed and supplied by this press until 1916. In 1916 Mr. P. R. Kapadia was placed on special duty to revise the standard and special forms in use in Sind. Between 1917 and 1919 all Sindhi stock form work was transferred to the jail press at Yeravda with the exception of the following, the printing of which was retained at the Sind press only because the jail press was unable to undertake more work :—

	Number of forms printed.
(1) Standard revenue ..	500
(2) Standard judicial ..	67
(3) Standard civil ..	165

The Sind press also prints the special forms of all provincial departments in Sind, annual reports, manuals, rules, confirmation cases, monthly gradation lists, dossiers, periodical settlement reports and other miscellaneous work.

The press also executes on payment work for the local authorities in Sind and the examination papers of the Bombay University. Since 1931 the press has undertaken binding work for all provincial officers in Sind and also printing and binding work for local officers under the control of the Government of India with the sanction of the deputy controller of printing, New Delhi, on payment.

The expenditure at the commissioner in Sind's press for the last three years for which figures are available has been :—

	Rs.
1929-30	1,11,314
1930-31	1,07,853
1931-32	97,385
1932-33	92,478

Output.

6A. The output of the various sections of this press during the year 1932-33 was :—

Serial No.	Units of Operations.	Outturn in	
1	Hand Composition ..	.. Pages F'cap Folio ..	14,930
2	Stereo Casting ..	.. Lbs. (Finished Plates) ..	1,782
3	Hand Presses ..	.. Impression F'cap ..	577,000
4	Machine ..	.. Impression F'cap ..	16,544,000
5	Ruling ..	.. Impressions	3,103,000
6	Perforating ..	.. Cuts	254,000
7	Folding ..	.. F'cap Folio, Single Fold ..	3,007,000
8	Inserting ..	.. Insets	348,000
9	Cathering ..	..	1,812,000
10	Collating ..	.. Forms	4,249,000
11	Hand Sewing ..	.. Books, H. B. F'cap folio 100 leaves.	134,960
12	Wire Stitching ..	.. Stitches	332,000
13	Paging ..	.. Impressions	1,864,000
14	Casing-in ..	.. Books	24,219
15	Eyeletting ..	.. Eyelets	25,000
16	Envelope-making ..	.. F'cap thin envelopes ..	52,000
17	Embossing ..	.. Impressions	28,100
18	Miscellaneous—Productive Time.	Hours	1,008

Staff of Sind press.

7. The Reorganisation Committee recommend the abolition of the post of assistant manager at this press. Government have accepted this recommendation.

III. Government printing.

Scope of department.

8. The superintendent, Government printing and stationery, is in charge of the following offices :—

(*i*) Government printing at the central press, Bombay, and the Yeravda prison press, Poona ;

(*ii*) Publication branch or the Government book depôt, Bombay ; and

(*iii*) The stationery stores and office, Bombay.

The superintendent is now responsible for the supply of stationery to all officers of the provincial Government throughout the presidency and for the supply of paper, type, binding materials and English stores to all presses in the presidency. The manager of the commissioner in Sind's press is responsible, under the control of the commissioner in Sind, for the purchase of local stores required for the Sind press. The concentration of this work in one department with, it is believed, a very high standard of efficiency, has a long history behind it.

Evolution of central press.

9. From about 1830 to 1871 all the secretariat and head-quarters printing work of Government was done at branch presses attached to the various departments of the secretariat, most of the miscellaneous work such as forms work being done at the Bombay Educational Society's press or other private presses on payment. This procedure, however, did not answer well even the requirements of those times and in October 1871 Government appointed a committee, the first of a long series of committees, to look into this question. The committee recommended a central press in place of the detached printing units which, being decentralised, were very expensive. Government accepted this recommendation and ordered the centralization of all printing including that of the *Bombay Government Gazette* at the Government central press, Bombay. This press was then placed under an officer called "superintendent, Government central press". This central press was accommodated in the town barracks belonging to the military department. It took over the work formerly done by the secretariat branch presses, the Bombay Educational Society's press and other private presses. Each department of the secretariat however retained for its urgent work a small press establishment of its own, consisting of two compositors, a proof reader and two pressmen and rollermen and located in the town barracks alongside of the central press. In 1873 when the new secretariat building was completed all the secretariat press units except the public works department press were consolidated and housed in two rooms on the southern wing of the ground floor and called the secretariat press. In 1899, in consequence of increased work, due to famine and

plague, this press was enlarged and two more rooms on the first floor were assigned to it. This press was from its inception technically supervised by the superintendent, Government central press, till 1915-16 when both it and the public works department press were finally placed completely under the control of the superintendent, Government central press.

In the meantime the town barracks in which the Government central press was first established were required by the military department and, as soon as the new secretariat building was completed and occupied, Government ordered the central press to be shifted to the old secretariat building duly modified to suit printing requirements. The move was made in March 1876 and the town barracks handed back to the military department. But, as the state of the old secretariat was very unsatisfactory and its internal arrangements were unsuitable for a printing house, Government in 1881 appointed a committee to advise what should be done. The committee advised the improving of the old building and the press remained where it was till 1888. In the meantime the new building now occupied by the Elphinstone College was sanctioned and actually built for the press, but the printing department was never allowed to occupy it. The central press was instead shifted to the hydraulic press building, the old premises being sold by Government. This hydraulic press building was but a sorry substitute for the Elphinstone College building and, in spite of large expenditure on repairs, remodelling and temporary buildings from time to time, the provision of a satisfactory building for the central press still remained a crying need.

In 1887 Government appointed a third committee to advise whether the central press should be abolished and all the printing and binding work executed there transferred to private firms in Bombay. The detailed enquiry then conducted proved beyond doubt that private firms were not in a position to undertake economically and well the whole volume of work done at the Government central press. The proposal to abolish the press was therefore abandoned. The appointment of this committee was due to local pressure demanding a field for private enterprise in this industry and there cannot be two opinions on the point that the decision then arrived at has stood Government in good stead. Particularly has this been the case in years of stress, such as those of the Great War and the period of the introduction of reforms, when private firms could not have satisfied the needs of Government.

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About 20 years later, in 1906, a fourth committee was appointed to consider and report upon the following among other matters :—

(*i*) The saving which would result from the transfer of stock forms from the central press to the Yeravda prison press ;

(*ii*) The transfer of the central press to Yeravda and also the transfer of a considerable part of the work to private presses.

Government issued orders on this report in 1907 and, among other things, sanctioned the gradual transfer of stock forms to the Yeravda prison press.

In 1909 yet another (the fifth) committee was appointed to consider the amalgamation of the central press with the Yeravda prison press. The committee recommended amalgamation. as financially advantageous. The question, however. involved diverse aspects such as additional buildings at Poona, disposal of the buildings at Bombay, arrangements for the transfer etc. and Government in passing orders on the committee's report merely called for additional information on these points. Final orders were not passed until the sixth and most important of all press committees had reported in 1912. Government then decided that the scheme for the removal of the central press from Bombay to Yeravda and its amalgamation with the prison press should be abandoned and that plans and estimates should be expeditiously prepared for a new central press.

This committee was appointed with a view to drawing up a scheme indicating the exact nature and scope of the requirements of the new Government central press to be built in Bombay and incidentally to look into the distribution of work between the two presses on certain accepted principles. The committee reported after consulting Mr. Cogswell, controller of printing, stationery and stamps, who visited Poona at the time. Its proposals and the orders issued by Government and action taken by Government upon them are shown below side by side :—

Committee's proposals.	*Orders issued.*	*Action taken.*
1. All book work and other printing work of a non-urgent character should be transferred from Bombay to a new non-jail press to be erected near the Yeravda prison press at a cost of Rs. 75,000.	The proposal was approved and plans and estimates called for, the item being provided for in the budget.	The new non-jail press was not erected but the non-urgent work was transferred to the Yeravda prison press.

	Committee's proposals.	*Orders issued.*	*Action taken.*
2.	The central press building should be electrified and improved at a cost of Rs. 60,000 so as to accommodate all the Government presses then existing in Bombay, viz. the central press, the secretariat branch press, the public works department press and the high court press, the last two ceasing to exist as separate entities.	This was also approved but in deference to the wishes of the high court its press was retained. Plans and estimates for the improvement and electrification of the central press building were also called for.	Part of the central press building collapsed later on and a temporary building on the Kennedy Sea-Face was sanctioned by Government in 1914.
3.	The appointment of superintendent, Government central press, should be abolished and a new appointment of superintendent, Government printing, should be created. The new officers should have control of the central press in Bombay as reconstituted and of the new press at Yeravda and exercise in addition to these duties and subject, if necessary, to the orders of the commissioner in Sind, and the Agent to the Governor, Kathiawar, respectively, general supervision over the commissioner's printing press, Karachi, and the agency press at Rajkot.	Approved subject to the sanction of the Government of India to the creation of the appointment. The superintendent, Government printing, should control the free press at Yeravda, the Government central press as reconstituted and also the high court press. Government left it to the superintendent to decide about the transfer of suitable urgent work to Yeravda and similar work from the high court to the central press at Bombay so that the work to be done at the high court press might be reduced to the minimum. The supervision of the presses at Rajkot and Karachi was left subject to the orders of the agent to the Governor and the commissioner in Sind respectively.	Carried out (except as regards the new press at Yeravda).
4.	The superintendent of Government printing should have control of all arrangements for supplying paper to Government presses.	Approved subject to the purchasing of country paper through the stationery office as before during the contract period ending in 1918.	Carried out.
5.	The posts of superintendent, photozincographic department, and certain other minor appointments at the press in Poona belonging to that department should be abolished and the press itself placed under the charge of the superintendent, Government printing.	(5) and (6). The photozincographic press was to be administratively subordinate to the settlement commissioner and commercially subordinate to the superintendent, Government printing. Form-printing and other type-work were to be transferred to	Carried ou.

	Committee's proposals.	*Orders issued.*	*Action taken.*
6.	All form-printing work done at the press of the photozincographic department should be transferred to the Yeravda prison press.	approval of both the settlement commissioner and the superintendent of Government printing, doubtful cases being referred to Government, if, in any case, the two officers did not agree. The photozincographic press should not ordinarily undertake work for Indian States and semi-official bodies in competition with private presses. Only private work of a highly specialized character which is beyond the capacity of local private presses might be undertaken.	
7.	The Government book-depôt should be transferred to Poona.	Approved as accommodation became available there.	Carried out.
8.	A special officer should be appointed to standardize forms, which should then be transferred to the Yeravda prison press.	Approved	.. First Mr. F. S. Jehangir and latterly Mr. P. R. Kapadia were placed on special duty in connection with the standardization of forms transferred to Yeravda.

Government thus modified the committee's recommendations in respect of the high court press and the photozinco press and so to some extent reduced the financial benefits of the scheme. But the measures approved were estimated to yield an annual saving of Rs. 30,000 and a considerable increase in efficiency. The post of superintendent, Government printing, with headquarters at Poona was created with the approval of the Government of India and the printing department was put under his control in 1914. The superintendent was given, in addition to supervision over the different presses in the presidency, charge of the supply of paper to the presses and to the stationery office. He was also entrusted with the examination of the expenditure of officers throughout the presidency on printing at private presses and on stationery with a view to checking the tendency of officers to buy from private presses forms and envelopes for which standard articles would do equally well and with the duty of seeing that in cases where the employment of private presses was really needed the rates charged were reasonable. The strict performance of this important duty has saved Government large sums of money every year.

The temporary building on the Kennedy Sea Face, the building of which for the central press was sanctioned as an emergency measure while the hydraulic press building was being remodelled and overhauled after its collapse, was occupied in 1914. Presumably on account of the war the scheme of remodelling or repairing the hydraulic press building was given up and the central press remained in the temporary building until 1927. The war also prevented the new non-jail press being built at Yeravda. Progress was however made during the war by the abolition of the public works department press and the amalgamation of the secretariat press with the central press. The non-urgent work was transferred to Poona and the book depôt was also moved there.

Finally Government decided to build a new central press building at Charni Road. It was occupied in September 1927. Thereafter the department was centralised and reorganised, all special forms and non-urgent book-work which had been transferred to Yeravda was brought back and the necessary readjustments were made in the establishment at Yeravda and Bombay.

The headquarters of the superintendent, Government printing and stationery, were transferred to Bombay in 1925.

Mechanical development of central press.

10. A small beginning was made with mechanical composition at Bombay by the purchase in 1913 of a monotype machine for the central press. The monotype section of the central press developed and at present consists of fourteen monotype casters, fifteen key-boards and six linotypes.

In 1916, following the example of the Government of Madras who had established a rubber stamp section in their press in 1913 and after deputing the superintendent of Government printing and stationery to Madras to study the subject, Government sanctioned the establishment and plant required for the manufacture of rubber stamps at the central press. The new arrangement has proved very economical compared with the previous system of purchase by the stationery department in the local market.

In 1919, owing to the paucity of labour at that time, a multigraph section was introduced in the central press with six compotypes and a multigraph printer, manned by female labour. This section was grouped with the mono-operating section, which was also managed by female labour, and both together were

placed under the supervision of one forewoman. The multigraph section was abolished from 1st March 1932 as no longer necessary, with a saving of Rs. 5,000 a year.

The lithographic section of the press which was established in 1882 was closed down with effect from 1st April 1930 when all cartographical work was transferred to the photozincographic press.

Staff of central press.

11. The Reorganisation Committee recommended that one post of assistant manager at this press should be abolished and that the possibility of reducing one post of monotype mechanic should be considered. Government have decided to give effect to the latter proposal with effect from 1st July 1933 but to wait until a vacancy occurs in the department before reducing the number of assistant managers' posts and then to keep the post vacant for two years as an experiment.

Yeravda jail press.

12. The Yeravda jail press originated about 1866 in a small printing outfit installed in the office of the inspector general of prisons, Poona, for printing departmental circulars. About 1870 this printing establishment was shifted to Poona city jail and this small jail press seems to have handled all departmental circulars and a large portion, it not all, of the jail department forms until 1885. In August 1885 the Poona city jail was abolished and the press was transferred to new quarters in the new Yeravda central jail. In 1891 the question of form printing on a large scale at the jail press first engaged the attention of Government and after considerable correspondence the superintendent of the central press was deputed to Yeravda and the Madras Penitentiary. As he reported adversely on the proposal it was shelved. Sometime later the second deputy superintendent of the central press was placed on special duty by Government and on his report the manufacture of stock envelopes, guard books, registration and Deccan Agricultural Relief forms was transferred to the jail press as a beginning. The jail department forms continue to be printed there. The work and scope of this press gradually increased and in 1900 Government sanctioned the post of a superintendent for the Deccan central prison press. The outturn of the press in 1900 amounted to from three and a half to four million forms. A year later the supply of magisterial, police and judicial forms was also transferred to the jail press from the central press and the annual output of the jail press

was thus raised to eighteen million forms. This rapid progress made a suitable press building an absolute necessity and it was sanctioned by Government in 1905.

The new building adjoins the central jail and was completed and occupied in May 1907. All standard form work was then transferred to that press and the total output raised to some 50 million forms a year. A further addition to the work was made in 1912 when all special departmental form work was transferred to the jail press. To this the 1912 committee added all non-urgent work from the Government central press and finally all Sind standard forms came to Yeravda from the commissioner's press, Karachi, in 1917, with the exception of revenue and judicial and civil forms which were retained at Karachi. At this stage the jail press reached its maximum output and importance and so continued undisturbed until 1927.

Classification of forms.

13. Standard and special forms were at first printed at the central press and the commissioner in Sind's press as and when they were indented for. In 1875–76 Government passed orders for the classification of the requirements of each department and in course of time the forms were standardized by departments and sanctioned by Government. Later on the classification was further improved by differentiating the particular requirements of certain offices and departments from the general requirements of Government offices. The latter were designated standard and the former special forms. Standard forms are printed in quantities sufficient for one or two years' requirements at a time, stocked at the press and issued on individual indents annually under orders dated 4th January 1909. Special forms were further classified into—(*a*) forms which in their nature are rules, standing orders etc. and are mere re-prints, (*b*) standard forms, the average annual consumption of which is less than 500, and (*c*) forms applicable to one department or office and special in all respects. The printing and supply of all these forms is governed by Government orders dated 27th January 1914 which lay down that special forms (*a*) will only be printed at each revision and supplied on consolidated indents, the heads of departments keeping some small surplus to meet the demands of any newly opened office under them, special forms (*b*) will be printed for five years' requirements and distributed and standard forms (*c*)

will be printed for triennial requirements and supplied, the press in no case keeping any stock.

Standard forms and special forms were devised and printed according to the needs of the departments and economy was not systematically studied. Some efforts towards economy was made by the appointment of Messrs. Jehangir and Kapadia as indicated above, but the real effort was made by departmental arrangement in 1917 when every form was examined in respect of its design and the quality of its paper and, with the co-operation of the departments for which the forms were intended, a saving was effected roughly estimated at Rs. 60,000 a year.

In 1926 the special accounts officer deputed by Government under a resolution dated 28th October 1925 to examine the contingent expenditure of all departments visited Yeravda and enquired into the details of expenditure for 3 years—1922-23 to 1924-25. His suggestions wherever possible were carried out. Later in the same year Mr. Shillidy as retrenchment officer visited Yeravda and examined in detail the procedure of supplying standard forms to all officers in the presidency. Government in issuing orders on his report in 1927 restricted the number of supplementary indents on the press.

Labour at the Government presses.

14. Military orders and the general increase of work in departments both of the provincial and the central Government led to an enormous increase of work at the presses during and after the war. It was impossible to obtain all the labour required. The establishment was increased in 1917 and 1918. The extraordinary rise in the cost of living at the end of and after the war was partially met by the grant in 1918 of a war allowance which was revised and renamed "temporary and provisional allowance" in March 1920. The pay of the technical establishment was revised in July 1920. But the revision was not commensurate with the needs of the times and further representations caused Government in November 1920 to appoint a seventh committee to look into the needs of the printing department. These were briefly summarised by the superintendent as a larger press, more workmen and better paid and more numerous supervising staff. The committee considered the prevailing conditions at the time—the heavy arrears and the causes thereof, the quantity of work done at the presses at Bombay, Yeravda and Karachi, the rates

of pay and the accommodation available. It also took cognizance of overtime work and work on Sundays and holidays. The committee specially went into the question of printing at private presses. It found that the entire printing of Government work at private presses was impracticable in view of the urgency and confidential nature of some of the work. The alternative of using the Government presses for urgent and confidential work and giving out the rest on contract was also considered and rejected. The committee held that the presses would have to be large enough to deal with the maximum amount of urgent work that might come in at any time. Urgent work is not regular in volume and, if urgent work only were dealt with, some of the machines would have to stand idle for varying periods, an arrangement which would clearly be uneconomical. After considering all these factors the committee suggested a revision of pay and laid down a schedule of overtime work. It recommended that work on Sundays and holidays should stop entirely and that the construction of new quarters at Yeravda should be expedited. On due consideration of the committee's recommendations and the departmental representations, Government in December 1920 ordered for the central press and the commissioner's press, Karachi (*a*) a permanent increase of 50 per cent. over the rates prevailing in 1914 for piece work charges, (*b*) a grant of a 20 per cent. allowance for dearness of living to men drawing up to Rs. 150, (*c*) an increase in time charge for corrections from annas 3 to annas 3½ an hour and (*d*) extra pay for vernacular work, 15 per cent. in respect of Gujarati and Kanarese and 25 per cent. for the rest over the rates for English composition. Government also revised the pay of the fixed establishments other than the clerical and menial establishments. The pay of the Yeravda establishment was similarly revised. But the special feature of this revision was the grant of bonus of a month's salary to the piece and task workers of all the presses for satisfactory work and regular attendance, absence of 20 days for sickness or other legitimate reason being allowed. The period of 20 days may be extended by the Superintendent in special circumstances beyond the control of the piece worker. The workmen have never appreciated this item, and would probably prefer a month's leave on average pay. But the bonus provided a reward for satisfactory work continuously throughout the year, which could not be earned as a matter of course as leave on average pay might have been, and it is gratifying to note that there are men on the establishment who have earned bonus every year since it was sanctioned. Further

orders dated the 7th October 1921 made the dearness allowance refixable every year according to local conditions. Government have directed that the dearness allowance sanctioned for the technical establishment of the Government presses, which had already been reduced by stages to 5 per cent. should cease with effect from 1st July 1932, i.e. on pay for June 1932, except in the case of men whose pay is in any month subjected to a percentage cut in pay.

Scheme of Indianisation.

15. Before 1925 the officers of the printing department were recruited almost entirely from among Europeans, the main reason being that Indians with the necessary qualifications were not forthcoming. In 1925 the Government of Bombay decided that the printing department should be Indianised at the earliest possible opportunity and they accordingly sanctioned a scheme, the broad outlines of which are as follows. The Government of Bombay offer at intervals scholarships for training in the printing profession in the United Kingdom. The duration of the scholarships is not less than three or more than five years in each case. The scholars are selected from all classes of British Indian subjects domiciled in the Bombay presidency. Candidates for the scholarships must be under twenty years of age and must have passed at least the intermediate examination in arts or science of the Bombay University or an examination of any other university which is recognised to be equal to this examination. Every scholar first receives at least two years' preliminary practical training as an apprentice at the Government central press, Bombay, before proceeding to the United Kingdom. During this period he receives such salary as Government may determine and is required to prove his capacity both mental and physical for further training in the printing profession. On the expiry of the period of training in India he has to undergo a further training in the United Kingdom for such period as may be deemed necessary. Every scholar, before being employed as an apprentice at the Government central press, has to execute a bond undertaking to repay the total cost of the preliminary training received by him at the central press, if owing to misconduct or otherwise he is not found suitable or if he declines to go to the United Kingdom for further training. The scholarships awarded to these scholars while in the United Kingdom are of the value of £216 per annum *plus* fees not exceeding £12 per annum. Scholars are also provided with second class return passages. Before proceeding to England

scholars have to execute another bond with two sureties undertaking to repay the full amount of scholarship if they fail to return to India when instructed by the High Commissioner for India to do so and to serve the Bombay Government for a period of ten years. A scholar who has completed his training to the satisfaction of the High Commissioner for India is, on his return to India, posted as assistant manager with prospects of promotion to the post of manager of a press and of superintendent, Government printing and stationery. So far only two scholars have completed their training viz. Messrs. C. J. Saldanha and D. D. Mehta, both of whom are employed as assistant managers at the central press. Two apprentices have been sent in August 1933 to England for further training.

The following statement shows the existing scale of pay and the scale of pay under the Indianisation scheme, and that, as revised now, for new entrants :—

	Existing scale of pay.	*Scale of pay under the Indianisation scheme.*	*Revised scale of pay for new entrants.*
	Rs.	Rs.	Rs.
Superintendent, Government printing and stationery.	800—60—1,400 (without free quarters).	1,000—40—1,200 (without free quarters).	750—25—900 *plus* overseas pay if the officer is of non-Asiatic domicile and is entitled to it.
Manager, Government central press.	600—30—900 (with house rent allowance of Rs. 150 in lieu of free quarters).	500—25—750 (with free quarters).	450—20—600 *plus* free quarters or a house-rent allowance of Rs. 100 per mensem in lieu of free quarters.
*Manager, Yeravda prison press.	500—25—750 (with free quarters).	400—20—600 (with free quarters).	350—15—500 *plus* free quarters.
Manager, commissioner's press, Karachi.	450—20—650 (with free quarters).	300—15—450 (with free quarters).	300—15—450 *plus* free quarters.
Assistant managers, Government central press.	400—15—550 *plus* 100 house-rent allowance.	250—15—400 *plus* 75 house-rent allowance.	225—15—360

*The present incumbent Mr. M. V. Joshi is on the scale sanctioned under the Indianisation scheme, viz., Rs. 400—20—600.

Mr. D. K. Pradhan, an apprentice in the photozinco press, was also sent to England in 1926 for a three years' training in photozinco methods and was guaranteed a pay of Rs. 300—10—360 on his return to India after his training.

The Reorganisation Committee specially commend this system of training as suitable for posts requiring qualifications which can only be acquired outside India.

System of accounts.

16. To begin with a schedule was laid down at the Government central press, Bombay, and at the commissioner in Sind's press, Karachi, for the valuation of the various operations such as composing and printing. All work done in the press in a financial year for the various departments of Government and for private bodies financially independent of Government was valued at the scheduled rates and totalled for comparison with the total actual expenditure of the press and a so-called profit and loss statement for the year was thus compiled. This comparison was almost always in favour of the press as the schedule was based on the market rates prevailing at the time and not on the actual cost. In December 1873 Government appointed an accounts officer to examine the press accounts and in the orders which they issued on his report a year later required the inclusion of the value of plant, postal charges, railway freight, leave allowance etc. in the profit and loss account and the exclusion of certain other items such as house-rent and provision for pensions.

This profit and loss account system continued until it was displaced by a more systematic scheme called the "unit cost scheme", first in 1911 at the Yeravda prison press, then in 1913 at the Government central press and in 1916 at the commissioner's press, Karachi. Under this system all work was unitised on the task basis under the various operations involved in the printing industry and the outturn, instead of being assessed in money or time units, was assessed in work units. Labour was divided into productive and non-productive and non-productive labour into supervision and auxiliary, and the distinction was made between productive cost and on-cost. Such charges as rent and pension were now admitted

into the cost. In short, an effort was made to work out the complete cost per unit and thus assist the administration in making proper recoveries on chargeable work, instead of basing them on a standing schedule. It was a complete costing system.

In 1923 the controller of printing, stationery and stamps called a meeting of all superintendents of Government presses at Delhi with a view to introducing a uniform scheme in all the presses in India. As a result of this conference a new costing system was evolved and sanctioned by Government in 1926. It was only a revised edition of the unit cost scheme already in force in the Bombay presses. Its main feature was the introduction of a depreciation fund from which all renewals and replacements of plant were to be met. A depreciation fund is however not inherent in a costing scheme. Depreciation represents the value of the capital cost of plant used in production and the fund is intended to contain an amount sufficient to replace the capital consumed by normal wear and tear. The press can draw on this fund only by budget provision and with the approval of Government. The fund does not admit any addition to plant due to extensions. These have to be provided for separately.

Social welfare work at central press.

17. Games and sports are out of the question for the workmen for want of a recreation ground. The question of assigning a vacant plot on the Kennedy Sea Face for this purpose is under the consideration of Government. With a view to alleviate the financial difficulties of the employees at the central press, particularly the low-paid staff, a co-operative credit society was established in 1918. The society has not attained great success in its principal object of encouraging thrift. But it has done some good and in all genuine cases of difficulty or extreme emergency it stands its members in good stead. In 1928 the employees of the book depôt and the stationery branches were admitted to membership. The society is progressing and has a working capital of over Rs. 50,000. Its main activities are the issue and recovery of loans and the maintenance of a savings bank. The accounts of the society are reported by the registrar, co-operative societies, who audits them annually, to be well maintained. The society has been classed as an urban bank since 1928.

OUTPUT.

18. The amount of printing and publication work done at the central press and the Yeravda prison press in 1932–33 was :—

Serial No.	Units of operations.	Outturn in	G. C. press, Bombay.	Y. P. press, Poona.	Total for 1932–33.
1	Hand composition ..	Pages, f'cap folio ..	40,329	8,731	49,060
2	Monotype „ ..	Do. ..	42,346	....	42,346
3	Linotype „ ..	Do. ..	10,067	....	10,067
4	Type-casting ..	Lbs. (pica type) ..	11,971	....	11,971
5	Stereo-casting ..	Lbs. (finished plates).	120	3,877	3,997
6	Hand presses ..	Impressions, f'cap	80,89,000	2,65,000	83,54,000
7	Machines ..		4,23,47,000	4,01,51,000	8,24,98,000
8	Pressing ..	Sheets ..	20,000	....	20,000
9	Ruling ..	Impressions ..	52,74,000	83,40,000	1,36,14,000
10	Perforating ..	Cuts ..	1,18,000	15,08,000	16,26,000
11	Folding ..	F'cap folio single fold.	1,31,84,000	51,25,000	1,83,09,000
12	Insetting ..	Insets ..	4,19,000	6,64,000	10,83,000
13	Cloth-lining ..	F'cap lining ..	....	92,000	92,000
14	Gathering ..	....	79,49,000	76,46,000	1,55,95,000
15	Collating ..	Forms ..	76,55,000	99,33,000	1,75,88,000
16	Hand-sewing ..	Book H. B. f'cap folio 100 leaves.	19,835	94,845	1,14,680
17	Machine-sewing	Books of 10 sections.	63,377	14,690	78,067
18	Wire-stitching ..	Stitches ..	11,27,000	4,73,000	16,00,000
19	Paging ..	Impressions ..	29,24,000	58,90,000	88,14,000
20	Casing in ..	Books ..	67,948	1,30,061	1,98,009
21	Gilding ..	Impressions ..	16,645	....	16,645
22	Eyeletting ..	Eyelets ..	87,000	5,00,000	5,87,000
23	Envelope-making ..	F'cap thin envelopes.	6,55,000	58,48,000	65,03,000
24	Embossing ..	Impressions ..	7,72,000	28,000	8,00,000
25	Miscellaneous productive time.	Hours ..	18,622	1,279	19,901
26	Rubber stamps ..	Stamps ..	9,330	....	9,330

The work dealt with includes the following :—

Provincial.

I. *Periodical news.*—Weekly *Bombay Government Gazette*, weekly *Bombay Police Gazette*, weekly *Gujarat Patrika* and monthly *Labour Gazette.*

II. *Periodical publications.*—Monthly Indian Law Report, Bombay series, six-monthly civil list, quarterly catalogue of books, annual history of services, annual budgets, annual audit reports and reviews such as the audit report of the Nasik distillery and review of the departmental accounts of the forest department and of the working of the treasuries. Annual hand book on agricultural research. The triennial report on the working of civil hospitals and dispensaries in the presidency. The quinquennial report on public instruction in Bombay.

III. About 54 departmental administration reports, including the general administration report of the presidency, covering about 5,000 pages.

IV. Acts and Bills.

V. Financial and other departmental manuals and addenda and corrigenda thereto.

VI. Public works department technical papers, returns of civil and military buildings and correction slips thereto, forest department working plans, town planning schemes and revision settlement reports.

VII. High court appeals and confirmation cases.

VIII. Audit notes of the local audit department.

IX. Departmental calendars or prospectuses.

X. Special publications, such as the public works department hand-book and the selections from the Peshwas' daftar.

XI. Agricultural bulletins, leaflets and forecast reports.

XII. Co-operative department leaflets etc.

XIII. Information or labour intelligence leaflets and reports.

XIV. Legislative council debates and questions for every day of the sessions.

XV. *Miscellaneous*—

(*i*) Forest department jahirnamas, excise auction sale notices and other sale notices.

(*ii*) Government provident fund schedule for large establishment bills.

(*iii*) Home indents for the medical and public works departments.

(*iv*) Police department notices or jahirnamas.

(*v*) Lists of jurors and assessors.

(*vi*) Question papers of Government high schools, colleges, training colleges and departmental examinations—confidential.

XVI. Government resolutions, memoranda and proceedings, budget notes, gradation lists etc. including confidential notes, orders and reports.

XVII. Government House engagements and dinner lists and plans, menu cards, table cards, band programmes, tour programmes, invitation cards, inventories of furniture etc.

XVIII. Proceedings of the Bombay Medical Council and the Bombay Medical Register.

XIX. Reports of committees and commissions if any.

XX. Electoral rolls and ballot papers for the legislative council elections or elections of the district local boards and taluka local boards.

XXI. Special work for the Bombay development and the Lloyd Barrage.

XXII. Special and destandardized forms of all departments in the presidency including those for the Government commercial undertakings such as Dapuri workshop, Poona water works etc.

XXIII. Binding of library books, files etc. of all provincial officers at Bombay, Bandra, Thana, Poona and Sholapur.

XXIV. Standard forms of all departments including those of Sind except Sind revenue, civil and judicial—numbering about 3,000 different items, loose or in books as the case may be.

XXV. Desk diary.

Central.

I. Monthly statement of average values and circular letter forwarding classified list of cotton goods produced in Indian mills for the *customs department.*

II. Amendments in Marathi and Gujarati to the regulations preventing collisions at sea and salt forms (biglot) for the *salt department.*

III. General letters, statements of budget grants and budget forms for the *audit department.*

IV. List of survey certificates issued by the Government of India, and official log-book (biglot) for the *ports and pilotage department.*

V. Hand bills in Marathi, Kanarese etc. for *scientific departments.*

VI. Government of India notifications and forms in connection with loans for the *currency department.*

VII. Duties of commander of the armed police guard and forms of the *Bombay Mint.*

VIII. Annual establishment list, pension circulars, review of balances, statement of work executed in the Royal Indian Marine dockyard, correction slips to the revised rate book of marine stores, notices to mariners, quarterly R. I. M. lists and annual home indents for the *marine department.*

IX. Pension circulars for the *army department.*

X. Tender forms for the Government *medical stores department.*

XI. Report on the working of Indian Emigration Act for the *political department.*

XII. Binding of (1) Bombay six-monthly civil lists, (2) forms S. 30 and S. 31, (3) library books and observatory records, (4) Indian and English law reports, appeals etc., (5) R. I. M. lists for the accountant general, Bombay, the shipping master, Bombay, the meteorologist, Colaba, Bombay, the registrar of companies, Bombay, and the flag officer commanding, R. I. M. dockyard, Bombay.

XIII. Daily report for the director-general of observatories, Poona.

Work is also done for and at the cost of the Bombay University, the Bombay Municipality, the Bombay Port Trust, the Central Cotton Committee, the Engineering Congress etc.

IV. Publication branch.

History and scope.

19. The date of origin of the Government book depôt is not on record. Up to 1908 it was in charge of a curator and run as a separate department under the director of public instruction. From the 1st January 1908 a number of vernacular publications hitherto dealt with by the book depôt were made over to a private firm for sale, the curator was put on pension and the balance of stock moved to the old medical stores building close to the central press and placed in charge of the superintendent of the press. This arrangement proved very satisfactory and economical as it saved the curator's salary and reduced the cost of forwarding publications from the central press to the book depôt. Besides printing and publication are relative functions and it is in the fitness of things that the two branches should be housed in the same premises and controlled by one agency. This arrangement was intended to be temporary pending the conclusion of arrangements with some private firm. But Government orders dated 10th August 1910 showed that the negotiations to this end had failed. On the recommendation of the 1912 committee this branch was transferred to Poona along with the printing of publications and located at No. 63, Civil Lines, Poona, from the 1st March 1916. Before the move a special effort was made by the department to examine the stock of all publications with a view to elminating any items that were superfluous or obsolete. At the same time the account books and business procedure were examined and revised.

A retired officer was also appointed to overhaul the stock at the book depôt and Government, in an order dated 16th February 1920, decided that publications which have no sale should be disposed of periodically by public auction at the discretion of the superintendent, Government printing.

With the introduction of the reforms the Government of India immediately suspended the free supply of their publications to provincial officers and the provincial Government followed suit. A discount of 25 per cent. was allowed on the Government of India publications which had been hitherto stored for sale by the book depôt. Later the free supply

to the local Government of the reports of central Government offices working on behalf of or under the administrative control of the Bombay Government was sanctioned.

In 1925 when the headquarters of the superintendent, Government printing and stationery, were transferred from Poona to Bombay, the book depôt was moved to the Town Hall. When the new press building at Charni Road was completed, the book depôt was transferred to it. It has since taken over the distribution of the *Bombay Government Gazette*, the Bombay civil list and the history of the services from the central press, and that of the Indian Law Reports, Bombay series, from the Yeravda prison press. The establishment of this branch has been augmented by two clerks transferred from the presses.

V. Stationery branch.

History of stationery office.

20. The 1912 committee recommended that, after the post of superintendent, Government printing, was created, its incumbent, who should have a fairly good knowledge of the paper trade, should take over the supply of printing paper to presses from the stationery office and also take charge of the stationery office. Effect was given to the first recommendation in 1915, with the result that the superintendent, by his expert knowledge, effected a large saving. In 1921 Government sanctioned the transfer of the stationery office to the superintendent, the name of whose post was thereupon changed to "superintendent, Government printing and stationery".

A small stationery office was first started some time in 1834 and located in the secretariat. It was managed by one warehouseman under the control and supervision of the secretary to Government. The departmental work gradually increased and additional establishment was sanctioned in 1846 and from time to time thereafter.

In 1866 the supply of stationery to officers of the Central Provinces was added to the duties of the post. In 1869 officers in Berar and the officers of the public works department in the presidency were authorised to obtain their requirements of stationery from this office, the establishment was increased and its pay revised. In 1888 the distribution of English freight case parcels was entrusted to this office and in 1890 the post of assistant superintendent of stationery on Rs. 350

per mensem was created and the establishment supplemented. In 1901 the supply of drawing materials, rubber stamps and accessories, thumb impression articles etc. to all officers was added and the establishment was again increased and its pay revised. In 1904 the supply of stationery to the officers of the Central Provinces and Berar from this office ceased. In 1908 the post of assistant superintendent was abolished and the control of the department was transferred to the assistant superintendent of stamps, with an allowance of Rs. 200. In 1918 Government sanctioned permanently the direct supply from the stationery office of stationery articles required by revenue offices in the presidency proper and added the necessary additional establishment. After taking charge of the stationery branch in 1921, the superintendent, Government printing and stationery, made a survey of its entire working and came to the conclusion that it was impossible for him properly to supervise the supply of stationery at Bombay with his headquarters at Poona and suggested that all the clerical work of the branch should be transferred to Poona, only the store section remaining in Bombay. A scheme, involving a saving of Rs. 7,300 a year in establishment charges, was drawn up by him and accepted by Government in 1922. The stationery office was originally located in the secretariat building and, as its operations gradually increased, a portion of the Town Hall was also allotted to it. When the control of the stationery branch was transferred to the printing department in 1921, the superintendent brought to the notice of Government the unsatisfactory arrangement of stores owing to inadequate accommodation and Government in 1925 handed over to this department the present building at Charni Road duly repaired and altered and provided with iron storage racks to serve its new purpose. This building was originally built by the development department as a store for tools and plant. It was the acquisition of this building which was mainly responsible for the new Government central press being built side by side with it, with the result that the printing and publication branches are both accommodated in the same building. Thus were completed arrangements which had been under discussion for over a half century.

Growth of the branch.

21. As economy in the supply of stationery was only possible by the rigid scrutiny of demands from indenting officers, a thorough examination of indents was made by the

superintendent. The proposals which he made as a result of this examination were accepted by Government in 1922. To facilitate the verification of annual indents for stationery, model indents for indenting officers, based on the consumption of three previous years, were prescribed in the same year at the suggestion of the department.

In 1921 model indents for standard forms were proposed by this department and accepted by Government. Officers used to purchase many other articles locally in addition to the stationery articles obtained from the stationery office. These purchases were naturally in small quantities of varying quality and at comparatively high prices. Government therefore ordered in 1923 that the supply of such articles should be entrusted to this department, so that by standardizing qualities and buying requirements in bulk, economy should be effected. All local purchases were stopped in May 1925 and the list of items in the stationery indent form was increased from 61 to 158.

In 1924 the supply of stationery, drawing materials, mathematical instruments etc. to all officers of the central Government in the presidency (numbering about 300) was transferred from this branch to the central stationery office, Calcutta, and in the same year the supply of stationery to all subordinate offices of the police department (about 500) and to those of the Lloyd Barrage was added to this branch.

A mechanical workshop for repairing typewriters, duplicators etc. opened in 1922 as an experimental measure was found to result in large savings to Government and was ultimately sanctioned permanently in April 1925.

In addition to the above, the supply of the following articles was entrusted to this branch from time to time, without any addition being made to its establishment :—

(1) Woollens to all peons and amaldars of the revenue and judicial department in the Bombay presidency	1921
(2) Peons' brass badges	1925
(3) Stationery to public conveyance fund (police department)	1926
(4) Bicycles	1926
(5) Safes, despatch and cash boxes etc. ..	1926
(6) Stationery to section-writers in district courts	1927
(7) Clocks, time-pieces etc.	1928

(8)	Bicycle accessories (about 200 items) ..	1929
(9)	Kamblis and umbrellas	1930
(10)	Drawing materials to public works officers	1930
(11)	Stationery and typewriter accessories to section-writers in sub-courts ..	1930
(12)	All articles of peons' liveries ..	1930

To the above list may be added the supply of rubber stamps and accessories added in 1931. For this one clerk was transferred from the central press to this branch. The duty of scrutinising demands for jail-made articles was also added to the branch's activities in 1930.

Organisation of the branch.

22. In 1929 Government appointed an accounts officer to report on the possibility of effecting a reduction of expenditure on the purchase of stationery and other stores supplied by the stationery office. The orders passed by Government on his proposals were briefly that :—

(*a*) The superintendent should obtain in future contract rates from the controller of printing and stationery and take them into consideration in dealing with his contracts. Government also required the complete list of quotations to be submitted to them by the superintendent when making proposals for the approval of contracts.

(*b*) The director of industries should make surprise checks of the stationery stores against the approved samples.

(*c*) Heads of departments should review the model indents of all officers subordinate to them with a view to a reduction of the scale of supply. The responsibility of controlling officers in respect of indents for stationery and printing was also emphasised.

(*d*) Non-stationery stores should be despatched with stationery articles in one consignment to save freight.

(*e*) Home indents should be submitted to the director general of stores, London, in December or January as soon as the departmental budget was accepted by the finance department, to facilitate comparison of probable expenditure with the budget allotment.

The above orders are being strictly followed.

STORES PURCHASE.

23. The printing and stationery department purchases large quantities of stationery, stores and paper. The procedure to be followed in effecting these purchases has been laid down by Government.

The policy of Government in respect of these purchases is to encourage the development of indigenous industries consistently with economy and efficiency. In making purchases preference has to be given to articles falling within the following categories in the following order :—

(*i*) Articles of entirely Indian manufacture made of Indian material.

(*ii*) Articles of Indian manufacture made from foreign material.

(*iii*) Articles of foreign manufacture purchased by the Indian stores department, London, and

(*iv*) Articles of foreign manufacture imported into India.

Articles falling within the first two classes are purchased by the department by annual contract in respect of large requirements and in other cases by tender, preference being given to jail-made articles when the quality is acceptable and the rate reasonable. Copies of all indents on the director general for articles of foreign manufacture are submitted to the Indian stores department, Delhi, for scrutiny as to whether any of the articles indented for are available in India. Foreign articles imported into India are bought only if economical in quality and rate or to meet urgent requirements, not foreseen and provided for in the home indent, or requirements too small to be ordered from the director general of stores, London, and always provided that articles of Indian manufacture of the required quality are not available in the market at reasonable rates.

It has also been laid down that—

(*a*) Articles of perishable nature including ferro-gallic linen, ferro-prussiate paper etc.,

(*b*) Metals,

(*c*) Printing and duplicating inks,

(*d*) Typewriter and other accessories, and

(*e*) Cheaper articles of common use required in small quantities

should always be purchased in India, whether of Indian or foreign manufacture, provided the rate and quality are satisfactory. For similar reasons inter-departmental purchases of Indian or foreign manufactured articles are also admissible.

The superintendent may purchase stationery articles and printing stores outside the contracts which are sanctioned by Government to the extent of Rs. 500 at one time and place in the case of foreign manufactured articles and Rs. 1,000 in the case of articles of Indian manufacture with or without competitive tenders as the case may be. Purchases in excess of these monetary limits as well as any departure from the authorized procedure may not be made without the sanction of Government.

Expenditure of department.

24. When the stationery office was handed over to the printing department in 1921 the expenditure of the branch was Rs. 14,15,235. By the close scrutiny of indents and by standardizing the qualities of articles the expenditure was brought down to Rs. 11,82,132 in 1923-24. The real start with the supply of the additional articles was made in 1926-27 and the actual cash expenditure including adjustments against the budget grant incurred by this branch from that year to 1931-32 is detailed below, side by side with the expenditure incurred by the printing branch of the central press and the Yeravda prison press :—

	Printing.	Stationery.
	Rs.	Rs.
1926-27	6,33,505	9,96,591
1927-28	6,69,841	7,15,690
1928-29	6,76,816	7,77,420
1929-30	6,36,984	7,46,477
1930-31	5,09,937	6,71,075
1931-32	5,43,551	6,17,551
1932-33	4,86,013	5,92,291

The appreciable fall in the expenditure is mainly due to the endeavours of the department in (1) purchasing raw material and stationery articles from the cheapest source, (2) substituting suitable cheaper paper for printing standard and special forms and other work, (3) substituting cheaper paper for writing purposes, and (4) rigidly scrutinising demands of officers for every kind of work. In fact, no indents for stationery articles or printing work are entertained unless their

necessity is first established. This, of course, involves considerable work, but it is cheerfully undertaken in the interest of the department. The reduction of expenditure under printing is also partly due to retrenchment of the establishment. A further reduction of stationery expenditure is expected in 1933-34 owing, among other things, to a 5 per cent. cut in stationery indents imposed at the suggestion of the Reorganisation Committee and estimated to yield a saving of Rs. 31,000 a year.

VI. Future organisation.

Scope for further improvements.

25. As a result of the steady pursuit of economy in recent years and of the fall in the cost of materials, expenditure on printing and stationery has shown a welcome decrease.

Apart from the recruitment of staff on reduced salaries, a general matter which concerns all departments, Government have no reason to believe that there is any considerable scope for economy now in the organisation of the department itself. If the need of employing jail labour did not enter into the question, it is possible that it would be found advantageous to close the Yeravda press and concentrate the operations of the department administered by the superintendent, Government printing and stationery, in one place, especially if the present tendency towards reduction of work is accentuated, but the requirements of the jail department place this question outside practical politics at present.

In respect both of printing and stationery the department is a service department and, though it has assisted Government in securing an economical system of indents, it is at the mercy of every indenting officer.

Orders of Government prescribe in detail what may and what may not be printed. All publications have been recently scrutinised and among economies which have been secured are the abolition of the weekly report on Indian newspapers and the reduction of issues of the civil list from four to two a year. Further, in accordance with the recommendation of the Reorganisation Committee, Government have recently ordered a triennial review of all publications in respect of—

(*i*) the necessity for their continuance ;
(*ii*) the possibility of reducing their size ;
(*iii*) the possibility of reducing their free circulation :
and (*iv*) the possibility of reducing the periodicity of their issue.

The extent of the free issue of Government publications was largely curtailed last year. For instance, five copies of most Government publications are now sent to the legislative council library instead of copies being sent to each individual member of the legislature. The question of revising this arrangement and making official publications more freely available to members of the legislature is under the consideration of Government.

Waste in the use of stationery articles can only be eliminated with the co-operation of the officers of all departments. No check can be so effective as the internal check of the indenting officer. A small saving in every individual indent may have an important result in the consolidated accounts of a department.

DEVELOPMENTS, ECONOMIES ETC. CARRIED OUT DURING THE LAST 5 YEARS.

26. *Re : Stationery office.*—The allotment of the present building for the stationery office in 1925 has enabled that office to arrange all stores systematically, which has resulted in the reduction of establishment by 4 lascars and 2 packers. Further, by the introduction of labour saving devices and also by the systematic arrangement of work this office has been able to undertake a large amount of additional work without any extra clerical assistance. Even with the increased work the expenditure is going down year after year, which proves that the stationery office is being run on the most economical and efficient lines. This has been admitted by Mr. P. G. Shah, special officer appointed by Government in the year 1929. He suggested that the stock in hand should be kept as low as possible, and action in that direction has been taken. He also recommended that the model indents for stationery articles should be revised, and this has been done. Further, by the discontinuance of the Hammallage contract and the introduction of a lorry for transport of goods from both the offices, i.e. stationery office and the Government central press, a recurring saving of about Rs. 750 is effected.

Re : Printing industry.—The important factor in the history of the printing industry during the last few years was the completion of the new building of the Government central press in the Charni Road Garden and the centralization and reorganisation of the department after the building was occupied in September 1927. In this re-arrangement all the special forms and non-urgent book work which were previously transferred to the Yeravda prison press were brought back

to the Government central press and the establishment at both the presses was re-adjusted and revised to suit. With a view to economy all litho work that used to be done at the Government central press was transferred to the Government photozinco office, Poona, after the reorganisation of the department and the litho section closed down altogether since 1st April 1930. With the same end in view the multigraph section at the Government central press has been abolished from 1st March 1932. This resulted in a saving of about Rs. 5,000 annually. A further reduction of establishment effected in 1932 gave a saving of Rs. 5,760. The post of mono key-board mechanic has also been abolished from 1st July 1933, resulting in a saving of Rs. 1,500 per annum. The Urdu section, which was before borne on the salaried establishment, has been transferred to the piece-work section from 1st March 1933.

Government had sanctioned the grant of bonus at special rates for the first year of the probationary period to the girls employed in the mono section of the Government central press. This special concession was recommended in 1920, as at that time it was difficult to obtain this class of labour. As the same difficulty is not now experienced the grant of the concession has been discontinued from 1st March 1932. Further, special leave rules to regulate the leave of permanent salaried industrial employees of the Government presses below the grade of the assistant manager, who were not classed as "Inferior", have been introduced with effect from 21st September 1933. The question of fixing revised scales of pay of the technical establishment of Government presses is under consideration.

Commissioner's printing press, Karachi.

27. So far as this Press is concerned, there have been no important reforms and developments during the last five years, except the following :—

(*i*) The confidential room of this press has been supplemented by a small machine worked by electricity since May 1933 and the printing of all confidential works, including question papers of high schools, departmental and educational examinations, the increase whereof in recent years both in the number of subjects and copies to be printed having been considerable, is now undertaken exclusively in the confidential room; as it should be.

(*ii*) *Retrenchment.*—Owing to general reduction in printing of form work caused by the revision of standard and special forms and later by the stoppage of work from the Indo-European Telegraph department, due to its abolition, it was deemed necessary to reduce the supervising staff, and the appointment of overseer in the grade of Rs. 125—5—175 was abolished by Government with effect from May 1931. In view of the recommendation of the Reorganisation Committee the post of assistant manager in the grade of Rs. 200—10—300 has been abolished with effect from 1st July 1933 (*vide* paragraph 7 of the review).

XII—DEPARTMENT OF INFORMATION AND LABOUR

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XII—DEPARTMENT OF INFORMATION AND LABOUR

I. Information Office.

Scope of activities.

1. The information office was founded in 1920 as a result of the recommendations of the Parliamentary Joint Select Committee, which emphasized the value of publicity in relation to administration. During the first few years of its existence the office used to issue large numbers of leaflets in the vernaculars explaining Government's administration and activities, but in 1924, as the result of retrenchment, these were discontinued and the activities of the office are now confined to the issue of press notes and the distribution of information on a large variety of subjects in response to oral and written enquiries. Leaflets however still form a part of the work. During the last civil disobedience campaign about $2\frac{1}{2}$ million copies were issued and recent leaflets have dealt with the communal award and the results of the Round Table Conference. A reading room and reference library which includes an information bureau and press cuttings is maintained and representatives of the press and the public make considerable use of the office. Summaries of all important Government publications, orders and resolutions are prepared and issued to the press, and the office does provide a definite link between Government and the public. The staff of the office consists of an office superintendent, a librarian, who looks after the secretariat library in addition, a stenographer and two clerks.

Apart from press notes, close personal contact is maintained with the press, several of whose representatives use this office as the chief source of information for matters relating to Government as well as for correcting false reports. Many articles have been written by this office for particular papers.

There is a growing number of foreign correspondents who visit this country and who are personally interviewed and provided with information and the Government point of view is also explained to them.

District officers are assisted with material for propaganda whenever it is required.

The only criticism which the Reorganisation Committee made on this department is that the duties of information officer have no connection with those of labour officer. They proposed that on the appointment of a commissioner of labour the duties of the director of information should be transferred to the oriental translator, that officer being relieved of his duties as secretary to the civil and military examination committee. Government, however, when they created the post of commissioner of labour shortly after the Reorganisation Committee had reported, decided to combine the post with that of director of information.

Secretariat library.

2. The secretariat library is an official reference library of 10,000 volumes lodged in several rooms of the secretariat maintained for the use principally of the secretariat departments. It was removed from the administrative control of the separate department of the secretariat and placed under the director of information on 1st July 1924. This library has since been card indexed. The librarian in charge of the information office reading room and reference library is librarian of this library also.

Record office.

3. The administrative control of the secretariat record office was transferred to the director of information with that of the secretariat library in 1924. The records are lodged on the whole ground floor and the western wing of the first floor of the Elphinstone College building. The record office contains some three lakhs of publications in addition to the records of the secretariat departments and files of newspapers, specifications of patents etc. It receives from the secretariat library publications which are no longer required for constant reference. Its records are continually growing to the extent that new receipts exceed the number of old records destroyed. The records deposited during the calendar year 1933, for instance, numbered 148 books, 20,124 files and 17,699 printed Government and other publications.

Much of the material in the record office is of historical value. A conspectus of these records is given in Mr. A. F. Kindersley's "Handbook of the Bombay Government Records"

(Government Central Press, Bombay, 1926). No serious student of Bombay history since the arrival of the British neglects these records. The number of research students who resort to the record office is about 25 a year. The office is badly in need of further rearrangement, better cataloguing and the destruction of unnecessary materials; but these things mean money which Government are unable to afford at present.

II. Labour Office.

Scope of activities.

1. The activities of the labour office, of which the commissioner of labour is in charge, fall under the following heads :—

(1) Prices and cost of living,
(2) Wages and hours of labour,
(3) Rents,
(4) Economic and social conditions of the people,
(5) Unemployment and welfare,
(6) Industrial disputes,
(7) Trade unions,
(8) Other industrial and labour intelligence including absenteeism and labour turnover,
(9) International labour intelligence,
(10) Labour legislation,
(11) The *Labour Gazette*,
(12) The library and maintenance of press cuttings,
(13) Miscellaneous enquiries, and
(14) Administration.

Prices and wages.

2. The medium for giving publicity to these various activities is the *Labour Gazette*, the only publication of its kind in India and, it is believed, in the East. The *Labour Gazette* is published monthly and in it will be found statistics relating to the movements of wholesale prices and retail prices in Bombay and other centres in the presidency proper and Sind. Movements of prices in other countries and comparative tables of index numbers are also published in the *Gazette*. The labour office compiles and publishes cost of living index numbers for Bombay,

Ahmedabad and Sholapur, and an article on the cost of living index numbers for industrial workers in India and Burma is published regularly every month in the *Labour Gazette*. Three wage censuses in the textile industry have been carried out so far and the results of the last, taken in 1926, were published in 1930. Proposals for holding a general wage census covering all perennial and seasonal factories in the presidency have been approved by Government. Statistics relating to agricultural wages are also compiled and those for the years 1900–1922 were published in the form of a special report in 1924. Special enquiries have been conducted with regard to wages of clerical labour in Bombay city and for municipal workers, press workers, peons, etc. Articles on prices and wages are compiled annually for the Bombay general administration report on the basis of information supplied by revenue officers. In 1925 the wages portion of the old taluka form no. XVIII, which used to be submitted monthly to the director of agriculture by the mamlatdar of every taluka in the Bombay presidency, was separated from the old form and, after considerable expansion, was put into a new special form called taluka form no. XVIII-A and this form has since then been submitted direct to the labour office, which tabulates the figures annually for simultaneous publication in the *Labour Gazette* and the general administration report. Rent enquiries have been conducted in Bombay, Ahmedabad and Sholapur from time to time for revising the cost of living index numbers for those centres.

Economic and social conditions of the people.

3. The collection of family budgets has been a feature of the work of the labour office. These budgets not only provide data for the cost of living index but also furnish much information regarding economic and social conditions and it would appear that the labour office in attaching considerable importance to this branch of its activity has been wisely advised. In this connection it would not be out of place to quote the remarks of the Royal Commission on Indian Labour :—

> "We have already referred to the limited information available in respect of the standard of living of the industrial classes, and we have stressed the importance of taking steps to remedy the present deficiency. There seems to be an impression in some quarters that the collection of such statistics is a luxury in which only rich countries or provinces should indulge. This, in our view, is a profound

error. It is on facts that policy must be built, and so long as there is uncertainty as to the facts there must be confusion and conflict regarding the aim. The absence of accurate statistics regarding the life of the workers constitutes a serious handicap to intelligent efforts to better their condition." (p. 445.)

For family budget work the labour office has three lady investigators. A family budget report relating to Bombay city was published ten years ago and a very comprehensive new family budget enquiry was started in May 1932 in connection with the revision of the cost of living index. This enquiry has now been completed and the results are being tabulated. Reports based on results of the Sholapur and Ahmedabad enquiries have also been published. An enquiry into the family budgets of cotton mill workers in Bombay was made in 1930 and the results were published in the January 1931 issue of the *Labour Gazette*. A special enquiry into the social and economic condition of workers in match factories in the Bombay Suburban district was conducted between July and September 1932 and the results were published in the June 1933 issue of the *Labour Gazette*. An enquiry into the family budgets of the middle classes in Bombay city was also conducted in 1922–24 and the results were published in the form of a special report in 1928. The results of these enquiries are extensively used by those interested in the subject and it would appear from the following remarks of the Labour Commission that the labour office is regarded as somewhat of an authority on the question of family budget enquiries :—

"Enquiries of value (regarding income and expenditure) have been conducted by the Bombay Labour Office in Bombay, Ahmedabad and Sholapur and by the Labour Statistics Bureau in Rangoon.....The preliminary difficulties (regarding training of investigators) have been faced already by the Bombay Labour Office, and they have evolved a technique which can be studied with advantage by others who propose to embark on similar enquiries. We recommend that, wherever possible, investigators should undertake a course of training with that or some other office which has conducted a successful enquiry." (pp. 447–48.)

Two Governments have so far deputed officers to the labour office to study its methods, namely, the Governments of the Central Provinces and of Bihar and Orissa.

4. As regards unemployment, a special investigation was made by the labour office into the question of unemployment among the middle classes and the results were published in the form of a special report in 1927.

An article based on the results of an enquiry into the incidence of sickness among cotton mill operatives in Bombay city conducted between July and September 1930 has been published in the February 1931 issue of the *Labour Gazette* and the data resulting from the continuation of the enquiry for a period covering about a year were tabulated and a report based thereon was published in the March 1933 issue of the *Labour Gazette.*

An enquiry into infant mortality among working classes in Bombay city was conducted in 1930 and the results were published in the January 1931 issue of the *Labour Gazette.*

Industrial disputes.

5. The policy of the labour office hitherto has been not to interfere in industrial disputes, but to place all the information it has collected at the disposal of either party or of any committee which may be appointed. The Trade Disputes Act, 1929, however, gives to Government the power, which it did not possess before, of interfering in a trade dispute by the appointment of courts of enquiry, etc., and Government may consider it desirable to set up machinery for dealing with a dispute in its early stages, just as the Ministry of Labour, through its conciliation officers, has done in England. The labour office would be the obvious department to do any work that may be required in this connection; and, in fact, the Labour Commission has made the following definite recommendation on the subject :—

> " In concluding this chapter, we would emphasize the fact that the most useful form of State assistance in dealing with trade disputes is scarcely employed in India. The official outlook, like that of the public, has been concentrated largely on the final stages of disputes. As a rule committees and tribunals have been set up only when disputes had attained considerable magnitude, and when a strike was either imminent or in being. Individual officers, on the comparatively rare occasions when they have intervened, have also waited, as a rule, till the later stages. It is at the climax of a dispute, when the parties have completely failed to reach a common standpoint, that settlement is most difficult. At this stage public opinion tends to demand

action. Government which has been either unaware or a passive spectator of the earlier stages, may be compelled to intervene, and such intervention nearly always partakes more of the nature of arbitration than conciliation. It is in the earlier stages that assistance of the right kind can be most valuable.....There are frequent occasions when the tactful and experienced official can assist by bringing the parties together, or by putting before either party aspects of the other's case which may have been overlooked, or even by suggesting possible lines of compromise. India has tried to copy the less valuable part of the machinery employed in Great Britain whilst ignoring the most valuable part. There, less reliance is placed on *ad hoc* public enquiries of the kind contemplated by the Indian Trade Disputes Act than in the efforts of conciliation officers and others to bring the parties privately to agreement. The need of qualified officers to undertake conciliation is greatest in Bengal and in Bombay.....The existence of such officers should give an additional advantage in that they will be able to keep Government in close touch with disputes in their earlier stages.....An expert officer who had followed a dispute in its earlier stages would be able to take a wider view of the whole situation than those whose interest is rightly concentrated on a special aspect of it, namely, its relation to public security. Even when the expert officer's efforts to secure a settlement were unsuccessful, he should be in a position to give wise advice to Government as to the stage at which it could bring its influence to bear, either privately or by the appointment of a statutory Board or Court. We consider that every Government should have an officer or officers for this purpose." (pp. 347–48.)

Statistics relating to industrial disputes are collected and published in the *Labour Gazette* every month. Government have decided that it is not possible for the labour office to undertake conciliation work without an increase of staff and that therefore action on this recommendation of the Royal Commission must be postponed.

Miscellaneous duties.

6. The labour office also publishes in the *Labour Gazette*, quarterly, information regarding existing trade unions in the presidency. Other information published in the *Gazette* relates to the employment situation, as to which the labour office obtains statistics relating to absenteeism on special

schedules from large employers of labour, details of proceedings in cases under the Workmen's Compensation Act, judgments in workmen's compensation cases, letters from the Government of India inviting public opinion on proposed legislation and similar matters, Bills and Acts affecting workers and industries, etc. Statistics of cotton mill production are also compiled, but the detailed publication of such statistics in the *Labour Gazette* has recently been discontinued owing to the necessity of curtailing the size of this publication. The labour office keeps in close touch with the work of the International Labour Office and reproduces in the *Labour Gazette* all information of interest to India published by that office.

The labour office from time to time undertakes special statistical enquiries for Government, such as the rental enquiry (1924); salaries of clerks (1931); headquarters allowances (1932); and compensatory allowances at Thana (1933).

Ad hoc enquiries are also made by the labour office to collect statistical and other information to enable Government to answer questions relating to labour in the legislative council.

The labour office also deals with cases concerning legislation on labour matters which are referred to the Government of Bombay by the Government of India or arise in the presidency itself and in this respect performs many of the functions of a department of the secretariat. The labour office has therefore to be familiar with industrial legislation in other countries. In the past year or so it has dealt with proposed amendments of the Workmen's Compensation Act, Land Acquisition Act, the Indian Mines Act and with proposed legislation concerning a Tea Districts Emigrant Labour Act, a new Factories Act, the besetting of industrial establishments for the recovery of debts, payment of wages, exemption of salaries and wages from attachment, and the fixation of the hours of work of dock labourers. Pending cases include legislation proposed on the arrest and imprisonment for debt, periods of wage payment and the revision of the Trade Disputes Act, 1929. The labour office similarly deals with questionnaires and references received from the International Labour Office and transmitted by the Government of India to the local Government for their views.

Library.

7. The labour office has a library dealing with economic, labour and industrial problems which is open to research

workers. Many research workers use it and it has the reputation of being one of the best in the presidency. The library also contains copies of the more important periodicals received from the various Ministries of Labour, the International Labour Office, etc. It also contains files of classified newspaper cuttings on various subjects connected with labour and industry.

Staff.

8. The staff of the labour office consists of two assistant commissioners at Bombay and one investigator at Ahmedabad who are all gazetted officers. There are also three lady investigators, two statistical assistants, three senior clerks, eight junior clerks, one stenographer, two typists, a cashier and a despatcher.

Commissioner of Labour.

9. As regards the organization and functions of the labour office, the following remarks of the Labour Commission may be of interest :—

> "The Bombay Labour Office represents the sound nucleus of a labour department. Here some regard has been paid to the principle of continuity in the Director's appointment, and that officer, in addition to being responsible for both statistics and intelligence, is Commissioner for Workmen's Compensation and Registrar of Trade Unions. He is thus in a position to act as expert adviser to Government on labour matters. But he is not concerned with the administration of the Factories Act, nor has he (or any other officer) been expected or permitted to act generally as a conciliation officer in trade disputes.....We recommend, therefore, that in every province with the exception of Assam there should be a Labour Commissioner..... The Labour Commissioner should be a selected officer and he should hold the appointment for a comparatively long period, preferably not less than five years." (pp. 452–53.)

The Reorganisation Committee strongly endorsed this advice in paragraph 499 of their report and recommended that the administration of the factory and boiler departments should be transferred from the collector of Bombay to a labour commissioner. Government have accepted this recommendation and appointed a commissioner of labour for the presidency with effect from 1st May 1933. He is in charge of the labour office and is the administrative head of the factory and boiler departments. He is also commissioner under the Workmen's

Compensation Act and registrar of trade unions under the Indian Trade Unions Act. As stated in the first section of this review he is also director of information.

The transfer of the administrative control of the factory and boiler departments from the collector of Bombay to the commissioner of labour facilitated the combination of the revenue charges of Bombay and the suburban district under one collector. The interaction between factories work, labour work and workmen's compensation work is so great and continuous that the labour office has already experienced great benefit from this rearrangement. Government propose shortly to transfer the factory and boiler departments from the Old Custom House where they now are to the Secretariat alongside the labour office.

Reports published.

10. The following is a list of the reports, etc., published by the labour office in addition to the *Labour Gazette* :—

1. Report on an Enquiry into Working Class Budgets in Bombay, 1923.
2. Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry, 1923.
3. Report on an Enquiry into Agricultural Wages in the Bombay Presidency, 1924.
4. Report on an Enquiry into the Wages and Hours of Labour in the Cotton Mill Industry, 1925.
5. Report on an Enquiry into Middle Class Unemployment in the Bombay Presidency, 1927.
6. Report of the Labour Office Enquiry into Deductions from Wages or Payments in respect of Fines, 1928.
7. Report on an Enquiry into Middle Class Family Budgets in Bombay City, 1928.
8. Report on an Enquiry into Family Budgets of Cotton Mill Workers in Sholapur City, 1928.
9. Report on an Enquiry into Working Class Family Budgets in Ahmedabad, 1928.
10. Report on an Enquiry into Wages and Hours of Labour in the Cotton Mill Industry, 1930.

Other reports could have been published but in the interests of economy have been issued not as separate publications but in an abridged form in the *Labour Gazette*.

The following is a list of such reports :—

1. An enquiry into wages of peons in Bombay City (published in March 1923).
2. An enquiry into rentals in Bombay (published in October 1924).
3. An enquiry into maternity cases among women operatives in the Bombay mills (published in December 1924).
4. An enquiry into welfare work in the Bombay cotton mills (published in September and October 1924).
5. A special enquiry into agricultural wages and prices (published in January and February 1925).
6. An enquiry into distances between mill operatives' home and place of work (published in March 1925).
7. An enquiry into the food of the worker (published in April 1925).
8. An enquiry into the condition of the children of Bombay mill operatives (published in April 1925).
9. An enquiry into creches in Bombay (published in May 1925).
10. An enquiry into Ahmedabad working class rents (published in July 1925).
11. An enquiry into wages of municipal employees and workers within municipal limits (published in July 1925).
12. An enquiry into rentals in Bombay for tenements owned by public bodies (published in September 1925).
13. An enquiry into clerical wages in Bombay City (published in February–May 1926).
14. An enquiry into Ahmedabad mill chawls (published in September 1926).
15. An enquiry into creches in Ahmedabad (published in December 1926).
16. An enquiry into welfare work in the Bombay Presidency (published in January 1927).
17. An enquiry into house rents in Ahmedabad (published in July 1927).
18. An enquiry into length of service of cotton mill operatives in Bombay (published in January 1930).

19. An enquiry into movements of population between Bombay and the West Coast (published in March 1930).
20. An enquiry into maternity benefits paid in the cotton mills in Bombay and Ahmedabad (published in April 1930).
21. An enquiry into dining sheds in Ahmedabad mills (published in September 1930).
22. An enquiry into family budgets of cotton mill operatives in Bombay (published in January 1931).
23. An enquiry into infant mortality among working classes in Bombay City (published in January 1931).
24. An enquiry into incidence of sickness among cotton mill operatives in Bombay (published in February 1931).
25. An enquiry into refreshment rooms in Ahmedabad (published in February 1931).
26. An enquiry into working class house rents in Bombay (published in May 1931).
27. An enquiry into wages and hours of work in printing presses in Bombay City (published in June 1931).
28. An enquiry into mill chawls in Ahmedabad (published in September 1931).
29. An enquiry into incidence of sickness among cotton mill operatives in Bombay City (published in March 1933).
30. An enquiry into rents paid by the working classes in Bombay City in 1932 (published in April 1933).
31. An enquiry into the Socio-Economic conditions of workers employed in match factories in the Bombay Suburban District (published in June 1933).

III. Registrar of Trade Unions.

The commissioner of labour and director of information is also registrar of trade unions, one of the assistant commissioners being assistant to the registrar. Unions may be registered under the Trade Unions Act of 1926 and the tendency of employers is only to recognise registered unions. The number of registrations effected up to now is 75, and the number of unions standing on the register at present is 48 out of 104 unions in the presidency, by far the largest number in any province in

India. Applications for registration have to be scrutinised and the rules checked in order to see that they comply with the Act. Annual returns have also to be examined and any changes in rules, name and address have to be registered. This has involved a good deal of personal interviewing in addition to lengthy correspondence, because it has been the policy of Government to give every possible assistance to trade union officials. There is no separate staff for the registrar.

The office of the registrar of trade unions also compiles annual administration reports in connection with the working of the Trade Unions and the Trade Disputes Acts.

IV. Workmen's Compensation.

Having regard to the importance of Bombay as an industrial province, it was decided to appoint a full-time commissioner to deal with cases arising under the Workmen's Compensation Act, 1923, in the more important industries and industrial centres of the presidency and this policy has been warmly endorsed by the Whitley Commission and recommended for general adoption in all provinces. The jurisdiction of the commissioner for workmen's compensation, Bombay, now covers Bombay city, Bombay Suburban district and the districts of Ahmedabad, Broach, Surat, Khandesh and Sholapur. It also covers the B. B. & C. I. and the G. I. P. Railways in the Bombay presidency. The commissioner also deals with all cases arising in the presidency to which the hydro-electric companies managed by Messrs. Tata Sons Ltd. are a party. His jurisdiction, therefore, covers the greater part of the industrial areas of the presidency. For the rest, ex-officio commissioners have been appointed. These are judges of the small cause courts where they exist and in other cases the subordinate judge for the area. The ex-officio commissioners have, however, very little work under the Act and practically the whole administration of the Act falls on the commissioner, Bombay. The full-time commissioner first appointed under the Act was a practising barrister. In April 1928 he was promoted to act as a district judge and the officer in charge of the labour office, who is also a barrister and had had some experience of workmen's compensation in England, has been performing the duties of commissioner in addition to his other duties. He hears disputed cases, decides the amount of compensation, distributes money to the dependants and registers agreements. In addition he has been invested in some instances with wide discretionary powers under the Act.

He has power to refuse acceptance of agreements (section 28) and it has been pointed out by the Government of India that such provisions as those contained in section 6 and section 11 (4) require the exercise of judgment in matters in which the law itself gives him little assistance. Moreover, the intention of the Act is that the commissioner should not content himself merely with the decision of such disputes as come before him in his judicial capacity. He has to take a part in preventing the occurrence of disputes and also to be generally responsible for the protection of the rights of the parties. When a dispute arises, he is empowered, if necessary, to visit the place of occurrence and settle the matter on the spot. He is also responsible for preparing the annual administration report on the working of the Act with the consolidated returns under section 16.

For the calendar year 1932, 282 applications came before the commissioner, of which 126 were contested. In addition to that 277 agreements were dealt with under section 28. Compensation to the amount of about Rs. 1,20,000 was paid into the commissioner's account and distributed to injured workmen or their dependants.

The commissioner is also authorised to invest money on behalf of women or persons under legal disabilities either in Government securities, post office cash certificates or the post office savings bank. By the end of 1932 there were 58 accounts open in the post office savings bank of which 8 accounts were opened during the year.

The staff of the workmen's compensation office consists of one head clerk, one junior clerk, a typist and a process server.

The amended Workmen's Compensation Act which has been passed by the central legislature and will take effect from 1st January 1934 will, it is estimated, increase by 50 per cent. the number of workers coming under the Act. This will mean a corresponding increase in the work of the commissioner and his staff and may entail some re-organisation of the existing system under which the Act is administered and some increase in staff.

V. Factories and Boiler Departments.

General.

1. The commissioner of labour has taken the place of the collector of Bombay in respect of these two departments. His functions are roughly those of a head of a department and

are mainly confined to matters which involve the orders of Government or the exercise of such financial and other control under the Bombay Civil Service Regulations and other rules as has not been delegated to the chief inspectors. The chief inspectors have complete control of the technical side of the work of their departments. The realignment of the factory department with the labour office has resulted in some correspondence being short circuited and some duplication being eliminated. The chief advantage is the extra insight and the uniformity of policy which the union of departments engaged on parallel work brings about.

Factory department.

2. The administration of the Factories Act with its protective provisions regarding hours of work, employment of women and children, safety, health and sanitation is the main function of the factory department. But the administration of the Bombay Maternity Benefit Act and Cotton Ginning and Pressing Factories Act has also been assigned to it.

The number of factories subject to the Factories Act has steadily risen whilst the expanding nature of Indian industry has, year by year, added to the complexity of factory administration.

An attempt is being made to tackle the problem of accident prevention from the educative standpoint. The co-operation of the textile and labour interests have been secured and illustrated articles on accident prevention are regularly sent to the magazines published by them. Interest has been taken in the recently formed Safety First Association on its industrial side. The first poster issued by this association is a link with the activities of the department in furthering accident prevention by educational measures. Assistance in the production of safety posters has also been given to the Red Cross Society, employers, and an insurance association.

Despite the financial depression, many factories have spent large sums on air conditioning plants whereby working conditions have been revolutionised. The department has continued to do pioneering work in connection with the wet kata thermometer and the value of this instrument as a comfort meter is generally recognised throughout the textile industry. It has been possible by a link with the Bombay Presidency Health Association to arrange a series of health exhibitions for a very large number of factory employees.

The deterioration in the economic conditions in the mofussil has necessitated the institution of a greater number of surprise visits and prosecutions to ensure that the exploitation of labour is at least kept within reasonable dimensions.

The provisions of the Bombay Maternity Benefit Act are being increasingly taken advantage of by women employees, and despite a decrease in the number of women employed, there has been an increase in the number of benefits paid. Administrative difficulties in connection with this Act have been considered and an amending Bill has been introduced in the legislative council.

The examination of plans submitted by factory owners under the requirements of the Cotton Ginning and Pressing Factories Act has led to the erection of much better ventilated concerns in the cotton ginning industry, whilst co-operation with the Bombay Municipality has enabled the department generally to raise standards in the new factories in Bombay. There is an increasing tendency for prospective factory owners to consult and accept the advice of the department before new factories are built or occupied.

Staff of the department.

3. The full-time staff consists of a chief inspector, three inspectors, a lady inspector, and two assistant inspectors, whilst two certifying surgeons who are posted in Ahmedabad and Bombay perform duties connected with the examination of persons of protected age desirous of working in factories in addition to duties under the health and sanitary sections of the Factories Act.

Economies.

4. The Reorganisation Committee recommended the abolition of one post of assistant inspector and the placing of the certifying surgeon's post, Bombay, on a part time basis. Effect has been given to the former recommendation, while the certifying surgeon, Bombay, has accepted reduced pay and has retained the full-time character of this post. By this means his services remain available for inspection on the medical side.

Steam boiler and smoke nuisances department.

5. The function of the boiler department is to inspect steam boilers periodically and to grant working certificates therefor, in order to ensure their safe working and management. The

function of the smoke nuisances department, which is amalgamated with the department of steam boilers, is to prevent emission of smoke from furnaces in excess of the legal limits and also to prevent any new furnace being erected before plans are approved by the smoke nuisances authority.

Boiler legislation.

6. The first legislation introduced in the presidency to control the safe working and management of steam boilers and prime movers was the Bombay Boiler Inspection Act of 1869. Until 1923 all provinces in British India had their own boiler laws. Experience showed that difficulties were experienced by purchasers of boilers in respect of pressure allowance owing to the differences in the standards and practice in force in the different provinces. With a view to the unification of the boiler laws and regulations in the different provinces the Government of India in 1920 appointed the Boiler Laws Committee. The Indian Boiler Act of 1923 and the Indian Boiler Regulations, 1924, which apply to the whole of British India, are the outcome of the labours of this committee.

Examinations.

7. The department conducts examinations for persons desirous of obtaining certificates of proficiency as engineers and competency certificates as boiler attendants. These examinations were formerly held quarterly, but are now held only half-yearly at Bombay. An examination for boiler attendants is also held once a year at Karachi.

Staff.

8. Under the chief inspector there are now nine inspectors, one post of inspector having been recently retrenched. Inspectors are posted at Ahmedabad and Karachi, the former for Gujarat and the latter for Sind, as well as in Bombay. The inspectors in charge of the southern division and central division areas have their headquarters at Bombay. The Bombay Smoke Nuisances Act is in operation in the cities of Ahmedabad and Karachi as well as in the town and island of Bombay.

Extent of work.

9. The number of boilers inspected in the presidency in the year ending 31st March 1933 was 2,430 as against 2,715 in the

year ending 31st March 1928, the decrease being due to depression in trade, the curtailment of activities of the Bombay development department and the completion of the Sukkur Barrage. The number of candidates examined for the certificates of competency as boiler attendant and of proficiency as engineer in the same period was 393 as against 551 in the year 1927-28. The absence of appeals, the decrease of accidents to boilers and the gradual reductions in the average emission of smoke per hour per chimney as recorded in the annual reports all indicate that the department is working smoothly and effectively.

ECONOMIES.

10. As a measure of retrenchment one post of inspector, two of clerks and three of peons have recently been retrenched. The competency examinations and those of certificates of proficiency as engineers, which formerly involved a net loss to Government, have been made self-supporting by a reduction of the number of periodical examinations. The scales of inspection fees were recently enhanced by Government with the result that receipts now balance the expenditure of the department.

VI. Summary of recent progress.

The process of regrouping of offices under the commissioner of labour and director of information, which now seems to have reached its limit, is a somewhat remarkable example of "rationalisation." To do the work now done by the commissioner of labour there were as recently as in 1926 three whole time officers, namely, a director of labour in the grade of Rs. 2,500—100—3,000 with a conveyance allowance of Rs. 150, a director of information in the grade of Rs. 1,700—100—2,000 with a house-rent allowance of Rs. 200 and a conveyance allowance of Rs. 150 and a commissioner for workmen's compensation in the grade of Rs. 1,000—100—1,200. The pay of the commissioner of labour and director of information is Rs. 2,150 and special pay of Rs. 200 and a conveyance allowance of Rs. 160. In addition to the duties of three whole time heads of offices, duties have been transferred to him from the deputy secretary, separate department, and from the collector of Bombay, in order to facilitate the assumption of additional duties by the latter officer.

There have been substantial economies in the factories and boiler departments within the last three years. These include the retrenchment of one post of assistant factory

inspector and one post of boiler inspector and the reduction in the pay of the certifying surgeon, Bombay. The boiler and smoke nuisances department has also by a series of reforms, been converted from a deficit to a self-supporting department.

The factories department which is an expanding department has recently developed its safety propaganda. The labour office has met increased work without increase of staff. Government have decided not to add conciliation work to the duties of the labour office until they are in a position to allot additional funds to it.

The reorganisation of the departments with which this review is concerned may therefore be said to be complete for the time being.

XIII—PUBLIC WORKS DEPARTMENT : IRRIGATION

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XIII—PUBLIC WORKS DEPARTMENT : IRRIGATION

I. General.

Headquarter control.

1. The subject "irrigation" is under the devolution rules a reserved provincial subject and is in the portfolio of the home and general member of Government. It is dealt with in the public works department of the secretariat, the secretary in which department is both secretary to Government and chief engineer for irrigation and roads and buildings in the whole presidency including Sind. The chief engineer is the administrative and professional head of irrigation department, responsible to Government for the efficient working of the department and professional adviser of Government in all matters which concern it.

Government have decided that, with effect from November 1933, the posts of

(1) chief engineer for irrigation in the presidency and secretary to Government, public works department, and

(2) chief engineer for roads and buildings in the presidency and joint secretary to Government, public works department,

shall be amalgamated, subject to the sanction of the Secretary of State which has been applied for. The Reorganisation Committee recommended that there should be one chief engineer for the presidency proper but that he should not be a secretary to Government. The proposal of that committee that there should be this separation of secretariat and administrative functions and that all the superintending engineers in the presidency proper should be located in one office in Poona and form, with the chief engineer, a "Board of Works" for the presidency excluding Sind has been rejected as it would have involved enhanced cost without corresponding administrative convenience.

Separation of irrigation and roads and buildings branches.

2. The Public Works Reorganisation Committee, 1917, suggested the separation of the two branches of the public works department with the object of facilitating the transfer of roads and buildings to local bodies and encouraging private enterprise. In 1920 the Government of Bombay informed the Government of India that they were in favour of separation, but detailed investigation showed that no scheme of separation could be evolved which did not entail a large increase of expenditure. Although the transfer of the subjects "roads" and "buildings" to the ministry under the reforms and the consequent restriction in 1924 of recruitment to the all-India engineering service to the irrigation branch made separation a live issue again, this Government reported in 1926 to the Government of India that separation was for the time being out of the question. The tendency since then has however been, under the pressure of financial stringency, in the direction of greater fusion. The Pravara Canals division has been amalgamated with the Ahmednagar division and the Dharwar Irrigation division with the Belgaum, Dharwar and Kanara divisions. The Irrigation Development and Research circle has also been abolished and the divisions in the two circles (Deccan Irrigation and Irrigation Development and Research Circles) have been rearranged by reducing one Irrigation Division, viz. Mutha Canals Division. In some cases amalgamation extends down to the sub-division. In divisions amalgamation has proceeded to the extent that (1) in Sind there is one purely roads and buildings division for Karachi, while all the other divisions, which are classed as irrigation divisions, control the roads and buildings works in their areas, and that (2) in the presidency proper, out of the thirteen divisions which are classed as roads and buildings divisions, the only ones which have no irrigation works under their control are Thana, Poona, Presidency, Nasik and Ratnagiri and of the five irrigation divisions only the Nasik Irrigation and Irrigation Research divisions have no concern with roads and buildings.

The Reorganisation Committee state that there can be no question of the transfer of control of irrigation works to the local boards. The transfer of roads and buildings to them is dealt with in the "Review of the Public Works

Department: Roads and Buildings Branch". The only means of effecting separation of the two branches which now appears possible is by means of this transfer of roads and buildings work to local bodies.

CAPITAL AND REVENUE ACCOUNTS—PRODUCTIVE AND UNPRODUCTIVE WORKS.

3. Capital and revenue accounts are kept for all the more important works. The capital expenditure on such works is accounted for under the head 55, while the revenue and ordinary expenditure are separately credited and debited to a revenue account of the works maintained under a separate head, XIII-Irrigation.

If the net revenue from a capital work is likely to repay, within ten years from its completion, the annual interest charges on the capital invested inclusive of all arrears of simple interest, i.e. the sum-at-charge, the work is classified as productive; otherwise it is treated as an unproductive work. Further, if a productive work fails in three successive years to yield the expected return, it is transferred to the unproductive category and conversely, if an unproductive work succeeds in yielding for three successive years the return prescribed for a productive work, it is transferred to the productive class.

Capital accounts are not kept for works which are individually so petty that it is not worth while to keep separate accounts for them. Revenue from such works is credited to the head XIV and expenditure on them, whether on new construction or upon extensions, improvements, maintenance or repairs, is accounted for under the head 15.

II. Deccan and Gujarat.

ADMINISTRATION AND CONTROL.

4. Irrigation in the Deccan and Gujarat is not as compact as in Sind. The administration and control are accordingly maintained in the following manner:—

(1) Up to the end of the year 1927 the irrigation works from the rivers Nira, Godavari, Mutha, Pravara, Kadwa and Girna were grouped together under one circle of superintendence called the Deccan Irrigation circle. In this circle were also numerous small irrigation works such as tanks and bandharas, and the Special Irriga-

tion division (now known as the Irrigation Research division) was under its control. The work in this circle had been for some time much heavier than could be properly handled by one officer. Moreover, modern irrigation in the Bombay Deccan had reached a critical stage and its future advance depended upon a satisfactory solution of many difficult and complex problems. In order to deal adequately with the strictly scientific side of irrigational problems and practice a new circle of superintendence called the " irrigation development and research circle " was accordingly created on 1st December 1927. By a recent redistribution various roads and buildings have also been allotted to these two circles. Owing to the imperative need for economy the Irrigation Development and Research circle has been abolished and the divisions thereunder have been amalgamated with those in the Deccan Irrigation circle, reducing the total number of divisions from 6 to 5.

(2) Irrigation works in the other parts of the Deccan and in Gujarat which are not of great magnitude and scattered over various districts (viz. Ahmedabad, Kaira and Panch Mahals, Surat and Broach, Khandesh, Sholapur, Satara, Belgaum, Dharwar and Kanara) have been entrusted to the roads and buildings officers.

The present arrangement of circles and of divisions under each circle is :—

Circle.		Division.
(1) Deccan Irrigation	..	1. Nira Right Bank Canal. 2. Nasik Irrigation. 3. Ahmednagar. 4. Poona Irrigation. 5. Irrigation Research. 6. Poona Water Works.
(2) Northern	..	1. Ahmedabad. 2. Kaira and Panch Mahals. 3. Surat and Broach. 4. Presidency. 5. Thana.
(3) Central	..	1. Khandesh. 2. Sholapur. 3. Poona. 4. Nasik. 5. Executive mechanical engineer, Government central stores, workshop and training centre, Dapuri.

Circle.		Division.
(4) Southern	..	1. Belgaum.
		2. Kanara.
		3. Dharwar.
		4. Ratnagiri.

PROPOSED ADMINISTRATIVE CHANGES.

5. The Reorganisation Committee recommended the—

(1) Substitution for the superintending engineer, irrigation development and research circle, of a research officer of executive engineer's rank whose duties would be confined to the presidency proper and be purely advisory.

(2) Reduction of the three roads and buildings circles to two.

(3) Amalgamation of the Mutha Canals and Nira left bank divisions.

(4) Elimination of the Special Irrigation division.

(5) Elimination of the Kaira and Panch Mahals division by the inclusion of Kaira in the Ahmedabad division and the Panch Mahals in the Surat and Broach division.

(6) Retrenchment of assistant engineers in the superintending engineers' offices.

Government have decided to accept the first and third recommendations. They have also virtually accepted the fourth, since it is proposed, on the abolition of the post of superintending engineer for research, to continue the special irrigation division as a research division in lieu of creating a new post of divisional status for research work. As regards the reduction of one post of superintending engineer (roads and buildings) [item (2)] it is considered that the abolition of the post is not feasible without further delegation of powers to executive engineers. This matter is being further considered. The remaining two items, viz. (*i*) Elimination of the Kaira and Panch Mahals division by the inclusion of Kaira in the Ahmedabad division and Panch Mahals in the Surat and Broach division [item 5] and (*ii*) Retrenchment of assistant engineers in the superintending engineers' offices, [item 6] depend upon the decision to be arrived at on the question of the reduction of one superintending engineer's post and their further consideration is in consequence deferred.

Irrigation works.

6. In the Deccan and Gujarat rainfall is available for agricultural operations, but is often precarious. Tanks and canals provide irrigation to valuable crops like sugarcane and are a source of supply to other crops also when the rainfall is deficient. The old irrigation works consist chiefly of a few small canals and moderately large tanks, some twelve thousand smaller tanks mostly in the southern part and in Gujarat and about four hundred bandharas in Nasik and Khandesh districts. The tanks have earthen dams and the large ones irrigate areas of up to 1,300 acres, and the smaller ones areas of up to 500 acres, all situated immediately below the dams. The chief crop irrigated is rice. The bandharas are masonry weirs built across rivers to head up the water to a level sufficient to irrigate lands on the banks of the streams below by means of channels taking off from the flanks of the bandharas. The areas irrigated are up to 800 acres and the chief crops are sugarcane, wheat, bajri and gram.

From these small beginnings have evolved the magnificent irrigation works, which form a conspicuous feature of modern conditions in the presidency proper and have successfully fulfilled their beneficent purpose in banishing for all time the dread visitation of famine which formerly devastated this portion of the province with appalling regularity. In this respect may be mentioned the great famine of 1899–1902 (which cost this presidency some Rs. 3·25 crores in mere cash alone) and the lesser famines of 1918 and 1920.

Early large irrigation works.

7. The following are the more important of the earlier irrigation works constructed between 1851 and 1901 :—

Khandesh district.

Lower Panjhra river works from the Panjhra river—Jamda canals.

Nasik district.

Kadwa canals from the Kadwa and Banganga rivers.

Satara district.

Krishna canal from the Krishna river.

Ahmednagar district.

Lakh and Ojhar canals from the Pravara river. These canals are now merged in the Pravara river works system.

Sholapur district.

Ekruk tank from the Adhela river.

Ahmedabad district.

Hathmati and Khari Cut canals from the Hathmati and Khari rivers.

Poona district.

Mutha canals from the Mutha river.

Sholapur district.

Mhaswad tank from the Man river.

Belgaum district.

Gokak canal from the Ghataprabha river.

Poona district.

Nira left bank canal from the Nira river.

Of these the Mutha canals, the Nira left bank canal and the Kadwa canals receive fair weather supply from ghat-fed storage tanks. The other canals are dependent on the natural river flows for their supply, and the two tanks Ekruk and Mhaswad have ordinary Deccan catchments.

The oldest of the Government irrigation works in the Deccan are the Lower Panjhra river works in Khandesh. They date from 1851-52 and were constructed at a cost of about Rs. 4,70,000. They consist of small weirs across the Panjhra river with the addition of the small Mukti tank on a tributary of the same river from which an improved supply can be obtained in the rabi season. These works yield a return of 2 per cent. on the sum-at-charge.

The Kadwa river works, which came into operation in 1868-69, consist of three small canals, viz. the Palkhed, Ojhar Tambat and Wadali, taking off from weirs across the Kadwa and its tributary the Banganga and comprise

38 miles of canals and distributaries. The storage is at Waghad. The Waghad tank is a ghat-fed storage tank on the Kolvan river in the Nasik district. It is mainly remarkable for the size of its earthen dam, which attains a height of 96 feet where it crosses the gorge of the river. The system barely pays its working expenses.

The Ekruk tank near Sholapur, which came into operation in 1872–73, is an artificial reservoir formed by a great earthen embankment 7,000 feet long with a maximum height of 76 feet. It supplies water not only for irrigation but also to the town of Sholapur, the mills and the G. I. P. railway and yields a return of over 6 per cent. on the sum-at-charge. Under unfavourable conditions of replenishment, which arise at times, the tank is not able to meet all the demands, agricultural and non-agricultural, made on it. The Kalegaon tank scheme which is under preparation is intended to supplement the supply in the Ekruk tank with a view to meeting fully the irrigational requirements and the non-agricultural needs of Sholapur town and its cotton mills.

The Hathmati and Khari Cut canals system was the first and is still the most important canal system in Gujarat. The Hathmati canal irrigates a tract of land lying between the Sabarmati and Khari rivers. When surplus water is available it passes part of its supply into a reservoir known as the Bokh reservoir and part into the Khari. The Bokh reservoir does no direct irrigation but acts as a storage work for the Khari into which it discharges. Lower down on the Khari are two small irrigation systems which utilise the natural flow of the river and any excess water made available from the Hathmati canal, part being abstracted for direct irrigation at the so-called "Khari sluices" and part diverted through an artificial cut, the Khari Cut, into a natural channel which in its turn supplies a system of distributaries, several small tanks and the large Chandola tank near Ahmedabad. This system was first opened in 1873–74 and more than Rs. 13 lakhs have been spent on it. It yields a return of about one per cent. on the sum-at-charge.

The Mutha canals came into operation in 1874–75. The system has been constructed at a cost of about Rs. 67½ lakhs with a large ghat-fed storage reservoir called Lake Fife on the Mutha river at Khadakwasla about 12 miles from Poona. The lake is named after Colonel Fife of the Royal

Engineers who was the originator of the scheme. The dam is of masonry 107 feet high and spans the valley of the Mutha river and the lake is the fortunate possessor of an excellent catchment, having been known to fill in as little as 18 hours at the beginning of the monsoon. The water of the lake is utilised partly for supplying drinking water to Poona city and cantonment and partly for irrigation. The system comprises two canals, the "right" and the "left", 70 and 18 miles long respectively. The Matoba tank is a tail tank receiving its supply from the right bank canal during the monsoon months. The system gives a return of $2\frac{1}{2}$ per cent. on the sum-at-charge.

The Gokak canal is the most important irrigation work in the southern circle. The system consists of a reservoir formed by a masonry weir situated a short distance above the celebrated Gokak Falls across the Ghataprabha river at Dhupdal in the Belgaum district and came into operation in 1884–85. The weir is nearly 3,000 feet long and 27 feet high, forming a reservoir of 1,468 m. cft. capacity. The water thus stored is utilised partly for supplying the mills which were erected at the falls in 1885 and partly for irrigation. The existing canal yields a return of about 3 per cent. on the sum-at-charge. A project, the Ghataprabha project, for the extension of the Gokak canal in the Belgaum and the Bijapur districts was fully re-investigated, but is not a practical proposition.

The Nira left bank canal, which came into operation in 1885–86, is one of the pioneer irrigation works in the Deccan and protects a tract with an extremely precarious rainfall in the Poona district. The original scheme consisted of—

(*a*) a ghat-fed storage tank at Bhatgar in the Bhor State about 32 miles south of Poona on the Yelwandi river impounding 5,300 million cubic feet of water;

(*b*) a pick-up weir at Vir on the Nira river;

(*c*) a canal about 100 miles long; and

(*d*) a tank at the tail of the canal used for storing a portion of the surplus monsoon water.

The masonry dam 127 feet high is now submerged in the lake formed by the higher Lloyd dam referred to later on. The scheme is financially the most remunerative of the larger protective irrigation works now in operation in the Deccan under normal conditions.

During the famine of 1899-1900 some work was done on excavation of a canal on the right bank of the Pravara river and also of one on the left bank of the Girna river, as a means of giving relief to people in famine-stricken tracts.

Modern large irrigation works.

8. The Irrigation Commission convened by Lord Curzon sat from 1901 to 1903 and thereafter a special staff was appointed by the Bombay Government to investigate irrigation projects. A definite start in the construction of large irrigation works was made in 1903 when the Chankapur tank project was commenced and steady progress has been maintained ever since.

The works completed since 1901 are :—

Chankapur tank and Girna left bank canal.
Godavari canals.
Pravara river works.
Visapur tank and canal.
Five first class tanks in Gujarat.

The Chankapur tank and Girna left bank canal system comprises a storage tank at Chankapur in the Kalwan taluka of Nasik district and the Girna left bank canal taking off from the river at Thengoda and irrigating lands in the Kalwan, Baglan, and Malegaon talukas of the Nasik district. The dam, 140 feet high, was completed in 1909-10 and the extended canal in 1920-21. This scheme does not yield any net revenue.

The Godavari canals system comprises a storage tank (Lake Beale) on the Darna river, a tributary of the Godavari river, near Asvali station on the G. I. P. railway and two canals taking off on either side of the Godavari from a pick-up-weir at Nandur-Madhmeshwar in the Niphad taluka of the Nasik district.

The dam at Darna, 20 miles by road from Nasik, is of masonry and is over one mile long including the waste-weir length and about 92 feet high above foundation level. The left bank canal is 48 and the right bank canal 69 miles in length. The canals command an area of 219,000 acres in the Nasik and Ahmednagar districts, of which an area of 79,000 acres is irrigable. The construction work was completed in 1915-16. The total amount spent on this system is about Rs. 104 lakhs and the return on the sum-at-charge about one per cent.

The Pravara river works consist of a large storage lake (Lake Arthur Hill) at Bhandardara on the Pravara river, and two canals, one on either bank of the river, starting from the village of Ojhar in the Ahmednagar district, about 50 miles down the river from the dam. The right bank canal, 33 miles long, was, as noted above, partially excavated in the famine of 1899 and the left bank canal, 48 miles long, is an enlargement and extension of the old Ojhar canal. The area commanded by the canals is all in the Ahmednagar district, a tract very liable to famine or scarcity. The masonry dam at Bhandardara, 75 miles north east of Bombay, is just over 282 feet high above foundation level and 274 feet high above the river bed and at the time of its completion was, so far as could be ascertained, the second highest dam in the world in respect to the maximum depth of water which it is designed to impound. It stores at present about 10,100 m. cft. of water and over 2,000 m. cft. additional storage will be obtainable, if, as possibly may be the case at a later stage, the waste-weir is provided with gates. Construction of this system was completed in June 1926 at a cost of Rs. 1½ crores and the dam was formally declared open for irrigation by His Excellency the Governor of Bombay on the 10th December 1926 from which date it has been known as the "Wilson dam". The annual area irrigable by this system is 57,000 acres and the return on the sum-at-charge one per cent.

Further protection of the Ahmednagar district is assured by the Visapur tank and canal system in the southern half of the district. The Visapur tank dam across the Hanga river, a tributary of the Bhima, was started as a famine relief work in 1896 and was subsequently completed in slow stages, partly by criminal tribes labour and partly by convict labour supplemented by free labour. The Deccan convict gang was employed on it from 1901 to 1927. This earthen dam, which is 7,440 feet long and 84 feet high over the river bed, forms a lake of 1,136 m. cft. capacity. It was completed in June 1927. Out of the estimated cost of Rs. 41 lakhs for the whole scheme Rs. 21 lakhs have been spent on the dam and headworks and the balance on the construction of the canal, its distributaries and minors. The total length of the main canal, distributaries and minor channels is 46 miles. The total area under command is 95,000 acres, of which

26,000 acres are irrigable. The area irrigated at present is about 4,000 acres.

The five first class tanks completed in Gujarat in this period are the Wangroli, Tranza-Nagrama, Savli and Saiat in the Kaira collectorate and the Futelao tank in the Panch Mahals collectorate. They were constructed between 1904 and 1917 at an aggregate cost of 11 lakhs of rupees. These tanks do not yield any net revenue, as there is not much demand on them in years of good rainfall while in years of scarcity the tanks themselves have deficient supplies.

Details regarding the principal irrigation works for which capital and revenue accounts are kept are given in appendix I.

Projects under construction.

(*i*) *Nira right bank canal project.*

9. This canal when completed will be the largest in the Deccan. The original estimate of this project framed in 1910 provided for :—

(*i*) Raising the dam at Bhatgar by 60 feet so as to increase its storage capacity from 5,300 m. cft. to 24,300 m. cft. ;

(*ii*) A canal 109 miles long on the right bank of the Nira river having a capacity at head of 1,500 cusecs ; and

(*iii*) Widening the existing Nira left bank canal so as to increase its discharge from 450 to 760 cusecs.

The capital cost was estimated at about Rs. 258 lakhs and the area to be irrigated annually at 190,000 acres (i.e. 178,000 acres on the right bank and 12,000 acres on the left). The gross revenue was estimated at Rs. 13,73,000 and the net revenue at Rs. 9,29,000 and the percentage return on capital outlay at 3·6. The project was submitted to the Government of India in May 1911 and was sanctioned by the Secretary of State in June 1912. Work was started during the same year as it was urgently required for the relief of famine labour. Before taking in hand the work of raising the Bhatgar dam, a thorough investigation was ordered into the design and estimates, with the result that it was decided on technical grounds to abandon the project proposal for raising the dam and to construct

an entirely separate structure. Owing to this change and to the unprecedented rise in the cost of labour and materials which took place from about the year 1916, in consequence of the Great War, a revised estimate was framed in the year 1920 for Rs. 491 lakhs and submitted to the Government of India in September 1921. The revised project provided for :—

(*i*) a new dam at Bhatgar to increase the storage from 5,300 m. cft. to 24,200 m. cft. ;

(*ii*) a canal on the right bank of the Nira river, 109 miles long ; and

(*iii*) the expenditure of Rs. $3\frac{3}{4}$ lakhs already incurred on widening the Nira left bank canal.

It was anticipated that 132,000 acres would be irrigated annually, that the gross revenue would amount to Rs. 15,22,000 and the net revenue to Rs. 11,92,000, giving a return of 2·4 per cent. on the capital outlay. This revised project was sanctioned by the Secretary of State in June 1922 subject to the approval of the local legislative council. The revised estimate was accordingly placed before the council during the budget session of February-March 1924 and was approved by it.

The new dam, which was named the Lloyd dam, is some 190 feet high and 5,333 feet long. It is one of the largest in the world and the amount of masonry in it, viz. $21\frac{1}{2}$ m. cft., exceeds by $2\frac{1}{2}$ m. cft. that contained in the Assouan dam in Egypt. The lake supplies water to both the old Nira left bank canal and the new right bank canal. It was formally declared open for irrigation by His Excellency the Governor of Bombay on the 27th October 1928.

Practically all the deep cutting and high banks of the right bank canal have been completed. The progress on branches and distributaries is satisfactory. The distribution system is being constructed on up-to-date principles and the latest types of measuring devices are being provided at the distributary heads and also at frequent intervals on the channels. Improved types of outlets and falls have been introduced and care has been taken to maintain correct discharging capacity and efficiency in all parts of the distribution system. The whole perennial area under the canal was carefully surveyed and soil classification carried out before designing channels, while areas unsuitable for perennial crops have been determined and

indicated on maps. The acceleration of the progress of construction in recent years made it possible to issue water from the canal for rabi crops during the year 1924-25. The area under irrigation is gradually extending. The canal commands lands in the Satara and Sholapur districts and in the Phaltan State and ends near Mohod in the Sholapur district. Out of the estimated cost of Rs. 484 lakhs (after deducting salvage value of tools and plant Rs. 7 lakhs) both for the dam and the canal, an expenditure of about Rs. 437 lakhs has been incurred up to the end of March 1932. The culturable area commanded by the scheme is 397,000 acres, of which 132,000 acres will be irrigated annually when the canal is fully developed. The area irrigated in 1932-33 was over 18,000 acres. The whole scheme is expected to be completed by 1935-36 with a saving of about Rs. 32 lakhs.

(*ii*) *Nira valley development project.*

10. This project was designed for the complete development of irrigation in the Nira valley by widening and remodelling the Nira left bank canal to irrigate an additional area of 19,000 acres and by the construction of a new dam at Vir to supplement the storage of 24,200 million cubic feet impounded by the Lloyd dam at Bhatgar referred to in the preceding paragraph. The construction of the Vir dam estimated to cost about a crore of rupees has now been abandoned as unnecessary. It is considered that by the economical distribution of water the storage at Bhatgar will be sufficient to meet all irrigation requirements in the Nira valley both on the old Nira left bank canal and the new right bank canal.

The remodelling of the Nira left bank canal, which was started in 1925-26, has made considerable progress. The total expenditure to end of March 1932 amounted to Rs. 30 lakhs against the original sanctioned estimate of Rs. 36,70,000. The work will be completed by 1936-37.

Projects under investigation and contemplation.

(*i*) *Deccan.*

11. The supply of water in Lake Fife at Khadakwasla is insufficient to meet the increasing demands on account of the water supply to Poona and cultivation on the two Mutha canals. For several years it has been increasingly

apparent that it cannot carry this double load. A project for increasing the storage of the Mutha canals in the Poona district and for remodelling and extending the Mutha right bank canal has been prepared. It is estimated to cost Rs. 196 lakhs and to yield a return of 2·33 per cent. on the capital outlay. Three alternative schemes have also been worked out and one of them, which is estimated to cost Rs. 78 lakhs and to yield a return of 5 per cent., shows promise of being a practical proposition if and when funds again become available for expenditure on Deccan irrigation.

On the Godavari canals irrigation has developed so rapidly as to render the provision of additional storage works a problem for consideration in the near future. An additional storage of 7,000 m. cft. is considered necessary to develop fully the Godavari area and a scheme for a new storage at Gangapur on the Godavari river near Nasik is under investigation.

There is also a scheme for additional storage for the Pravara canals, but consideration of it has been postponed for the present. The pick-up weir at Ojhar has silted up badly. The first few miles of the canals have also silted heavily and are badly obstructed by weeds. The necessary measures to remove these defects are under contemplation.

(*ii*) *Karnatak.*

12. The physical configuration of the Karnatak makes the construction of dams and provision of storage reservoirs prohibitively expensive. The irrigable land is never in compact and accessible areas, so that the provision of irrigation facilities to such lands as are suitable for irrigation is a matter of engineering difficulty and such expense as in almost all cases to render the proposition financially impracticable.

Among the various irrigation schemes which have been investigated is the Ghataprabha project referred to above. This scheme having been abandoned after thorough investigation, a scheme to utilise the waters of the Markandeya river was investigated but had to be given up, as the anticipated return on the capital outlay of Rs. 171 lakhs was small (1·17 per cent. only) and the area to be served was not so liable to famine as to justify such a large unremunerative expenditure. It is, however, proposed to

investigate other schemes on the Malaprabha and Ghataprabha rivers as soon as the financial situation allows.

(*iii*) *Gujarat.*

13. As regards Gujarat, various schemes have been mooted, but, chiefly owing to the heavy cost and the difficulties of dealing with schemes which embrace the territory of a number of Indian States, no material advance has been made in the past. However in 1926 it was decided to carry out investigations for the three schemes briefly described below :—

(1) *Reservoir on the Panam river and canal.*—The storage site is at Kel near Lunawada in the Lunawada State. The water from the reservoir will be let down the river and picked up about 32 miles below by a weir across the river Mahi at Wanakbori and a canal 68 miles long will be taken on the right bank of the Mahi to command 3 lakhs acres. This scheme will irrigate 90,000 acres at an approximate cost of 2 crores of rupees and yield a return of about 3 per cent. on the capital outlay. The project is under scrutiny.

(2) *Reservoir on the Watrak river and canal.*—The site selected for the dam is near Magodi on the Watrak river. The reservoir will impound a storage of 5,000 million cubic feet. The main canal 54 miles long will go up to Mehmedabad and a branch canal 16 miles long to Dehmai. All field work has been completed and the rough project is under the scrutiny of the local officers The scheme will cost 122 lakhs of rupees and irrigate an area of about 50,000 acres. The net revenue will be Rs. 2,60,000 and the return on capital outlay about 2 per cent.

(3) *Pick-up weir across the Meshwa river at Raska.*- The main object of this scheme is to supplement the water in the Khari river and thus assure a better supply to the Khari sluices and the Khari Cut area. The scheme will irrigate 16,000 acres of land in the Kaira district at a cost of about 16 lakhs of rupees and yield a return of about 3 per cent. Rough plans and estimates are ready. The project, however, interferes with the vested rights of irrigators on the Khari sluices and its investigation has been withheld pending the consent of the irrigators to its execution.

General character of Deccan irrigation.

14. The irrigation works in the Bombay Deccan are fundamentally different from those in Sind, the Punjab, Egypt or Mesopotamia, where wide alluvial plains have been formed by great deltaic rivers in perennial flow. The Bombay Deccan consists of a sloping table-land running eastward from the ridge of the Western Ghats. These form a ridge running parallel to the sea-coast at a distance from it of 50 to 100 miles; precipitous on the western side, they fall away more gradually to the east. The heaviest rainfall occurs on the peak of the ridge, where anything up to 270 inches of rain is recorded in the four monsoon months. The intensity of the rainfall very rapidly decreases as we go eastward from the highest ridge, until at a distance of 100 or 150 miles east of the ghats it is only 20 to 25 inches. The rivers in the Bombay Deccan rise in the valleys close to the ridge, flow in an eastward direction, and are dry, or practically so, for 7 or 8 months of the year. The line of the ghats, like the ridge of a roof, divides the rainfall into two parts; one, the smaller portion, falling westward into the Indian Ocean, and the other flowing, through long lengths of tortuous rivers, to the east and joining the rivers which reach the sea on the south-eastern coast of the peninsula. These rivers are in flow during the monsoon months only and, if no artificial means of conserving their waters were provided, the whole monsoon rainfall would be wasted, so far as the Bombay Deccan is concerned, and would simply flow away to the sea, benefiting but to a small extent the country traversed.

The large irrigation systems in the Deccan are all of the same type. Each depends upon a storage lake near the head of one of the river valleys, where sufficient water is collected during the monsoon to supply the country on either side of the river valley below. The water stored during the rains is let out during the dry months of the year in accordance with requirements and, at a point on the river which may be as far as 50 miles from the main storage lake, a "pick-up-weir" is constructed across the river-course to divert the water into canals, which take off on either side of the weir. In one case only, that of Lake Fife at Khadakwasla near Poona, do the canals take off from the flanks of the dam itself. The canals are always constructed at a considerably flatter slope than

that of the river and consequently are able to diverge from the river itself on each side of the valley; as a rule each canal only irrigates the area between itself and the river.

Engineering difficulties.

15. The river valleys in the Deccan, bordered by hills or high ridges and broken up by numerous water-courses and nalas carrying the monsoon rainfall into the river channels, present very considerable engineering difficulties from the point of view of canal construction. Numerous costly masonry works, such as aqueducts, culverts, syphons, bridges and falls, are required and the undulating nature of the country necessitates frequent cuttings, often in rock and sometimes as deep as 40 feet, and long lengths of high banks, without which the canals would be extremely tortuous and of very much greater length. The cross-drainage works have to be so designed as to protect the canals from the risk of damage which might be caused by the sudden and violent floods which occur in the nalas in the monsoon. Similar precautions have to be taken in the case of the distributaries, which are replicas on a small scale of the large canals. These features render Deccan canals infinitely more expensive than canals of similar size in flat and level countries such as the Punjab or Egypt.

Future of Deccan irrigation.

16. The future of irrigation policy in the Deccan is in the melting pot. Financial considerations would in any case now have made a halt necessary, but apart from such considerations it is arguable that the forward policy adopted since 1903 has already been carried further than is justifiable in present conditions. The enormous improvement in transport facilities has itself made a recurrence of the more serious effects of old-time famines impossible and some consider that the stage has already been reached if not actually passed when the further extension of protective irrigation becomes an unjustifiable burden on the taxpayer. The point must, in any case, be reached at some stage when it is cheaper and more efficient to counter famine by relief measures than by additional irrigation works.

Whether that point has been reached or not the improvement of the financial return from the existing works is a measure of the utmost importance to the presidency. The future of irrigation in the Deccan appears to depend more than anything else on the extension of sugarcane cultivation and that extension appears to depend on the establishment of new sugarcane refining factories, as opposed to the production of unrefined *gul*.

The construction of large irrigation works with an assured supply of water gave a great impetus to sugarcane cultivation. The area under cane rose from some 12,000 acres in 1912–13 to nearly 30,500 acres in 1931–32. It is the most paying crop in the Deccan and it is only by growing a considerable amount of it in suitable areas that the Deccan canals can be made productive. The slump in the price of *gul* and the increase in working costs of the cane industry have, however, made further expansion of sugarcane most difficult. The question of promoting the development of irrigation on the Deccan canals so as to benefit both Government and the people has therefore been receiving the anxious consideration of Government for some years past. In 1927 they appointed a revenue officer (Mr. C. H. Bristow, I.C.S.) on special duty to enquire into the matter. His report was received in 1928. His main recommendations were that the establishment of sugar factories should be encouraged and that an irrigation cess should be levied. The report also contained several other recommendations on minor points. A conference of irrigation, revenue and agricultural officers was held in February 1929 to discuss the policy to be followed by Government in regard to the development of the Deccan canals in the light of the recommendations made in the special officer's report. Further conferences of these officers were held periodically in June-July and October 1931, July 1932 and January 1933 to consider certain other points on the same subject. Many of the recommendations of the periodical conferences referred to above have been accepted and orders have issued accordingly.

In pursuance of a resolution moved on 6th August 1931 by a non-official member of the legislative council and passed by that body, Government appointed a committee consisting of official and non-official members to consider and report after taking evidence as to how the financial

aspects of the irrigation works in the Deccan could be improved, having regard to the fact that the present return on the sum of Rs. 10 crores sunk in their construction is less than three per cent. The committee submitted its report in 1932. Its main recommendations were the same as those of the special officer, namely (1) that the establishment of sugar factories should be encouraged and (2) that an irrigation cess should be levied. As regards question (1), orders laying down certain general terms and conditions subject to which Government are prepared to supply water to prospective sugar factories have issued. Government are not prepared to accept the committee's proposal regarding legislation for compulsory leasing of lands to sugar factories.

The paucity of communications in this area has however been in a large measure responsible for retarding the development of irrigation in general and of the sugarcane industry in particular. This was brought to the particular attention of the special officers, Messrs. Kirkness and Mitchell, when they were on tour in the Bombay presidency last November, and they recommended that a further special enquiry into the necessities and possibilities of improvement in the communications in the area should be made. Accordingly Messrs. W. A. Evershed and R. O. C. Thompson, executive engineers, were appointed by the Government of Bombay and the railway board, respectively, with instructions: "To examine and report on the communications required to develop the Nira right and left bank canal area, and particularly to what extent those areas require:

(*a*) New roads;
(*b*) Improved roads; and
(*c*) Railway extensions and connections to enable agricultural produce to reach its market most economically.

In the event of branch railway lines being considered necessary, to make recommendations to the gauge on which these should be constructed."

Their report on the enquiry which has since been published is under consideration of this Government. The following are among the chief recommendations made:—

(1) The construction of a 2'–6" gauge railway from Baramati passing through or near Asu, Dharampuri, Nateputa, Malsiras, Akluj and Velapur to Pandharpur.

(2) The completion of the road from Phaltan to Baramati station, including bridges over the river Nira at Sangvi and over the river Karha in Baramati.

(3) Improvement of the road from Akluj to Sangam at the confluence of the rivers Nira and Bhima.

(4) Increased grant for maintenance of the road from Phaltan to Lonand.

The views of this Government on the recommendations will be communicated to the railway board in due course.

This is the first example of a co-ordinated expert investigation into the communications of any area in the Bombay presidency. The collaboration of a railway officer, having no connection with or direct interest in any of the railways in the neighbourhood, and an irrigation officer, who is only interested in communications in so far as they provide an outlet for produce from the land under command of the canals has resulted in the problem being approached from an entirely impartial standpoint.

Other factors directly affecting the development of irrigation in this area have also been receiving the attention of Government. From the soil classification and subsoil surveys of the land commanded by the canals, areas have been selected which are most suitable for cane growing from the point of view of soil and facility of drainage. Such matters also as the availability of the water over a period of years and the method of distribution have been investigated.

Applications have been received from several prospective sugar companies and negotiations are in progress for the final settlement of terms and conditions subject to which water will be supplied to them. As regards question (2), *vide* paragraph 17 below.

Irrigation cess.

17. The case for an irrigation cess is that, with the exception of the Shahada channel and Ekruk, Gadikeri and Mavinkop tanks, all the capital irrigation works in the presidency proper are unproductive. The major canal systems constructed after 1901 were mainly intended to protect the country from famine and the earning of a commercial return on the capital cost was not the primary consideration. Since these canals have been opened, the whole aspect of the country-side through which they pass has been altered. The rental value of all lands receiving regular irrigation is very much higher than that of dry land. Thus not only have these canals afforded permanent and complete protection from famine in the tracts commanded by them, but they have conferred

very considerable unearned benefits upon those fortunate enough to possess land in these areas. The ghat-fed storage systems in the Deccan are, however, exceptionally costly and the revenue derived by Government from them has not risen proportionately with the wealth which they have created. Since the interest on the capital invested on these works is not being met from the revenue derived from them, they provide no balance for expenditure on drainage works and the reclamation of water-logged lands. There appears to be therefore no prospect of further expansion of irrigation in the Deccan unless the present canal systems can be made to give an adequate return to Government on the money invested on them and unless the new projects can be worked out as paying propositions. It is not possible to obtain the whole of this additional revenue by an increase in the water rates alone, as too great an increase might result in a reduction of demand for water and a consequent decrease in the areas under cultivation. Owing to the system of thirty years' settlements under the Land Revenue Code in this presidency, no enhancement of land revenue has hitherto been possible. It is also not practicable on political and financial grounds to acquire the lands outright and obtain a portion of the unearned increment by leasing or selling them. In the circumstances, the question of introducing a bill in the legislative council authorising Government to levy a cess on the owners of all lands irrigable under the Deccan canals for which a supply of water can be made available has been under the consideration of Government for some time past. The cess would, it is believed, help in the development of irrigation as it would be an incentive to owners of land to obtain the extra profits of irrigation.

Reclamation of damaged land.

18. This is a problem which always arises in irrigated tracts. It early came to notice in the tract of the Nira left bank canal and was reported on in 1900 by agricultural experts. In 1908-09 the agricultural department undertook some experiments in the reclamation of salt-affected land at Baramati and carried these on for some four years, after which it handed back the lands to the cultivators. In 1915 experiments in an adjacent area were started by the special irrigation division and these have since been carried on with great success. In 1922

the operations were extended by taking in the whole of the area which had previously been dealt with by the agricultural department, serious damage by salt having again shown itself there. By this time an efficient technique for dealing with water-logging and salt efflorescence had been evolved. The greater part of the area reclaimed is now producing heavy crops of sugarcane. It is hoped to extend this work in the future as funds permit. It can safely be said that almost all the damaged land on the Deccan canals can be reclaimed at a reasonable cost.

Soil surveys.

19. The soils of the Bombay Deccan consist of black basalt, generally known as trap rock, volcanic in origin, which has been weathered and disintegrated through the centuries into soils of various descriptions, from highly porous red murum to clay and impermeable black cotton soil. They thus present irrigation problems far more complex than those presented by the uniform alluvial soils of northern India. Until some ten years ago irrigation was allowed to develop on the canals in accordance with the demand for it, but about that time the vital importance of selecting suitable soils for various crops, particularly sugarcane, was realised and soil-surveys, which have now reached completion in the perennial sections of all the major canals, were begun in the special irrigation division. Over a million acres have now been classified and soil maps showing the classification of the canal areas have been printed. Hand in hand with this work detailed observations have been made in connection with sub-soil water levels, a factor which is directly connected with water-logging and salt-efflorescence. The results of these surveys and observations form the basis for the selection of soils for the various crops and for the determination of areas in which either cane cultivation requires to be restricted or drainage projects are needed.

These surveys are based on the physical examination of the soil by specially trained observers, chemical analysis, observation of the presence or absence of certain index weeds which indicate definite soil conditions and observations of sub-soil water-levels and recuperation in wells and bore-holes, these latter observations being also utilised in connection with the consideration of drainage schemes, if such are required.

IRRIGATIONAL *cum* AGRICULTURAL PROBLEMS.

20. The most important side of the work carried out in the irrigation development and research circle has been the investigation of the lines on which irrigation methods can be modified to meet agricultural requirements and the degree to which agricultural methods can be modified to meet irrigation necessities and limitations. The whole future of Deccan irrigation depends on the satisfactory solution of this exceedingly complex problem and the research work already carried out definitely shows that by an amendment of present methods Government and the cultivator would both benefit enormously. It has also been proved that by improved methods of distribution the area irrigated with a given volume of water can be increased by as much as 30 per cent. on a distributary. The aim of the system is to give by means of modules and semi-modules correct discharges at suitable intervals. The direct advantages to the cultivators which follow from a reliable and constant supply are very considerable, in that they get better crops; but the indirect benefits will also be great, in that, when the system has been perfected, it will be possible to allow the internal distribution to be carried out largely by the cultivators themselves. The prevention of waste and reduction of volume of water used leads to less water entering the sub-soil and hence reduces the area of land damaged by water-logging. This in turn increases the area available for cultivation. It is owing to the work done in the research circle on the economical distribution of water that it has been found that it will be possible to increase "duties" so considerably that the Lloyd dam storage will suffice for all irrigation requirements in the Nira valley and that the Vir dam, estimated to cost a crore of rupees, has been found unnecessary. As recommended by the Reorganization Committee, the status of the research officer has now been reduced to that of an executive engineer consequent on the abolition of the appointment of the superintending engineer, irrigation development and research circle, reference to which has already been made in paragraph 4 (1).

BLOCK SYSTEM OF IRRIGATION.

21. A special feature of the Deccan canal systems is the perennial block system of irrigation. This is a form of long-term water lease first introduced on the Nira left

bank canal by Mr. (now Sir) M. Visvesvaraya, then executive engineer, Poona irrigation, which has now been extended to other canal systems, such as the Godavari and the Pravara. In return for first claim for the supply of water for the irrigation of sugarcane in one-third (or one-fourth) of the area concerned and for other crops during the monsoon and rabi seasons on the remaining two-thirds (or three-fourths) of the area, the lessee binds himself to pay a fixed rate per acre annually whether water is taken or not. There are at present about 45,000 acres under block agreement on the Deccan canals. The block system was derived from the *thal* or *phad* system which had been followed for generations on some of the bandharas in the Nasik and Khandesh districts.

Another form of long-term agreement in vogue on the Deccan canals is the "two seasonal" lease, which mainly differs from the perennial block system in that it guarantees water during the monsoon and rabi seasons only. Yet another modified form is adopted on some canals and applies solely to rabi irrigation. The guarantee of water for the more valuable crops is the attraction offered by these long-term agreements, while the advantages to Government are the stability of demand for water during the critical seasons of rabi and hot weather and the certainty of a uniform return for the water supply.

III. Sind.

Administration and control.

22. While the construction work of the Lloyd Barrage was in progress, the control and administration of irrigation on running canal systems in Sind was maintained by the following establishment, viz.—

1 Chief engineer,

2 Superintending engineers of circles—one for the right bank of the Indus and the other for the left bank,

13 Executive engineers of divisions, of which all but one (viz. the Karachi Buildings division) were irrigation divisions.

The establishment employed on the construction of the Lloyd Barrage and Canals consisted of :—

1 Chief engineer,

5 Superintending engineers,

25 Executive engineers (including one personal assistant to the chief engineer).

The construction work of the project having been practically completed at the end of the year 1931, it became necessary to reorganise the whole department in Sind to meet post-barrage conditions. Since, however, some construction work was still in progress, it was premature to formulate any definite scheme of reorganisation to deal with post-barrage conditions in anticipation of their being established. Government accordingly sanctioned the following establishment as a provisional measure (in place of the two separate establishments detailed above)--

1 Chief engineer in Sind.

1 Joint chief engineer in Sind.

5 Superintending engineers.

28 Executive engineers (including the personal assistant to the chief engineer and the executive engineer in charge of the Karachi Buildings division, which is a roads and buildings charge).

There was a joint office for the chief engineer in Sind and the joint chief engineer in Sind and the latter was subordinate to the former. With the abolition of the post of the joint chief engineer in Sind, the two offices have been combined and are now under the control of the chief engineer in Sind. The chief engineer has certain divisions directly under him. The relation of circles to the chief engineer and of divisions to circles is as follows :--

Name of circle.	Name of division.
Chief engineer in Sind ..	1. Personal assistant to the chief engineer (*temporary*).
	2. Development and research.
	3. *Mechanical* (*temporary*).
	4. Plant (*temporary*).
	5. Drainage (*temporary*).
Northern Sind ..	1. Khirtar.
	2. North Western Canal.
	3. Begari Canals.
	4. Shikarpur Canals.
	5. Barrage.

Name of circle.	Name of division.
Western Sind ..	1. Northern Dadu.
	2. Warah.
	3. Rice Canals.
	4. Southern Dadu.
	5. Manchar Drainage (*temporary*).*
Rohri canal ..	1. Rohri.
	2. Nasrat.
	3. Dad.
	4. Hala.
Southern Sind ..	1. Nasir.
	2. Hyderabad.
	3. Karachi Canals.
	4. Karachi Buildings.
	5. Fuleli Canals.
Eastern Sind ..	1. Northern Jamrao.
	2. Southern Jamrao.
	3. Khipro.
	4. Mithrao.

Proposed administrative changes.

23. The Reorganisation Committee considered the arrangement of having a joint chief engineer in charge of three circles but subordinate to the chief engineer anomalous, even if it was temporarily justified, and recommended that this appointment should not continue after the end of February 1934 at the latest. Government have abolished the appointment from the end of March 1933.

The committee also recommended that the offices of the chief engineers and superintending engineers in Sind should be amalgamated into a single headquarter office. Government have been unable to agree to this arrangement as they consider it would be inconvenient, while the savings resulting from it would have been very small.

The committee considered that the time was not yet ripe for any reduction of circles or divisions in Sind and recommended that the position should be reviewed three years hence. Government will keep the possibility of such reduction continually in view.

Indus River Commission.

24. There is also a body designated the Indus River Commission which has been constituted for the regular survey and conservancy of the river Indus, the maintenance and supervision of the canal mouths and the control

of important river embankments. The constitution and functions of this body are detailed below :—

Personnel.

The commissioner in Sind ..	*Chairman.*
The chief engineer in Sind ..	*Members.*
All the superintending engineers of circles in Sind	
The senior public works department officer, Khairpur State ..	

The executive engineer, development and research division, is the secretary to the commission but is not a member of it.

Functions.

The commission acts as an advisory board to Government in all matters relating to the river Indus within the boundaries of Sind, including foreign territory. It is also required :—

(*i*) To deal with all questions of policy in connection with the river Indus ;

(*ii*) To take and record scientific observations of the river regarding velocities, discharges, matter carried in suspension etc. ;

(*iii*) To arrange for surveys of the river, whether topographical or hydrographical, to keep the maps of the river up to date and have all changes in its course from year to year recorded on the maps ;

(*iv*) To carry out investigations regarding comparative gauge readings and varying discharges ;

(*v*) To sanction plans and estimates (within the powers delegated to them—*vide* pages 233 and 235 of the Public Works Department Manual), order the execution of all necessary works connected with the construction and maintenance of river embankments and to approve all proposals in connection with new heads for inundation canals.

(*vi*) To prepare the budget for all works and establishment under their administrative control ; and

(*vii*) To approve administratively and finance from their discretionary grant or by reappropriation, within the limits of the powers delegated to them, works

of immediate urgency not provided for specifically in the budget.

The meetings of the commission are held at least once a quarter and oftener when necessary.

General character of Sind irrigation.

25. Sind is situated beyond the influence of the south-west and north-east monsoons and in consequence its rainfall is small and negligible. In normal years nine-tenths of the area cultivated depends on irrigation by canals. The importance of a scientific and modern system of irrigation to Sind cannot therefore be over-estimated. Before the construction of the Lloyd Barrage nearly all the canal systems were inundation ones, dependent on floods in the Indus, and in general the canals flowed from the end of May to the beginning of October, only the Jamrao canal system receiving a perennial supply. The cultivation dependent on river inundations was principally kharif and even this was subject to insecurity of supply owing to fluctuations in the river water levels. The low water supplies in the winter season could be tapped only to a small extent and largely ran to waste in the Arabian Sea. As a result of the vagaries of a constantly changing river the inundation canals used to suffer badly from a poor supply during critical irrigation periods. To cite a specific instance, the inundation of 1918 was one of the lowest on record and the value of the crops lost by the failure of the inundation that year was estimated by the then commissioner in Sind (Sir Henry Lawrence) at £ 10,000,000.

From the year 1932 the area in central Sind is receiving an assured supply of water from the Lloyd Barrage canals, all of which except the Rice canal will be perennial canals. The irrigation system of Sind will therefore in future be an inundation system only in those parts of Upper and Lower Sind which are outside the sphere of influence of the Barrage.

From the point of view of irrigation, Sind may therefore be conveniently divided into two distinct spheres :—

(*a*) Area which falls under the command of the Lloyd Barrage and Canals.

(*b*) Area served by the inundation canals in Upper and Lower Sind.

Lloyd Barrage and Canals.

26. This project is described in the "Review of Sind and the Lloyd Barrage". The aim of the project is to provide an assured supply to an area of about 1,830,000 acres in British territory which had previously been receiving an indifferent supply from inundation canals and to increase the annual irrigated area by about 3,183,000 acres. Including the Khairpur State and the Nasirabad tehsil in British Baluchistan the annual cultivation when final development is reached will be 5,453,000 acres.

The barrage is designed to pass a maximum river flood of $1\frac{1}{2}$ million cusecs, or about 50 per cent. more than the highest flood hitherto recorded.

Seven canals have been excavated, three on the right bank and four on the left bank. The total length of the canals including branches, distributaries, etc. is 6,816 miles, including 1,647 miles of existing channels which have been remodelled and utilised. The following table gives the names of the main canals and a few particulars regarding them :—

Canals.	Designed discharge at head.	Length in miles of main canals.	Culturable area.	Final area of annual cultivation.
Right bank.	Cusecs.		Acres.	Acres.
North Western	5,152	36	939,235	705,000
Rice	10,215	82	476,498	367,000
Dadu	2,837	131	582,035	386,000
				*27,000
Left bank.				
Eastern Nara	13,649	226	2,195,384	1,627,000
Rohri	10,883	208	2,545,609	2,043,000
Khairpur Feeder, West ..	1,936	45	†	298,000
Khairpur Feeder, East ..	2,094	13	†	
Total ..	46,766	741	....	5,453,000

* Manchar drainage. † Information not available.

Progress of work on the barrage and canals.

27. The barrage has been completed including the divide walls and the head-regulators of the seven canals. About 608 crores cubic feet of earthwork have been completed to end of September 1933. The construction of

water-courses is being pushed on vigorously. The necessary canal structures, viz., regulators, falls and bridges have also been completed. The total cost of the whole scheme according to the revised recapitulation statement sanctioned by the Government of Bombay, in August 1931 amounts to Rs. 20·03 crores, out of which an expenditure of about Rs. 17·65 crores has been incurred to end of March 1932. Water was admitted into the canals for purposes of irrigation during the kharif season of 1932. In spite of the difficulties encountered by reason of the change-over from the old inundation system to the new and controlled supply from above the barrage to the new canals, involving the danger of breaches in new banks and the provision of new sources of water supply to much of the land, the first year's results have been satisfactory. The total area irrigated in the kharif season was 1,345,000 acres, while the total acreage of rabi crops was 1,155,607 acres. This gives an increase of 670,067 acres over the pre-barrage average annual cultivation of 1,830,000 acres in the barrage zone. The works are expected to be finally completed in 1934–35. According to the original financial forecast framed in 1923 it was anticipated that the project would become productive two years after completion of the works, but owing to the recent fall in the prices of agricultural commodities the original financial forecast requires revision and this matter is now engaging the attention of the Government of Bombay.

IRRIGATIONAL *cum* AGRICULTURAL PROBLEMS.

28. A special development and research division was opened with effect from 1st October 1930. There is no overlapping in research work between Sind and the presidency proper, but the superintending engineer of the Poona research circle has done much valuable work for Sind. A soil and sub-soil survey has begun on both banks of the Indus with a view to ascertaining the danger of waterlogging and enabling adequate steps to be taken to deal with it by way of both surface and sub-soil drainage. Co-ordination between the research activities of the agricultural and irrigation departments has been provided for by the formation of the Sind Research Committee on which both the departments are represented under the chairmanship of the commissioner in Sind. Two other committees were also constituted :—

(1) The Lloyd Barrage Standing Committee, consisting of officials ; and

(2) The Lloyd Barrage Advisory Committee, consisting of non-officials.

The object with which the standing committee was appointed was that any major proposals affecting the project or requiring the orders of Government might reach Government in a form giving the considered opinions of all the local heads of the responsible departments. The purpose for which the Lloyd Barrage Standing Committee was brought into existence has been served. Government accordingly decided in July 1933 that the continuance of the Standing Committee was no longer necessary. The functions of the advisory committee are to advise Government generally in all matters connected with the barrage project and to offer advice on any matter referred to it by Government.

INUNDATION CANALS.

29. Particulars regarding the principal inundation canals in Upper and Lower Sind are given in the following statement :—

Circles and divisions.	Principal canals.	Productive or unproductive.	Capital cost direct and indirect to end of 1931-32.	Length of main and branch canals and distributaries.	Culturable area commanded.	Average area irrigated per annum.	Average net revenue realised per annum.	Principal crops grown.
UPPER SIND.			Rs. lakhs.	Miles.	Acres.	Acres.	Rs.	
Northern Sind circle.								
Begari canals division.	Begari canal.	Productive.	25·17	249	651,000	364,000	227,000	Jowari, rice, bajri, wheat and oilseeds.
	Desert canal	Do. ..	27·55	333	449,000	195,000	−95,000	
	Unharwah	Do. ..	8·09	119	203,000	106,000	90,000	
Shikarpur canals division.	Sind canal	Do. ..	8·78	143	147,000	84,000	−48,000	Rice, jowari and wheat.
	Mahiwah	Unproductive.	14·98	303	152,000	73,000	−89,000	Jowari, wheat, bajri and rice.
LOWER SIND.								
Southern Sind circle.								
Fuleli canals division.	Fuleli canal	Productive.	57·79	1,040	1,552,000	408,000	347,000	Rice, bajri, wheat, cotton, jowari and oilseeds.
	Hassanali	Unproductive.	3·11	90	79,000	21,000	2,000	Rice and bajri.
Karachi canals division.	Pinyari canal.	Productive.	12·47	400	186,000	98,000	61,000	Rice bajri and oilseeds.
	Baghar canal.	Do. ..	7·63	159	95,000	33,000	14,000	Rice, bajri and barley.
	Sattah canal.	Do. ..	1·83	36	34,000	16,000	8,000	Rice and bajri.
	Kalri canal	Unproductive.	7·41	89	40,000	15,000	−14,000	Rice, barley and bajri.

Several indigenous channels existed before the British assumed control of Sind in 1843, but they were generally neglected and in some cases had fallen into disuse. It was due to the initiative of Sir Bartle Frere, then commissioner in Sind, that the work of improvement was taken up in real earnest.

The first canal to be improved, the work being carried out in 1855, was the Begari canal, which takes off from the Indus on the right bank 40 miles below the northern boundary of Sind and runs almost due west towards the hills of Baluchistan. The main canal is of considerable size having a discharge of 8,000 cubic feet a second at its head. The total length of the main and branch canals is 249 miles. The system irrigates 364,000 acres yearly and yields a return of about 9 per cent. on the sum-at-charge.

The Desert canal system owes its origin to Sir John Jacob. The main canal runs parallel to and just south of the Baluchistan border and has been an important factor in weaning the frontier tribes from their habits of lawlessness and rapine. A beginning was made with the acquisition by Government of the *Maksudowah*, a private canal, in 1852 and this was gradually extended and improved by the Frontier authorities. In 1871–72 the work was handed over to the irrigation department and in 1873 the excavation of the present canal began. The whole system was remodelled and extended in 1900. This canal irrigates 195,000 acres yearly. The canal is a productive work, but owing to heavy expenditure on the excavation of a new mouth and special repairs rendered necessary on account of damage caused by hill torrents and floods it did not yield any return during the years 1929–30 and 1930–31.

The Unharwah has its head 35 miles below that of the Desert canal on the same side of the river. It originated like the latter in a private water-course which was improved and extended between 1884–87. It has a discharge of 2,500 cubic feet a second and irrigates about 106,000 acres annually and yields a return of about 11 per cent. on the sum-at-charge.

The Sind canal system constructed at a cost of Rs. $8\frac{3}{4}$ lakhs irrigates an area of about 84,000 acres in the Sukkur collectorate. Under normal conditions it yields on an average a return of over 11 per cent. on the sum-at-charge.

The Mahiwah is situated on the left bank of the Indus in the northern-most corner of Sind and draws its supply from the Gudu Dhand, a branch of the main river, and serves a portion of the Sukkur collectorate. It irrigates 73,000 acres annually and does not at present yield any net revenue.

The Fuleli canal in the Hyderabad district, the largest of the old Sind canal systems, was opened in 1861. Including branches and distributaries it has a total length of 1,040 miles; the maximum discharge of the main canal at head is over 10,000 cubic feet a second and the system irrigates 408,000 acres annually and yields a return of nearly 8 per cent. on the sum-at-charge. The Fuleli is one of the few canals in Sind which carries an appreciable supply of water all the year round. The canal is being remodelled and improved at a cost of Rs. 49·98 lakhs.

The other inundation canals, such as the Ghar, the Western Nara, the Dad and the Nasrat, have either been scrapped or short lengths thereof have been utilised for the barrage canals system. The Jamrao and the Mithrao canals have been remodelled and now derive a very much improved supply in consequence of assured command from the barrage and the canalisation of the Eastern Nara river as a part of the Lloyd Barrage scheme.

All the canal systems mentioned in this paragraph are works for which capital and revenue accounts are kept.

Financial results of productive and unproductive works combined.

30. The subjoined table compares the financial results obtained by works for which capital and revenue accounts are kept in operation in Sind classed as productive and unproductive up to the end of 1931-32 :—

	Productive	Unproductive	Total
	Rs.	Rs.	Rs.
Sum-at-charge ..	2,16,67,978	3,24,07,609	5,40,75,587
Net revenue-average..	20,12,584	19,134	20,31,718
Percentage of return on sum-at-charge ..	9·29	0·06	3·76

Taking the productive and unproductive works in operation together, the return is 3·76 per cent. on the sum-at-charge on the basis of the average of the last three years ended 1931-32. This return is low because of

extraordinary remissions and heavy expenditure on repairs on account of the abnormal floods of 1929 and 1930. Irrigation by capital irrigation works in Sind is, however, a profitable investment as evidenced by the revenue surplus in its favour at the end of 1931-32 of Rs. 720 lakhs. That is to say, the capital works in operation have not only repaid the entire capital spent on them, but have yielded a surplus of about Rs. 179 lakhs to Government.

Distribution of water supply.

31. The return from these works would have been much greater but for the inequitable distribution of available supplies of water on the several inundation canals in Sind, a condition which is now in process of being remedied. Lands in the upper reaches of inundation canals have as a rule been drawing off much more than their fair and legitimate share of water, to the detriment of lands less favourably situated in the lower reaches, and one of the most pressing Sind irrigational problems is to remedy the deficiency of water at the tails of canals and effect a fair and equitable distribution of the available supply between the upper and lower reaches. The projects under construction at present provide for straightening the old tortuous inundation canals, for making new branches and distributaries where required and for the control of the draw-off to equalise the distribution of water supply at a higher level of command. Adoption of these measures would not only safeguard Lower Sind against the adverse effects of any possible lowering of river levels at critical periods through the withdrawals of the barrage canals, but benefit by the more equitable distribution of supplies considerable areas now precariously commanded.

Works for which no capital accounts are kept.

32. As no separate capital accounts are kept for these works it is not possible to calculate their financial return. A number of small canals and all the river embankments in Sind fall in this category. The river Indus flows on a ridge and, in order to protect the country from floods during the "abkalani" season, protective bunds have been constructed on both banks except where high ground makes them unnecessary. Their proper maintenance is essential and forms a very important part of the duties of the department. Large amounts are spent annually on these

embankments (the total length of which is about 1,000 miles). This expenditure is not charged against the canals concerned but against the head "15" and this fact has to be borne in mind when the percentage return of Sind irrigation as a whole is considered, although the expenditure on these embankments is primarily for the protection of the country and its communications.

Financial results of works for which no capital accounts are kept.

33. The total area irrigated, revenue and expenditure in respect of irrigation works for which no capital accounts are kept in Sind, are :—

Area irrigated—average	..	91,000 acres.
Revenue—average ..	..	Rs. 10,44,000.
Expenditure—average	..	Rs. 21,77,000.

There is therefore an annual net loss of about Rs. 11 lakhs on these non-capital works.

Financial results of all irrigation works combined.

34. The table below shows the area irrigated, expenditure incurred and revenue earned by all irrigation works—capital as well as non-capital—in the province of Sind during the triennium ended 1931-32 :—

—	1929-30	1930-31	1931-32
Area irrigated in acres	3,805,000	3,713,000	3,495,000
Gross revenue in thousands of rupees ..	78,44	62,17	84,30
Working expenses in thousands of rupees	73,47	69,34	55,19
Net revenue in thousands of rupees ..	4,97	—7,17	29,11

The area hitherto irrigated in Sind in a normal year is about $3\frac{1}{2}$ million acres. When irrigation has fully developed on the new Lloyd Barrage canals the total area irrigated will amount to about 7 million acres. The total length of canals, branches, distributaries and minors under the administration of the irrigation department in Sind at present is 10,410 miles.

Projects under construction in Lower Sind.

35. Lower Sind comprises the larger part of the Fuleli Canals division and the whole of the Karachi Canals division. This tract stands in danger of being adversely

affected at critical periods of the kharif season in consequence of the operation of the barrage canals. At the time of the inauguration of the Lloyd Barrage scheme in 1923 Government gave assurances to the landholders of Lower Sind that systematic improvements to their canals would in consequence be undertaken and in pursuance of these assurances projects are under construction or preparation for the complete remodelling of the canals in this area.

(*i*) *Improvements to the Fuleli canal system.*

This project is estimated to cost Rs. 49·98 lakhs and contains provision for widening, regrading and the excavation of new distributaries etc. on the Fuleli system. It is divided into five sections. The works in all the 5 sections with the exception of modules and remodelling of Mirwah Talhar, have been practically completed. It is expected that the whole remodelling will be completed in 1935–36.

(*ii*) *Improvements to the Kalri and Narichach system.*

A project for remodelling this system has been sanctioned for Rs. 10,70,949. The work was started in 1930 and has been practically completed.

PROJECT SANCTIONED BUT NOT BEGUN.

36. Detailed plans and estimates for the project for remodelling the Sattah canal system, estimated to cost Rs. 2,81,377, have been sanctioned, but the question of undertaking the work will be considered further after experience has been gained of two or three post barrage abkalanis.

PROJECTS UNDER CONTEMPLATION OR INVESTIGATION.

(*i*) *Upper Sind.*

37. The probable approximate cost of remodelling the three large canals systems in the Begari Canals division, viz. the Desert canal, the Unharwah and the Begari canal, on the right bank of the Indus, amounts to :—

		Rs.	
Desert canal	.. ..	5	lakhs.
Unharwah ..	.. ..	14	,,
Begari canal ..	.. ..	49	,,
	Total ..	68	,,

These projects, which provide for the complete remodelling of the three canal systems, would fully command the irrigable lands under each. The preparation of the detailed projects for these canals has, however, been held in abeyance for the present. The total cost of improvements to existing inundation canals and extension of irrigation to areas which at present have no such facility amounts, in the aggregate, to Rs. 1,24½ lakhs for that part of Upper Sind which lies north of the sphere of the Lloyd Barrage and Canals. For further details see the "Review of Sind and the Lloyd Barrage".

(ii) Lower Sind.

38. In addition to the scheme for improvements to the Fuleli canal system (cost Rs. 49·98 lakhs) referred to above a project is under preparation for affording assured irrigational command to the area situated to the west of the Fuleli and bordered by the Indus and by the Karachi Canals division. This area now depends for irrigation on the Hassanaliwah, Khairwah and Mulchandwah. The approximate estimated cost of the project is Rs. 9·3 lakhs. The total cost of remodelling the existing irrigation systems in the Fuleli Canals division to safeguard this area from possible adverse effects consequent on the operation of the Barrage canals and to afford improved distribution of the supplies available will therefore be Rs. 59 lakhs approximately.

The Mehrani canal project in the Fuleli canals division does not come within the scope of the assurances given by Government to the Lower Sind zamindars at the time of the inauguration of the barrage scheme. The project contempates the extension of irrigation to 61,600 acres of good culturable land to the south of the Guni taluka which at present lie uncommanded. The total culturable area to be brought under command will be 156,000 acres. The project is estimated to cost Rs. 26 lakhs and the estimated return on capital expenditure is 10·6 per cent.

Plans and estimates have been prepared for remodelling all canal systems in the Karachi Canals division at a total cost of Rs. 72 lakhs. Out of these, work on the Kalri and Narichach remodelling project has now been practically completed. The liability in sight to which Government are committed by the assurances given to the landholders of Lower Sind that their interests would not be allowed to suffer as the result of the withdrawals of the barrage canals, therefore,

amounts approximately to Rs. 1,31 lakhs (Fuleli Canals division Rs. 59 lakhs and Karachi Canals division Rs. 72 lakhs) and considering the outlay as a whole the expenditure will be unproductive. The Fuleli and Kalri remodelling schemes are in progress. The commencement of the remaining projects will depend on the financial situation. The question of the provision of a second barrage for Lower Sind at Kotri or Jherruck has been mooted, but the cost would be prohibitive in view of the comparatively small area and unproductiveness of the country which could be brought under command. This suggestion is therefore beyond the bounds of practical politics.

System of assessment and collection of irrigation revenue.

39. Except for water supplied for non-agricultural purposes, no separate water rates are levied in Sind, as in the Deccan and Gujarat, but the charge for water is consolidated with that for land revenue and irrigation is credited with 9/10ths of the consolidated rate. Most of the irrigation revenue comes from this source. A small part is also derived from separate water rates levied on *jaghir* lands.

The control and distribution of water in the canals is managed by the public works department, whereas the assessment and collection of revenue and grant of remissions is managed by the revenue department. Practically no revenue work in connection with the canals is done by the public works department except on the Jamrao canal, where there are abdars and canal assistants who report cases of unauthorised irrigation, waste of water etc., and also supply figures of cultivation on different distributaries and water-courses which enable the executive engineer to distribute the water available to the best advantage, especially in times of short supply. The system of transferring the work which was done by tapedars and supervising tapedars of the Revenue Department to abdars of the public works department was introduced in the first instance in the Thar Parkar District as an experimental measure. As a result of the experience gained the commissioner in Sind has reported that results have not been altogether satisfactory. The commissioner has however asked for the remarks of the chief engineer in Sind before he gives his final opinion in the matter.

The system of linking irrigation rates with land revenue and fixing them for a certain number of years on the basis of outturn and price of crops is very disadvantageous to irrigation revenue. In the Punjab a sharp distinction is maintained between land revenue and water rates. Land revenue is as in Sind, based on a percentage of the net assets of the owner and cannot be altered during the period of settlement. But water rates in the Punjab are regarded purely and simply as the price for water and are, like charges for electric power or railway freight based on what the traffic will carry, are elastic and can be altered at suitable intervals. The question of introducing into Sind a system of separate land revenue and irrigation rates is under consideration.

IV. Amendment of Irrigation Act, 1879.

40. It has been recognised for a long time that the existing Bombay Irrigation Act, 1879, is defective and unsuitable in its application to the general administration and control of irrigation in Sind. The said Act, inter alia, did not authorise the levy from the land holders of the cost of construction of new water courses made for their benefit. It was therefore amended in the first instance by Bombay Act No. XIV of 1931 and Bombay Act No. XV of 1933 to legalise the recovery of the cost of new water courses in the Barrage area from the landholders whom they are designed to serve. The other proposed amendments to the Irrigation Act will now be taken up for consideration.

V. Investigation of Minor Irrigation Works.

41. The appointment of special engineer, minor irrigation works (originally designated superintending engineer on special duty) was created in september 1925 for the purpose of investigation of minor irrigation works and village water supply schemes as a measure for the prevention of famine in the Presidency excluding Sind, and Mr. C. O. Lowsley of the Public Works Department was appointed to hold the post. Owing to financial stringency the post had to be abolished with effect from 1st April 1930. During this period of four and a half years Mr. Lowsley covered a very large area in investigating the possibility of the extension of irrigation as well as the safeguarding and augmentation of domestic village water supplies in precarious districts. During the period 1,769 proposals were received, 739 of which were investigated and 296 rejected. 99 projects estimated to cost over Rs. 87 lakhs

were submitted to Government for approval, and of these, 53 projects estimated to cost Rs. 21 lakhs were administratively approved. 37 projects valued at over Rs. 17 lakhs were technically sanctioned, while 12 works costing approximately Rs. 1¾ lakhs were completed and 26 works costing over Rs. 6½ lakhs were in progress. The value of the work initiated by Mr. Lowsley met with recognition in all quarters. In particular the Royal Commission on Agriculture expressed its appreciation of its potentialities. Not only did it recommend the extension of the work to non-scarcity areas, but it commended the experiment to other provinces. Unfortunately however Government were compelled by paucity of means to close down this activity.

VI. Questions under consideration.

42. The following are the principal questions now under the consideration of Government :—

(1) The reduction of a division in Gujarat.

(2) The abolition of posts of Assistant Engineers in Circle offices.

Their consideration has been deferred pending decision on the question whether a post of a Superintending Engineer (Roads and Buildings) can or cannot be reduced.

APPENDIX

DECCAN AND

Principal works for which capital

Circle and Division.	Principal irrigation works.	Productive or unproductive.	Source of supply.	Capacity of storage, if any.
Deccan irrigation circle.				M. cft.
Poona Irrigation division.	Mutha canals and Matoba tank.	Unproductive ..	Lake Fife ..	3,955
	Nira left bank canal and Shetphal tank.	Do. ..	Lake Whiting at Bhatgar (Lloyd dam).	24,200
Nasik Irrigation division.	Kadwa river works..	Do. ..	Kadwa and Banganga rivers—Waghad tank.	606
	Chankapur tank and Girna left bank canal.	Do. ..	Chankapur tank on the Girna river.	1,550
	Godavari canals ..	Do. ..	Lake Beale on Darna river.	7,800
Ahmednagar division .	Pravara canals ..	Do. ..	Lake Arthur Hill at Bhandardara (Wilson dam).	10,100
Nira Right Bank Canal division.	Mhaswad tank ..	Do. ..	Man river ..	2,600
	Nira right bank canal.†	Do. ..	Lake Whiting at Bhatgar (Lloyd dam).	24,200
Northern circle.				
Ahmedabad division..	Hathmati and Khari Cut canals.	Do. ..	Hathmati and Khari rivers.	..
Kaira and Panch Mahals division.	Wangroli tank ..	Do. ..	Kharwa nala ..	212
	Tranza and Nagrama tanks.	Do. ..	Matar drainage channel.	177
	Savli tank ..	Do. ..	Gadia nala ..	172
	Saiat tank ..	Do. ..	Saiat nala ..	130
	Futelao tank ..	Do. ..	Futelao nala ..	56

* Includes an expenditure of Rs. 66·4 lakhs on old works.

† The construction estimate of this project has not been closed but the canal is in operation.

I.

GUJARAT.

and revenue accounts are kept.

Length in miles.		Culturable area commanded.	Average area irrigated per annum.	Capital outlay direct and indirect.	Sum-at-charge.	Average net revenue realised per annum.	Principal crops grown.
Main canal and branches.	Distributaries.	Acres.	Acres.	Rs.	Rs.	Rs.	
88	84	50,000	14,000	67,40,417	1,04,31,926	2,79,000	Sugarcane, fruits, jowar and bajri.
100	139	150,000	65,000	96,00,000*	1,03,00,000	2,77,000	Jowar, sugarcane, wheat, bajri and cotton.
24	14	36,000	3,000	10,35,876	25,16,298	4,000	Sugarcane, groundnut and wheat.
19	21	25,000	5,000	20,56,431	39,16,555	−40,000	Wheat, bajri, gram, cotton and sugarcane.
122	112	219,000	22,000	1,03,93,918	1,43,15,113	85,000	Sugarcane, wheat, jowar, bajri and gram.
115	148	183,000	30,000	1,50,07,000	2,35,37,800	1,68,000	Sugarcane, jowar, bajri, wheat and gram.
66	43	106,000	5,000	20,96,016	49,17,297	19,000	Jowar and wheat.
163	287	397,000	18,000	4,37,00,000	6,45,00,000	−1,49,000	Jowar, bajri, cotton, wheat and groundnut.
60	82	49,000	10,000	13,18,729	26,90,290	12,000	Rice, wheat, gram and cotton.
17	..	5,000	1,700	2,93,295	5,57,858	2,000	Maize, rice, wheat and gram.
8	..	1,300	10	2,80,635	5,57,082	−1,000	Wheat and rice.
8	1	5,000	1,800	2,55,210	5,16,665	1 000	Maize, rice and wheat.
9	2	4,000	900	1,84,029	4,62,432	−38	Maize, tag, gram and rice.
4	..	1,200	50	1,16,461	2,02,775	−1,000	Sugarcane and barley.

APPENDIX

Circle and Division.	Principal irrigation works.	Productive or unproductive.	Source of supply.	Capacity of storage, if any.
				M. cft.
Central circle.				
Khandesh division ..	Lower Panjhra river works.	Unproductive ..	Mukti tank ..	320
	Shahada channel ..	Productive ..	Gomai river ..	..
	Jamda canals ..	Unproductive ..	Girna river ..	..
Sholapur division ..	Ekruk tank ..	Productive ..	Adhela river ..	2,600
Poona division ..	Krishna canal ..	Unproductive ..	Krishna river ..	..
Southern circle.				
Belgaum division ..	Gadikeri tank ..	Productive ..	Nalla ..	28
	Gokak canal ..	Unproductive ..	Dhupdal reservoir on Ghataprabha river.	1,468
Kanara division ..	Mavinkop tank ..	Productive ..	Nalla ..	44
Dharwar division ..	Dharma canal ..	Unproductive ..	Dharma river ..	..

I—*contd.*

Length in miles		Culturable area commanded.	Average area irrigated per annum.	Capital outlay direct and indirect.	Sum-at-charge.	Average net revenue realised per annum.	Principal crops grown.
Main canal and branches.	Distributaries.						
		Acres.	Acres.	Rs.	Rs.	Rs.	
..	45	13,000	2,600	4,68,621	9,41,470	17,000	Wheat, fruit and peas.
21	1	3,000	1,500	1,07,547	1,07,547	3,000	Barley, sugarcane, wheat and methi.
39	75	40,000	1,800	10,51,360	36,89,053	−3,000	Wheat, fruit and jowar.
48	2	17,000	4,000	13,40,386	18,27,453	1,30,000	Jowar, wheat and cotton.
64	..	26,000	5,000	9,49,807	14,16,984	47,000	Sugarcane, wheat, rice and jowar.
..	2	700	400	16,918	16,918	2,000	Rice and garden crops.
16	35	18,000	9,000	14,66,673	19,17,292	49,000	Maize, cotton, wheat and sugarcane.
..	3	800	400	33,504	35,141	1,000	Rice and garden crops.
27	4	13,000	6,000	97,832	2,05,323	100	Rice.

XIV—EDUCATIONAL DEPARTMENT

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XIV—EDUCATIONAL DEPARTMENT

I. History of educational policy.

Beginnings.

1. The history of education in the presidency is in brief as follows. In 1854 the Government of India decided to create an articulated system of education from the primary school to the university. Their policy included the constitution of a separate department for the administration of education in each province with adequate inspection, universities in the presidency towns, training institutions, the maintenance of existing Government colleges and high schools and an increase in their number where necessary, closer attention to vernacular schools, both primary and secondary, and the introduction of a system of grants-in-aid. In accordance with this policy, a department of public instruction was set up in 1855 and the University of Bombay was founded in 1857. In the same year a system of grants-in-aid was introduced. Local funds were created in 1860 by means of special all-India taxation earmarked for local purposes and in 1863 it was decided that one-third of the local cess should be devoted to maintaining primary schools in rural areas. This sum was supplemented by a fixed contribution from the provincial revenues of about Rs. 2½ lakhs, which was later increased to one-third of the total cost incurred by the district local boards on primary education.

Subsequent developments.

2. As a result of the Education Commission appointed by the Government of India in 1882 the policy was adopted of entrusting the local bodies, set up in this presidency at the instance of Lord Ripon's Government in 1884, with powers relating to the management and expansion of primary education. In 1903 the Government share of the cost of primary

education was raised to one-half and, since the amount realised from local cess increased very slowly, the cost of further expansion of primary education came to be met from provincial revenues.

In 1904 the Government of India issued a resolution reviewing the whole policy. They accepted the principle that in each branch of education Government should maintain a limited number of institutions, both as models for private enterprise to follow and in order to uphold a high standard of education. They also emphasised that, in withdrawing from direct management, it was essential that Government should retain general control by means of efficient inspection. Such control, they declared, is the only means of securing economy and efficiency and preventing waste, especially in a period of expansion, and is as a rule best exercised by a system of grants-in-aid, regulated in the light of the results of a thorough and independent inspection. They also endorsed the main recommendations of the Indian Universities Commission of 1902 that the senate should be limited in size, that the university should be given teaching powers in addition to its examining powers and required to demand a high educational standard from its affiliated colleges.

In 1913 the general policy of concentrating the bulk of available resources on the improvement and expansion of primary education on a voluntary basis was adopted. The necessity of improving facilities for the training of primary and secondary teachers and for training women teachers for girls' schools was emphasised.

Recent legislation.

3. In 1923 the Primary Education Act was passed. It transferred control to the district local boards and municipalities on the basis of their continuing to receive grants from Government approximately equal in amount to those paid in the year preceding the transfer; but the boards were to provide one-third and the municipalities one-half of all fresh expenditure due either to expansion or increase in cost from their own resources, the remainder being provided by Government. The Act also provided that local authorities might frame schemes for compulsory education in any area under their control and that if Government approved of a scheme Government must bear half its cost in the case of a municipal local authority and two-thirds in the case of a local board authority, such cost being limited to the amount of the approved estimate.

Under section 93 of the Bombay Local Boards Act, 1923, a cess of one anna in the rupee is compulsorily levied on land revenue and the proceeds credited to every district local board. These bodies may, however, at will raise the cess to as much as two annas in the rupee or any lower figure. The present position is that out of 27 district local boards nine have raised their local fund cess to the maximum of two annas in the rupee, four to $1\frac{1}{2}$ annas and four to $1\frac{1}{4}$ annas. The total income so accruing works out for the year 1930-31 at Rs. $47\frac{3}{4}$ lakhs. Had the rate been uniformly raised to two annas in the rupee the total would have been nearly Rs. $68\frac{1}{2}$ lakhs.

Reconstitution of university.

4. In 1928 the Bombay University Act was passed. The university was reconstituted so as to enable it to provide greater facilities for higher education in all branches of learning including technology and conduct post-graduate teaching and research, while continuing to exercise due control over the teaching given by colleges affiliated to it.

II. Administration.

Director of public instruction.

5. Government exercise their control over public instruction through a director. He, as head of the educational department, controls both the Government educational institutions and the Government inspecting agency. Government, however, correspond direct with the university, while technical, medical, agricultural and veterinary education and the School of Art are controlled by Government through the heads of the departments concerned.

The director is assisted by a deputy director and an assistant director of the Indian Educational Service and three superintendents in class II of the Bombay Educational Service, with a clerical staff of 42 and one assistant superintendent.

In his inspecting duties the director is assisted by a staff of inspectors and inspectresses of various grades. The object of inspection is to see that Government's educational policy is carried out, that proper standards are maintained and that public funds are expended to the best advantage. The serious falling off in the inspectorate, consequent on the recruitment to the Indian Educational Service having been stopped and

the transfer of inspecting staff to local authorities, has produced a situation which is causing grave concern. It is on the central inspecting agency that Government must rely to see that due economy is observed and that funds are not wasted, but the present staff is inadequate for this purpose.

The deputy director is principally concerned with primary education. The assistant director is officially in charge of the director's office and deals with the reports from the 600 secondary and special schools.

The director of public instruction deals with grants and formerly made all permanent appointments in high schools, the inspectors making temporary appointments. Inspectors administer primary and secondary school scholarships. Larger powers are delegated to the inspector in Sind than to other inspectors. With a view to reducing the volume of work in the director's office additional powers have recently been delegated to educational inspectors subject to certain conditions and reservations, namely, powers to (1) select assistant masters for deputation to the Secondary Training College, (2) confirm them, (3) impose all penalties (including dismissal) prescribed by the Civil Services (Classification, Control and Appeal) Rules, (4) withhold increments of assistant masters, (5) sanction crossing of efficiency bars and (6) appoint assistant mistresses and grant them leave and promotion.

The Reorganisation Committee have pronounced against the proposal which is often made that the director should be appointed secretary to Government, as he is in the Central Provinces, on the ground that the arrangement would not enable Government to retrench a post of secretary to Government and would interfere with the director's touring and administrative duties. They propose however that cases coming from the director should not be re-examined in detail in the secretariat and that a part of the staff in the education department of the secretariat should be transferred to the director's office, a part retrenched and only a skeleton staff retained in the secretariat.

Government have issued orders on these recommendations of the committee. They consider that there is no considerable body of cases in which delegation is possible, at least not to the extent which would justify the transfer of the secretariat staff to the director of public instruction's office, as suggested by the committee. Some further delegation may be possible but it involves legislation. Government are, however,

considering what further financial powers may be delegated to the director of public instruction as in the case of other heads of departments.

EDUCATIONAL SERVICES.

6. The educational services are divided into :—

(1) The Indian Educational Service ;
(2) The Bombay Educational Service, class I ;
(3) The Bombay Educational Service, class II ;
and (4) The Subordinate Educational Service.

These cadres are divided further into men's and women's branches.

The Indian Educational Service as an all-India service dates back to 1896. Recruitment was stopped in 1924 in accordance with the recommendations of the Royal Commission on the Superior Civil Services in India.

The Bombay cadre of the Indian Educational Service now contains 32 posts, one of which is in abeyance. Up to 1919 all posts in this service were held by Europeans. As posts in this service fall vacant they are replaced by posts in the new Bombay Educational Service, class I, which was constituted with effect from 1st January 1931. The number of Europeans in the two services together is now fourteen. They hold the following posts :—

Administrative branch.

Director of public instruction.
Deputy director of public instruction.
Educational inspector, central division.
Inspector of European schools (on contract for 5 years).

Collegiate branch.

Four posts of principal of an arts college.
Principal of the Engineering College.
Principal of the Secondary Training College.
Principal of the Royal Institute of Science (on contract for 5 years).
Two Professors of English (one on contract for 5 years).
Director of School of Art.

There is only one post in the women's branch of the Indian Educational Service, namely, that of Inspectress of Girls' Schools. It is held by a European lady. Government have laid down that for class I appointments in the Bombay

Educational Service European educational qualifications with an honours degree and for administrative officers in addition a diploma in education will ordinarily be required.

The cadre of the Bombay Educational Service, class II, consists of:—

	Posts.
Collegiate branch	50
Teaching, inspecting and general	61
	111

The Subordinate Educational Service consists wholly of Indians. Appointments to clerical and teaching posts in this service are made by the educational inspectors subject to the condition that the power of appointment to the teaching posts is exercised in accordance with any instructions which the director of public instruction may issue for the guidance of the educational inspectors. The cadre consists of:—

	Posts.
Inspecting	139
Teaching	697
Clerical	368
Others	86
	1,290

When it was decided to admit Indians to the Indian Educational Service in 1919 a number of men were promoted from the provincial service. These were all men with long service who had risen from subordinate positions and few of them had high academical qualifications.

In the women's branches of the provincial service Indian women graduates are now coming forward in sufficient numbers. The department contains several Indian ladies with high qualifications and of proved capacity.

Control over primary education.

7. Government control over primary education is exercised through a very small staff of inspecting officers. With the exception of the mulla schools in Sind there are comparatively few privately managed primary schools, the majority being under district local boards or municipalities. Before the passing of the Primary Education Act, 1923, the control of primary schools was vested almost entirely in the educational

department and there is no question but that this presidency was at the beginning of this century considerably ahead of the rest of India in the domain of primary education.

This position is now being challenged and it is one of the objects of this review to determine how it can be retained. It must be admitted that the increase in expenditure consequent mainly on the rise in pay of the teachers has not produced proportionate results either in efficiency or in actual output, but other important factors enter into the question, notably the transfer of control and the decrease in the Government inspecting staff.

That Government do not maintain an effective control over primary education is evident from the fact that since the posts of deputy inspector, one of whom was formerly posted in each district, have been abolished, the only Government district inspecting staff consists as a rule of one assistant deputy inspector in each district. This officer also has to inspect secondary schools which do not teach above standard V and special schools, assist the educational inspector and inspectress of girls' schools in the inspection of high schools and help in conducting the Government departmental examinations.

Government can exercise control over primary education by refusing or withholding grants in case of misuse of powers or misapplication of funds, but, without an adequate inspecting staff to investigate matters on the spot and see where things are wrong, it is difficult to make effective use of this instrument of control. Up to 1923 Government gave grants to district local bards to supplement their resources, which were confined almost entirely to one-third of the local cess. The grants were originally allotted according to the needs of the different districts, not in proportion to their expenditure, and the distribution of grants between the different boards was left to the divisional inspectors to decide. In 1903 Government increased the grants to one-half and determined their distribution on the new principle of expenditure but continued to give additional grants for special purposes. At the time of the transfer of control to the boards under the Primary Education Act of 1923 Government were contributing 87 per cent. of the total expenditure of district local boards on primary education. Under the Act and the statutory rules Government have left themselves very little option regarding the proportion in which they should contribute towards primary education in the cases of district

local board schools and municipal schools and do not take into consideration the relative wealth or poverty of different districts and municipalities.

CONTROL OVER SECONDARY EDUCATION.

8. Control is exercised over secondary education both by the university and Government.

The university recognises schools for the matriculation examination, but before doing so satisfies itself that the school is up to the required standard. The matriculation examination itself is also a means by which the university controls secondary education. Government control is exercised through recognition and payment of grants-in-aid.

Recognition by the university of schools which have not been recognised by the department is not desirable educationally and administratively and points to the need of this dual control being abolished.

Of the 424 secondary A. V. schools and 139 English classes in the presidency in 1932–33 recognised by the department, 353 schools and 22 English classes were in receipt of grants-in-aid. The majority of those not registered have applied for grants but registration has been refused on the ground that the allotment at the disposal of the department is insufficient for grants to be made. To give to all schools the grants they have a right to expect under the code an additional sum of about Rs. 7 lakhs would be required.

Schools are registered for grants-in-aid under the conditions laid down in the grant-in-aid code. Schools which do not desire a grant-in-aid may be recognised if they satisfy generally the requirements of the code. Recognition by Government entitles a school to send up candidates for Government examinations and to admit Government scholars. An unrecognised school suffers the further disability that its leaving certificates are not recognised for admission to a recognised school. There is, however, no bar to the admission to a recognised school of a child from an unrecognised school unless the teaching in the latter has been specially declared by Government to be of a pernicious nature. In practice, owing to the prestige attaching to Government recognition, it is a disadvantage to a school not to be recognised by Government.

Grants to secondary schools are awarded by the director on the recommendation of the divisional inspectors, who submit annual inspection reports. All full high schools are

inspected by the educational inspectors themselves and schools which do not teach above standard V by the assistant deputy inspectors. The inspection in drawing is conducted by a separate inspector in that subject, while the deputy inspectors of Urdu schools assist in the inspection in Persian and Urdu. Girls' schools are inspected by the inspectress of girls' schools of the division concerned, except in the southern division in which they are inspected by the educational inspector of the division.

Government further influence secondary education by the maintenance of secondary schools of their own.

CONTROL OVER UNIVERSITY EDUCATION.

9. A measure of control is exercised over the university through the requirement that the governor of the province shall be the chancellor and through the power of the chancellor to nominate 40 members. It is also provided that the chief justice, the minister of education, the director of public instruction, the surgeon-general, the director of agriculture and the secretary to Government, public works department, shall be ex-officio members of the senate.

All statutes passed by the senate require the sanction of the chancellor, the affiliation or disaffiliation of colleges is subject to the sanction of Government and the accounts of the university must be submitted to Government for audit.

Six of the arts colleges and six of the eleven professional colleges affiliated to the university are maintained by Government. The Bombay Veterinary College and the Bombay School of Art are not affiliated to the university. Of the seventeen non-Government colleges, ten are in receipt of a grant from Government. No rules are laid down for the award of grants to colleges, but the principle observed in practice has been to aim at grants equal to one-fourth of the admitted expenditure, or one-third of the local assets, whichever is less. There is no inspection by Government of aided colleges other than a scrutiny of their accounts.

CONTROL OVER TECHNICAL EDUCATION.

10. The control of technical and industrial education has been transferred from the director of public instruction to the director of industries. Apart from the education given in colleges of university standard and in the Victoria Jubilee Technical Institute, which has been recognised by Government as the chief technological institution of the presidency,

and in the diploma classes attached to the engineering colleges at Poona and Karachi, the control of technical and industrial education is exercised through a special committee appointed by Government, of which the principal of the Victoria Jubilee Technical Institute is secretary. The committee prescribes courses of instruction, issues certificates and arranges for the inspection of schools through the agency of members of the staff of the Victoria Jubilee Technical Institute. The committee submits recommendations for grants to the director of industries, who awards grants from the allotment placed at his disposal for the purpose.

Inspection of secondary schools.

11. The educational inspectors formerly were of the Indian Educational Service and were invariably men who possessed an honours degree of a British university. Although they did not all possess a diploma or degree in teaching, they had usually had practical experience before coming to India. Recruitment from Europe has however been discontinued for some years past and all the present inspectors are Indians who have been promoted from the subordinate ranks or appointed by direct recruitment in India with the exception of one, who has been recruited from England. Some of the Indian inspectors possess teaching degrees of foreign universities. Secondary education has of late years become more and more specialised. The schools are employing increasing numbers of trained teachers, while many of the privately managed high schools now have headmasters who have been trained in England or America. It is essential that for the inspection of such schools the inspecting officers should be men and women who have undergone special training. Three direct appointments of highly qualified officers have recently been made to the inspectorate. A certain number of class I appointments on the administrative side are, however, reserved for promoted officers, for it is recognised that the prospect of promotion to the highest class acts as a great incentive to officers in class II of the service and that natural ability combined with wide educational experience may in some cases make good the deficiencies of early training.

Inspection of primary schools.

12. The skeleton staff retained by Government for the inspection of primary schools is wholly insufficient to carry out a thorough and efficient inspection. The inspecting staff

employed by local authorities is answerable to those authorities and under the existing law and rules cannot be regarded as supplying that measure of independent and protective supervision which at the present stage it is the duty of Government to afford. The problem of evolving a system which will enable Government to maintain such supervision and guidance as they think necessary without unduly limiting the freedom of local authorities or incurring unreasonable expense is one that must be faced in the near future. When the control of primary education was transferred to the local authorities, some of the Government staff were transferred to them, their cost being still borne by Government. The local authorities have often shown a lack of appreciation of the need of inspection and have left vacancies in their inspecting cadre unfilled.

In one district in the central division in which there are 900 primary schools the Government inspecting staff consists of only one officer who is in the Subordinate Educational Service. It is true that the district local authority employs one administrative officer and seven supervisors, but the Government staff is entirely inadequate to see that the education is effective and that public funds are being spent to the best advantage. The Indian Statutory Commission considered the present position as regards Government's ability to exercise any kind of effective supervision over primary education in this presidency as particularly unsatisfactory. The source of recruitment of Government inspectors of primary schools is the cadre of secondary school teachers. They are usually graduates who have passed through a course of training in the Secondary Training College and obtained the B. T. degree. These inspecting posts are interchangeable with posts in the training institutions for primary school teachers.

Staff in Government colleges.

13. The staff in Government colleges ordinarily consists of members of the educational services. All clear vacancies in both classes of the Bombay Educational Service are widely advertised and selected applicants appear before a selection board consisting of the secretary to Government, educational department, the director and a principal of a college. No difficulty is anticipated in recruiting young men with good degrees for most of the higher posts and with adequate qualifications for the less important posts in the colleges.

Headmasters of high schools.

14. Posts of headmaster of a high school are usually filled by promotion from among the assistant masters, although direct appointments are occasionally made. The appointments are made by Government. Although in the case of promoted officers seniority is an important factor, appointments are made by selection. Special value is attached to European teaching qualifications. The needs of secondary education demand that a headmaster should be a picked man.

III. Primary education.

Policy.

15. The preamble to the Bombay Primary Education Act of 1923 declares it to be the policy of Government that universal, free and compulsory elementary education for boys and girls should be reached by a definite programme of progressive expansion. The Compulsory Education Committee (1921–22) recommended that compulsion for boys should be introduced into all city municipalities by stages within five years and into all non-city municipalities and all villages (except in Sind) which already possessed a school within seven years and that schools on a voluntary basis should be opened each year in one-tenth of those school-less villages in the presidency which were able to produce 30 children of school-going age (i.e. of between five and ten years of age). By this means they expected that the total attendance of boys of school-going age would be increased by 500,000 in ten years and that at the end of the period 80 per cent. of such boys in the presidency proper and 60 per cent. in Sind would be at school. The committee's proposals regarding the expansion of the education of girls were more vague. They contemplated an increase of 200,000 girls at school in ten years. Financial stringency, however, has made expansion at the rate contemplated by the committee altogether out of the question.

Primary Education Act, 1923.

16. The Primary Education Act of 1923 is based on the report of the Compulsory Education Committee of 1921–22 and provides for the transfer of control of primary education to local authorities. The administration of the primary education of each district local board and of such municipalities as are considered by Government to be fit to perform the functions of a "local authority" may under the Act

be entrusted to a school board consisting of from seven to sixteen members elected by the members of a local authority but not necessarily from among its members and of such members, not exceeding three in the case of Municipalities and four in the case of District Local Boards as may be nominated by Government. The school board exercises the powers and performs the duties of the local authority in respect of primary education subject to the general control of the local authority. The local authority has, among other powers, the power to appoint, subject to the approval of Government, the school board administrative officer, who is the executive officer of the school board. This dependence of the school board on the local authority has in many instances given rise to friction which has impaired the efficiency of education. A remedy which has been suggested is an amendment of the Act whereby all members of the school board would be chosen from the members of the local authority itself, in which case the appointment of the administrative officer might be made by the school board. If, however, all members of the school board are elected from among members of the local authority, there may not be an adequate representation of educational experience and of minorities.

With a view to defining better the spheres of the local authority and the school board a circular explaining the legal position has been issued. It is further intended to issue a set of model rules under section 27 (*3*) (*d*) of the Act on the subject, so as to facilitate the framing by the local authorities of the necessary regulations with the sanction of Government.

It may be said that local authorities and school boards are becoming more familiar with the working of the Act. The number of cases in which difficulties or differences of opinion arise is diminishing year by year and on the whole the administration of the Act is proceeding with increasing smoothness and harmony.

The Act of 1923 not only provides for the transfer of the direct control of primary education from Government to the local authorities but creates a system by which compulsion may gradually be introduced with the consent and on the initiative of local authorities. Government have under it power to compel local authorities to submit schemes for compulsion and declared, when the bill was under consideration, that it was their intention to make use of this power. Local authorities were called upon to work out schemes in detail and to submit them to Government for scrutiny. If they

sanction any such scheme Government are bound under the Act to bear half the recurring and non-recurring extra cost in the case of municipalities and two-thirds in the case of district local boards in addition to the amount of the datum line grant, i.e., the amount of grant paid by Government to the local authority in the year before transfer. The Act imposes no statutory financial liability with respect to expansion on a voluntary basis. Aid was however promised, if finances permitted, on the same scale as to compulsory schemes. In reckoning Government grants an increase of a half per cent. over the expenditure of the previous year is admitted as allowable for normal expansion on a voluntary basis.

To give effect to the provisions of the Act the first step was to hand over the control of primary education to those district local boards and municipalities which were declared local authorities. Contrary to expectation some boards proved loth to assume the responsibilities offered, especially in Gujarat, where the district local board, Ahmedabad, has only recently decided to take over control of primary education in the district from 1st January 1934. All of the forty-eight municipalities which have been constituted local authorities under the Act have taken over the management of their schools. The total number of local authorities managing their own schools was 73 on 31st March 1933.

The following table shows the increase in the number of pupils :—

	1923-24	*1932-33*
Lower primary stage, i.e., up to standard IV	763,582	1,032,595
Upper primary stage, i.e., standards V to VII ..	69,412	107,764
Total ..	832,994	1,140,359

The following table shows the growth of expenditure on primary education under the various heads from 1923–24 to 1932–33 :—

Year.	Provincial revenues.	Local cess.	Municipal funds.	Fees.	Subscriptions.	Endowments.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1923–24 ..	1,10,28,017	6,35,913	31,23,931	5,75,359	10,26,777	2,52,200	1,66,42,197
1932–33 ..	1,03,59,112	15,75,283	44,53,164	6,10,546	21,15,481		1,91,13,586

Out of the 33 schemes for compulsory education which have been drawn up, eleven have been sanctioned, seven for the following municipalities, viz., Ahmednagar, Sholapur, Broach,

Jalgaon, Poona City, Karachi and Nasik, and four for the district local boards of Larkana, West Khandesh and Karachi (two schemes). The sanctioned schemes cost Government Rs. 1,13,493 a year. Of the above sanctioned schemes only seven are actually in operation, the Nasik and Jalgaon municipalities having withdrawn their schemes for want of funds and the district local board, Karachi, having held up one out of its two schemes in view of contemplated territorial changes and the other for the Kotri taluka having been cancelled as the taluka has recently been transferred to the Dadu District. Under the Bombay Primary Education (District Municipalities) Act, 1918, compulsory education for boys only has been introduced by the municipalities of Bandra, Satara City, Dhulia, Surat and Byadgi.

Out of the seventy-one schemes submitted for expansion on a voluntary basis thirty-four, involving a total cost of Rs. 4,84,916 to Government, have been sanctioned.

Advance towards compulsory education.

17. The Compulsory Education Committee estimated that the cost of the programme proposed by them for ten years, which would result in an addition of 700,000 pupils, would be Rs. 110 lakhs. Of this sum the Government share was computed at Rs. 77 lakhs, on the basis of a *per capita* cost of Rs. 20 per pupil in the first year, declining by 8 annas in each year to Rs. 15-8-0 per pupil in the 10th year. The anticipated reduction has, however, not fully materialised, as the cost per head of pupils in primary schools in 1932 was still :—

	Rs.
Boys	16·0
Girls	21·0

The committee estimated the ultimate number of extra pupils under a system of compulsion at 770,000 boys and 992,000 girls. On the basis of the present cost per head this would involve an additional expenditure of Rs. 334 lakhs recurring, exclusive of the cost of inspection and administration. Of this total they estimated that 60 per cent. would fall on provincial revenues. Though Government have been working on the lines indicated by the committee, the advance has been slower than anticipated in 1921, the total direct expenditure on primary education having increased by only Rs. 49 lakhs between 1922 and 1927.

Cost of primary education.

18. The following table summarises the growth of expenditure on primary education and the increase in the number of

schools and pupils during the two decades immediately preceding the passing of the Primary Education Act :—

Year.	Number of schools.	Number of pupils.	Cost to Government.	Total cost including cost to local bodies, etc.
			Rs.	Rs.
1903–04	7,033	349,469	Figures not separately.	available
1913–14	11,217	668,671	30,35,798	58,34,422
1923–24	12,546	832,994	1,10,28,017	1,66,42,197

These figures reveal the fact that between 1913–14 and 1923–24, while the number of schools and pupils increased by only 12 per cent. and 25 per cent. respectively, the cost increased by 185 per cent. District local boards were charged with the obligatory duty of providing suitable accommodation for primary schools and for their maintenance and the training of teachers and the general development and extension of primary education and were required to set aside one-third of their total revenue for this purpose. But the schools were managed directly by Government, who exercised their control through the director of public instruction and the divisional educational inspectors, who had a deputy under them in every district.

Wastage.

19. The Hartog Committee's report is the *locus classicus* on the subject of wastage in primary education. That committee held that primary education was ineffective unless it produced literacy and made the assumption, which is generally accepted, that no child who had not completed a primary course of at least four years would become permanently literate. It showed that of 252,274 boys and 48,084 girls who were to be found in class I of primary schools of the presidency in 1922–23 only 102,506 boys and 14,728 girls were in class IV in 1925–26—a percentage of 41 for boys and 31 for girls. These Bombay figures, serious as they are, were considerably better than those in any other province in India, the next highest percentages being 26 for boys in Madras and 23 for girls in the Central Provinces. For the whole of British India the percentage was 18 of all pupils. The difference is perhaps not unconnected with the higher rates of pay received by teachers in this presidency. Teachers who are contented and interested in their work would probably be more capable than others of carrying their pupils to the higher classes.

The most recent figures available corresponding to those given in the Hartog Committee's report are :—

Year.	Class I.	Class II.	Class III.	Class IV.	Class V.
	Boys only.				
1928–29	277,617	..	..	..	..
1929–30	..	147,128	..	..	..
1930–31	..	..	133,030	..	..
1931–32	..	..	..	112,400	..
1932–33	..	..	..	..	98,070
	Girls only.				
1928–29	110,280	..	..	..	..
1929–30	..	43,698	..	..	..
1930–31	..	..	35,219	..	..
1931–32	..	..	..	26,857	..
1932–33	..	..	..	..	17,975

These figures include pupils in the primary standards of European and English teaching schools and are thus not a safe guide to the wastage in vernacular primary schools only. The following statement gives figures for primary schools proper. It shows that the percentage of pupils reading in standard IV or passing that standard has decreased since 1928–29 :—

Wastage in vernacular primary schools.

Year.	Pupils in infant class.	Pupils in standard IV five years later.	Pupils passing standard IV five years later.	Percentage of pupils in standard IV to pupils in infant class.	Percentage of pupils passing standard IV to pupils in infant class.
1921–22	302,960	..	..	..	..
1925–26	..	94,320	46,900	31·1	15·4
1922–23	287,930	..	..	..	..
1926–27	..	98,650	48,596	34·2	16·8
1923–24	287,714	..	..	..	..
1927–28	..	99,671	56,871	34·6	19·8
1924–25	281,419	..	..	..	..
1928–29	..	102,775	56,368	36·5	20·0
1925–26	308,229	..	..	..	..
1929–30	..	104,284	55,519	33·8	18·0
1926–27	352,281	..	..	..	..
1930–31	..	106,475	63,774	30·2	18·1
1927–28	372,019	..	..	..	..
1931–32	..	113,118	65,209	30·4	17·5
1928–29	387,897	..	..	..	..
1932–33	..	116,045	70,581	29·7	18·1

TEACHERS.

20. The present scales of pay for primary school teachers are :—

	District local boards.	Municipalities.
	Rs.	Rs.
Unqualified ..	15	20
Qualified ..	20—1/3—25—1/2—30.	25—1/5—30.
First year trained ..	25—1/2—35—1—40.	30—1/3—35—1/2—40.
Second year trained ..	30—½—35—1—50.	35—½—45—1—50.
Third year trained ..	35—1—60.	40—2/3—50—1—60.

All rates in Sind are Rs. 5 higher.

The " unqualified " teacher scarcely exists except in temporary vacancies. A " qualified " teacher is one who has passed the vernacular final examination. Owing to the much higher cost of the trained than of the untrained teacher Government have restricted the number of trained teachers to 50 per cent. The number of trained teachers now in the schools has not yet been generally brought within this limit. A first year trained man is considered suitable for teaching up to standard IV, a second year trained man for teaching up to standard VI and in exceptional cases up to standard VII. Third year trained men are really necessary for teaching for the vernacular final examination.

Government now maintain nine training institutions for men. In 1921–22 there were 21 such institutions. Third year training was discontinued in 1923 on the score of expense. In 1925, the fifty per cent. of trained teachers, which was originally laid down as a minimum percentage, was converted by an executive order of Government into a maximum percentage, to be worked down to gradually. The policy followed at present is to level up the percentage of trained primary teachers all over the presidency to approximately 50 per cent. allowing for normal wastage. In practice this means that more places are allotted to those local authorities whose percentage of trained teachers is low. This policy of restriction, though in many ways unsound and opposed to the best interests of education, has been imposed by financial circumstances.

Government bear not only the whole cost of the training schools but also that of the stipends paid to local board teachers deputed to the schools (Rs. 12-8-0 a month in Sind and Rs. 10

elsewhere for eleven months for each male teacher and Rs. 15 a month for a woman teacher) and the cost of the grant-in-aid towards the pay of the substitute employed in the vacancies of the teachers under training and the allowances paid by municipalities to their teachers under training. That the incentive offered to the trained teacher is unnecessarily high is shown by the fact that there has been a demand for teachers to be trained at their own expense in excess of the quota in order to qualify for the higher pay offered to trained teachers. But Government have hitherto refused to accept the extra liability which this would involve.

The policy of Government was therefore to postpone the extension of training to the maintenance of the rates of pay of trained teachers. But the present depression has compelled Government to change their policy. In the first place in 1930 all local authorities were allowed to cancel the headmasters' and first assistants' allowances, which ranged from Rs. 5 to Rs. 25 a month in the case of headmasters and from Rs. 5 to Rs. 10 a month in the case of first assistants according to the attendance of pupils and were given in addition to pay. Secondly the heavy cut in the primary education grants of nearly 20 per cent. in 1932–33, following a cut of 5 per cent. in 1931–32, compelled Government to encourage local authorities to revise their scales of pay for new entrants and to subject the pay of existing incumbents to a cut.

The Reorganisation Committee recommend that economy should be obtained by two methods, namely,

(1) By reducing the pay prescribed by Government for primary teachers; and

(2) By fixing a number of posts on higher pay for which posts only teachers having second and third year training qualifications would be eligible, instead of offering higher pay to all teachers who obtained those qualifications.

The adoption of the second recommendation would result in an increase of second and third year trained teachers over the number required to fill the posts, but would cost Government nothing except the cost of the training itself.

The committee recommend that the savings secured by these proposals should be devoted first to securing that all primary school teachers have at least one year's training. They consider that the training of all teachers is far more

important than any quantitative expansion of primary education.

Government have these proposals under consideration at present and a decision will be reached after the revised scales for the Government subordinate services have been fixed. They have recognised the importance of training, especially of women teachers. It is generally agreed that Indian women of the class who take to teaching are usually unfit for the work without at least one year's training.

Curriculum.

21. The curriculum has been criticised as unrelated to the conditions of village life and unlikely to fit a boy for it. A committee was appointed to consider this subject amongst others and its report is being considered by Government. The aim of every school should evidently be not only the attainment of literacy but also the raising of the standard of village life in all its aspects. This awakening can be brought about by the master if he is properly trained and the department is now experimenting in this direction. A special training school for masters to take charge of rural schools has been established in the Deccan. An alternative curriculum, known as the agricultural bias course, is being tried in 80 schools.

Division into primary and secondary.

22. In comparing primary education in this presidency with that of other provinces it is necessary to bear in mind that all education which is solely in the vernacular is here classed as primary, the term "secondary" being reserved for schools in which English is taught. The primary course is one of eight years and comprises an infant class and seven standards. The infant class and standards I–IV are classed as lower primary (or elementary, the term employed in the Primary Education Act) and standards V–VII as upper primary. In other provinces the latter would be classed as secondary. The Government of India have from time to time moved the Bombay Government to adopt the classification followed elsewhere. There are, however, fundamental reasons, of far greater importance than those of mere statistical convenience, why the old system should be adhered to. Our primary schools, including standards V–VII represent a form of education which is self-contained and homogeneous and is entirely separate in purpose, outlook and method from the "English" education given in the secondary

schools. It is generally admitted that one of the most important problems in this country is to keep within reasonable bounds the tendency of the masses to forsake manual labour and swell the ranks of the English-knowing classes. It is said that the education given in our upper primary standards is too literary and is not adapted to the needs of either the agricultural or the artisan classes. Efforts are being made to remedy the defect by the provision of alternative courses such as the agricultural-bias curriculum, the employment of a preponderating proportion of teachers from the less advanced classes and adapting the training of teachers to the special needs of the rural population. Secondary education, which involves the teaching of English, is kept apart as a separate branch with different aims and different methods.

Amendment of the Act.

23. For the last six years efforts have been made to build up a complete and detailed administrative system by means of a code of rules under the Act. The rules have become cumbrous and in some cases ambiguous. The Act as drafted left the department and the local authorities in uncertainty about many questions.

The only important powers which Government have retained are those of approving the appointment of the school board administrative officer, regulating the scales of pay of teachers, fixing the proportion of untrained teachers, prescribing the curricula and sanctioning schemes of expansion and of compulsion. Revision of the Act is called for; for instance, in order to lay down more clearly the qualifications, powers and duties of administrative officers, to protect them from interference on the part of the boards and their chairman, to give them adequate powers by statute and to enable Government to insist on the local authority making a fresh recommendation for the appointment of a suitable officer in cases where a previous recommendation has not been approved. It is necessary also to restore the power of Government to step in when things are going wrong and to enforce their requirements when necessary. Cases have occurred where a school board has arbitrarily transferred over a hundred school masters in the course of a month. It is of course true that the education policy has been to encourage the growth of educational institutions dependent on substantial grants from Government and it has been suggested that Government can exercise control

by withholding or reducing grants. The Hartog Committee remarks :—

> " We think it is to be regretted that a system of Primary Education which has been framed on sound lines should have been handed over to the control of local bodies, without the insertion in the statutes or rules of sufficient safeguards to ensure that Government, working through its Ministers and the Education Department, would be able at least to guide future developments."

The question of amending the Act so as to remove the defects observed in its working up to now is under the consideration of Government at present.

Finance.

24. Government expenditure on collegiate and secondary education after standing still (at about Rs. 17 and Rs. 24 lakhs respectively) has now begun to decline. It is the policy of Government to devote any additional funds available to primary education. But it may be questioned whether it is justifiable to refuse to assist reasonable development of secondary and higher education and whether such a policy will not result in a falling off in the standards of education in its higher branches which will react to the disadvantage of the presidency as a whole.

The grants voted for primary education in 1932–33 were Rs. 1,09.84,000 of which Rs. 1,07,37,000 were grants to local bodies. This is 65·4 per cent. of the total grant to the educational department (Rs. 1,68,05,000). Taking the total revenue of Government (excluding the various debt heads and services) at Rs. 13 crores, about one-eighth of it is being spent on education. The means by which a further advance in primary education can be made appear to be :—

(1) To impose fresh taxation. Unless fresh sources of revenue are made available by the impending constitutional changes, it seems that the educational department, like other departments, must await a revival of general prosperity before any material expansion can be made.

(2) To reduce the share which Government contribute.

(3) To reduce the cost of education. This is the method recommended by the Reorganisation Committee.

Cost of primary education.

25. The average annual cost per pupil in 1927* in the various provinces was as follows :—

	Primary schools.	
	Boys.	Girls.
	Rs.	Rs.
Madras	7·2	12·6
Bombay	19·2	26·0
Bengal	4·0	3·2
United Provinces .. .	7·6	10·7
Punjab	8·9	11·9
Burma	7·8	12·4
Bihar and Orissa	5·8	7·3
Central Provinces	10·8	16·7
Assam	5·1	6·9

*Hartog Committee's report, table CXV, page 265.

The main cause of this disparity between Bombay and other provinces lies in the higher cost of teachers. This is shown in the following statement :—

†*Average monthly pay of teachers in boys' and girls' primary schools.*

	Rs.	a.	p.
Madras	15	4	0
Bombay	47	0	0
Bengal	8	6	0
United Provinces	18	8	0
Punjab	25	8	0
Burma	33	1	0
Bihar and Orissa	11	5	0
Central Provinces	24	8	0
Assam	14	4	0

†Hartog Committee's report, table XXXVI, page 4.

As we have seen, the cost of teachers in this presidency has fallen since 1927. The difference in pay between Bombay and other provinces is exaggerated by the difference in the classification of classes referred to in paragraph 22.

In the Punjab and elsewhere it has been found possible to obtain the services of the pick of those who pass the vernacular final examination on lower scales of pay than are given in this presidency.

The following table shows the fraction of the average cost of a pupil in a boys' primary school which consists of the pay of teachers :—

Management.	Average annual cost per pupil.	Pay of teachers.
	Rs. a. p.	Rs. a. p.
Government	32 0 0	29 12 0
District local board ..	16 13 0	14 4 0
Municipal	24 6 0	21 15 0

IV. Secondary education.

General.

26. The term "secondary education" connotes education given in schools in which English is taught. The education may be English or Anglo-vernacular. It is exclusively English in the case of European and English teaching schools which are designed for members of the European, Anglo-Indian, Goan, East-Indian and other communities who speak English at home and claim none of the Indian vernaculars as their mother-tongue. It is Anglo-vernacular in the large majority of schools for English-learning children. Anglo-vernacular schools which teach the full course of VII standards leading up to the matriculation examination of the Bombay university are known as high schools. Some Anglo-vernacular schools teach up to standard III only and are known as middle schools. Other schools teach up to standards IV or V only and are generally known as Anglo-vernacular schools. No pupil is admitted to Anglo-vernacular standard I until he has passed vernacular standard IV i.e., after the completion of 5 years in a primary school. An experiment is also being made in a few schools of teaching English in a shortened course to pupils who have passed through the full vernacular course of seven standards. The experiment appears to be working very successfully.

Government policy and control.

27. The policy of Government was till recently to maintain one full high school in each district as a model for Anglo-vernacular education. There are Government full high schools in 23 of the 28 districts of the presidency. There has been for some time a tendency to depart from the policy because of its cost and to hand over Government high schools to private management when a suitable opportunity presented itself.

In 1929 Government decided that they would be willing to consider any proposals for the transfer of any Government high school or college to private bodies or societies, though they were not ready to commit themselves to a general policy of transfer. The chief advantages of the maintenance of Government high schools are that they compare very well with aided schools in efficiency and discipline and play an important part in the education of the backward communities. The Reorganisation Committee consider that the need of maintaining models no longer exists, that the efficiency is bought at too high a price, that backward communities can be provided for by rules under the grant-in-aid code and that the percentage of secondary school children now in Government high schools (about 12 per cent. of boys in 1932–33) is so small that it is unjustifiable to single them out for exceptionally favourable treatment. They therefore recommend that Government should declare it to be their policy to abolish their Anglo-vernacular schools as quickly as possible and that part of the saving should be devoted to increasing the grants to aided schools. Government have decided to accept the general principle of the ultimate transfer of the management of their secondary schools to private agency, but such transfer is conditional on a body coming forward whose constitutional and financial resources, assisted by such grant-in-aid as may be admissible, are such as to ensure that the transferred school will be maintained in a state of efficiency. Government have also accepted the view of the Reorganisation Committee that fees in Government secondary schools should not be increased.

In 1933 there were 545 Anglo-vernacular schools for boys in this presidency, with a total number of 97,122 pupils. The following table gives the distribution by management :—

	Schools.	Pupils.
Government	29	9,253
District local board ..	136	4,391
Municipal	68	10,291
Aided	250	62,242
Unaided	62	10,945

The total cost of the Government secondary schools for boys in 1932–33 was Rs. 9,61,387, of which Rs. 4,11,083 was met from fee receipts.

There are also 79 European and English teaching schools.

Before a grant-in-aid is sanctioned for a school it is inspected by an inspector who is directed to consider the following points :—

(1) Whether the conditions on which the school was registered and the attendance are duly maintained ;

(2) Whether the school premises are sufficiently sanitary, well lighted and ventilated and whether they contain sufficient accommodation, furniture and appliances for the instruction and recreation of the pupils ;

(3) Whether the arrangements for registering the admission, attendance and age of pupils, for management and for keeping accounts of income and expenditure are effective ;

(4) Whether the teaching staff is adequate and well qualified ;

(5) Whether the education given is satisfactory in range and quality ;

(6) Whether the discipline and behaviour of the pupils, especially their manners and regularity of attendance, are satisfactory ;

(7) Whether the school records are properly maintained and all statistical returns and formal certificates given by the masters or school managers are trustworthy ; and

(8) Whether admissions and promotions are well regulated.

The maximum grant-in-aid is $\frac{1}{3}$ of the admitted expenditure of the previous year. Failure to comply with any of the above conditions may involve a reduction of the grant, but a grant once given is not ordinarily reduced without due warning so long as the expenditure is maintained. The system has on the whole worked well, as in Indian schools efficiency is in most cases in direct relation to expenditure. Its great merit is that it leaves the maximum of discretion to the management and does not induce the schools to specialise in certain subjects or to cram special pupils. In the present state of finances it is not possible to sanction grants to many deserving schools.

The inability of Government to meet its obligations under the grant-in-aid code is having an unfortunate effect on secondary schools in the presidency. It is only by a properly administered system of grants-in-aid that inspectors can really ensure that necessary improvements are carried out and that reasonable standards are maintained. It is to be feared that the deleterious effects on the rising generation of some of the more unsatisfactory schools will in the end react on the body politic far outside the educational sphere.

Examinations.

28. It has been reported that with every increase in the numbers of those taking secondary education there is a fall in the standard of efficiency, owing chiefly to classes hitherto excluded from secondary education being drawn upon. The majority of those who pass the school-leaving examination are stated to be unfit for higher studies. Passage from the lowest primary class to the highest class of a high school tends to be regarded as the normal procedure for every pupil and there is practically nothing to correspond with the exodus from many English secondary schools at a stage below the top either into various occupations or into vocational institutions. The reason may be that the matriculation examination is laid down as the minimum qualification for many forms of employment. A remedy which has been suggested is to divert boys to industrial and commercial careers at the end of the middle stage by means of an examination which might be called the "Anglo-vernacular middle school examination". The chief objection to such a course is the practical difficulty which the department would have in conducting an examination for such a large number of pupils spread over so large an area and the want of sufficient technical and commercial schools to accommodate such a large number of boys. That the suggestion is worth consideration is shown by the special classes conducted at the Dapuri workshop for apprentices who have completed the middle Anglo-vernacular stage. It has been reported that the demand for good craftsmen is so large that many of the apprentices have left before completing their course, owing to their being able to command a good salary after only two or three years' apprenticeship.

At the same time it must be borne in mind that openings, even for craftsmen, are not unlimited and that to set up a technical or commercial school in a place where there is little demand for the product turned out would be to court failure. The fact must not be lost sight of that the main training ground for an artisan or for a business man is in the trade or business itself and that a boy with a good general education is likely to make a better artisan or business man than one who does not possess this advantage.

In 1932 out of 15,477 who appeared for the matriculation examination in this presidency only 5,806 passed. It is further estimated that there were some 2,677 pupils in the VIIth standard of the 359 schools recognised by the university who were not considered fit to appear for the examination.

Inspection should be made adequate to prevent the retention of pupils who will never be able to pass the examination. The consequent saving of time, effort and money would be considerable.

Some consider that the standard of the matriculation examination does not need to be raised, but that the quality of the teaching should be carefully examined and "cramming" discouraged. It has been suggested that though control of the matriculation examination rests chiefly with the university, Government could assist by intensifying and improving their system of inspection. But it must be remembered that any system of inspection, unless accompanied by an adequate system of grants-in-aid, is largely stultified.

Finance.

29. The total expenditure on all secondary schools, other than European schools, amounted to Rs. 75,57,514 in 1932–33. The average cost of an Anglo-vernacular school for boys and of educating a pupil attending one was Rs. 10,500 and Rs. 59 respectively.

The following table shows the average gross cost per pupil in schools under different managements :—

	1932–33. Rs.
Government	105·0
Board	43·11
Aided	55·5
Unaided	62·7

There is always a keen demand for admission to Government schools, and there is no doubt that, with the exception of a small number of schools under specially capable management, Government high schools are superior to other schools as their staffs are as a rule far better qualified. Government schools are, however, handicapped to some extent by having to admit a large number of boys of the educationally backward communities, which impedes the progress of the best boys.

V. University education.

Constitution of the University.

30. When the University of Bombay was established in 1857 it was purely an examining body. Not till 1904 was it given a measure of control over affiliated colleges. The governing body was originally the senate, which consisted

of not less than 26 fellows and as many more as the chancellor thought fit.

The syndicate, which was an executive body created by the senate, consisted of the vice-chancellor and seven fellows.

By the Indian Universities Act of 1904 it was enacted that the senate might consist of not more than ten ex-officio members and not less than 50 or more than 100 other fellows. Eighty per cent. of the fellows were to be nominated by the chancellor and the election of 20 fellows was subject to the chancellor's approval. Subsequent developments have aimed chiefly at making the university a teaching university. A committee was appointed in 1924 to consider the question of university reform and the Act of 1928 gave effect to many of its proposals.

The senate continues to be the governing body, but has been given greater independence by the reduction of the nominated element from 4/5ths to 1/4th. The number of fellows has increased from 100 to 144, of whom the chancellor may nominate forty in order to correct inequalities of representation. The Act provides for a further increase of the number of fellows in certain circumstances. The technical part of the university's work is entrusted to a new expert body, the academic council.

When the university was first constituted there were four faculties,—arts, medicine, engineering and law. Subsequently science was separated from arts and combined with engineering and agriculture including veterinary science. Recently a fifth faculty, viz., the faculty of technology, has been created and under it are included along with chemical technology engineering and agriculture including veterinary science which have been separated from Science.

Functions of the University.

31. The main functions of the university are to confer degrees, to prescribe syllabuses for examinations for its degrees, to affiliate colleges and to provide for post-graduate teaching. The syllabuses for examinations are determined (in the form of regulations) by the academic council, after the expert advice of the boards of studies and the faculties has been obtained. All regulations require to be ratified by the syndicate, which must pass or reject them but cannot amend them. The senate has the power to require regulations thus passed to be submitted to it for ratification.

The executive body of the university is the syndicate, which supervises the working of the whole machine. It arranges for the inspection of affiliated colleges and takes action on the report of its inspection committees, appoints the examiners for all examinations, regulates and controls the examinations and controls the finances of the university. No college is affiliated without the previous sanction of Government.

Matriculation examination.

32. The university controls the matriculation examination, which fulfils the dual function of a test for admission to a university institution and of a qualification for certain grades of Government service. It is also in request as a qualification for employment generally. There were formerly two examinations, the matriculation and the school final, with separate syllabuses, both conducted by the university, but the school final was alone recognised as a qualification for Government service. In 1905 the department took over the school final examination and conducted it on lines distinct, both in respect of the subjects to be studied and the method of the examination, from the matriculation examination. Owing to a lack of public support for this examination the two examinations were amalgamated in 1918 under the control of a joint examination board appointed partly by the university and partly by Government. The period for which the board was constituted terminated in 1925 and Government then decided to recognise the university school leaving examination of the school leaving examination board which was then constituted (with certain conditions) as a qualification for Government service. With the passing of the Bombay University Act in 1928 the school leaving examination board has ceased to exist and there is now only one examination—the matriculation—conducted by the university.

Defects of university education.

33. The standards of university examinations are not altogether satisfactory. Their level cannot fairly be judged by the percentage of failures, since there are three factors to be considered—(*a*) the standard of matriculation, (*b*) the standard of university teaching, and (*c*) the standard of attainment required at the examinations. A decrease in the percentage of passes (72 per cent. in 1912, 56 per cent. in 1927) may show that the university is admitting in increasing numbers students who are incapable of profiting by the university courses.

The Hartog Committee remarks "the universities are overcrowded with men who are not profiting either intellectually or materially by their university courses. To many hundreds the years of training means a waste of money and of precious years of youth; nor is it only private money that is wasted. Every student in a university or college costs in each country far more than his fees. The overcrowding of universities and colleges by men of whom a large number fail and for whom there is no economic demand has vitally affected the quality of university education."

Secondly, the university is at present not turning out graduates of the type who can all find employment. This is partly due to trade depression and to the fact that industries are still comparatively undeveloped and commerce does not require a large number of highly trained men. The openings in law, medicine and Government service are strictly limited. But besides this it must be admitted that the university tends to make the educational system top-heavy by failing to concentrate on giving good advanced education to those students only who are fit to receive it and by attempting to diffuse its benefits over a wider field than can at present be successfully covered.

The tendency to recognise isolated colleges scattered over the mofussil and not capable of creating alone a real university atmosphere is another example of this lack of concentration.

Difficulties are being experienced in maintaining discipline in some colleges. The student population have inevitably been affected by events that are taking place round them. Nevertheless it is essential in their own interest that they should be made to realise that the claims of the studies on which they have embarked are paramount.

Education in the colleges.

34. The Elphinstone College, the Grant Medical College and the Law Class were affiliated in 1860, the Wilson College in 1861 and St. Xavier's in 1869; in 1931-32 there were affiliated to the university sixteen arts and eleven professional colleges in the presidency, of which twelve were maintained by Government, fourteen by private bodies and one was under the Bombay municipal corporation. There were also four in Indian States. Two more Arts Colleges under private management—one at Belgaum and the other at Shikarpur have recently been affiliated with effect from June, 1933.

The total number of students in the colleges of the presidency in 1931–32 was 14,499.

The following table shows the number of candidates who passed the various degrees examinations held at the end of the year 1931–32 :—

	Number who appeared.	Number who passed.	Percentage of passes.
B.A.	1,152	821	71·26
B.Sc.	446	323	72·42
LL.B.	480	224	46·66
B.Ag.	82	58	70·7
B.Com.	117	46	39·3
M.B.B.S.	187	68	36·0
B.T.	114	75	65·8
B.E.	103	66	64·1

All colleges are inspected every three years by committees of three persons usually comprising principals and professors of colleges and others possessing a good knowledge of the work.

In addition a committee of scrutineers has been appointed to bring to the notice of the syndicate the steps taken by the colleges for the removal of the defects pointed out by the inspection committees.

The first year course is the same for all students. The university has been considering the possibility of admitting the principle of specialisation in the first year by introducing optional groups of subjects, but no change has yet been made.

At the end of the year the students are examined by the colleges themselves. This has many defects, the worst being inequality of standard. Usually the worse the college the

lower the standard and the higher the percentage of passes. Uniformity could be obtained if the university conducted the examination.

Undergraduates have the opportunity of specialising during the second year. They can choose either arts, science, commerce or agriculture.

The third and fourth years complete the course of study for the B.A. degree, for which there are two separate examinations—the pass and honours. In the honours examination candidates have to take three additional papers and under the rules an honours candidate who fails to get the required percentage for the honours degree may be awarded a pass degree if he secures the required percentage in the pass examination papers. The majority try to master the additional subjects and appear for the honours degree and thus tend to lower the standard of the examination.

During 1930–31 56·66 per cent. obtained honours. It has been suggested that an honours students should be one whose course of training aims at the outset of his university career at a distinctly higher standard than that of the pass student and that his examination should be of a different standard and with a different set of papers.

The university provides a course of public lectures of general academic interest by inviting eminent scholars from Europe and elsewhere and utilizes the staffs of affiliated colleges to provide tuition for certain post-graduate degrees. It supplements the inter-collegiate lectures by courses delivered under its own auspices, encourages original investigators by special grants from its research fund and also maintains its own school of economics and sociology. On March 31st, 1933 there were 55 students in the school of economics. Of these 20 were engaged in research. There were 47 students in the school of sociology of whom 27 were engaged in research work.

Technological education.

35. A criticism which has been levelled at the university for many years is that too large a proportion of its students study literature and that it has not been in touch with industry and commerce even though the B.Com. courses have been instituted.

The Royal Commission on University Education in London was of opinion that the city university ought to find a place for technological studies besides those of pure science. This finding would appear to be as applicable to Bombay as to London, but there is no technological institution of university standard anywhere in the presidency.

The majority and the minority reports of the Bombay Committee on Technical and Industrial Education of 1922 both recommended the creation of a faculty of technology and the institution of a college of technology. The university has decided to open a technological department in accordance with a scheme submitted to it by the present principal of the Royal Institute of Science for post-graduate teaching in technology in co-operation with the Royal Institute of Science and the V. J. T. Institute. Government have handed over to the university for a period of five years in the first instance the East Wing of the Royal Institute of Science for the purpose, subject to certain conditions, with effect from the 15th November 1933.

University finance.

36. During 1932–33 the total receipts of the university were Rs. 12,50,840, which include the Government grant of Rs. 1,21,500, and the expenditure was Rs. 9,23,740.

The average cost per student during 1932–33 in a Government arts college was Rs. 289, of which Rs. 112 were contributed by Government. The average cost per student in aided colleges was Rs. 190, of which Government contributed Rs. 28.

University education in India is exceptionally cheap. Fees in Government colleges have been increased since June 1931.

Cost of colleges.

37. The following table shows the cost to Government (excluding the cost of pensions and upkeep of buildings in the case of the Government colleges) of the sixteen arts and eleven professional colleges in the presidency.

Table showing the cost of all arts and professional colleges in the British districts of the Bombay presidency in 1932–33.

—	Government, aided or unaided.	Number of students on 31st March 1933.	Cost in 1932–33.
Arts Colleges.			Rs.
Elphinstone College, Bombay ..	Government ..	480	1,27,392
Ismail College, Andheri	,, ..	250	88,164
Deccan College, Poona	,, ..	249	1,39,835
Gujarat College, Ahmedabad ..	,, ..	797	1,79,215
Karnatak College, Dharwar ..	,, ..	525	1,16,170
Royal Institute of Science, Bombay	,, ..	271	1,71,432
University School of Economics and Sociology, Bombay.	Aided by Government.	102	51,690
Wilson College, Bombay	,, ..	947	2,09,474
St. Xavier's College, Bombay ..	,, ..	1,539	2,87,211
Fergusson College, Poona ..	,, ..	1,428	2,08,613
Sir Parashurambhau College, Poona ..	,, ..	677	1,00,796
M. T. B. College, Surat	,, ..	451	93,154
D. J. Sind College, Karachi ..	,, ..	874	1,96,084
Sind National College, Hyderabad ..	Aided by municipality.	253	54,171
H. P. T. Arts College, Nasik ..	Unaided ..	213	37,711
Willingdon College, Kupwad (Sangli)..	,, ..	328	76,940
Nowrosjee Wadia College, Poona ..	,, ..	316	1,05,168
Professional Colleges.			
Government Law College, Bombay ..	Government ..	520	51,581
Grant Medical College, Bombay ..	,, ..	551	2,82,306
Sydenham College of Commerce and Economics, Bombay.	,, ..	356	68,956
Secondary Training College, Bombay..	,, ..	98	68,548
College of Engineering, Poona ..	,, ..	184	1,86,204
Agricultural College, Poona ..	,, ..	182	1,51,435
Seth G. S. Medical College, Bombay ..	Municipal ..	342	2,21,021
N. E. D. Civil Engineering College, Karachi.	Aided ..	140	95,019
Law College, Poona	Unaided ..	447	41,744
Sir Lallubhai Shah Law College, Ahmedabad.	,, ..	197	14,459
Sind Collegiate Board's Law College, Karachi.	,, ..	96	11,868

—	Government, aided or unaided.	Net cost to Government.	Average annual cost per student.	
			Total cost.	Cost to Government.
Arts Colleges.		Rs.	Rs.	Rs.
Elphinstone College, Bombay ..	Government ..	31,958	266	67
Ismail College, Andheri	,, ..	51,046	361	209
Deccan College, Poona	,, ..	1,04,486	568	425
Gujarat College, Ahmedabad ..	,, ..	34,427	230	44
Karnatak College, Dharwar ..	,, ..	30,299	229	60
Royal Institute of Science, Bombay ..	,, ..	50,982	608	181
University School of Economics and Sociology, Bombay.	Aided by Government.	46,360	453	407
Wilson College, Bombay	,, ..	33,096	215	34
St. Xavier's College, Bombay ..	,, ..	41,982	189	28
Fergusson College, Poona ..	,, ..	32,010	156	24
Sir Parashurambhau College, Poona ..	,, ..	17,697	145	25
M. T. B. College, Surat	,, ..	11,968	210	27
D. J. Sind College, Karachi ..	,, ..	32,579	235	39
Sind National College, Hyderabad ..	Aided by municipality.	..	222	..
H. P. T. Arts College, Nasik ..	Unaided ..	..	180	..
Willingdon College, Kupwad (Sangli).	,, ..	..	241	..
Nowrosjee Wadia College, Poona ..	,, ..	..	352	..
Professional Colleges.				
Government Law College, Bombay ..	Government ..	..	115	..
Grant Medical College, Bombay ..	,, ..	1,34,683	512	244
Sydenham College of Commerce and Economics, Bombay.	,, ..	..	199	..
Secondary Training College, Bombay	,, ..	65,242	692	659
College of Engineering, Poona ..	,, ..	1,47,431	1,001	793
Agricultural College, Poona ..	,, ..	1,26,945	841	705
Seth G. S. Medical College, Bombay ..	Municipal ..	..	760	..
N. E. D. Civil Engineering College, Karachi.	Aided ..	30,970	848	277
Law College, Poona ..	Unaided ..	..	94	..
Sir Lallubhai Shah Law College, Ahmedabad.	,, ..	..	73	..
Sind Collegiate Board's Law College, Karachi.	,, ..	..	125	..

MAINTENANCE OF GOVERNMENT ARTS COLLEGES.

38. The Reorganisation Committee proposed that, except in the case of the Royal Institute of Science and possibly of the Deccan College, the policy of Government should be to hand over the institutions to educational bodies and reduce the cost of maintenance to Government to the same average as that of the colleges now receiving a grant-in-aid. They considered that there is no longer any need to retain these colleges

as models, that Government are not justified in imposing the additional cost of maintaining their own arts colleges on the general tax-payer, that Government cannot dictate the educational policy of a nation and that if Government set a term to the continuance of their colleges as Government institutions there will be no lack of offers from satisfactory quarters to take them over. In the case of the Deccan College they suggested that the section of the public whom it serves should be given an opportunity of coming forward to secure its continuance by paying fees which would reduce the cost of the college to that of the average of aided institutions.

Government have decided not to accept the general policy recommended by the committee but that, subject to the sanction of the Secretary of State which is necessary to the abolition of the posts in the Indian Educational Service in the Deccan College, that college should be closed with effect from the end of the academic year 1933-34. They have also raised the fees for students from Indian States and other provinces, which were formerly the same as for students of this presidency, by 50 per cent. in all arts colleges with effect from 1933-34.

Royal Institute of Science.

39. The Royal Institute of Science, Bombay, which occupies a magnificent building in the Fort area, was built and equipped at a cost of over 25 lakhs of rupees, largely out of funds generously donated for the purpose by four of Bombay's leading citizens, Sir Jacob Sassoon, Bart., Sir Currimbhoy Ebrahim, Bart., Sir Cowasji Jehangir, Bart., and Sir Vasantji Trikumji Mulji, Kt. The institute commenced work in 1920 and was first affiliated to the University of Bombay in 1926. Whilst undergraduate teaching is undertaken, the institute is intended primarily for the encouragement and development of scientific research. It is at present divided into five departments each of which is in charge of a professor, namely, the departments of chemistry, physics, botany, zoology and mathematics. On March the 31st 1933 there were 191 undergraduate and 62 post-graduate students. The number of post-graduate students is steadily increasing. All members of the staff and all post-graduate students are engaged on various researches and an increasing number of papers have been and are being published which embody the results of their labours.

Government are assisted in the management of the institute by an advisory committee of 11 members consisting of the Vice-Chancellor of the Bombay University as chairman, and

representatives of the university senate, Indian industry, donors etc. The functions of this committee are purely advisory.

Government have transferred with effect from the 15th November 1933 one wing of the institute to the university for the purpose of instituting a university department of chemical technology.

Vocational colleges.

40. The policy of Government in relation to the maintenance of their medical, agricultural and veterinary colleges is discussed in the "reviews" of the appropriate departments. The medical college maintained by the Bombay Municipality and the law colleges at Poona, Ahmedabad and Karachi do not receive any Government grant. The Government Law College in Bombay pays its way and the Reorganisation Committee have recommended its continuance. The vocational colleges which remain are—

The College of Commerce, Bombay.
The Secondary Training College, Bombay.
The Bombay School of Art.
The College of Engineering, Poona.
The N. E. D. Engineering College, Karachi.

College of Commerce.

41. The Sydenham College of Commerce and Economics started in 1913 and aims as a commercial college at training men for commerce and as a college of economics at providing a liberal education in economics and the social services. It teaches for the degree of B.Com. and also provides facilities for research in economics. There is an advisory board. of which representatives of many of the leading mercantile associations of Bombay are members, to assist the department in the management of the college. The students in 1933 numbered 356.

The Reorganisation Committee considered that the general tax-payer received no benefit from the maintenance of this college and that it should therefore be closed unless it could be made to pay its way. Government have decided, in order to make the college self-supporting, to raise the number of students admissible to 400, and have abolished the system of charging fees for individual subjects. Post-graduate students are being now charged fees at Rs. 60 a year and students from other provinces and from Indian States are charged Rs. 125 a term instead of Rs. 100.

Secondary Training College.

42. The Secondary Training College controls the Elphinstone High School which is its model school. It provides training for graduate teachers only and has been affiliated to the Bombay University since 1920, having been founded in 1906. Up to 1924 the number of teachers under training at the college was 34, 29 from Government schools and 5 from recognised schools or schools in Indian States. In 1924 the number of students increased to 40 and later to 60, but the proportion of those deputed from Government schools decreased. Teachers deputed from Government schools draw their pay while at the college. Stipends for teachers from aided schools were fixed at 25 of the value of Rs. 40 a month in 1926. In 1931 the value of the stipends was reduced to Rs. 30 a month. In 1932 the number of admissions was increased to 100, but the number of stipends was not altered. Of the 101 students admitted in June 1933, 10 were Government teachers, 75 from non-Government schools, 7 from Indian States and 9 fresh graduates. The college is the only college affiliated to the university which teaches for the degree of bachelor of teaching. Though the training of secondary school teachers is therefore in the hands of Government, it is the university which prescribes the syllabus and therefore dominates the curriculum and assesses the results. The college has succeeded in creating an *esprit de corps* among the teaching profession and a general recognition of the need of training, which a few years ago was not only ignored but frequently denied. Government's recognition of the need of training teachers is shown by the fact that they increased the size of the college in a year of great financial difficulty. The policy of Government is as far as possible to train graduates fresh from colleges at the Secondary Training College, rather than to depute teachers from schools as in the past, and thereby to lessen the cost of the training.

School of Art.

43. The Sir Jamshetji Jeejeebhoy School of Art, Bombay, comprises drawing and painting classes, modelling classes, a normal class for drawing teachers and a school of architecture. It also contains a workshop known as the "Reay Art Workshop" for the training of artisans. In 1933 there were 446 students at the school of art and 159 students at the workshop.

The Reorganisation Committee proposed the closing down of the school both because of its heavy cost and because, in

their opinion, if an institution of this kind is necessary in India, the central Government ought to maintain it. The Government of India were requested to take it over as a Central institution in view of its All-India character, but they refused. The fees of the school have been raised but fees cannot meet a large part of the cost of this institution. Government have, however, now decided to continue the school on its present lines in view of its importance and to consider the question of disposing of a part of the frontage so far as can be done without detriment to the school.

Poona Engineering College.

44. The Poona Engineering College gives two courses of instruction. In the lower or diploma class there are two branches, one for civil engineering and the other a combined class for mechanical and electrical engineering. The former is a three years' course and the latter a four years' course. The fees were Rs. 60 a year for Bombay men and Rs. 100 a year for outsiders and the number of admissions are about 40 a year to each class. The Reorganisation Committee considered that the maintenance of this class was a necessity and that the fees, which had recently been raised, would not bear further increase. Government however have raised them to Rs. 100 and Rs. 150 in the case of new entrants with effect from June 1933. The degree course which teaches up to the B.E. degree is a three years' course. The fees were Rs. 200 to students from the province and Rs. 250 to outsiders. The Reorganisation Committee recommended that they should be increased to Rs. 400 and Rs. 600. Government have raised them to Rs. 300 and Rs. 400 with effect from June 1933 in the case of new entrants only.

The college was affiliated to the university in 1886. The entrance test is now the intermediate science examination. Associated with the college is an advisory committee of six officials and seven non-officials. There were 184 students in the college in 1933. There is much unemployment among graduates from the college at present.

N. E. D. Engineering College.

45. The N. E. D. Civil Engineering College, Karachi, is managed by the Sind Collegiate Board, of which the commissioner is president. It was opened in 1922 and teaches up to the B.E. (civil) degree. It also has diploma courses in civil, mechanical and electrical engineering. Students in the degree class numbered 140 in 1933. The need for engineers in a developing country like Sind is likely to grow.

VI. Muslim education.

Progress of Muslim education outside Sind.

46. Muhammadans represent 8·6 per cent. of the population of the presidency outside Sind. The percentage of them who are receiving education compares thus with that of other communities :—

Advanced Hindus	18·3
Muhammadans	10·3
Intermediate Hindus	4·9
Backward Hindus	3·5
All communities	6·3

This figure is really of little guide. The real test is the proportion of literacy, i.e. of pupils who have at least completed standard IV. The wastage is higher in the case of Muslims than of other communities.

It is not possible to gauge accurately the expenditure on Muhammadan education, but it is estimated to have been about Rs. 44,71,450 in 1932–33.

The following table shows the distribution of Muhammadans in different kinds of institutions :—

	Pupils in 1932-33.
Arts colleges	454
Professional colleges	179
Secondary schools	8,973
Primary schools	140,214
Special schools	3,081
Total recognised	152,901
Unrecognised	10,744
Grand total ..	163,645

The following table gives the percentage to population of Muhammadans receiving higher education compared with other communities :—

Hindus.				Muhammadans.	Others.	Average for all communities.
Advanced.	Intermediate.	Backward.	Average for Hindus.			
0·50	0·01	0·002	0·05	0·04	0·32	0·06

It will be seen that, while Muhammadans are considerably in advance of intermediate Hindus, they are much behind advanced Hindus. They are, however, now taking to higher and secondary education more than formerly. They are greatly assisted in this by the very liberal system of scholarships provided by Government and from private donations. The following scholarships are given by Government to Muhammadans in arts and professional colleges :—

Arts colleges.	Professional colleges.			V. J. Technical Institute.
	College of Engineering.	College of Commerce.	Law College.	
42 scholarships of Rs. 15 (40 tenable for 4 years and 2 tenable for 1 year).	9 scholarships of Rs. 30 tenable for 3 years.	3 scholarships of Rs. 25 tenable for 3 years.	6 scholarships of Rs. 20 to Rs. 25 tenable for 2 years.	12 scholarships of Rs. 35 tenable for 4 years.

The following scholarships are given from endowment funds :—

Name of scholarship fund.	Amount of fund.	Number of scholarships.	Value of scholarships.	Where awarded.
	Rs.		Rs.	
Sir Mahomed Yusuf.	2,39,800	27	30 per mensem.	Ismail College.
Kazi Shahabuddin.	1,41,000	19	15 ,, ,,	Arts colleges and Savantwadi State.
Sir Currimbhoy Ibrahim.	2,29,000	5	70 ,, ,,	Royal Institute of Science.
		12	30 ,, ,,	
Saiyid Saiyidmiyan.	24,300	1	15 ,, ,,	Gujarat College (Junior B.A. Class).
		1	10 ,, ,,	Agricultural College.
		1	15 ,, ,,	Grant Medical College or College of Engineering.

A new arts college, the Ismail College, was opened at Andheri in June 1930. The college owes its existence to Sir Mahomed Yusuf who in 1914 placed a sum of Rs. 8 lakhs at the disposal of Government for the promotion of higher education among Muhammadans. The college has fine buildings and a hostel capable of accommodating 74 boarders. Additional hostel accommodation has been found to be necessary and if funds are available it is proposed to construct a new block for 63 more students next year. There is room for further

expansion of hostel accommodation when it is required. The college has been provided with a highly qualified staff and teaches up to the B.A. degree and also the inter-science course in groups A and B.

The following table gives the percentage of Muslims receiving secondary education compared with other communities :—

Hindus.				Muhammadans	Others.	Average for all communities.
Advanced.	Intermediate.	Backward.	Average for Hindus.			
3·59	0·18	0·06	0·44	0·56	4·36	0·61

There is a growing demand for Anglo-Urdu schools. Government maintain Anglo-Urdu high schools at Poona and Hubli and have opened Anglo-Urdu middle schools at Nasik and Sholapur. They have also instituted Anglo-Urdu classes in the Jalgaon high school.

In Government secondary schools 15 per cent of the places are reserved for Muhammadans in all divisions of the presidency proper, except in the northern division where the percentage is 20. Free studentships are awarded to the extent of $22\frac{1}{2}$ per cent of the number of Muhammadan pupils in each school. 637 special scholarships ranging in value from Rs. 4 to Rs. 8 have been sanctioned in secondary schools for Muhammadans in the presidency excluding Sind. The number of such scholarships provided for intermediate and backward Hindus is respectively 1,274 and 644. There is one set of seven scholarships for every 15,000 of the Muhammadan population against one set for every 50,000 of the intermediate and 40,000 of the backward Hindu population.

Persian is taught in all Government high schools. In ten of them there are special teachers of Urdu. Provision is made for the teaching of Arabic in the Surat high school and in the Anglo-Urdu high school, Poona, both of which are Government institutions. It is now realised that the neglect of Arabic is largely responsible for the unsatisfactory progress that has been made in Islamic studies in India and especially in this presidency and there is a growing demand for the study of Arabic.

Government have recently obtained a donation of 5 per cent Government securities of the face value of Rs. 1,80,000 from the Haji Gulam Mahomed Ajam Trust Fund and it is expected that a suitable site will shortly be acquired for the location of the Government Muhammadan educational institutions in Poona, the Anglo-Urdu high school, the Urdu training class and the central Urdu girls' school, all of which are at present unsatisfactorily housed.

During the quinquennium 1926–27 to 1931–32 the number of Muhammadan pupils in primary schools showed an increase of 16·6 per cent. The latest figure (1932–33) is 140,214, of whom 101,486 attend schools specially provided for the community.

There are alternative primary courses for Muhammadans—the Urdu-vernacular, in which Urdu is used as the medium of instruction in all subjects, with the local vernacular in addition as an optional subject, and the vernacular-Urdu, in which all instruction is given in the local vernacular, with Urdu as a compulsory extra language. Which course is to be followed depends on the choice of the local members of the community, as does also the decision whether in Urdu-vernacular schools the local vernacular will be learnt or not. The following table gives figures for the schools and pupils which follow respectively the Urdu-vernacular and the vernacular-Urdu curriculum :—

—	Urdu-vernacular schools in 1932-33.		Vernacular-Urdu primary schools in 1932-33.	
	Schools.	Pupils.	Schools.	Pupils.
(a) District local boards.				
Bombay division	48	2,599	164	6,463
Central division	129	6,696	96	3,122
Northern division	30	2,193	109	6,534
Southern division	212	11,291	..	..
Total ..	419	22,779	369	16,119
(b) Municipal.				
Bombay division	143	16,555	12	758
Central division	97	11,667	21	1,360
Northern division	75	9,142	16	2,161
Southern division	76	8,581	..	..
Total ..	391	45,945	49	4,279

There has been great development in the use of Urdu by the Muhammadan community during the last fifteen years or so. The development has been purposive and is a symptom of the strengthening of the Islamic spirit throughout the community. In so far also as Urdu is preferred as the medium for instruction the choice is largely due to the unsuitability of the vernacular text-books. Not only are the ideas they contain frequently such as do not appeal to Muhammadans, but the language, especially, it must be confessed, that of the vernacular readers, abounds in words of Sanskritic origin not in every-day use. There is a special set of Urdu readers and text books on history, geography and other subjects.

Of the primary teachers in Urdu schools, 49·6 per cent are trained. There is a training school in Ahmedabad and another in Poona. The former teaches the first year course only while the Poona institution has a two years' course.

Special provision is made in the Primary Education Act for the representation of minorities on the school boards and, if the Muhammadan representation secured on any board by election appears to Government to be inadequate, Muhammadan members are nominated.

Muslim female education outside Sind.

47. The number of Muhammadan girls studying in various kinds of institutions in 1932–33 was :—

Colleges	11
Secondary schools	527
Primary schools	38,348
Special schools	124

The progress of female education among Muhammadans, which is lamentably behind that of other communities, is chiefly retarded by the absence of institutions with special arrangements for pardah and by the dearth of qualified and trained mistresses. The Government central Urdu girls' school at Poona, which is strictly a pardah institution, has been successful in attracting Muslim girls to its higher standards; English is taught in a special Anglo-Urdu middle school which was opened in November 1929. The school has a hostel attached to it. With a view to increasing the output of trained teachers, the normal class attached to the central Urdu girls' school, Poona, was converted into an independent Urdu training school for women and was brought into line with other similar non-Urdu institutions by the provision of a two years' course leading to the first year's certificate examination.

Provision has also been made in the school for teaching the second year's course. The central school now serves as a practising school to this institution.

Inspection of Urdu schools.

48. In every division there is a special deputy inspector for Urdu schools (in class II of the Bombay Educational Service) and in the Bombay and central divisions an inspectress of Urdu girls' schools. These officers have advisory powers only. Thus special provision is made for a competent and adequate inspecting staff to watch over Muhammadan education and advise Government as to its needs.

Progress of Muslim education in Sind.

49. In Sind the percentage of Muslims is 73 of the whole population and over 80 of the rural population. The percentage of Muhammadans attending recognised educational institutions is only 2·9 against 8 per cent for Hindus.

The following table gives the number of Muhammadans attending different classes of institutions in 1932–33.—

Arts colleges	..	123
Professional colleges	..	25
Secondary schools	..	3,889
Primary schools	..	76,736
Special schools	..	472
Total recognised	..	81,245
Unrecognised	..	8,956
Grand Total	..	90,201

The literacy figure for Muhammadans is 3·7 against 5·2 for all communities.

The Muhammadans of Sind have long remained markedly backward in education. There has, however, been an awakening during recent years. In secondary education there was an increase of 39·7 per cent during the quinquennium ending in 1932. Government provide 700 scholarships ranging in value from Rs. 7 to Rs. 9 per mensem for Muhammadans in secondary schools. In Government high schools 30 per cent of the Muhammadan students are admitted free, while in each Government high school places are reserved proportionate in number to the percentage of the Muhammadan population of the district. Government give a grant of Rs. 50,000, the largest grant given to any educational institution in the whole presidency, to the Sind Madressah

of Karachi, which provides secondary education for nearly 800 boys. Government have also lent the community a substantial block of buildings in Hyderabad for use as a hostel for Muhammadan boys attending secondary schools and have recently ordered the transfer of the Government High School at Hyderabad to the Muslim Education Society for management from 1st April 1934.

It is fully recognised that when the developments of the Sukkur Barrage Scheme mature they will make greatly increased demands on secondary education, a fact which the Muhammadan community appears to have realised. It is only right that Government should do all that they can to assist them.

76,736 Muhammadan pupils attend primary schools. In the rural areas practically all Muhammadans speak Sindhi, which is largely Arabic in origin, and use the Arabic script. Urdu is, however, used to a considerable, and to a growing, extent in the towns and especially in Karachi.

Of the 3,464 teachers employed in Government district local board and municipal schools 47·5 are Muslims, of whom 912 or 55·4 per cent are trained. In the making of admissions to the training college at Hyderabad 75 per cent of the places are reserved for Muhammadans.

All the district local boards in Sind have taken over the control of primary education. In all districts the school boards are preponderatingly Mussulman in composition. Hindus are, however, in the majority in all the municipal school boards.

Mulla schools.

50. A feature of primary education in Sind is the mulla schools. These represent the ancient indigenous system whereby the local mulla teaches the children to read and write the Koran. In the old days the mulla seldom gave any secular education. He has, however, by a system of grants, which is administered entirely by the educational department, been induced to do so. The department maintains three special deputy inspectors for mulla schools, who are now called deputy educational inspectors for Muhammadan education, with nine assistant deputy inspectors to persuade the mullas to give secular education. The duties of these officers are solely to inspect mulla schools and to encourage the mullas to improve the efficiency of their teaching. In 1932–33, 920 mulla schools received grants amounting in all to Rs. 1,60,676. The children receiving education in these schools numbered 32,649.

The justification for the mulla school is its ability to give at a moderate cost secular education of a standard of efficiency that will compare satisfactorily with that given in the ordinary district local board school. The end in view is to raise the mulla schools to the level of the ordinary schools and the giving of grants is directed to that end. There are now over 900 schools of which 200 schools teach the ordinary primary standards. Of these 162 teach beyond standard IV, 38 of them teaching up to IV standard. The mullas have been induced (by suitable monetary aid) to employ qualified assistants. Constant endeavours are made to improve the general knowledge and the teaching capacity of the mullas themselves. A permanent training class of mulla teachers, attached to the training college for men, Hyderabad, has been established with effect from August 1931. Each term a batch of twenty-five mullas is trained. The course of instruction extends to, and is inclusive of, the vernacular final course, *plus* method and management as taught in the first year of the training college. Books and writing materials are given free to mullas under training, and, in addition, each mulla gets a stipend of Rs. 12½ per mensem. Nothing could better justify the hopes entertained for the continued improvement of instruction in mulla schools than the readiness with which the mullas have left their villages and have brought themselves to sit at their desks and learn like school-children.

The great merit of the mulla school system is its cheapness. The cost per pupil is about Rs. 11·6, while the cost of educating a child in a district local board school in Sind is Rs. 23·1. It is further a fact that most of the children who attend the mulla schools would not, except by compulsion, attend a district local board school. This is particularly true of girls. The mulla schools are popular, chiefly because they give religious instruction.

A special committee appointed by Government to report on the mulla school system in 1924 recommended the absorption of the mulla schools in the district local board educational system. Acceptance of this recommendation would involve an additional expenditure of some five and a half lakhs of rupees per annum. This in itself would appear to be a sufficient reason for rejecting the proposal. Government have decided to continue to support the mulla schools because they are comparatively cheap, preserve the rural atmosphere, accord with Muhammadan sentiment and tradition, are acceptable to the parents of Muhammadan girls, have shown satisfactory progress

and in particular, provide religious instruction which Muhammadans are practically unanimous in desiring.

The words of Mr. (now Sir) H. S. Lawrence as commissioner in Sind in 1916 are still true :—

"Moreover they (the mullas) have taught discipline and obedience to the children of tribesmen of the most wild and untameable temperaments. Many men have commented on the good manners of the Muhammadan race, rich and poor alike, landholder and labourer; few have given the credit where it is due, to the humble Mulla, who not only believes that 'the fear of the Lord is the beginning of Wisdom' but also, in agreement with William Wykeham, has recognised that 'Manners makyth Man.' The teaching of the Koran in the Muhammadan traditional method is condemned by the modern scientists as a useless waste of time. The important fact that during these earliest years the child is being taught reverence and submission to authority escapes the attention of this critic; but nevertheless it is the subconscious foundation of the unwavering attachment of the Muhammadan race to this tenet of their faith."

VII. Education of girls.

Progress of female education.

51. While the reports of educational officers record year by year an awakening on the part of the people towards the education of women, it must be admitted that the advance as evidenced by numerical results is slow. Only 2·9 per cent. of the female population attend any educational institution and of the total of 266,652 girls in primary schools only 12,472 or 4·7 per cent. have advanced beyond standard IV. A very large proportion attend the infant classes of the primary schools and the majority never get beyond that stage. 33 per cent. of the total number of girls are advanced Hindus.

The number of women attending university institutions in 1932–33 was 966. In secondary schools there was an increase of 7·2 per cent. over the previous year's figures. It is only at a few large centres, principally Bombay, Karachi, Hyderabad and Poona followed in the second rank by Ahmedabad and Surat, that serious attempts are made by anything more than a small proportion of the people to give their daughters secondary education, while generally speaking it is confined to the advanced classes and to the more socially advanced members of the intermediate communities. The department maintains a high school for girls at Ahmedabad, and Anglo-vernacular middle schools for girls at Thana, Nasik,

Ahmednagar, Bijapur and Dharwar, but only two of the latter, those at Thana and Nasik, have succeeded in attracting more than 60 girls. The progress in Gujarat is disappointing compared with the promise of 50 years ago. It is among the Brahmins of Poona that the most noticeable advance has been made. The high school for Indian girls at Poona is a very notable institution. It is now under the management of a society which has been promised by Government a fixed annual grant of Rs. 30,000 in lieu of the pay of the staff which Government formerly provided. The school sends up every year between 30 and 40 girls for the matriculation examination, of whom almost all pass.

In 1933 there were 291,508 girls in recognised educational institutions, distributed thus :—

Arts colleges	835
Professional colleges	131
Secondary schools	21,048
Primary schools	266,652
Special (including training) institutions	2,842

As regards university education there are no separate colleges for women. The disadvantages which women have to undergo from attending the same institutions and taking the same courses of study as men are obvious. The women's university established at Poona in the year 1916 has however not met with much success. The four colleges affiliated to this university at Poona, Baroda, Bombay and Ahmedabad, have on their rolls some 107 students only. The course is one of three years, and the syllabus is so framed that graduates shall, in addition to proficiency in the vernacular, English and one other optional subject, possess a general elementary knowledge of history, sociology, domestic economy and hygiene, psychology and child-study. It would appear that the chief reason why this university has not met with more support is that it lacks the hall-mark of official recognition, not having been constituted under the Universities Act of 1904.

The number of girls receiving secondary education is :—

	Schools.	Pupils.
For Indians ..	84	17,954 (3,716 in boys' schools).
For Europeans ..	18	3,094 (414 in boys' schools).
Total ..	102	21,048 (4,130).

Almost all the secondary schools follow the departmental curriculum based on the university matriculation examination. In this examination domestic science for girl candidates is accepted as an equivalent for science. But the value of the concession is largely destroyed by the fact that all who proceed to a university course of studies are required to take physics in the first year arts course. Every encouragement is given by the department to schools to adopt alternative curricula, but very few schools choose to do so, except in Sind where the alternative course specially sanctioned by the department is followed.

Fifteen schools are affiliated to the Indian Women's University. The course differs from that usually followed chiefly in respect of the amount of time given to the study of the English language. The instruction in all subjects is in the vernacular throughout. The standard in English is undoubtedly lower than that in the ordinary schools. It is claimed on the other hand that in other subjects the general standard is higher.

There are no Government scholarships specially reserved for girls in either colleges or secondary schools in the presidency excluding Sind. In Sind there are 35 Government scholarships ranging in value from Rs. 4 to Rs. 5 each.

There are 1,742 primary schools for girls with 172,712 pupils. There are 97,348 girls in primary schools for boys.

The vernacular final examination for girls, instituted in 1924, has given a great incentive to the schools and is bound to raise the general standard of education. It is hoped that it may be possible in a few years to extend the course to one of seven (instead of six) standards.

Of the primary school teachers 55·3 per cent. are trained, 34·6 per cent. holding the second or third year certificate.

It is difficult to estimate the consequences of the Primary Education Act to the education of girls. It is required by the Act that the school board of every local authority shall contain at least one woman. There is little evidence to show how far the women elected or nominated have succeeded in securing from their boards full recognition of the needs of the girls' schools. Only three of the boards, those of the Larkana district local board and the Hyderabad and Karachi municipalities, employ a woman supervisor.

Government maintain five training institutions for women. In addition to these five institutions there are twelve

maintained by missionary and other societies. All these take courses prescribed by Government and prepare for the Government certificate.

The difficulty of obtaining women teachers for girls' schools has been greatly exaggerated, at any rate so far as the Deccan is concerned. Not only is there an adequate supply of qualified teachers, but it would be possible to augment very largely the number of trained teachers had not a restriction been imposed for economic reasons on the output of the training institutions.

Most district local boards and municipalities provide scholarships for girls in primary schools, the sums awarded varying from a few annas to Rs. 5 per mensem. The value of the scholarship system as a means of attracting girls to school and keeping them there is not easy to determine. It is not likely that girls who would normally not continue at school over a certain age would be induced to stay on by a scholarship unless it were of substantial value. On the other hand, the dole of small sums in the lower standards is well calculated to attract the parents of young girls.

Inspection of girls' schools.

52. Government employ an inspectress of girls' schools in Sind, one for Bombay and the northern division, and one for the central division, in addition to the inspectress of Urdu girls' schools, Bombay and central divisions. Their principal function is to inspect secondary schools. They also inspect the training institutions for women, both Government and non-Government, and visit primary schools.

Mention must be made of the many societies and other agencies which are working for the uplift and the education of women. Foremost among these is the Seva Sadan of Poona, whose social, medical and educational work is well known.

VIII. European education.

Constitutional position.

53. European education is a reserved subject. A recent representation made on behalf of the Anglo-Indian and domiciled European community to the Government of India contained the request that European education should be a central subject. To this the reply given by the Government of India was that while Government recognised the claims of

the community to the maintenance of educational facilities in the same degree and of the same general character as in the past they did not in the present circumstances consider it necessary to make European education a central subject in order to secure these objects. It is natural that the policy of provincial Governments in European education should be bound up with their policy in regard to Indian education.

Sphere of Government.

54. From earliest times European education has been kept distinct from vernacular education. Government have, however, never undertaken to maintain separate schools or colleges for Europeans. It has been left to private agencies to provide the schools. Government confine themselves mainly to :—

(*i*) giving grants ;

(*ii*) fixing a curriculum and providing a code of regulations ;

(*iii*) providing for inspection by an inspector of European schools. This officer also conducts the final examinations, which are the Cambridge Local examinations.

The number of schools is as follows :—

	Boys	Girls	Total
High schools	7	13	20
Middle schools	9	5	14
Other schools	..	..	3
			37

These schools are managed as follows :—

Management.	Number of Schools.
Roman Catholic missions	10
Church of England	14
Church of Scotland	1
Zenana Bible and Medical Mission	1
Society of St. John the Evangelist	1
Methodist Episcopal Mission	1
Railway companies	9
	37

Seven of the boys' schools and 18 of the girls' schools have boarding houses attached. Arrangements for medical inspection exist in all schools and six have hospitals attached to them. With the exception of railway schools almost every European school is conducted by a religious order or society.

The Government grant in 1932–33 was Rs. 4,78,756 towards a total expenditure of Rs. 13,89,966. The Government subsidy includes, besides the ordinary grants, special and building grants and grants on account of special expenditure for orphan and destitute children, scholarship awards and grants for training institutions.

The grant under the code of regulations for European schools is given as long as the schools maintain their distinctive European character. The schools are allowed however to admit some Indians and are considered to maintain their distinctive European character as long as the number of Indians does not exceed 30 per cent. of the total number (this figure was formerly 20 per cent.). If that number is exceeded, the schools become English-teaching schools and are governed by the ordinary grant-in-aid code.

As regards the training of teachers, it is obviously not possible for each province to conduct a training institution for European schools. There is only one training college for men in India—at Ghoragali in the Punjab. The Bombay Government has from time to time granted stipends for training European boys at this college. There are, however, two training centres for women in the presidency, viz. the St. Mary's Training College, Poona, and the Convent Normal Class, Bombay. As a result of the special efforts made for training teachers the number of trained teachers increased from 98 in 1922–23 to 259 in 1932–33.

The arrangements for maintaining the European inspector themselves present a difficulty. Recruitment in England for the educational service has ceased. It is possible that with changed conditions no suitable European may accept a permanent post in the provincial service. To meet this difficulty the Bombay Government recommended to the Government of India the formation of a small cadre of an all-India service of inspectors of European schools to be recruited in England and lent to local Governments according to their requirements. The Government of India have pointed out certain administrative difficulties and have deferred consideration of the proposal. The present inspector holds the post on a contract for five years.

Condition of European education.

55. The main difficulty of European education is that the population is a fluctuating one and that many of the pupils are constantly moving between different parts of India. This affects economical management. There is also the problem of

the diversity of religious denominations. The main aim now therefore is concentration. In 1922 the Scottish Education Society brought about an amalgamation of their schools with the Cathedral and John Connon high schools, reducing the Scottish Education Society's high school to the status of a primary school. Some years ago too the Indo-British Institution and the Bombay Education Society were amalgamated and also their schools. The amalgamated society decided further to remove their boarding school to the more salubrious climate of Deolali, where they have established the Barnes boys' and girls' schools.

In one of his reports Mr. Miller, formerly inspector of European schools, stated :—

"The most promising signs in European education at the present time are the attempts to amalgamate schools wherever possible, the appointment of more highly qualified teachers, often recruited in England, and the up-to-date methods employed by these recruits. Several schools have imported most excellent teachers lately on respectable salaries and their methods are being closely followed by the less highly trained members of staffs. This new leaven is bound to have a valuable influence on all the schools.

"I see no reason to feel in any way despondent about European education in this presidency. A great deal of work in the schools is excellent and, although a large number of candidates fail to pass their final examinations, they do not fail to be thoroughly well educated."

This is perhaps a somewhat optimistic opinion.

IX. Other specialised schools.

Education of Goans and East Indians.

56. Schools for Goans and East Indians have been recognised as English-teaching as opposed to European schools and are peculiar to this presidency. Their special feature is that instruction is through the medium of English throughout.

At present 90 per cent. of the English-teaching schools are for Goans and East Indians. The number of schools was 47 in 1932–33 and of pupils 16,037, of whom 1,079 were European children. These attend English-teaching schools because there is no European school in the vicinity. About 60 per cent. of the pupils attending these schools are Goans or East Indians, seven per cent. European and the rest Indians. It is

reported that in some schools the majority of pupils are not Christians. Some better class Indians prefer to send their children to these schools, as they attach more importance to English than the vernacular and speak it freely at home.

It has been found difficult to classify these English-teaching schools, as the pupils in the lower classes are really studying in the primary stage, but, as English is the medium and as non-Christians in these classes have completed the primary stage in the vernacular, it seems quite correct to treat them as secondary schools.

An important question which has arisen is the extent to which the local Government should be responsible for the education of Goans. There is no doubt that a number of youths after attending a school in Goa for some years, where Portuguese must, by a recent order, be taught, come to Bombay to learn English. On the other hand there is nothing to show that a large number of Goans return to Goa for employment. A very large number of Goan families have settled in British territory and as they pay rates and taxes it can hardly be put forward as an argument that they should not send their children to the English-teaching schools.

Of the total number of English-teaching schools, 41 are managed by Roman Catholic missions, one by the Zenana Bible and Medical Mission, one is a Jewish school and the remaining four, which include two railway schools, are undenominational.

The total expenditure on these schools in 1932–33 was Rs. 12,24,063 of which 20·1 per cent. was met from Government grant, 56·1 per cent. from fees and the remainder from other sources. The average annual cost of a pupil was Rs. 66.

Mission schools.

57. Christian missionaries have done much for education in India, particularly for what is commonly termed English education. This will be exemplified by quoting the number of pupils in mission primary schools, which is about 30,000 as compared with nearly 2,000 in colleges and 5,500 in Anglo-vernacular schools. These institutions differ in one main aspect from Government and local board schools in that they are not merely content to impart good secular instruction but seek also to give moral and religious training.

As other agencies came into the general field of education, the missions found a new and useful sphere of expansion among

classes which were neglected by the ordinary system of education, e.g., depressed classes and outcastes, aborigines and hill tribes. In recent years the missions have also paid a great deal of attention to the education of girls and must be given the credit for first developing the residential system.

The mission schools and colleges in large centres, such as Ahmednagar, are well staffed and well equipped. In the average village however where a mission is established it is frequently to be found in a lean-to shed, verandah or ill-lit room in the Mahar or Mang wada. There are exceptional cases where the missions have been given a plot within the village site on which a fair school building has been erected and where both depressed and advanced class children sit side by side. The opening of a local board school in such a village invariably means that the mission school is immediately deserted by the upper class children.

Missionaries are doing at present some useful experimental work in vocational training in village schools. They have realised the inadequacy of a purely literary training and are trying to evolve a form of education which will better fit their pupils for village life.

Depressed classes.

58. Government have, on the recommendation of the Backward Class and Aboriginal Tribes Committee, appointed a backward class officer and provided a staff to enable him to watch over the interests of the backward classes and the aboriginal tribes and to see that their progress is continuous and their rights are upheld.

Government have also constituted a Backward Class Board, whose functions are consultative and advisory.

As far back as 1858 Government asserted the rights of the depressed classes to enter the common schools, but for many years the right was scarcely exercised. The first separate school for the depressed classes was opened in 1855, but for some years the number of such schools was very limited. In recent years progress has been more rapid, as is shown by the following figures of the number of depressed class children in primary schools in the presidency (excluding Sind) :—

1882	2,713
1917	30,212
1922	37,892
1927	59,693
1932	64,239
1933	64,705

The important increase since 1923 is partly due to the declaration made by Government in their press note No. P. 21 of 1923 that they were determined to see that no disabilities were imposed on depressed class children in any school conducted by a public authority in its own or in a hired building. In many areas this policy is being carried into effect and the depressed classes are allowed inside the common schools. In fewer areas the depressed class children are both allowed inside the common school and permitted to sit amongst the other children. In other areas local orthodox opinion is too strong to permit of the policy being carried out. Government have, in their circular No. 4370 of 18th March 1931, reaffirmed their policy and the principles laid down in their press note of 1923 and directed that in all publicly managed institutions there should be equality of treatment between children of different communities—advanced, intermediate or backward. They have made it explicitly clear in circular No. 206, dated the 23rd December 1932, that all the pupils should sit together in class regardless of caste distinctions and that separate seating arrangements for pupils of the depressed classes or others should not be allowed.

The difficulties caused by the opposition of orthodox Hindu opinion have in the past been avoided by the establishment of separate schools. These separate schools fulfilled a useful function in educating the depressed classes, but it is doubtful if they ought to be encouraged any longer, as it is difficult to make them efficient and their existence is uneconomic and tends to perpetuate the barrier between classes. Government have accepted the recommendation made by the Depressed Classes and Aboriginal Tribes Committee that common schools should be encouraged and separate schools discouraged. The local authorities have accordingly been called upon to follow this policy.

Allied to this question is the problem of training and placing teachers from the depressed classes. Considerable progress has recently been made and the desirability of increasing the number of teachers belonging to the depressed classes in primary schools has been brought to the notice of the local authorities. There are now 763 teachers from the depressed classes in local board and municipal primary schools.

Aboriginal tribes.

59. The special difficulties in the way of educating the aboriginal tribes are partly due to the isolated and scattered

position of their villages or habitations which are usually in the forest areas. It is usually difficult to secure enough pupils to make a school possible. Service in such schools is also unpopular with teachers on account of the unhealthiness and lack of society and comfort. Hostels for boys from the aboriginal tribes attached to full primary schools have been established in a few centres and are successfully enabling such boys to obtain a full primary education and in particular to become sufficiently educated to serve as teachers. But extension of the hostel system is limited by financial considerations. Again it is very doubtful whether the present curriculum is best suited to the needs of the aboriginal tribes.

The Depressed Classes and Aboriginal Tribes Committee have suggested in the interests of the education of the aboriginal tribes the recruitment of more teachers from these tribes to vernacular training colleges for training with a view to their employment in schools intended mainly for the children of these classes. This suggestion has been brought to the notice of the local authorities.

Government provide a greater number of scholarships for secondary and collegiate education for the backward classes than can be absorbed at present. The increasing number of the depressed classes attending primary schools will result in a gradual increase in the number of their candidates for higher education; but until the aboriginal tribes take more to primary education, the number of them proceeding to higher education will remain negligible.

Reformatory schools.

60. There are three reformatory schools in this presidency:

(1) Yeravda.

(2) David Sassoon Industrial and Reformatory Institution, Matunga.

(3) Willingdon Boys' Home, Byculla.

The first is maintained and the others are aided by Government. They are under the general control of the director of public instruction, as they are recognised as schools for the education and reform of boys and are not jails. The final control is that of Government in the home department.

During 1932–33 the average monthly number of boys and the cost were as follows :—

—	Average monthly No.	Annual cost	Monthly cost per boy.
			Rs. a. p.
Yeravda	227	42,433	15 9 0
David Sassoon I. & R. Institution ..	368	74,386	16 14 0
Willingdon Boys' Home	70	14,917	17 12 0

The Yeravda Reformatory is conducted under the Reformatory Schools Act, 1897, and has been certified by Government under the Bombay Children Act, 1924. Under these Acts boys may be detained till they attain the age of 18.

The boys are instructed in carpentry, smithing, book-binding, tailoring, gardening and agriculture. There are classes in Marathi, Gujarati, Sindhi and Urdu up to vernacular standard V. Special attention is also given to games and the boys are taken out on occasions for walks and swimming.

The David Sassoon Institution is under the control of a committee of management. It is intended for boys above 10 and under 18 years of age who are principally committed to the institution under the Apprentices Act, the Reformatory Schools Act and Children Act. They are taught various trades and crafts.

There are classes in Marathi, Gujarati and Urdu up to vernacular standard V and English; drawing, gardening, carpentry, tailoring, cane-work, painting, smithing and lathe-work are taught, while some boys are sent to the mills daily to learn spinning and weaving. A class for training in motor mechanics has been opened.

An annual camp is arranged at Versova to which picked boys are sent, cricket and football matches are played with outside teams and parties of boys go out to various places of interest on frequent occasions. A scout troop has been formed and boxing has been introduced. A swimming bath has been added.

The Willingdon Boys' Home is managed and partially maintained by the Salvation Army. Most of its inmates are sent to it under the Bombay Children Act, 1924. Juvenile offenders conditionally released from prison are also admitted.

There are classes in Marathi and Gujarati up to the vernacular standard IV. Weaving, tailoring and cane-work are also taught. Attempts are made to play hockey and football as well as Indian games, but there is little space available.

In March 1933 Government appointed a special Committee to examine questions connected with the care of destitute children and youthful offenders. The Report of this committee is at present under the consideration of Government.

TECHNICAL AND INDUSTRIAL EDUCATION.

61. The Victoria Jubilee Technical Institute, which was founded in 1887 and in 1923 was moved to up-to-date quarters at Matunga equipped with modern tools and appliances in all departments and costing over Rs. 17 lakhs (out of which Government contributed Rs. 6,80,000), is the central technical institute of the presidency and of almost university standing. In 1932 it had on its rolls 559 students distributed among the classes as under :—

Mechanical engineering	..	..	154
Electrical engineering	..	..	188
Textile manufacture	..	..	122
Technical and applied chemistry		..	39
Sanitary engineering and plumbing		..	56
			559

The entrance examination is equivalent to the matriculation examination, the course is of four years and the fees are Rs. 110 a year for students from the presidency and Rs. 160 a year for outsiders. There is much competition for places at the institute and there are usually some graduates among the students.

The institute is controlled by a board of eighteen members, eight appointed by Government and the rest representing various public bodies and other interests. The board holds examinations and grants diplomas in mechanical, sanitary and electrical engineering and also in textile manufacture and in technical chemistry.

The institute also holds apprentice classes for railway apprentices, textile apprentices and electrical wiremen. The diploma classes at the Poona College of Engineering have already been described. There is a flourishing apprentices'

class attached to the public works department workshop at Dapuri and there are two other institutions which may properly be classed as technical, the Ranchhodlal Chhotalal Technical Institute, Ahmedabad, a Government institution for students intending to work in textile factories, and the Parikh Technical Institute maintained by the Surat Municipality.

Other technical schools receiving grant-in-aid from Government are classed as industrial and are twenty-eight in number with 1,779 pupils. They are controlled through the director of industries by the Committee of Direction for Technical Education. The committee consists of seven members, with the principal of the Victoria Jubilee Technical Institute as secretary. The committee inspects the schools, recommends them to the director of industries for grants-in-aid, regulates the courses and arranges for the annual examination. The grants paid to these schools amounted in 1932–33 to Rs. 41,586. They provide instruction in carpentry, furniture-making, hand-loom weaving etc.

The facilities for technical and industrial education do not satisfy the public demand. It is, however, questionable whether the instruction given in industrial schools is the best fitted to local requirements. Carpentry classes which teach chiefly the making of furniture are not likely to be of much assistance to boys who wish to learn house carpentry. Government have the question of improving the curriculum under consideration.

Domestic science.

62. Many have been the demands in recent years for the differentiation of the curriculum in girls' schools from that in boys' schools.

The All-India Women's Conference on Educational Reform at Poona in 1927 recommended that "alternative courses should be established to suit the needs of girls who do not intend to go to a college—to include domestic science etc."

Similar recommendations were made in Bengal and Madras and on 21st September 1929 the Bombay Women's Conference considered the same question. To quote the words of the president :—

> In secondary schools for girls, subjects like domestic science, etc., as well as some idea of social work should be given prominence. Even in an advanced city like Bombay most of the girls who go to school have to do a good deal of domestic work at home. If the same course as is assigned

for boys, who can devote their sole attention to school work, is set up for girls, it becomes a great strain on them and naturally their health suffers.

In this presidency domestic science is accepted as an equivalent for science for matriculation purposes, but this concession is largely destroyed by requiring all candidates to take physics in the first year arts course. For this reason few girls' schools have adopted the alternative course.

With the object of developing the subject the inspectress of girls' schools, Bombay, suggested in 1920 the opening of a temporary domestic class in Bombay at a cost of Rs. 3,120. Government approved of the proposal and provision was included in the budget for the next year, but funds were not provided. The subject was considered by Miss Brooke, who was placed on special duty to report on female education in 1920. One of the three difficulties which she enumerated as besetting the development of girls' education was unsuitability of the curriculum and she recommended a special vernacular final examination for girls to include domestic science, physical training and civics.

Government considered that sewing, domestic economy and hygiene should be optional subjects in secondary schools and that, if there is an effective demand for the teaching of domestic economy in Government secondary schools, a few teachers should be deputed to the domestic economy class at Baroda, as further consideration of the proposal to establish a central class in Bombay had been postponed.

It is well known that in any programme for the expansion of female education the systematic teaching of domestic economy must find a place. The first essential would appear to be to concentrate on a system for the training of teachers in this subject by establishing a central class as already proposed in 1920.

PHYSICAL TRAINING.

63. Physical training, which is the regulated and supervised practice of muscular exercises, should have an important part in education.

Serious attention does not seem to have been paid to the subject in primary schools or in colleges until quite recently. But it holds a place in most secondary schools. In all Government secondary schools class drill and open air drill is performed and some organised English and Indian games are played under supervision. In the Elphinstone

High School the experiment of devoting the last period to outdoor exercise was tried in standards I to IV and the principal reported that the class work of these standards did not suffer and that the health of the boys improved considerably. There has, however, been difficulty in arranging for drill outdoors as schools under private management are reported to have been seriously handicapped by the want of suitable playgrounds. In 1925 Mr. Weber of the Y. M. C. A. was appointed director of physical education. He was only able at first to give attention to Bombay, but arranged some classes for mofussil teachers. In 1926 he toured Gujarat and Sind and gave an impetus to physical instruction by conducting three courses of mass drill in some of the larger centres. The system advocated by Mr. Weber is followed in Government secondary schools and is a great advance on the methods which had been followed previously and the exercises are said to be much appreciated.

Drill of some kind is taken in most of the girls' schools, though here again lack of knowledge and suitable open spaces have made it difficult. A certain amount of training has been given through the medium of the Guides and the Salvation Army in some districts.

Practically nothing has been done to organise physical training in primary schools; but drill and physical exercises are taught by those primary teachers who have been through a course of instruction in a training institution. In some districts scouting has become popular.

The Committee on University Reform appointed in 1924 reported that the proportion of students in the colleges who took an active and continuous share in college and other games was not as large as it might be and that this was one cause of the poor physique of the students and of their liability to illness. The committee advocated the appointment of a director of physical training for college students to organise physical training and games and to visit mofussil colleges for the purpose and to train members of the college staffs to conduct regular classes of physical training. These proposals were not accepted by the senate. The syndicate however resolved to introduce compulsory physical training in the three arts colleges in Poona and sanctioned a grant for the purpose. The results have justified the steps taken. The senate also appointed Mr. S. K. Mukerji as director of physical training for a period of three years. He was entrusted with the work of surveying the possibilities of introducing efficient physical training in

the colleges affiliated to the university, preparing a scheme and syllabus of training, advising colleges on the lines to follow and supervising the training when it was introduced. A preliminary medical examination of the college students with a view to observing their physical fitness to undergo a system of compulsory physical training was made and the director of physical training after a tour of personal inspection of the students formulated his proposals for holding a training camp for physical instructors. The senate recently did not approve of the proposal to continue the appointment of the director of physical training after the 1st of January 1934.

In 1927 Government appointed a committee to enquire into and report on the question of physical training and on making it compulsory.

This committee in its recommendations stressed the need of a regular medical inspection of pupils, to be combined with an organised system of physical training. It suggested that a comparative record of height, weight and other physical characteristics of children might be kept and that physical defects might be prevented and cured. It was further of opinion that all teachers and school authorities should be trained to treat physical education as an integral part of education in all respects.

The committee recommended the creation of a Central Board of Physical Education and that physical education in each district should be supervised by a committee which should include a medical officer. The committee reported that the net cost to Government of introducing compulsory physical training in all primary and secondary schools in the presidency would amount to Rs. 4,73,000. Owing to financial stringency it was not possible to take any action in connection with the recommendations made by the committee.

A certain amount of success could perhaps be attained by arranging short classes at district headquarters during the holidays for village school masters who are fit, in the same way as camps are arranged for teaching scout masters. For secondary school masters similar classes might perhaps be arranged in the larger towns. It is most desirable that more attention should be given to physical education in training schools for teachers while under training. Not only should the teachers take part in games and physical exercises, but they should be given courses which will enable them to teach the pupils under their charge.

X. Summary.

64. The past five years was a period of unprecedented financial stringency. In 1927–28 the actual expenditure from Provincial revenues on education was Rs. 200 lakhs and in 1932–33 this had been reduced to 169 lakhs. During the same period the total expenditure on education fell from Rs. 390 to 382 lakhs or by only 8 lakhs showing that the percentage of expenditure met from non-Government funds has increased. This may be regarded as a very healthy sign, indicative of the widespread interest in education throughout the Presidency. During the same period the number of institutions increased from 16,713 to 16,871 and the number of pupils in all classes of institutions from 1,192,153 to 1,332,087 or by 11·8 per cent. The period was marked by a considerable awakening of public interest, and by progress, in the matters of girls' education and of the education of the Muhammadans and Backward classes, where, however, much leeway has still to be made up. All things considered the general progress shewn may fairly be claimed to be satisfactory. But for financial stringency progress, especially in the realm of primary education, would have been much more rapid.

During the past three or four years the efforts of the department have been specially directed towards consolidating, as far as possible, the position, and putting the affairs of the department into good working order so that it may be able to widen its activities when the financial situation improves.

The following is a summary of the more important events and matters dealt with.

A. General.

(1) The educational services were reorganised. This measure provided for the replacement of the Indian Educational Service by the Provincial Educational Service, and has improved the efficiency of the Provincial Service where the uncertainty of the position had been a cause of considerable hardship and discontent.

(2) The superior inspecting staff was strengthened by the creation of a class I post of assistant educational inspector. The post of inspector of science teaching was abolished.

(3) The control of industrial and technical education was transferred from the director of public instruction to the director of industries.

(4) An Education Manual embodying the standing orders and circulars of Government, the circulars of the director and other matters which it was desirable that the officers of the department should be conversant with for the efficient discharge of their duties, was prepared and published in 1933. This has improved the efficiency of departmental officers, particularly in the inspecting branch.

(5) A Code containing the orders of Government regulating expenditure on primary education was prepared and published in 1930. This has been of great assistance to the department and to local authorities in the working of the Primary Education Act.

(6) A Directory showing the personnel of the department which had not been published for 8 years was brought up to date and republished.

(7) Wider powers have been delegated to educational inspectors.

(8) The report of the committee appointed by Government in connection with the educational, economic and social conditions of the Depressed classes and the Aboriginal Tribes in the Presidency and measures required for their uplift was published. As a result of the recommendations of this committee various measures have been taken by Government to safeguard the interests and to provide better educational facilities for these classes. It is anticipated that the steps taken will ensure steady improvement in the condition of these classes.

(9) The reports of the Primary and Secondary Education Committee, the Physical Training Committee and the Committee of Enquiry into the Care of Destitute Children and Young Offenders were also published.

(10) With a view to improving the qualifications of non-graduate teachers for European schools, Government sanctioned in 1931 the institution of a new examination to be called "The Bombay European School Teachers' Diploma Examination." Before the institution of this examination non-graduate teachers used to appear for the Secondary Teachers' Certificate Examination which is unsuited to the needs of teachers in European schools. The purpose of the new examination is to supply suitably qualified teachers from standard III upwards in schools of every type working under the Code of Regulations for European Schools. Candidates for this examination are required to undergo a three years'

course of training in a recognised training college or training class, during which period they also work for the Cambridge Higher School Certificate, their achievements in this connection being entered upon the teaching Diploma. The first examination was held in November 1931 for which three candidates appeared and all passed.

B. University.

(1) The Bombay University Act of 1928 came into operation.

(2) Certain amending Acts which removed difficulties in working, but which did not interfere with the principles underlying the University Act, were passed into law.

(3) The university has formulated a scheme of post-graduate teaching in chemical technology and Government have handed over to the university on the 15th November 1933, for a period of five years in the first instance, the east wing of the Royal Institute of Science, in order that the scheme may be put into operation at an early date.

C. Collegiate education.

(1) Four new arts colleges have been opened, at Andheri, Poona, Belgaum and Shikarpur. The college at Andheri known as the Ismail College was opened by Government while the other three colleges were opened by private bodies.

(2) With a view to reducing their direct expenditure on higher education in some way Government have decided to close the Deccan College at the end of the academic year 1933–34.

(3) Fees in Government arts colleges were raised. As a result of the recommendations of the Reorganisation Committee, Government considered the possibility of making their arts colleges self-supporting by still further increasing the fees, but came to the same conclusion as the committee that this was impracticable. Fees for new entrants from Indian States and other provinces have however been raised by 50 per cent with effect from 1933–34.

(4) The rates of fees have been raised for new entrants from Indian States and other provinces in the Sydenham College of Commerce, and for all new entrants in the College of Engineering, Poona (including the Diploma classes attached to it).

(5) In the Royal Institute of Science, Bombay, there has been a marked increase in the number of post-graduate research students and in the amount of research carried out.

(6) The College of Engineering, Poona, was provided with better equipped laboratories and workshops at a cost of about Rs. 4 lakhs to Government. A new course leading to a degree in electrical engineering has been introduced. The course is popular and meets a long felt want.

(7) In the Government Law College, Bombay, a scheme of additional training was introduced and the number of hours of instruction were increased, the additional cost for this improvement being met by an increase in the fees.

(8) The Secondary Training College, Bombay, was reorganised. The staff was strengthened and the number of admissions to the college per annum increased from 60 to 100 with a view to increasing the output of trained teachers for secondary schools.

The value of stipends in the training college was reduced.

(9) The budget allotment for grants in aid of colleges was reduced by about ten per cent.

(10) There has been a redistribution of the grants to arts colleges as a result of which three arts colleges under private management, which did not previously receive grants, have been admitted to grants-in-aid.

D. Secondary education.

(1) The number of pupils attending secondary schools increased from 108,578 in 1927-28 to 127,698 in 1932-33. There was a marked increase in numbers of girls, of intermediate and Backward classes pupils, and of Muhammadans in secondary schools during this period.

(2) Three Government Anglo-Urdu middle schools, two for boys and one—a purdah institution—for girls were opened.

(3) The question of raising fees in Government high schools with a view to giving a lead to aided institutions to take a similar step and thus increase their financial resources was considered by Government. It was decided not to take any action in this direction at present.

(4) The number of classes in the Elphinstone High School was reduced by half in order to provide accommodation and funds for the expansion of the Secondary Training College.

(5) A new agreement was entered into with the management of the High School for Indian Girls, Poona, which resulted in a saving to Government of about Rs. 12,000 per annum.

(6) Owing to the continued financial stringency Government were unable to increase their assistance to aided secondary schools under the Grant-in-Aid Code. On the contrary the allotments for grants to these schools were reduced by about 10 per cent.

(7) With a view to providing facilities for training non-graduate teachers in European schools an examination known as the Bombay European Teachers' Diploma Examination has been instituted. The course covers a period of 3 years. The St. Mary's Training College, Poona, under private management, has undertaken to prepare women candidates for this examination.

E. Primary education.

(1) During the period of 5 years ending 31st of March 1933, the number of pupils attending primary schools increased from 1,021,078 to 1,140,359.

(2) Four district local boards in the northern division which had refused formerly to take over control of primary education under the Primary Education Act have now taken over or are about to take over such control. All district local boards will have taken over control by the 1st January 1934.

The total number of local authorities increased from 68 to 73.

(3) Government sanctioned revised scales of pay for primary teachers appointed after June 1923, and gave local authorities the option of discontinuing head masters' and 1st assistants' allowances.

(4) With a view to minimising the friction which existed in some cases between a local authority and its school board, a circular explaining the legal position of these two bodies was issued by the director of public instruction in September 1931.

(5) Owing to the continued financial stringency it was not possible to devote more funds for the furtherance of primary education. On the contrary it was found necessary to impose an emergency cut in the grants payable to local authorities to the extent of 20 per cent in 1932–33. This cut has now been reduced to 14 per cent in the current year.

(6) The question of determining datum line grants to various district local boards in the presidency which had been engaging the attention of Government for some years past has been settled. These grants have now been fixed finally for each district local board. Those local authorities which were not treated as generously in the past as others were given special block grants.

(7) Model designs for various types of village school buildings suitable for different divisions of the presidency have been prepared.

(8) A beginning has been made in the direction of training primary teachers in rural surroundings and conditions by the establishment of a special training school following a modified course in which practical subjects receive greater emphasis.

(9) The Urdu Normal Class for Muslim girls, Poona, has been developed into a full grade Urdu training school for women.

(10) Stipends paid in training institutions for men have been reduced in value as a measure of retrenchment. The stipends for women remained unchanged.

F. Miscellaneous.

Among the other economies effected as a measure of retrenchment may be mentioned the following :—

(*i*) Reduction in the value of all scholarships, which will ultimately effect a saving of over Rs. 1,25,000.

(*ii*) The number and value of the dakshina and other fellowships have been reduced, with the result that there has been an annual saving of Rs. 10,000.

(*iii*) The allotment for grants to special schools was reduced by Rs. 20,400.

65. The following are the principal matters which have been partly considered or dealt with :—

(*i*) Action on the report of the Committee on Physical Training has been held up on account of the financial stringency.

(*ii*) The report of the committee appointed by Government to consider the reorganisation of primary and secondary school courses with a view to their proper co-ordination and the introduction of vocational and industrial training in primary and secondary schools was published, and is receiving consideration by Government.

(*iii*) The question of the amendment of the Primary Education Act is receiving consideration.

66. The questions to be taken up in the future are the following:—

(1) Means of improving the Government inspection of primary schools. This question closely depends on the amendment of the Primary Education Act.

(2) Revision of the pay of primary teachers which will be taken up as soon as the scales of pay of corresponding Government subordinate services are revised.

(3) Increase of output of trained primary school teachers. This question will be considered after Government have reached a decision as regards the revision of pay of primary teachers.

(4) Alteration of the curriculum of primary schools to bring it into closer touch with the life and needs of the community served.

(5) Organisation of physical education in schools. Nothing can be done until the financial position of Government improves.

(6) Righting the position under the Grant-in-Aid Code in the case of secondary schools—*vide* concluding portion of paragraph 27 *ante*.

(7) Improvement of the curriculum of industrial schools. The question is under the consideration of the Committee of Direction for Technical Education.

XV—INDUSTRIES DEPARTMENT

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XV—INDUSTRIES DEPARTMENT

I. History and purpose of the department.

SHORT HISTORY OF THE DEPARTMENT.

1. In the year 1915 representations were received by Government that measures were necessary to ensure that Indian industries should be able to take advantage of the openings created by the war and that Indian manufacturers should have a fair chance of competing successfully in the supply of articles hitherto obtained from Austria and Germany. As a result of these representations the Government of Bombay formed a Standing Committee of Advisers to advise them on the subject.

The functions of the committee were to examine the projects and suggestions submitted to it, advise as to their practicability and the extent to which they needed Government support and generally to collect and co-ordinate information on all subjects connected with the furtherance of indigenous industries.

This committee investigated the following industries :—

Gold and silver thread industry.
Match industry.
Sugar industry.
Oil industry.
Glass industry.

In 1917 Government appointed a whole-time officer designated director of industries. The committee was, after it had submitted evidence before the Indian Industrial Commission, dissolved by Government at its own suggestion. In its place, however, an advisory committee was appointed to advise the director of industries who was its chairman.

The work of this advisory committee was defined to be, to assist Government with advice and suggestions in matters relating to the development of indigenous industries.

Under the advice of this committee the department was gradually expanded and demonstrations in the following industries were organised :—

(1) [illegible]sein, (2) fish-oil, (3) pottery, (4) rosha oil, and (5) buttons.
(4)
(5) [illegible]

In addition the steam trawler " William Carrick " was bought and experiments in trawling carried out.

The progress of the department was checked in the year 1922–23 owing to financial stringency, and the department had to curtail its activities. In March 1924 the legislative council refused to vote the salary of the director, which post was therefore abolished, and most of the activities of the department were distributed amongst other departments. The then assistant director of industries was given charge of weaving schools, etc., and called " superintendent of weaving " and later " superintendent of industries ".

The department continued in a truncated form until July 1925. Government then on the recommendation of the legislative council were pleased to restore the department under the then superintendent of industries designating him " director of industries ".

When the then director retired in March 1927 Government kept the post in abeyance and appointed a committee to report on the reorganisation of the department and to advise on the formulation of its activities. This committee finished its deliberations on the 4th July 1927 and submitted its report to Government. Government accepted the recommendations made by the committee in paragraph 23 of its report and the post of the director of industries was filled in August 1928. Since then the activities of the department have been gradually expanding.

The highest expenditure of the department was in the year 1921–22, when it amounted to Rs. 6,98,463, including the cost of fishing operations. The lowest expenditure was in the years 1925–26 and 1927–28 when there was no director of industries, the expenditure being Rs. 67,457 and Rs. 69,472 respectively. For the year 1933–34 a provision of Rs. 3,60,000 including Rs. 2,34,100 for technical education has been made in the budget.

Objects in view.

2. The objects which are kept before the department of industries are that it should take all reasonable steps to encourage from year to year an increase of production from industries and manufacture in the Bombay presidency and in the number of workers who obtain a living from these occupations.

FUNCTIONS OF THE DEPARTMENT.

3. The Industries Committee, Bombay, 1926–27, suggested the following as the main functions of the department :—

(1) The supply of industrial and commercial intelligence to private enterprises. This should include the obtaining of information regarding trade openings in the province or elsewhere for any goods produced in this presidency.

(2) Technical advice and assistance to cottage industries and small organised industries, including the introduction of new methods and improved implements. This should include the development of new spare-time occupations in rural areas.

(3) Industrial education, including weaving schools and demonstrations in cottage industries.

(4) Survey of all industries in the presidency, except major industries, and maintenance of an organisation to keep information on this subject up-to-date. This would include the maintenance of a record of producers and so would connect with the commercial and intelligence work specified under the first heading.

(5) Industrial exhibitions, including the industrial sections of agricultural or other exhibitions.

In addition to the above, the following functions are also carried out by the department :—

(6) Work in connection with mines and minerals.

(7) Investigations in connection with applications for financial aid made to Government.

(8) Investigations in respect of new industries. For this purpose, short-term-contract specialists may be engaged from time to time.

(9) Industrial research.

(10) Work in connection with the Weights and Measures Act, 1932.

(11) Work in connection with fisheries.

II. Organisation.

THE STAFF.

4. The present staff of the department is as under :—

(*a*) *Headquarters, Bombay.*

(1) Director of industries,
(2) Industrial engineer,
(3) Industrial chemist,
(4) Fisheries Officer,
(5) Clerical establishment : 10 clerks.

(*b*) *Under the Committee of Direction for Technical Education.*

(1) Part-time secretary,

(2) Full-time teaching inspector of technical and industrial schools.

(3) Clerk.

(*c*) *Mofussil staff.*

(1) R. C. Technical Institute, Ahmedabad.

1 Principal and 21 members of staff.

(2) Weaving institute, Poona.

1 superintendent and 5 members of staff.

(3) 1 Senior weaving assistant—headquarters, Bombay.

This senior weaving assistant has in his charge three weaving schools and three demonstrations in the central division. These are peripatetic institutions.

(4) 1 Weaving assistant—headquarters, Gadag.

This weaving assistant has in his charge two weaving schools and five demonstrations in the southern division and one demonstration in the central division. These are peripatetic institutions.

(5) 1 Weaving assistant—headquarters, Surat.

This weaving assistant has in his charge two weaving schools and three demonstrations in the northern division. These are peripatetic.

(6) 1 Weaving assistant—headquarters, Sukkur (Sind).

This weaving assistant has in his charge two weaving schools and two demonstrations in Sind. These institutions are peripatetic.

The staff employed in the four divisions comprise a total of 34 men.

(7) A dyeing demonstrator with a manual assistant at present stationed in the Presidency proper and another with a manual assistant at present stationed in Sind. Both these institutions are peripatetic.

Functions of headquarter staff.

5. The work of the headquarter staff is to carry out the functions of the department described in paragraph 3 above. It investigates possible improvements in existing industries. Examples of this work are the improved machines and processes to which reference is made in the next two paragraphs and improved methods in the manufacture of gas mantles, glass bangles, confectionery etc. It investigates new industries.

Examples of this work are the detailed examination of the manufactures of imitation gold thread and peppermint oil, neither of which is at present made in India, investigations in connection with the manufacture of straw boards, tallow substitute, sardine oil, starch from jowari, etc. The department has prepared and supplied to industrialists some twenty very detailed estimates for industries.

The existence of the department enables those wishing to establish new small-scale industries to obtain unbiassed advice. The alternative source of information is the firms which sell machinery. The director proposes to make suggestions to Government for the levy of fees for giving advice both in industrial and commercial matters by the department.

The headquarter staff carries out experimental work for the solution of practical difficulties encountered by small manufacturers in technical processes of manufacture. A number of instances of this are available in the last two annual reports.

Several hundreds of letters are issued every year in connection with commercial information to enquirers.

It has not been possible to carry out detailed surveys of all industries, but surveys of tanning, hand-weaving, art-crafts and fisheries have recently been carried out.

With its present staff the department can only examine one or two industries at a time. If the department were expanded, several new industries would be worked up simultaneously and demonstrations would increase. The director works in close co-operation with the directors of industries in other provinces and does not take up work which he can borrow. But even if there were in existence a central research agency working on behalf of the provinces, a local organisation would still be required to apply the results and also to investigate local problems. Even at present some difficulty is felt in the absence of a gazetted officer on the staff of the department in Sind in controlling work there. The director as far as possible utilises the organisation of the co-operative department in Sind. As for industrial exhibitions, the department has not so far organised any, but it has taken part in some agricultural exhibitions, both provincial and district, and the Poona Swadeshi Bazar and Industrial Exhibition.

The department advises the excise department in connection with the use of alcohol in industries. It assists the superintendent of stationery in the economic and efficient purchase of stationery, etc., by examining and testing for him samples of such items as inks, gums and cloth. The director advises Government in connection with the Weights and Measures Act

of 1932 and the staff proposed to be employed to implement the Act will be under the control of the director. The department advises Government on questions concerning mines and minerals, especially in connection with the grant to the public of leases for the right of excavating minerals.

The services of the director are utilised by Government for advice on industrial matters and in placing their views before bodies like the Tariff Board and the recent Hides Cess Enquiry Committee and the like.

Industrial engineer.

6. Government have recently appointed as industrial engineer, a mechanical engineer who has had seventeen years' previous experience in factories, on a scale of pay rising from Rs. 800 to Rs. 1,000. He has been actively engaged since his appointment in examining the tools used in rope making, brass and copper utensil making, gold thread making and other industries with the object of effecting improvement in the appliances used by workers in these industries. After an improved appliance has been devised a demonstration staff is required to introduce it. A new gilding machine designed by the department enables the Surat gold and silver thread works to produce better thread at lower cost and to compete successfully with French and German products. There are about 750 small gold and silver thread factories in Surat and twenty of the larger factories have adopted this machine and the demonstration unit which was formed to introduce it has now been withdrawn on the assumption that the new process will now filter through. Two other machines for fine wire drawings and wire flattening for this industry have been designed and patented by the department and have been demonstrated to the gold thread manufacturers of Surat. A machine for the winding of lametta on yarn is under construction and is expected to be completed and demonstrated to the gold thread manufacturers during the year 1933-34.

The director has been authorised by Government to seek the co-operation of the Dapuri workshop, which is under the control of the Superintending Engineer, Deccan Irrigation Circle, in the manufacture of new appliances for cottage and minor industries. The question of transferring the Dapuri workshop in whole or part to the control of the director of industries (in whose charge it formerly was) has not been finally settled.

Industrial chemist.

7. The industrial chemist who was recently appointed is an M.Sc. and Ph.D. of Cornell University and had five or six

years' industrial experience before his appointment. His present scale is Rs. 450—30—570 a month. He has his laboratory at the Royal Institute of Science. He has already done some valuable work. As a result of his labours the department has demonstrated the production of peppermint oil and of an improved method of soap manufacture from natural indigenous soda. The department has also successfully experimented with the production of paper pulp and straw boards from rice straw and with the production of vegetable tallow as a substitute for the imported animal tallow, and manufacture of starch from Jowar.

FUNCTIONS OF MOFUSSIL STAFF—COTTAGE INDUSTRIES.

8. Most of the mofussil staff of this department is engaged in promoting the hand weaving industry and the allied industry of hand dyeing and calico printing.

It will be noted that so far the chief cottage industry for which fairly substantial work has been done is the hand weaving industry. This work was formerly entrusted to the co-operative department. Since the transfer to the industries department, the expenditure on this work has grown from Rs. 14,000 to Rs. 60,000 a year. The principal development has been the introduction of improved appliances, such as fly-shuttle sleys, beams and sizing machines, but above all of fly-shuttle sleys, some 16,663 of which have so far been introduced amongst hand weavers. It is estimated that there are approximately 80,000 to 1,00,000 hand looms at work in the Bombay presidency including Sind, and that about 8,00,000 people including dependents of workers obtain their livelihood from hand weaving and allied industries.

While the work done so far has been very useful there can be little doubt that assistance could also be rendered to weavers in the following directions :—

(*a*) Assisting the handloom weavers to weave cloths which do not come into direct competition with mills. Helping weavers to standardise their production in width, length, design, quality, etc.

(*b*) Helping the people concerned to organise in each of the large handloom centres one or more small factories for sizing the yarn and supplying it in warps to weavers and for calendering and finishing cloths produced on handlooms.

(*c*) Helping weavers to find markets for their finished products beyond the restricted areas to which they now have access.

At present nearly one half of the industries portion of the department's budget is spent in connection with hand weavers. Government have considered the question whether, in order to undertake work of the nature described above and to supervise the various schools and demonstrations, a textile expert should be attached to the department, but have decided not to make this appointment as the Industries Committee do not include the textile industries among the main functions of the department.

Temporary demonstration staff is employed from time to time to demonstrate the possibilities of gold thread, soap, peppermint oil and other cottage industries.

Another cottage industry which has been investigated is village tanning and flaying. A scheme has been administratively approved by Government. If Government provide funds for it, a tanning expert and some staff for a tanning school at Dharavi will be employed.

III. Relations with Government and other departments.

Factory and boiler departments.

9. It is sometimes suggested that the boiler and factory departments should be retransferred to the control of the director of industries as was previously the case.

The majority of the Industries Committee, 1926-27, were against placing the factory departments under the director as they took the same view as the Royal Commission on Labour, 1931, took, namely, that the primary function of the department of industries was the development of industries and the department was likely to be antagonistic to the proper fulfilment of the functions of the factory and boiler departments. The Reorganisation Committee have reinforced the recommendation of the Royal Commission on Labour and recommended the early creation of the post of labour commissioner who should administer the factory and boiler departments among his other duties. Their recommendation has been accepted by Government, and orders have been issued accordingly.

Technical education.

10. Government have recently accepted the view of the present director of industries that one of the most important functions of his department should be to make available to

industries technically trained men of all grades and therefore that his department was the proper department to handle the subject of industrial education. This subject has been transferred by Government from the Director of Public Instruction to the Director of Industries with effect from 1st April 1931 with the budget provision of Rs. 2,39,000. The activities of Government under this head include the maintenance of the Ranchhodlal Chhotalal Technical Institute at Ahmedabad, the grant of scholarships and the inspection and examination of privately managed industrial schools with a view to the regulation of grants-in-aid. The director is assisted in these activities by the Committee of Direction for Technical Education, Bombay, of which he is an ex-officio member. He is also an ex-officio member of the Board of Trustees of the Victoria Jubilee Technical Institute, Bombay.

RELATIONS WITH THE SECRETARIAT.

11. The subject industries is a transferred subject under the devolution rules and is in the portfolio of the Honourable Minister for Education. The director is a head of a department and corresponds directly with the secretariat.

In this connection it is of interest to note that the Industrial Commission, 1916-18, have stated in paragraph 312 of their report:—"We recommend that the relations of the Director (of Industries) and the Local Government should be as direct as possible, an end which may be effected by giving him the position of secretary for commercial and industrial subjects....."

IV. Development during the last five years.

12. During the last five years the department of industries has undertaken many new activities. The hand weaving section was for the first time organised in Sind by the establishment of two weaving schools, two weaving demonstrations and one dyeing and calico printing demonstration. A central Hand Weaving Institute was opened in Poona. The industrial engineer was appointed. He has been able to render considerable help to a number of small industries, such as the gold thread industry, etc. An industrial chemist was also appointed. He has been able to help a number of chemical industries.

13. The department is responsible for the working of the Weights and Measures Act, which became law in 1932, but has not yet been put into operation. The draft rules have

been published by Government for public criticism, and they will be sanctioned and published finally shortly, and the Act will be put into operation in selected areas in 1934-35, as soon as budget provision therefor is made.

14. A survey has been carried out in accordance with the decision of Government to make a survey of fisheries of the Bombay presidency, and the results published in "The Marine Fisheries of the Bombay Presidency", Government Central Press, Bombay, 1933, and the Government have recently sanctioned the creation of a post of fisheries officer, the taking on loan of one Royal Indian Marine launch, the building of two motor boats and the entertainment of the necessary staff to man these boats in order to demonstrate them to the fishermen. The demonstration work has been started this month (November). It is hoped that with the appointment of the fisheries officer Government will be able to carry out many of the recommendations of the report in connection with the development of fisheries, such as the establishment of a Fisheries Information Bureau, etc., which do not involve any special expenditure.

15. A revised scheme for assisting the tanning industry has been approved by Government and it is proposed to make provision for the establishment of a tanning school in Dharavi in 1934-1935.

V. Future of the department.

16. The Reorganisation Committee, 1932, advocated the abolition of this department on the ground that, though the province requires a strong and active industries' department, it cannot afford one to-day and that to keep in existence a department with resources so limited that it cannot do any considerable amount of work merely in the hope of better times is to fritter away funds uselessly. Government have been unable to accept this view and have decided to retain the department.

Questions under consideration.

17. The only important questions at present under the consideration of Government in connection with the industries department are :—

(*i*) Whether a scale of fees for the giving of advice should be introduced. The proposals of the director of industries are awaited.

(*ii*) Whether it would be practicable and involve economy to transfer additional duties to the department.

It has been decided that the question of entrusting additional duties to the department might be considered later if occasion arises.

(*iii*) The director of industries has submitted to Government a proposal to levy an annual cess of annas 8 or a rupee per horse power used by factories and to utilize the proceeds for giving state-aid to small industries. The industrial and commercial bodies consulted in the matter are opposed to the proposal. The question is now under the consideration of Government.

(*iv*) The question of establishing a marine aquarium in Bombay was mooted by Government so far back as 1913. In 1914 Mr. W. S. Millard, the then Honorary Secretary of the Bombay Natural History Society, was deputed by Government to visit Madras and report to Government on the aquarium there, with a view to preparing plans and estimates for an aquarium for Bombay. His report showed that the Madras aquarium was built and equipped for Rs. 20,000, that its receipts were in excess of the expenditure and that the normal monthly expenses of its upkeep were about Rs. 385. On receipt of the report a Committee was appointed in 1915 to select a site for an aquarium and on its recommendation the site near the junction of the Sandhurst and Malabar Hill Roads was considered suitable. The idea had, however, then to be dropped on account of the general financial stringency. In 1925 a Committee was appointed by the Bombay University to consider the question of establishing a Marine Biological Station and an aquarium in Bombay. The Committee's Report was submitted to the University but no further progress was made in the matter. In 1930 the Bombay Natural History Society interested itself in the project. The Society considered the plot to the east of the Charni Road Gardens an ideal site for the aquarium and thought it possible from the experience of Madras that the receipts from fees charged to visitors would be sufficient to meet the expenditure of about Rs. 14,000 excepting the charges on account of the technical control and supervision which it itself was willing to provide gratis. The cost of construction and equipment was estimated at about Rs. 70,000 provided a plot was given free by Government. Government agreed to make a free gift of land on condition that the aquarium was not conducted

for the purpose of making profit. The Charni Road site was however later found unsuitable owing to difficulties regarding the supply of pure sea water. It was subsequently suggested that an aquarium could be constructed in one of the extensions of the Prince of Wales Museum at a cost of Rs. 35,000 only and that satisfactory arrangements could be made there at a very low cost for the supply of pure sea water. An additional amount of Rs. 9,000 would also be necessary for a Curator's room and laboratory. The scheme as proposed by the Bombay Natural History Society has been considered *prima facie* sound but the Society has not yet been able to push it through for want of necessary funds.

XVI—DEPARTMENT OF AGRICULTURE

(excluding Sind)

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XVI—DEPARTMENT OF AGRICULTURE

(Excluding Sind)

I. Organisation.

Functions of the department.

1. The subject "agriculture" is transferred. It is in the portfolio of the honourable minister for education and is administered by the revenue department. The agricultural department has been in existence for nearly half a century and was formed as a result of the recommendations made by the Famine Commission, which sat after the great famine of 1877. In the early years its primary functions were statistical, but gradually its purposes have been widened and it is now intended to be an organisation to ascertain by experiment, investigation and research the methods by which agricultural produce can economically be increased in quantity and improved in quality and then to get these methods put into practice.

The functions of the department at the present time may be divided into five main headings :—

(*a*) Research and investigation ;

(*b*) Demonstration and propaganda ;

(*c*) Supply of material direct to the public ;

(*d*) Agricultural engineering ; and

(*e*) Agricultural education.

Organisation.

2. The director of agriculture is responsible for all agricultural activities in the presidency excluding Sind. He is assisted by a personal assistant, whose headquarters are in Poona and whose presence there makes it possible for the director to tour, together with four deputy directors. In Sind there is a chief agricultural officer who is independent of the director. The organisation and functions of the agricultural

department in Sind are described in the "Review of Sind and the Lloyd Barrage."

The scientific staff are as follows :—

(*A*) *Located at the Poona college of agriculture and having the double duty of teaching and research :—*

Professor of agriculture.

Agricultural chemist (also professor of agricultural chemistry).

Economic botanist (also professor of economic botany).

Horticulturist (also professor of horticulture).

Plant pathologist (also professor of plant pathology).

Professor of agricultural economics.

Professor of agricultural engineering, physics and mathematics.

Assistant professor of entomology (also head of entomological section).

Five other assistant professors.

(*B*) *Located at Poona, but not on the college staff, are the following specialists :—*

Live stock expert.

Assistant agricultural engineer.

(*C*) *Located elsewhere in the presidency are the following specialists :—*

Crop botanist (headquarters at Karjat).

Soil physicist (headquarters at Sholapur).

Five cotton breeders (one each at Viramgam, Broach, Surat, Jalgaon and Dharwar) of whom the one at Broach is financed by the Indian Central Cotton Committee.

Three cotton superintendents (one each at Surat, Dharwar and Amalner) of whom only the one at Amalner is financed by the Indian Central Cotton Committee.

One scientific officer financed by the Indian Central Cotton Committee who is in charge of the special research scheme known as the Gujarat cotton bollworm clean up scheme.

Three scientific officers financed by the Imperial Council of Agricultural Research, who work at the new sugarcane research station at Padegaon.

One scientific officer financed jointly by the Imperial Council of Agricultural Research and Indian Central Cotton Committee. He is in charge of the Bombay part of the all-India scheme for enquiry into the cost of production of cotton and sugarcane.

(*D*) *There is also an inspector of agricultural schools for the presidency, excluding Sind.*

THE DIRECTOR.

3. Research is managed by the specialist officers, subject to the final control of the director. Research financed by the Indian Central Cotton Committee or the Imperial Council of Agricultural Research is subject to the approval of those bodies. Provincial directors of agriculture and Provincial directors of veterinary services are members of the advisory board of the Imperial Council. Other provincial representatives also serve on its sub-committees. The director attends the Imperial Council twice a year. Central research deals with central problems and provincial research with provincial problems and there is very little overlapping. For instance, the cottons bred at Dharwar and Surat are only of value locally, or to a very small extent outside the presidency.

There is a provincial research committee appointed by Government to co-operate with the Imperial Council of Agricultural Research, which consists of a few officials and eight non-officials with the minister for education as chairman. The committee advises Government on provincial research schemes before these are transmitted to the Imperial Council.

There is also an Imperial Board of Agriculture and Animal Husbandry in India, which meets once in two years. The Government of India have decided to retain the board and amplify it in spite of the existence of the Imperial Council.

Almost all new work in cotton is financed now by the Indian Central Cotton Committee, with which body the director keeps himself in close touch. He attends its meetings twice a year. A certain amount of research is financed by the Sir Sassoon David Trust.

The director is also a member of the senate of the Bombay University, to which body the Poona agricultural college is

affiliated. He attends University meetings about half a dozen times a year.

Attendance at meetings of these bodies is recognised as being of great importance to the department as it enables the director to keep himself in close touch with the latest research work, while as an ex-officio fellow of the University and member of the Faculty of Science he is of assistance to the scientific side and in particular to agricultural teaching in the University. But work of this character trenches upon the time which the director should be able to devote to questions of policy and to touring.

Divisional organisation.

4. The presidency, excluding Sind, is divided for agricultural purposes into four divisions :—

(*a*) Gujarat ;

(*b*) North Central ;

(*c*) South Central ; and

(*d*) Southern ;

each of which is in a charge of a deputy director. Until recently there was a fifth deputy director in charge of the Konkan division. That division has been split up among the other divisions, but the arrangement cannot be regarded as satisfactory. The Reorganisation Committee have pronounced against any further reduction of divisions and suggested that it would be preferable to withdraw altogether from certain areas for a time rather than to increase the size of the present divisions. The deputy directors are assisted by agricultural overseers in each district, the deputy director of agriculture, south central division, being assisted in addition by a divisional superintendent, who is stationed at Baramati.

These divisions overlap to a certain extent the three revenue divisions, though, on the whole, they are more logical than those of the revenue department. The agricultural divisions are based largely on—

(*i*) Agricultural features ;

(*ii*) Geographical features ; and

(*iii*) Languages.

The functions of the deputy director are to take the results of research and adapt them for the cultivator, to popularise new implements and to control all district activities. He has

little time for research on his own account. He works through the divisional board of agriculture of which he is chairman (see Review of the Co-operative Department), the agricultural overseers, of which there are two or three to a district, and the taluka development associations.

District organisation.

5. There are 41 district agricultural overseers in the 20 districts of the presidency proper. They are drawn from the cadre of "graduate assistants" of whom there are all told 111 in the presidency proper, the remaining 70 being at the Poona agricultural college, the college farm and dairy, Modibag and the 15 institutions outside Poona, the two agricultural schools and on the staff of the specialist officers.

Under the district agricultural overseers are 27 "non-graduate assistants," now called "agricultural sub-overseers". These men are sometimes matriculates, but hardly ever failed graduates. Their essential qualification is a knowledge of English, as their work includes the keeping of farm records, muster rolls, labour sheets, experimental data, etc. They also manage labour and do miscellaneous work. If the non-graduate assistants are junior men they work under the graduate assistants, but if they are senior men they may work in independent charges directly under their deputy director. Non-graduate assistants do no work which graduate assistants, clerks and kamgars could not do, and the policy of the department is gradually to work off this class of officer.

Kamgars are intelligent cultivators allotted to the graduate assistants in all districts as demonstrators, e.g., in ploughing. There are thirty-one of them in the districts at present.

There is no official taluka staff. In talukas which have taluka development associations, the whole propaganda work and agricultural service in their areas is conducted through them. But the department has never had sufficient staff to base its organisation on the taluka, although the taluka would be the best unit for agricultural purposes.

The aim which the department has set itself is the adoption of the taluka basis and the provision of one kamgar in most of the talukas which have no development associations. The Reorganisation Committee go further than this and advocate the appointment of a kamgar in every taluka which has

no association. This accords with their general view that the taluka and the district should be the units of organisation in all departments as far as possible. As regards agricultural overseers the departmental policy is to retain two in each district. The Reorganisation Committee proposed that there should be only one in each district, and recommended the substitution of 20 agricultural overseers and 119 kamgars for the present staff of 41 graduate assistants (agricultural overseers), 27 non-graduate assistants (agricultural sub-overseers) and 31 kamgars. They considered that the work of agricultural sub-overseers could be done by kamgars working directly under the district agricultural overseer. The number of graduate assistants actually employed as district agricultural overseers is only 31, the remaining ten being employed on propaganda work in connection with cotton or canal irrigation in certain specified areas. These ten propaganda workers must in any case be retained, as it is not practicable to entrust special propaganda work to the single agricultural overseer in charge of a district. In view of the large area of their charges, and the importance of their duties, Government decided not to reduce the number of the remaining agricultural overseers and not to replace the agricultural sub-overseers by kamgars. Kamgars are usually men drawn from the cultivating classes with a practical knowledge of improved agricultural methods. But their work is not likely to be satisfactory unless it is closely supervised by officers of the rank of agricultural overseer: and there are not enough overseers, even if their number is not reduced, to enable that supervision to be adequate. Kamgars are not at present fitted to replace the fieldmen in any scheme of district agricultural propaganda. Government have accepted the Committee's recommendation that the designation "agricultural overseer" should in future replace that of "graduate assistant", and that of "agricultural sub-overseer" should take the place of "non-graduate assistant".

Taluka development associations.

6. There are at present 68 taluka development associations in the presidency proper. The Government orders passed in 1922 under which these associations have been formed offered to meet half the expenditure of an association on approved

objects subject to a limit of Rs. 1,000 a year. But the budget provision has been cut down from year to year as follows :—

Year	Sanctioned Budget grant.	Actual expenditure.
	Rs.	Rs.
1928-29	59,084	59,084
1929-30	52,400	46,350
1930-31	52,400	43,316
1931-32	41,600	39,455
1932-33	37,600	40,449

Government have also placed an embargo on the formation of new associations without their consent in order to keep expenditure down. Government have in fact had to hold up an eminently desirable expansion because of their inability to supply funds on the scale promised. The associations ought to become more self-supporting. Some have endowment funds collected in prosperous years, but most have great difficulty in collecting their subscriptions even on the present scale. The Government grant is given on the basis of the accounts of the previous year, which are carefully scrutinised by the divisional boards and passed on to the joint board of the director and registrar of co-operative societies which allots the grants (see Review of the Co-operative Department).

Government have decided that the existing practice of making grants to taluka development associations on the basis of actual realisations by way of subscriptions, donations from members, etc., subject to a maximum of Rs. 1,000 should continue. The Director of Agriculture and the Chief Agricultural Officer in Sind have been authorised to refuse or cut down a subsidy to associations which are not incurring necessary or useful expenditure but merely accumulating unnecessary reserve funds.

Of the 68 associations in existence in 1930-31 in the presidency proper, 34 were classed as efficient, 26 as struggling but deserving and 8 as moribund. The closing down of an association means that the whole cost of propaganda in its area falls upon Government.

These associations are a development of the departmental organisation which enables intensive work to be done in a taluka. Each association employs at least one non-graduate

assistant or kamgar, whom it usually selects itself but in exceptional cases borrows from Government.

The system is well developed in certain areas. Ten of the seventeen talukas in Satara district have development associations, with the result that the work of the whole district is co-ordinated, departmental staff in the district has been restricted to purely supervisory functions and the district local board has taken over control of the propaganda work. In Khandesh (East and West) seventeen of the twenty-one talukas have associations.

Special research schemes.

7. The Jaywant Cotton Seed Multiplication Scheme may be taken as a typical research scheme. The Jaywant cotton evolved on the Dharwar farm is superior in all respects to the Kumpta cotton grown in the tract and its extra benefits are estimated to be worth Rs. 5 an acre to the cultivator. The scheme in progress aims at producing and distributing pure pedigree seed for two lakhs of acres.

If an improved strain of cotton is grown side by side with other cotton it deteriorates from cross-fertilisation. The purity of seed is therefore controlled by selfing (preventing crossing) seed every year on the farms and in cultivator's fields and arranging for the separate ginning of the produce under efficient supervision. The cotton superintendent, a class II officer, supervises this and other schemes in addition to his other duties. The cost of the scheme is Rs. 5,500 a year in staff, while the purchase, cleaning and distribution of 20,00,000 lbs. of seed costs Rs. 60,000 a year. This imposes a cost of 31 per cent. on the cost price of the seed against a 10 per cent. addition which is the cost of handling and distributing ordinary bazar seed. The cultivators will not pay the whole of the difference. The business selling price of purified seed is 6 lbs. higher than that of bazar seed. The actual selling price in force is now 2 or 3 lbs. over the cost of bazar seed and the deficit is met by a contribution from the Indian Central Cotton Committee.

The total area under Kumpta cotton in the southern division is 12 lakhs of acres. The present scheme covers 2 lakhs of acres. To cover the whole area there would have to be more schemes and more staff. Unless there is an organised scheme in operation of the type described, the money spent on research is money thrown away. It is true that the cultivator ought to pay for the work, but he already pays land revenue and it

is reasonable that Government should make some return to the industry which finances Government. If the cost of agricultural services is to be specifically paid for, the most satisfactory method of recovering the amount would probably be by an indirect cess on the agricultural produce such as the cotton cess levied on cotton bales.

AGRICULTURAL ENGINEERING.

8. The post of agricultural engineer was held in abeyance between March 1st, 1932 and 13th November 1933, though there was still an assistant engineer, and also a professor of agricultural engineering, physics and mathematics at the agricultural college. The retrenchment thus effected, however, could not in the nature of things be permanent, since the work and responsibility of the post was much too important to be left in charge of an assistant. It was clearly illogical to style the officer in charge an "Assistant" when there was no superior officer over him. Both the Punjab and Madras maintain an agricultural engineer and in the United Provinces there are three such posts. Accordingly Government in November 1933 decided to restore the post of Agricultural Engineer and to abolish that of Assistant Agricultural Engineer instead.

The agricultural engineer is primarily a designer and has to work in with an agricultural expert. The work done in this branch of the agricultural department in the past has been most effective. Moreover much of the work done is just reaching the stage when it could be translated into new popular implements.

An additional function of the agricultural engineer's department is to superintend the machinery in the institutions. In addition he is in charge of an oil engine class which gives a six-weeks' course to men who wish to learn how to run oil engines.

LIVE STOCK EXPERT.

9. Agriculture cannot divest itself of the animal side. The live stock expert has his own budget which is comparable in amount to the budget of one of the deputy directors. He has under him two breeding farms, the Chharodi farm with 300 head of cattle and the Bankapur farm with 150. The bulls bred at the farms are put out with premia in the villages. At present some four hundred villages come within the orbit of the farms. A small fee is charged for service. The live stock expert is also in charge of a poultry farm at Poona and besides controlling his own district staff works in with local bodies and gaurakshak mandalis. These mandalis are

subsidised with the idea of diverting the charitable funds which they administer into useful channels.

The live stock expert is under the director of agriculture. His work has been limited and he has not been able to follow a definite programme, which is so essential in the breeding of large animals. The breeding of large animals cannot be compared with plant breeding, as in the latter failures can be destroyed without much loss, whereas a mistake once made in the breeding of animals cannot be rectified without grave loss. Breeders of live stock have to be far more conservative and averse from changes of policy than plant breeders, because no breeder of the larger domesticated animals is able to breed enough of any improved type to produce an appreciable effect on the stock of a country within a generation.

The bulk of the existing females must be bred from, and to obtain true-breeding strains of the type desired is the work of a lifetime, necessitating a carefully planned and long continued policy and an intimate knowledge of the class of stock concerned. This knowledge can only be gained by practical experience and by that sympathy and close study of individual animals and strains which is characteristic of all successful breeders.

It has long been the opinion of all concerned with the improvement of cattle that one of the necessary measures for this purpose is the compulsory castration of inferior bulls. It is believed that in many areas cultivators themselves would welcome a measure of this kind. Government have therefore recently enacted the Live Stock Improvement Act which is intended to give the necessary power compulsorily to castrate bulls in specified villages.

Farms.

10. In the appendix is given a list of the various experimental farms and similar institutions and their net cost in the year 1932-33. The staff on these farms consists of 28 graduate assistants and 25 non-graduate assistants.

Seed improvement is a continuous process and the benefits of the work done can only continue so long as the work goes on, whether it is financed by Government or replaced by a commercial organisation. The chief expense of the farms is the high pay of the specialist breeders. Expenses could be reduced by increasing the scale of the work done and so spreading out the overhead charges.

Research

11. There are 23 graduate and 22 non-graduate assistants serving under the research staff. The Reorganisation

Committee proposed the abolition of 5 posts of graduate and 5 of non-graduate assistants out of the whole number of posts of these classes in the farms and under the research specialists.

In pursuance of this recommendation, two posts of graduate assistant (agricultural overseer), and two of non-graduate assistant (agricultural sub-overseer) have been abolished. After very careful enquiries, Government have been forced to the conclusion that no further reduction of the staff on farms or under research specialists is possible.

The Royal Commission on Agriculture observed that provincial departments of agriculture were not in close touch with the Central Research Institute, Pusa, and therefore did not avail themselves of the facilities which this institute offers, though it is admitted that agricultural development is vital to the prosperity of India.

The Commission suggested three possible methods by which closer contact might be established between the agricultural department and the institute, the first being by dividing research into compartments, i.e., by the formation of crop committees; the second by transfer of control of Pusa from the Government of India to a quasi-independent body on which all provinces would be represented, and the third by constituting a Provincial Research Institute.

The most successful crop committee is the Indian Central Cotton Committee, though it cannot be taken for granted that such committees would achieve the same measure of success with regard to other crops. The formation of crop committees is a matter for consideration when finances improve, especially in view of the fact that in this presidency there are staple crops for which the formation of a committee might be justified.

The second method of encouraging closer co-ordination with Pusa is not likely to be satisfactory, owing to the fact that the central Government might be unwilling to surrender control to a body on which representatives of that Government would be in the minority.

The third proposal is one which cannot be considered at present owing to the financial condition of the presidency.

In discussing research work it is of great importance to remember that research workers need special training and every encouragement should be given to graduates in agriculture in order to permit of their undertaking advance courses or post-graduate training. In furtherance of this object Government in November 1932 constituted a selection committee for the selection of students from this presidency seeking admission to the Pusa institute.

The organisation of research in connection with agriculture under irrigation, especially in the Deccan canal area, was considered by the Royal Commission on Agriculture whose views are given in paragraph 287 of their report. They insisted most strongly on the closest association between the irrigation and agricultural departments in regard to irrigation research. In the Deccan canal area this problem is not yet finally solved. In Sind co-ordination is secured by a committee of two representatives of each department with the Commissioner in Sind as chairman.

AGRICULTURAL SCHOOLS.

12. The agricultural schools have always been an experiment and when retrenchment became necessary they were one of the first things to go. There were previously six schools but are now only two, at Devihosur and Dhulia, respectively. Boys have to be provided with scholarships before they will attend. The scholarships have been reduced and might possibly be reduced still further. The present cost of the two schools is Rs. 18,000 a year. In the case of the Dhulia school the local school committee defrays the boarding charges of the boys.

These schools provide a useful type of a man but it is obvious that their effect on rural conditions must be extremely local. The Linlithgow Commission wholeheartedly condemned this type of school and the Reorganisation Committee recommended the closure of the two remaining schools.

The grounds advanced for this recommendation were that these schools are of purely local interest, the entries being only about 16 a year in each case, and there is no adequate return to the general tax-payer for the money spent on them. On the other hand it has been urged that there is a keen demand for the kind of education imparted in these schools and that they do not serve a merely local purpose, since students from adjoining districts take advantage of them. In the case of the Dhulia school, a further reason advanced in favour of its retention is that the cost of the school is in part paid for by contributions from several local bodies. After careful consideration of these conflicting arguments Government decided that as both schools are doing good work, it would not be a sound policy to close them. At the same time they asked the director of agriculture to explore the possibilities of effecting economies in their management.

The educational department has instituted agricultural bias classes in seventy schools. The inspector of agricultural

schools inspects these classes. The cost of that appointment might perhaps now more properly be debited to the educational budget.

AGRICULTURAL COLLEGE.

13. The Poona agricultural college serves the purposes both of a college teaching agriculture and of a research institute. The director estimates the cost of running the research side of the college alone at Rs. 61,000 a year.

The course given at the agricultural college is of a standardised type, such as is given in England, America and other countries. There is nothing in India intermediate between the agricultural school which turns out a better farmer and the graduate training. The college was started in 1908, but there had been higher agricultural teaching in connection with the college of science since 1890. The object is to attract men who do not simply enter the college for the sake of obtaining employment under Government. A few men from the land-owning and ruling classes are now coming forward to take the full graduate course. The reputation of the college is high and if the Government of India adopted the suggestion of the Reorganisation Committee and regulated the number and location of agricultural colleges in India (which are at present in excess of the needs of the country) it is probable that the Poona college would be retained.

The college already serves a large area. It could probably serve Madras and the Central Provinces in addition. Government cut down the number of entrants to 50 a year with a view to reducing the staff to the lowest possible number but later permitted 75 as before. Admissions of students from outside the presidency are limited to ten per cent. of the total but if the local demand does not take up 90 per cent. of the available places more outsiders may be admitted.

Records have been kept of the careers of 46 per cent. of the men who have graduated from the college and the classes which have preceded it since 1892. Of these 90 per cent. are doing work connected with agriculture—in the agricultural, forest and irrigation departments, Imperial Chemical Industries, butter factories, dairies, intensive irrigation farming on their own account, selling agricultural implements, etc. About 20 per cent. of those whose careers are known are farming on their own account.

The maintenance of an agricultural college must be regarded as a subsidy to agriculture. The Poona college was established

in order to strengthen the position of agriculture in the province. It has met with a small if inadequate response. It is claimed for the college that it has done a great deal to change public opinion towards agriculture, and that gradually the better minds in the country have, by virtue of the influence which it has shed, been turning towards agriculture. The Reorganisation Committee, however, were unable to find any evidence that the existence of the college had benefited agriculture to any appreciable extent and therefore considered it a luxury which the province could not afford and recommended its closure. They estimated the saving at Rs. 1,06,000 a year, Rs. 1,32,000 being the cost of the college and Rs. 26,000 the present fee receipts. They also recommended the abolition of the post of assistant professor of dairying, if the college were retained.

One of the criticisms brought against the college is that it has failed to attract youths who desire an agricultural education for its own sake and has been almost entirely filled by aspirants for employment in Government service. Government, however, held that there was ample evidence to show that this was not generally true and that a large number of men who passed out of the college had afterwards been usefully employed in agriculture or its allied occupations. In their opinion, the college serves a valuable purpose in training not only the men required to fill the ranks of the agricultural department but also students who take up agriculture or other allied occupations after passing through the college course. If the college is once abolished it cannot be revived, and there is no other institution in this presidency to take its place. They considered that there are serious objections to the suggestion that students required for the personnel of the agricultural department should be sent annually for training to colleges in other provinces. None of these colleges is within easy reach of this presidency. Agricultural conditions in the provinces in which they are situated differ widely from those prevailing in this presidency. The fees charged in some of them for Government scholars coming from provinces other than their own are very high. Moreover the disappearance of the college before any system of inter-provincial or federal agricultural colleges can be introduced would leave a very definite gap in the educational system of this presidency and would probably tend to check its agricultural progress. In these circumstances, Government decided that it would not be sound policy to close the college.

With effect from 10th June 1933, the tuition fee for the students from the Bombay Presidency has been increased from Rs. 120 to Rs. 150 per annum and that for students from outside the presidency from Rs. 240 to Rs. 300 per annum. Present students as well as new entrants are paying the fees at the increased rate.

The Reorganisation Committee's proposal to abolish the post of assistant professor of dairying has also been rejected by Government as there was no other officer to whom duties performed by this officer could conveniently be entrusted. Enquiries showed that it was quite impracticable for the live stock expert to undertake these duties.

The running contingent grant of the agricultural college farm, which was fixed after very careful scrutiny by the special accounts officer at Rs. 34,000 per annum in the year 1927-28 but which was reduced from year to year owing to acute financial stringency and stood at Rs. 25,578 in the year 1932-33, has been further reduced to Rs. 18,238. Similarly the Modibag garden attached to the Poona agricultural college for teaching is now run as a business concern, one of the non-graduate assistants on the staff of that garden having been retrenched and the running contingent grant having been reduced from Rs. 5,777 to Rs. 4,340.

AGRICULTURAL SERVICES.

14. The department is staffed by members of the Indian Agricultural Service, the Bombay Agricultural Service (class I and class II) and the Subordinate Agricultural Service.

The present strength of the Indian Agricultural Service in the presidency is seven. The post of agricultural chemist is held by an officer outside the Indian Agricultural Service and this was also the case with the post of agricultural engineer until that post went into abeyance. Recruitment for the service ceased in 1924, since when rules have been drawn up for the Bombay Agricultural Service, class I and class II. Vacancies in class I are to be filled :—

(*a*) by nomination from candidates possessing an honours degree in science or agriculture of an approved university; and

(*b*) by the promotion of members of class II of proved merit and efficiency.

Vacancies in class II are ordinarily to be filled by the promotion of officers of proved merit and efficiency from the ranks of the Subordinate Agricultural Service, though Government may make direct appointments.

The Subordinate Agricultural Service consists of :—

(*a*) graduate assistants (now called agricultural overseers) ;

(*b*) non-graduate assistants (now called agricultural sub-overseers) ; and

(*c*) kamgars.

The Indian Agricultural Service as a service will gradually disappear and the field of recruitment will be reduced. It is, however, necessary that the important posts of director of agriculture and principal of the college of agriculture should be filled by the best officers obtainable, even if they have to be recruited from Europe. The Royal Commission on Agriculture dealt with this question at length and emphasised that the directorship is one of the key posts in rural development and that agricultural advance must depend upon the suitability of the officer appointed, while they were of opinion that no appointment, except that of the director of agriculture, has greater opportunities for influencing the course of agricultural development in a province than that of principal of an agricultural college.

The question of separating teaching posts and administrative posts was discussed by the Royal Commission on Agriculture. There is no doubt that the combination of research and teaching is desirable, as the teacher by engaging in research work is prevented from getting into a groove and is kept in touch with the latest developments, which cannot fail to prove a source of inspiration to his pupils. The danger which must be guarded against is of one branch of the work stifling the other. It would therefore appear advisable that professors and lecturers in the college of agriculture should do research work and also give instruction in their special subjects. It has on many occasions been urged that continuity is necessary in the principalship of an agricultural college and this is no less true of the appointments of professors and lecturers if a high standard of teaching is to be maintained. There would therefore be justification for a separate branch of the service for research workers and teachers. The other branch would be for administrative officers. Interchange between the two branches would not be entirely barred.

II. Co-ordination with other departments.

15. The departments with which the work of the agricultural department is closely related are :—

(*a*) The co-operative department.

(*b*) The civil veterinary department.

(*c*) The irrigation department.

(*d*) The revenue department.

(*e*) The forest department.

(*f*) The educational department.

With the exception of the co-operative department there is no formal arrangement for co-ordination of administrative work with other departments.

Co-operative department.—In the case of the co-operative department, the registrar and the director of agriculture meet quarterly to deal with matters submitted to them by the divisional boards and the assistant registrar and the deputy director of agriculture are alternately chairmen of the boards. This provision for co-ordination is however not altogether adequate. Differences in the view point of the two departments have arisen, particularly on the non-credit side of the co-operative movement. Co-operative societies assist the agricultural department by doing propaganda work and giving annual subscriptions to taluka development associations. Propaganda is distributed between the agricultural department overseers and the agricultural organisers working under the co-operative department.

Co-operative sale societies are organised by the co-operative department and receive assistance from the agricultural department on the technical side. These societies are of the greatest use to villagers for the distribution of improved seeds and for the sale of produce.

Veterinary department.—The live stock expert should be in close touch with the veterinary department and in the Review of the latter department the question has been discussed whether he should work directly under the supervision of the director of veterinary services. It is not, however, admitted by the department of agriculture that the veterinary department is the most suitable agency for improving live stock and the fact that the agricultural department has much the larger organisation is a factor in favour of retaining the live stock expert under the director of agriculture. That closer co-ordination between the veterinary and agricultural departments is desirable cannot be denied.

Irrigation department.—Co-ordination between the irrigation and the agricultural departments is also very necessary. There is at present a certain amount of consultation by correspondence between these departments over the question of canal policy, but maintenance of the closest relations between the officers of both departments is required.

Land revenue department.—Contact between revenue officers and officers of the agricultural department is usually maintained in connection with local improvements, organisation of shows or special measures for the protection of crops. As an example, during the last serious famine the agricultural department organised cattle camps and collaborated with the revenue department in the supply of foodstuffs for animals.

Forest department.—The forest department comes in contact with the agricultural department with regard to grazing areas, as the specialists in the agricultural department can advise what steps should be taken to conserve and improve grazing. This question is referred to in the Review of the forest department.

In the opinion of the Reorganisation Committee the interrelation between the agricultural, co-operative and veterinary departments is so close that they should all be grouped together under a common Board of Rural Development over which the director of agriculture should preside. This suggestion has not been approved by Government. The question how the work of the department should be co-ordinated with that of other departments is, however, still under consideration.

III. Matters and changes of importance carried out in the past five years.

16. During the last five years a very considerable amount of retrenchment and economy has been carried out in the agricultural department. This may be shown by comparing the total departmental budget in the year 1928-29 with that in the year 1933-34 :—

1928-29.	1933-34.
Rs.	Rs.
13,73,587	11,74,600

During this period, as a result of the enquiries by the Retrenchment Committee of 1923, the officer on special duty for the examination of accounts of contingent expenditure in 1925, the Retrenchment Officer appointed in 1926 and the Reorganisation Committee of 1931, four gazetted posts (viz., deputy director of agriculture, Konkan, agricultural engineer to Government, divisional superintendent of agriculture, N. D., and district horticultural officer), were either abolished or held in abeyance, while 75 posts in the

subordinate agricultural service were retrenched. The post of agricultural engineer has however recently been restored on a lower scale of pay, and the post of assistant agricultural engineer has been abolished instead.

Development in the agricultural department has been due to a large extent to funds provided from the Sir Sassoon David Trust Fund, the Indian central cotton committee and the Imperial council of agricultural research.

During the period of five years ending 31st March 1933, the Trustees of the Sir Sassoon David Trust Fund made grants aggregating in all to Rs. 1,10,706 for investigations and researches in various agricultural problems, e.g., investigations in connection with the improvement of grass lands, drought resisting crops (specially bajri), mango-blight problem, jowar-borer, castor, vegetable and other researches and also for the purchase of implements useful to the agriculturists such as tractors for demonstration purposes, power dust sprayers and power-chaff cutters, etc.

The Imperial Council of Agricultural Research undertook to finance a scheme for the establishment of a sugarcane research station at Padegaon at a cost of Rs. 3,91,238. While during 1933–34 three new schemes have been started, e.g., the scheme of economic enquiry into cost of production of cotton and other important crops, dry-farming research scheme and the cold storage research scheme for the export of fresh fruit. The agricultural department has been early in the field with well-considered schemes which have naturally received priority and the department has in consequence been fortunate in securing considerable funds from the Imperial council of agricultural research.

During the past five years, the Indian Central Cotton Committee paid subsidies aggregating in all to Rs. 5,13,321 with the assistance of which the agricultural department has been able to take up various cotton breeding, entomological, physiological and seed distribution and expansion schemes in various cotton growing centres in the presidency.

Government have now decided that important matters affecting both the agricultural and other departments should be considered in the commissioners' conference, questions affecting the agricultural department being considered in that conference, the director of agriculture sitting as an additional member of the conference.

MATTERS PARTLY DEALT WITH OR STILL UNDER CONSIDERATION.

17. (1) How the activities of the agricultural department can best be co-ordinated with those of other departments.

(2) The part to be played by the agricultural department in the organisation and working of the scheme for village improvement initiated by His Excellency the Governor.

(3) The framing of rules under the Live Stock Improvement Act, 1933, and the selection of villages for the first application of that Act;

(4) The financing of taluka development associations so as to provide for a better distribution of funds.

(5) Scheme for investigating the Koleroga disease in betel-nut in Kanara.

(The scheme was recommended to the Imperial council of agricultural research for a grant. Their decision is still awaited.)

MATTERS POSTPONED.

18. Execution of the following schemes placed by the local Government before the Imperial council of agricultural research for grants-in-aid has for the moment been postponed—

(*a*) Scheme for the production of lime juice on a laboratory scale;

(*b*) Scheme for poultry breeding research in Western India:

(*c*) Virus diseases scheme.

The first scheme is to be re-examined. In the case of the second scheme the conditions imposed by the Imperial council of agricultural research were not acceptable to the local Government as they involved undertaking a financial liability which cannot be accepted in the present financial stringency. The virus diseases scheme will be taken up after the plant pathologist to Government who has been deputed to Europe and America for the study of such diseases returns to duty in June 1934.

APPENDIX.

Statement showing the financial position of the farms of the agricultural department during 1932–33.

Serial No.	Name of farm.	Expenditure.				Receipts.	Net cost.
		Pay of establishment.	Allowances and honoraria.	Contingencies.	Total.		
	Experimental Farms.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Surat Farm	13,118	93	16,703	29,914	18,000	11,914
2	Nadiad Farm	3,681	50	3,261	6,992	800	6,192
3	Dohad (Muvalia) Farm ..	3,057	50	4,835	7,942	3,800	4,142
4	Dharwar Farm	6,986	102	10,419	17,507	5,200	12,307
5	Gokak Canal Farm, Arbhavi ..	4,425	93	8,958	13,476	6,500	6,976
6	Ratnagiri Farm	3,672	106	4,960	8,738	900	7,838
7	Kumpta Farm ..	5,466	69	5,212	10,747	1,500	9,247
8	Rice Research Station, Karjat	2,232	65	3,633	5,930	210	5,720
9	Jalgaon Farm	5,062	97	12,520	17,679	10,000	7,679
10	Kopargaon Farm ..	3,122	204	5,867	9,193	5,000	4,193
	Cattle Breeding Farms.						
11	Chharodi Cattle Farm ..	5,529	333	17,805	23,667	7,000	16,667
12	Bankapur Cattle Farm ..	3,432	74	11,940	15,446	1,000	14,446
13	Tegur Cattle Farm ..	756	..	2,738	3,494	700	2,794
14	Sangvi Cattle Farm ..	810	25	2,626	3,461	200	3,261
	*Horticultural Gardens.**						
15	Ganeshkhind Botanical Gardens, Kirkee ..	10,261	144	10,500	20,905	4,000	16,905
					Total ..		1,30,281

* In addition there is a small garden (Modibag) attached to the agricultural college intended mainly for teaching.

XVI—CIVIL VETERINARY DEPARTMENT.

I. Present organisation.

(*i*) General.

The subject "veterinary" is transferred. It is in the portfolio of the honourable minister for education and is administered by the revenue department.

The functions of the department may be classified as :—

(*a*) Prevention and cure of diseases of animals, with special reference to epidemics ;
(*b*) Control of the importation of livestock at ports, so as to prevent the importation of diseases ;
(*c*) Educational work at the veterinary college, Bombay ;
(*d*) Veterinary dispensaries ;
(*e*) Inspection of animals for slaughter and meat after slaughter, where municipalities so desire ; and
(*f*) In Sind particularly, control of horse-breeding operations.

In addition to these principal duties, there are minor duties such as inspection of cattle markets, attendance at shows and fairs and visits to pinjrapoles.

Up to the end of the year 1931-32 veterinary service was supplied to the public by means of three entirely independent "departments" operating in :—

(*a*) the presidency, excluding Sind and Bombay city and port ;
(*b*) Bombay city and port ; and
(*c*) Sind.

There was no officer responsible for veterinary services as a whole. This defect has now been partially remedied, and there is now a director of veterinary services for the whole of the presidency proper. He is placed in general supervision of veterinary education and the Bombay city and harbour veterinary department. The diagram at page 621 shows the composition of the department at a glance.

(*ii*) Presidency proper.

In the presidency proper, including Bombay city and port, the civil veterinary department is controlled by a director, who has under him a staff of one deputy director, three veterinary inspectors and 123 veterinary assistant surgeons. The department is responsible for the prevention and control of disease and provides the professional staff required for state-aided veterinary hospitals and dispensaries maintained by district local boards and municipalities.

The director, who is a member of the Indian Veterinary Service, is a touring officer with headquarters at Poona. In addition to his administrative duties he initiates and controls the work in connection with epidemics and is responsible for the proper conduct of the professional work in hospitals and dispensaries and visits these institutions as frequently as possible in connection with this and their general management.

The deputy director acts as personal assistant to the director of veterinary services (with touring duties). The three veterinary inspectors have been allotted a range each. Within their ranges the inspectors supervise work in connection with the prevention and control of contagious diseases and undertake periodical inspections of veterinary hospitals and dispensaries. 104 veterinary assistant surgeons are placed in charge of the veterinary institutions maintained by municipalities and district local boards and their services are also utilized for disease control work within their jurisdiction. One is seconded for service with the Society for the Prevention of Cruelty to Animals, Nasik, where he is in charge of the Society's veterinary hospital. The remaining 18 are intended to supplement the local district staff when epidemics are widespread and to form a reserve for leave purposes. This staff is under the control of the director. By arrangement with the Society for the Prevention of Cruelty to Animals, Nasik, the veterinary assistant surgeon seconded to that society is available for epidemic work.

The most important part of the work of the department is that in connection with the investigation of, prevention and control of epidemics. The chief diseases dealt with are anthrax, rinderpest, surra, glanders, foot and mouth disease, hæmorrhagic septicæmia, and black quarter-disease. This work is increasing very considerably and the resources of the department are heavily taxed at times in dealing with it. The increase is due

partly to better reporting of outbreaks of disease and partly to increased initiative by the department in dealing with epidemics, especially in organising preventive measures.

There are 105 veterinary hospitals and dispensaries including that maintained by the Society for the Prevention of Cruelty to Animals at Nasik. Of these only 35 now receive a grant-in-aid from Government, which ordinarily does not exceed one-half the cost of maintenance, and the services of Government veterinary assistant surgeons are lent to boards and municipalities, free of all charge, to conduct the work of the dispensaries, except in the case of the Nasik society which receives a lump sum. The remaining income is derived from the general funds of the board or municipality, assisted in some cases by grants-in-aid from municipalities to district local boards or from district local boards to municipalities, contributions and donations from private bodies and individuals or by fees charged for treatment. At present it is entirely optional with the local bodies whether they charge fees or not, whereas in the case of medical dispensaries the levy of fees is a condition of Government aid. The Reorganisation Committee considered that there was scope for the further levy of fees at veterinary dispensaries and suggested that, in view of this, Government grants other than the free loan of services of veterinary assistants should be withdrawn at once in the presidency proper and gradually in Sind, and the local bodies should recoup the loss by the levy of fees.

Government carefully considered this recommendation. But they concluded that except in the larger towns the result of charging fees would be a great decrease in attendance. The return from fees would be meagre and thus the utility of the veterinary dispensaries would be sacrificed to an extent altogether out of proportion to the financial gain.

In considering the question of abolition or reduction of grants it is necessary to take into account the fact that local bodies are under no statutory obligation to maintain veterinary dispensaries. The financial difficulties in which most of the local bodies find themselves at present make it likely that the abolition or reduction of grants would result in the closure of a large number of dispensaries. In view of the importance of cattle to the agricultural industry of the country it is necessary to give to agriculturists the fullest possible protection from cattle disease. If the abolition or reduction of the grants were to be followed by the closure of a number of dispensaries, it is feared that the ill effects of the

proposed step would be far greater than the resultant saving would justify.

It is true that, if after dispensaries were closed by the local bodies, Government were to abolish the posts of veterinary assistant surgeons attached to them, a much larger saving would result. But such a step would also reduce the strength of the staff available to combat epidemics and would result in a general increase in cattle diseases. The consequent deterioration of cattle in the districts concerned would, in the opinion of Government, affect adversely not only the well being of the people of those districts but in the end the land revenue of Government. If on the other hand, the posts of veterinary assistant surgeons were not abolished when the dispensaries were closed, but only added to the reserve available to meet epidemics where and when they occur, there would be a considerable waste of personnel at times when epidemics are not widespread. Moreover, the general effect would probably be to set back the whole work that has been accomplished during the past few years in developing a sense among the public of the value and importance of proper care of animals and of interest in their welfare.

In these circumstances Government decided not to abolish the grants of veterinary dispensaries in the presidency proper or to reduce them in the case of the dispensaries in Sind.

The Reorganisation Committee also found that very little advantage was being taken by the public of certain veterinary dispensaries and suggested that those which treated less than 15 patients a day on the average should be closed down and a corresponding reduction in the cadre of veterinary assistant surgeons should be made. This proposal is still under examination.

The object of maintaining a Government service of veterinary assistant surgeons is to control contagious diseases. The assistant surgeon in charge of a dispensary has to do epidemic work as well as dispensary work proper.

(*iii*) Bombay city and port.

In Bombay city and port there are two separate charges both of which are held by the principal of the Bombay veterinary college, who is now placed under the general supervision of the director, namely :—

(*i*) The Bombay veterinary college ; and
(*ii*) The Bombay city and harbour veterinary department.

The duties of the principal are mainly concerned with the college. This is a teaching institution and is maintained by Government. It is affiliated to the Bai Sakarbai Dinshaw Petit Hospital for Animals, a non-Government institution managed by the Bombay Society for the Prevention of Cruelty to Animals. The society's officers manage the hospital and the college officers treat the animals in the hospital, thereby obtaining facilities for imparting clinical instruction to the students of the college. The arrangement has been made by Government and the society and is, under the circumstances, for the time being advantageous. The principal teaches the subject of medicine to the final year students, supervises the teaching throughout the college and the veterinary treatment in the hospital as well as administering the institution. He is assisted by four professors and assistant professors and two lecturers. One of the lecturers also acts as laboratory assistant. There is also a hospital surgeon and a compounder.

Government service requires about six veterinary recruits a year. The course is a three years' course, as it is also at the Madras, Calcutta and Patna colleges. The course at the Lahore college in the Punjab is a four years' course. There is scarcely any opening for passed students from the Bombay college except in service under the Bombay or other Governments.

The Reorganisation Committee have suggested that it would be much more economical and otherwise unobjectionable if the Bombay Government nominated the number of recruits who were required every year and sent them to other colleges for training. They have accordingly recommended that the Bombay college should be closed and the veterinary laboratory removed to Poona.

Government carefully considered the remarks of the Reorganisation Committee regarding the utility of the Bombay veterinary college and their recommendation to abolish it. They found that if the college were closed down gradually by refusing admission to new students, the effect would be for three years to produce not a saving but a very considerable increase of expenditure owing to the cost of retrenchment concessions and of scholarships for Government students sent for training to colleges in other provinces.

Two other considerations weighed with Government in not giving effect to this recommendation. One was the future needs of the presidency in regard to veterinary aid which is even at present inadequate and which is necessary to maintain the

cattle in a state of efficiency and to protect them from the ravages of diseases. This is a matter of vital importance to a large part of the population of the presidency which is dependent on its live stock. If the college were once abolished it would be difficult and expensive to revive it and there is no other institution in the Presidency to take its place.

The other consideration is the necessity for an "infirmary" for Bombay City under the Prevention of Cruelty to Animals Act. Under the arrangement made with the Trustees of the Bai Sakarbai Dinshaw Petit Hospital for Animals, this hospital has been declared as an "infirmary" under the Act. In consideration for this and also in consideration for the clinical material supplied to the students of the Bombay veterinary college, the hospital is allowed to utilise the services of the college staff free of charge. If the college were abolished, the hospital would have to maintain a separate staff; and as it would still have to be treated as an "infirmary" under the Prevention of Cruelty to Animals Act, Government would have to make a very heavy annual contribution towards the cost of maintaining the hospital.

In these circumstances Government did not consider that it would be sound policy to close the college.

The Bombay city and harbour veterinary department deals with the equine diseases scheduled under the Glanders and Farcy Act and with the work of the Live-Stock Importation Act. These two duties are carried out for the local Government and for, and at the expense of, the Government of India respectively. The Government of India have not yet provided a quarantine station. The Bombay city and harbour veterinary department consists of a deputy superintendent and assistant Government veterinary officer and eight inspectors. The principal of the college controls the department in addition to his educational duties as a matter of administrative convenience. His functions in this connection consist in supervising the work of the inspectors throughout the city as well as personally supervising the mallein tests of all animals imported and, when necessary, directing destruction of those that react and checking all certificates of health of animals landed in the port. The work of the deputy superintendent and assistant Government veterinary officer and the inspectors is concerned with the examination of imported horses and other animals, and the inspection of all horses and stables in Bombay city and Bandra for glanders, farcy and other diseases.

(*iv*) SIND.

Veterinary work in Sind is under a separate organisation which is controlled by the Commissioner in Sind through a superintendent, who is a member of the Indian Veterinary Service, two inspectors and 22 assistant surgeons, of whom 18 are in charge of dispensaries and four are on general duty. The duties are similar to those in the rest of the presidency, although the organisation is quite independent. The staff is inadequate for the needs of the sub-province and there are no fewer than 43 talukas without veterinary dispensaries. The bovine population in Sind per veterinary surgeon amounts to 110,700 as compared with the Royal Commission on Agriculture's standard of 25,000. The superintendent in Sind is in charge also of veterinary work in Rajputana.

II. Co-ordination with other departments.

(*i*) REVENUE DEPARTMENT.

Revenue officers and their subordinates, who are constantly visiting villages, can be and are of great assistance to the veterinary department in reporting the occurrence of epidemics and in using their influence in inducing stock owners to follow the instructions given by departmental officers. In the presidency the village patels and in Sind the tapedars are responsible for reporting outbreaks to the mamlatdar or mukhtiarkar and simultaneously to the veterinary assistant surgeon.

(*ii*) AGRICULTURAL DEPARTMENT.

The officers of the agricultural department are generally in close touch with those of the veterinary department and it is their duty to report outbreaks of disease which they may discover during the course of their visits to villages. The most important subject on which the agricultural and veterinary departments are jointly concerned is that of animal husbandry. The Royal Commission on Agriculture dealt with this subject at considerable length and emphasised the immense loss to agriculture caused by contagious disease. The agriculturist is still dependent on cattle for transport and cultivation purposes and the occurrence of a severe epidemic, such as rinderpest, causes considerable loss to them not only on account of mortality but also by interference with agricultural operations. Improvement in livestock also is dependent to a very large extent on the freedom of the herds from epidemics. The

two branches of work are therefore closely related. Animal husbandry is in charge of the livestock expert, who is under the department of agriculture.

(*iii*) Co-operative department.

In this connection, the officers of the co-operative department can be of great assistance in controlling breeding operations and in improving the stock, as it is to them that the agriculturists appeal for help when purchasing bullocks.

(*iv*) Board of Rural Development.

The Reorganisation Committee suggested that the required co-ordination between the veterinary, agricultural and co-operative departments would be best secured by the creation of a Board of Rural Development for the presidency proper. The director of agriculture should be chairman and the director of veterinary services a deputy director on the board. This suggestion has not been approved. The question how the work of the department should be co-ordinated with that of other departments is, however, under consideration.

The Reorganisation Committee also suggested that the charge of the co-operative and veterinary departments in Sind should devolve on the chief agricultural officer in Sind. Government have come to the conclusion that little, if any, advantage is likely to be gained by placing the veterinary department under the control of the head of the agricultural department, as both the departments are highly specialised and overlap at a very few points. They are, therefore, not prepared to accept this suggestion of the Reorganisation Committee.

However, to secure the necessary co-ordination between the departments Government have decided that periodical conferences should be regularly held between the heads of the agricultural, co-operative and veterinary departments in Sind thrice annually in December, April and August to consider jointly questions of policy in which more than one department is interested and any questions specially referred to such conferences by Government or by the Commissioner in Sind. The chief agricultural officer is to convene the conference and prepare the necessary agenda. Extraordinary conferences may be convened at any time, if necessary to consider matters requiring immediate attention. The Conference may be presided over either by the Commissioner in Sind or one of the

heads of the agricultural, co-operative or veterinary departments to be nominated by the Commissioner. The chief-agricultural officer is responsible for the maintenance of record of the proceedings and of the submission of the agenda and the conclusions of the conference to the Commissioner in Sind and forwarding their copies to Government.

III. The present system and proposals for improvement.

(*i*) Administration.

The principal defects are a shortage of staff and dispensaries and the absence of investigation and research into animal diseases. It has been realised for some time that the present staff is inadequate to meet the normal veterinary needs of the presidency. The superior staff has had no appreciable addition to it since the department was first inaugurated, although the work of the department has much expanded and the subordinate staff has increased proportionately and it is becoming increasingly difficult for the director to control the subordinate staff, widely distributed as it is over the presidency proper, and direct the work along proper lines. Nor is the present subordinate staff sufficient to carry out the double duty of disease control and hospital work, since it is not practicable to remove men from the stationary institutions of which they are in charge for long periods in order to send them to a distance for disease control work. The number of men employed is limited by the number of hospitals and dispensaries and as their financial condition does not permit of all local boards maintaining sufficient veterinary institutions for the needs of their districts, the dispensaries and subordinate veterinary staff are to a certain extent unevenly distributed. An increase in reserve staff in order to provide more men for disease control is also badly required. The inadequacy of the veterinary staff in Sind has already been referred to. The suggestion has been made that there should be legislation for the compulsory treatment of contagious diseases and control of the movements of cattle, otherwise the work which is being done by the small staff of assistant surgeons will be of no avail to stem the progress of disease.

The lack of unified control in the veterinary services was a defect which has been partially remedied. The present arrangements, by which the principal of the veterinary college, who should be essentially a teacher and an educational officer, is burdened with office work and administration, is by no means

an ideal one. It is necessary that, research work should be carried out in the college both for the sake of the benefit it confers on an educational institution and to assist the director in the control of disease. In order to do this an up-to-date laboratory should be provided and a small isolation veterinary hospital, for which a suitable site exists at the back of the college, should be built. This hospital would provide valuable material for instructional purposes, besides enabling animals to be kept under observation in connection with disease investigation. Biological products useful in the control of disease, e.g. rinderpest virus, could be prepared there. In order to carry on the research work as indicated above the staff of the college would have to be thoroughly reorganised on a similar scale to that at the Madras veterinary college, where research work of this kind is undertaken. Such proposals are however ruled out for the time being on financial grounds. The present facilities for practical instruction provided by the hospital of the Bombay Society for the Prevention of Cruelty to Animals is a valuable asset and in present circumstances the college is not able to dispense with the facilities it offers.

At present the superintendent, civil veterinary department in Sind, controls veterinary work in Rajputana, but, owing to the distance from Karachi, inspection and supervision are difficult and it is desirable that the Government of India should take steps to separate Rajputana from Sind for veterinary purposes.

(*ii*) Recruitment.

With the provincialisation of the veterinary service in 1930 recruitment to the Indian Veterinary Service was stopped and the provincial service was divided into two branches, class I and class II.

There are two officers of the Indian Veterinary Service still serving in the presidency who retain their rights as members of an all-India Service, but whose appointments will automatically be filled, when they retire, by provincial officers of class I.

Vacancies in class I are to be filled by—

(*a*) Nomination from among candidates in possession of an M.R.C.V.S. degree, except in special circumstances when a graduate of an Indian veterinary college is possessed of exceptional attainments; or

(*b*) The promotion of members of class II who are of proved merit and efficiency.

Vacancies in class II are to be filled by promotion of officers of proved merit and efficiency from the ranks of the Subordinate Veterinary Service, but direct appointments may be made at the discretion of Government by nomination from amongst candidates possessing the qualifications of an M.R.C.V.S. or from graduates of recognised veterinary colleges in India who possess special qualifications. Veterinary assistant surgeons are recruited from among graduates of the Bombay veterinary college only.

There are at present one officer (principal, Bombay veterinary college) in class I and five officers in class II. Of the latter, only one possesses the qualifications of an M.R.C.V.S. The question of recruitment is of importance. The services of experienced officers may have to be obtained temporarily until suitable recruits are available. Four of the five appointments in class II are attached to the college, so that the prospects of promotion on the administrative side are comparatively poor.

(*iii*) Research.

It is recognised that investigation and research into animal diseases is of the greatest importance. The Bombay veterinary college would be the best place in which to conduct it, because the presence of a research officer there and the laboratory would prove valuable additions to the training resources of that institution.

An estimate for a laboratory has been prepared amounting to Rs. 67,000, but funds cannot be made available. The college has been organised mainly as a teaching institution and not as a research centre and, should research have to be undertaken, a thorough reorganisation of the staff would be essential as the present staff is insufficient for that purpose. Some useful investigation has, however, been carried out in the existing laboratory.

In order to obtain a fairly complete survey of the conditions of cattle diseases throughout India and to apply the latest methods of disease control, collaboration of the provincial veterinary staff in the research work done at Muktesar in connection with the investigation of cattle diseases is necessary. With a view to ensuring this collaboration, the Imperial Council of Agricultural Research has sanctioned a general scheme of appointment of veterinary investigation officers in all provinces for a period of five years and agreed to pay an annual grant of up to Rs. 10,000 towards the pay and allowances of each veterinary investigation officer and the typist-clerk and peon

under him. The grant is subject to the condition that the entire cost of accommodation, equipment and materials, such as microscope stains, is borne by the local Government. The investigation promises useful results and the Government of Bombay have decided to accept the offer on the condition mentioned above. An officer has been appointed for the purpose by the Government of Bombay from 27th June 1932.

IV. Matters and Changes of importance carried out in the past five years.

During the past five years a considerable number of retrenchments and economies have been carried out in the veterinary department. Their result may be seen on comparing the total departmental budget in the year 1928–29 with that in the year 1933–34 :—

1928–29.	1933–34.
Rs.	Rs.
5,18,000	4,43,000

The more important changes are as shown below :—

(*i*) Two posts of veterinary inspectors in the Presidency proper were abolished.

(*ii*) The veterinary department in the presidency proper was reorganised. The Bombay veterinary college and the Bombay city and harbour veterinary department which were formerly under the control of the principal of the college were placed under the control of the superintendent, civil veterinary department, whose designation was changed to director of veterinary services, Bombay presidency. The deputy superintendent, civil veterinary department, Poona, who formerly discharged the duties of a personal assistant to the superintendent was designated as deputy director of veterinary services and placed in charge of a division with a separate office. A veterinary inspector was appointed to do duty as personal assistant to the director. After a year's experience of this arrangement, however, it was found unsatisfactory. To enable the director to cope with his enlarged duties, an officer higher in status than an inspector was found necessary to relieve the director of his routine work. The deputy director was therefore appointed in July 1933 to be personal assistant to the director with touring duties and his divisional charge was given to the inspector, who was doing duty as personal assistant.

(*iii*) It was found necessary to redistribute the charges of the inspectors especially as one of them was unduly large. The charges were accordingly redistributed into three ranges, viz. Northern, Central and Southern, with headquarters at Surat, Ahmednagar and Dharwar, respectively.

(*iv*) Various economies have been effected at the Bombay veterinary college. The post of assistant principal was abolished, and an additional assistant professor's appointment was created in its place. The post of principal of the college, formerly held by an officer of the Indian Veterinary Service was converted into a post in Class I of the Bombay Veterinary Service. One of the posts of assistant professor has been held in abeyance and a lecturership created in its place. Some economy was also effected by retrenchment of some staff at the College. The number and value of scholarships have been reduced. In order to make the College more nearly self-supporting, the tuition fees and hostel rent have been increased and examination fees levied.

(*v*) The posts of chief inspector and a clerk in the Bombay city and harbour veterinary department were abolished.

(*vi*) Inoculation and vaccination of animals against haemorrhagic septicaemia, black quarter and anthrax were formerly carried out free of charge. From 15th April 1931 small fees have been levied for these services.

(*vii*) Another noteworthy development during this period which requires mention is the appointment of a veterinary investigation officer. In order to obtain a fairly complete survey of the cattle diseases throughout India and to apply the latest methods of disease control collaboration of the provincial veterinary staff in the research work done at Muktesar in connection with the investigation of cattle diseases was found necessary. With a view to ensuring this collaboration the Imperial Council of Agricultural Research sanctioned a general scheme of appointment of veterinary investigation officers in all provinces for a period of five years and agreed to pay an annual grant of Rs. 10,000 to each local Government. This Government agreed to participate in the scheme and appointed a duly qualified officer. The investigations carried out by this officer promise useful results.

V. Matters which have been partly considered or dealt with.

(*i*) The possibility of further raising the tuition fees at the Bombay veterinary college.

(*ii*) Closure of certain dispensaries of which little use is made.

(*iii*) Abolition of a post of veterinary inspector in Sind.

(*iv*) The best means of co-ordinating the activities of the veterinary department with others and especially the agricultural department.

VI. Matters which have been postponed.

Consideration of the following proposals has had to be postponed for the present owing to lack of funds :—

(*i*) The opening of new dispensaries in areas where there is none at present within convenient reach, and the reconstruction of some which are badly housed.

(*ii*) An increase in the number of deputy directors so as to provide one for each revenue division, in accordance with the recommendation of the Royal Commission on Agriculture.

(*iii*) The establishment of an up-to-date laboratory for research work at the Bombay veterinary college and creation of a goat virus depôt to combat rinderpest.

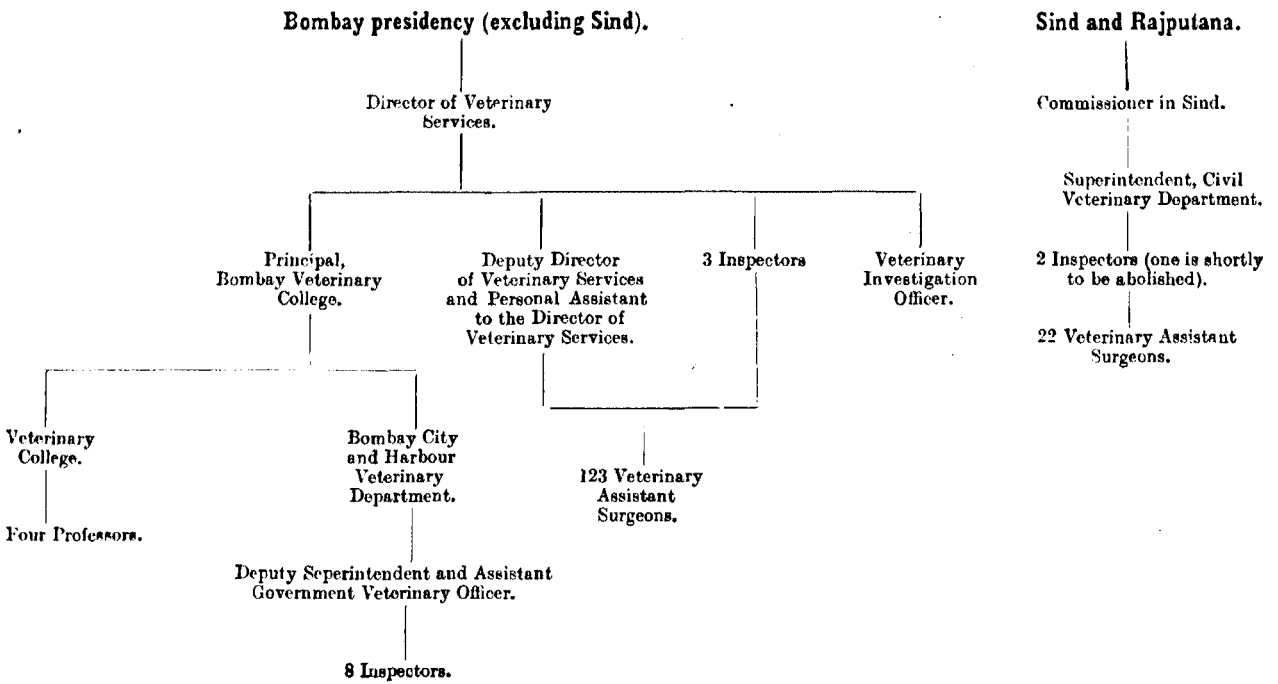
(*iv*) The construction of a quaratine station at Bombay for imported animals.

VII. Matters to be considered in the near future.

There are no questions which can be shown under this head.

APPENDIX A.

PRESENT ORGANISATION.



APPENDIX B.

Receipts and expenditure of the civil veterinary department, Bombay presidency, from the year 1904-05.

Year.	Receipts.	Expenditure.
	Rs.	Rs.
1904–05	28,000	1,59,000
1905–06	24,000	1,63,000
1906–07	35,000	1,58,000
1907–08	26,000	2,02,000
1908–09	13,000	1,36,000
1909–10	13,000	1,73,000
1910–11	22,000	2,08,000
1911–12	16,000	4,12,000
1912–13	16,000	2,61,000
1913–14	16,000	2,49,000
1914–15	16,000	2,93,000
1915–16	18,000	3,06,000
1916–17	24,000	3,01,000
1917–18	23,000	3,37,000
1918–19	32,000	4,02,000
1919–20	19,000	4,20,000
1920–21	13,000	4,24,000
1921–22	14,000	5,23,000
1922–23	49,000	4,45,000
1923–24	12,000	4,45,000
1924–25	7,900	5,02,000
1925–26	8,600	5,30,000
1926–27	9,400	4,73,000
1927–28	8,200	5,09,000
1928–29	11,000	5,18,000
1929–30	8,300	5,44,000
1930–31	9,500	5,75,000
1931–32	19,000	5,31,000
1932–33	17,000	4,53,000
1933–34 (estimates)	14,000	4,43,000

Remarks.—The abnormal receipts in 1922–23 are due to the sale of stallions in that year, when horse-breeding operations were stopped on account of the development of mechanical transport. Receipts in the subsequent years fell as a result of this stoppage.

The increase of expenditure up to the year 1921-22 was due partly to the revision of the pay of the establishment and partly to the increased

activities of the department on account of the outbreak of foot and mouth and other diseases. Measures of economy and retrenchment were taken from the year 1922–23, the principal items of retrenchment being as follows :—

Item of retrenchment.	Approximate annual saving.
	Rs.
(*a*) Abolition of one of the gazetted posts of deputy superintendent, civil veterinary department, and substitution of two inspectors	2,550
(*b*) Abolition of several non-gazetted posts ..	20,000
(*c*) Reduction of house rent, travelling and other allowances	5,000
(*d*) Reduction of contingent expenditure ..	20,000
(*e*) Reorganisation of veterinary department in the presidency proper	11,000

The increase of the expenditure in recent years in spite of all these measures of retrenchment is due principally to the enhanced grants for the purchase of sera and vaccines.

XVI—CO-OPERATIVE DEPARTMENT

I. Organisation.

Introduction.

1. The co-operative department is the creation of the Co-operative Societies Act of 1904 and is designed for the improvement of the economic condition of the ryot by inculcating habits of thrift and providing ready channels into which these habits can be directed. The Act of 1904 was replaced by an all-India Act of 1912 and after the Reforms when " Co-operative Societies " became a provincial and transferred subject, that Act was replaced by a local Act (Act VII of 1925) to facilitate the formation and working of societies. The aim of the department is to educate gradually the agricultural and industrial classes of the presidency in the co-operative idea and the moral lessons which it implies.

Present organisation.

2. In 1904, an independent officer known as the registrar was placed in charge of the co-operative department and this arrangement continued until 1907, when the registrar was subordinated to the director of agriculture. In 1919 the two departments were again separated and the co-operative department with the registrar at its head has continued as an independent department until the present time. The subordination of the co-operative department to the director of agriculture had become nominal several years before it ceased.

The staff of the department is divided into—

(*a*) Paid staff, and

(*b*) Honorary staff.

(*a*) The paid staff consists of the registrar with—

5 Assistant registrars,
1 Deputy registrar for Sind,
4 Special auditors,
1 Assistant deputy registrar,
9 Auditors, class I,
26 Auditors, class II,

34 Sub-auditors,
2 Agricultural organisers, class I,
7 Agricultural organisers, class II,
1 Special mamlatdar (in the Broach and Panch Mahals district),
1 Weaving inspector,
1 Assistant weaving inspector,
1 Office superintendent and
99 Clerks.

(*b*) The honorary staff consists of—

1 Divisional honorary organiser,
57 District honorary organisers and
64 Taluka honorary organisers for one or more talukas.

FUNCTIONS OF THE GOVERNMENT STAFF.

3. The statutory functions of the registrar under the Act are to classify and register societies, to audit their accounts once a year, to hold enquiries into their working and financial condition, wind up societies, cancel registrations, appoint liquidators and arbitrate in disputes. Government may make rules to carry out the purposes of the Act and hear appeals from the registrar's decisions.

Collectors recover as arrear of land revenue and the civil courts recover as civil court decrees sums recoverable according to the orders of liquidators and arbitrators.

The assistant registrars are stationed at Poona, Dhulia, Bombay, Surat, Dharwar and Hyderabad (Sind). One of them was formerly a deputy collector, one a direct recruit and the rest were promoted from within the department. They control about 1,000 societies each and are supposed to visit each society in their charge at least once in three years, but in practice visit societies requiring special attention more frequently. Their enquiries are based on the audit memoranda and their inspections stimulate societies to take action necessary to protect their interests. The registrar himself inspects about 600 societies a year.

There are five to seven auditors under each assistant registrar and two hundred societies are allotted to a team consisting of an auditor and a sub-auditor, who however usually tour separately. The auditing staff do a great deal more than pure audit. They call the committees together and point out what is wrong. This official audit is all that the bank has to go upon in lending money. Auditors are all

graduates and about half of them are B.Coms. possessing the G.D.A. qualification. They begin as clerks on Rs. 50 and are then posted as sub-auditors and afterwards promoted as auditors. They have to pass the G.D.C.A. examination within three years of becoming auditors. The four special auditors audit the banks and housing societies.

There are 52 weavers' societies, the continuance of whose existence depends on the weaving staff. This staff superintends the buying of yarn and other material on co-operative lines.

The agricultural organisers are two under each assistant registrar and deal with the non-credit side of the movement, such as cattle breeding, sale, dairy, fencing and similar societies, of which they are about three hundred in all. The cost of the agricultural organisers is fully met from the audit fees levied from societies of this type.

Honorary organisers.

4. The functions of the honorary organisers are to remove the defects brought to light by the auditors, advise and help weak societies, organise new ones, make enquiries into the conditions of bad societies and undertake liquidation and arbitration work. Their work is thus practically identical with that of the official staff.

Divisional and district honorary organisers are appointed by Government and taluka honorary organisers by the registrar. They are allowed travelling allowance for official journeys undertaken with the permission of the assistant registrar. The travelling allowance grant for honorary organisers has, however, been steadily reduced until for 1932–33 it stood at Rs. 7,500 in addition to Rs. 430 for out-of-pocket expenses.

The Reorganisation Committee, which made several important recommendations in regard to the relation of Government with the co-operative movement, suggested that the travelling allowance grant for honorary organisers should be withdrawn. The effect of accepting this recommendation would have been that the assistance which the movement derives from honorary organisers would have largely ceased to exist. Government gave careful consideration to this proposal but in view of the fact that the grant is small and that at the present stage of the movement the assistance of honorary organisers cannot be dispensed with, decided to continue the grant.

SUPERVISING UNIONS.

5. A supervising union supervises from twenty to forty agricultural credit societies and employs a supervisor on a pay of from Rs. 40 to Rs. 80 a month to supervise every group of twenty societies. Delegates from each society within a union form an electoral college which elects the managing committee of the union. The unions are registered under the Act. Their principal purpose is to control the supervisor. The supervisor has to pass an examination held by the Co-operative Institute. His control of societies is based on the audit notes. Supervising unions also conduct educative propaganda, organise seed and manure societies and act as a link between the societies and the financing body on the one hand and the Co-operative Institute on the other.

Supervising unions are financed by the subscriptions of the societies which they control. As will be explained later, the cost of these subscriptions is deducted from audit fees and thus virtually falls on Government. In addition Government contribute a sum, which is estimated to amount to Rs. 45,000 in 1933–34, out of the audit fees recovered from agricultural societies to supervising unions, the present policy of Government being to retain only Rs. 25,000 a year out of the audit fees recovered from these societies.

On 31st March 1932 there were 119 supervising unions, to which 3,418 agricultural credit societies were affiliated, leaving a balance of 1,155 societies which were not affiliated to any union.

In some districts district supervising boards, consisting of the assistant registrar as *ex-officio* chairman, a representative of the financing bank, a representative of the district branch of the Co-operative Institute and one or two representatives of the supervising unions, have been formed. The appointment, transfer and dismissal of supervisors is vested in these boards.

The Reorganisation Committee have condemned the system of supervising unions, not in principle, as they hold that the movement ought to be under non-official control, but in practice as an expensive and ineffective instrument for controlling societies and have also laid emphasis on the fact that these unions only control a part of the whole body of agricultural credit societies for whom they are intended. They have therefore proposed an increase of the Government auditing staff and the elimination of the supervisors and estimated

that this will benefit Government revenue to the extent of Rs. 70,000 a year. This proposal was discussed at the co-operative conference convened by Government in June last, and as the question is of vital importance to the co-operative movement, a committee has been appointed under the chairmanship of the registrar to report on it.

STRUCTURE OF THE MOVEMENT.

6. The basis of the co-operative movement is the primary agricultural credit society. Ordinarily one such society is formed for each village on the principle of unlimited liability with or without shares. These societies are grouped under "central banks" built upon shares subscribed both by the societies and individuals.

New societies are invariably registered with shares combined with unlimited liability. They are thus able to accumulate in a few years a sufficient amount of their own share capital to make them to some extent independent of the financing agencies.

Above the primary credit societies come the central banks which provide the necessary outside capital required by the primary societies.

The Bombay Provincial Co-operative Bank is the apex bank for the presidency proper and serves as a balancing centre for the movement. It also functions as a central bank in seven districts and in parts of other eight districts.

In Sind, similar functions are performed by the Sind Central Bank at Karachi.

For urban areas, societies with limited liability have been organised. There are also "people's banks" and "urban banks" which have a membership comprising every element of the urban population and providing short term finance in order to enable members to carry on their business or trade.

Although at present almost the whole work of the co-operative department is concerned with credit organisations, non-credit activities, such as cattle breeding societies, fencing societies, sale societies and housing societies, are very important. The Bombay Provincial Co-operative Institute and its branches have undertaken co-operative propaganda and education. This, in some measure, involves duplication of effort with Government and other organisations working for the same object. The Institute conducts training courses and awards certificates and diplomas to satisfactory candidates.

But the standard of examinations held by it is not sufficiently high; and it has been suggested that the efficiency of the Institute could be materially improved, if an assistant registrar were loaned to the Institute to organise it on progressive lines and establish a closer connection between it and the societies and the department.

AUDIT FEES.

7. While accepting the view that societies should ultimately pay for their own audit Government have hitherto refrained from recovering any substantial part of the cost of audit from agricultural societies with a view to enabling these societies to build up reserves as quickly as possible and in order to offer every possible facility to societies to join supervising unions.

Audit fees are levied from (1) banks and housing societies and (2) other societies. The former are audited by the special auditors, who are picked men from the audit staff and are on the same scale of pay as the assistant registrars.

(1) *Audit fees on banks etc.*—A non-agricultural society with a capital of more than Rs. 50,000 is termed " Bank " under the Act. As far back as 1914 it was agreed that the audit of such institutions should be self-supporting and accordingly in that year audit fees on the basis of the cost were levied from these institutions. The scale was revised in 1920, 1921 and 1928. At present the cost of the special staff for the audit of urban banks, central banks and housing societies is Rs. 52,768 and this item includes estimated leave and pension charges. The receipts during last year were Rs. 53,418. This year the working capital of these institutions has increased by about 12 per cent. and the balance saved to Government on the audit of these institutions will thus be substantial.

(2) *Audit fees on other societies.*—In 1925 the registrar first expressed the opinion that the older societies with large capital should be called on to bear a part of the cost of audit and accordingly proposals were submitted by Mr. Collins in 1927, which were sanctioned by a Government resolution dated 22nd February 1928. The scale of audit fees sanctioned under this resolution was as below :—

(*a*) *Agricultural credit societies.*—Four annas per cent. of the working capital, subject to the proviso that, if a society already paid supervision fees to a supervising union, the total amount payable on account of the audit fees and the supervision charges combined should not exceed ten annas

per cent. of the working capital. The minimum audit fee was fixed at Rs. 5 and the maximum fee at Rs. 50.

(*b*) *Agricultural non-credit societies*—

(1) for the first Rs. 1,00,000 of the turnover	1/16 per cent.
(2) For a turnover between Rs. 1,00,000 and Rs. 3,00,000—	
for the first Rs. 1,00,000 ..	1/16 per cent.
for the rest ..	1/32 per cent.
(3) For a turnover above Rs. 3,00,000—	
for the first Rs. 1,00,000 ..	1/16 per cent.
for the next Rs. 2,00,000 ..	1/32 per cent.
for the next Rs. 47,00,000 ..	1/64 per cent.
(4) For every lakh over Rs. 50,00,000	1/128 per cent.

The minimum audit fee was fixed at Rs. 50 and the maximum at Rs. 1,500.

(*c*) *Non-agricultural societies*—

For the first Rs. 20,000 of the working capital	1/4 per cent.
For working capital exceeding Rs. 20,000 up to Rs. 49,999 ..	1/8 per cent.

Mr. Bhide however on assuming charge of the department immediately after these orders were passed and before they had been applied requested Government to hold them in abeyance until he could submit a comprehensive proposal. Government agreed and his revised proposals were sanctioned in a Government resolution dated 29th December 1930. The main difference between the proposals of Mr. Collins and Mr. Bhide was that Mr. Bhide proposed by levy of these audit fees to compel societies to join supervising unions, which, he considered, were absolutely necessary for the healthy growth of the movement. He also felt that the societies were not in a position to pay for audit as well as supervision and, therefore, proposed a lower scale of audit fees of only two annas per cent. for those agricultural credit societies which were paying supervision charges to the extent of eight annas per cent. Mr. Bhide's proposals were subsequently modified at his

suggestion by a Government order dated 29th August 1931, by which the scale of audit fees from societies which were not affiliated to supervising unions was raised to ten annas per cent. so as to remove from societies any inducement to remain unaffiliated to supervising unions. The final scale of audit fees sanctioned by Government was as follows :—

(*a*) *Agricultural non-credit societies of at least three years' standing.*—The same rates as those fixed for societies of this type by the Government resolution of 22nd February 1928.

The minimum fee was to be Rs. 50 and the maximum fee Rs. 1,500 as before, but subject to the proviso that in no case should the fee exceed $\frac{1}{2}$ per cent. calculated on the working capital as it stood at the close of the last preceding co-operative year.

(*b*) *Non-agricultural societies of at least three years' standing.*—The same rates as those sanctioned by the Government resolution of 22nd February 1928.

(*c*) *Agricultural credit societies.*—An audit fee at the rate of ten annas per hundred rupees of working capital, as it stood at the close of the last co-operative year. Those agricultural societies which paid supervision charges to supervising unions or to taluka development associations of not less than eight annas per cent. were however to pay an audit fee of two annas per cent. only. The cost of this concession amounts to about Rs. 1,50,000 a year at present.

II. Condition of the movement.

8. The soundness of the co-operative movement depends entirely on the soundness of individual primary societies, more particularly primary agricultural societies, since they are in the great majority. If these societies are sound, i.e., if they are giving out loans carefully and recovering them punctually, the whole superstructure of supervising unions, central banks and the Provincial Bank will be sound. But primary credit societies will never flourish unless they regard the money with which they are dealing as their own money and unless the whole opinion of the country side is against defaulters to the society. A village society will not regard its funds as its own, unless the bulk of them are derived after a few years working from reserve fund, deposits by members and shares held by members. So long as a primary society is mainly dependent on external financing institutions for its resources it must be

regarded as in hospital. The seat of responsibility and of authority should be in the village. If ever it is transferred to outside agencies, such as the Government staff or the central banks or the unions, troubles may be looked for. If the members feel that the failure of any of them to pay up will not recoil on the heads of the other members but will be made good by the summary powers of collection vested in the collector or by action by any other outside authority, they will cease to exercise that care in granting loans which is the condition of their success. The object of the co-operative credit movement is to pool and capitalise the honesty of poor men who separately can offer no recognisable security to the lender. The only basis on which this can be done successfully is the personal credit of the borrower and of his sureties as known to his neighbours. Real security and mortgages should be resorted to sparingly and only as supplementary to personal credit. In practice for small loans real security is nothing like so effective as it seems and is inferior to good character and a good record in the borrower and his sureties. Once the seat of authority is transferred from the village, where it should be, to a central bank or any other outside agency, whether official or non-official, the movement is bound to loose its genuinely co-operative character and to be altered from a system by which the individual poor man is able to obtain such credit as his character, thrift and honesty deserves to a system of financing the production and movement of crops on a commercial or at any rate a non-co-operative basis. The problem of arrears cannot be successfully dealt with unless the villagers feel that the money they are dealing with is their own and unless village opinion is solid against defaulters.

It must be confessed that, judged from the above standard, the co-operative movement in this presidency, particularly in relation to agricultural credit, has not been a success. This is due mainly to defective assimilation of the true aims of co-operation by the members and their unwillingness to make the necessary sacrifices. The situation is further aggravated by agricultural depression which has greatly reduced the margin of profit in this industry. As a result, unauthorised arrears have increased to an alarming extent. The department is, however, pursuing a cautious policy of rectification and consolidation. Government are fully alive to the situation and are ready to take steps to prevent the collapse of the movement. It is, however, gratifying to note that the movement in the urban areas is on the whole successful and gives promise of steady expansion on sound lines.

The following table indicates the position of agricultural societies only :—

Year	Amount due for repayment	Amount of unauthorised arrears	Percentage of unauthorised arrears
	Rs.	Rs.	
1918–19	73,69,047	5,66,209	7·6
1919–20	98,62,484	8,26,506	8·3
1920–21	1,22,94,597	16,45,009	13·3
1921–22	1,46,42,295	19,70,382	13·4
1922–23	1,58,00,937	31,64,198	20·0
1923–24	1,74,07,421	34,21,145	19·6
1924–25	2,21,22,912	39,57,173	17·8
1925–26	2,47,49,430	35,70,982	14·0
1926–27	2,83,84,924	82,23,590	29·0
1927–28	3,17,78,699	1,05,18,439	33·0
1928–29	3,18,63,723	95,79,380	30·0
1929–30	3,11,38,922	98,98,582	31·0
1930–31	3,42,07,148	1,31,27,530	39·0
1931–32	3,61,89,697	1,73,30,132	47·8
1932–33	3,55,40,540	1,80,79,089	50·0

These figures show an alarming and almost steady increase in the unauthorised arrears, and in the percentage which they bear to the amount due for repayment. The percentage was indeed reduced in the period 1923–24 to 1925–26, and again in 1928–29 ; but on each occasion the recovery was slow and not sustained.

After a great deal of hesitation Government agreed in 1932 to the appointment of special recovery officers, with powers to use the summary procedure authorised by the Land Revenue Code, for the recovery of unauthorised arrears. The cost of this special staff is met from a levy amounting to 5 per cent. of the dues recovered from the defaulters concerned. In September 1933 there were 19 special recovery officers working in different districts.

The disquieting condition of the co-operative movement attracted the attention of the Reorganisation Committee, who made several recommendations of a somewhat revolutionary character. The principal recommendations, in addition to those already mentioned about honorary organisers and Government audit, were :

(1) that Government should discourage all propaganda in favour of new societies and, save in exceptional circumstances, should refuse registration to new societies until

such time as the position of those now existing has been consolidated ;

(2) that the Co-operative Societies Act should be so amended as to remove in respect of all future loans the power of recovery of dues as arrears of land revenue ;

(3) that the special exemption from registration and stamp duties enjoyed by co-operative societies should be cancelled.

In view of the importance of these recommendations Government placed them for discussion before a conference held last June at which leading co-operators from all over the presidency were present. The conference expressed itself somewhat strongly against the recommendations made by the committee. There was a feeling that the present was just the time when Government should, by lending a helping hand to the movement, help it to re-establish itself on sound lines.

After a careful consideration both of the recommendations of the Reorganisation Committee and of the views expressed at the co-operative conference Government decided not to cancel the exemption from stamp and registration fees enjoyed by co-operative societies. The registrar reported that for some time now he and his staff have not been carrying on any propaganda in favour of new societies, so no action was necessary on this recommendation of the committee. As regards the registration of new societies Government came to the conclusion that although the position of many of the existing societies is unsatisfactory and requires for its improvement the unremitting attention of every one concerned, there is no justification for a complete embargo on the formation of new societies. The following specific instructions were given to the registrar :

Registration of new societies should henceforward be confined to the following cases—

(1) societies organised for the benefit of the aboriginal and backward classes like Bhils, Mahars, Chamars and others, provided there are reasonable prospects of their working successfully ;

(2) societies in tracts which are newly provided with facilities in respect of irrigation, communication, etc. ; and

(3) societies which have exceptional features indicating that they can be carried on with success.

Government made it clear that these orders applied only to agricultural credit societies. As regards agricultural non-credit and urban societies they considered that even if the remarks of the Reorganisation Committee referred to them, which was very doubtful, they stood on an entirely different footing as they had on the whole been generally successful.

On the question whether the power to recover arrears of co-operative societies as arrears of land revenue should be withdrawn or not the conference expressed the view that it had not been established that this power had been abused. The registrar has been asked by Government to investigate this point; and it seems likely that the decision of Government on this recommendation will turn on the result of the statistical study which the registrar has been asked to make.

III. Co-ordination with the agricultural department.

9. Relation between the co-operative department and the agricultural department has always been very close, particularly with regard to the work of taluka development associations. These associations are registered under the Co-operative Societies Act and are intended to carry out agricultural propaganda, particularly to popularise improved methods of cultivation which have been tested and approved by the agricultural department. The membership of these associations consists of co-operative societies and individuals with the mamlatdar as an *ex-officio* vice-president. The officers of the agricultural department give the associations every assistance in carrying out the improvements which have been suggested by their department.

The two departments are further linked up in the divisional boards which have been set up to bring to the notice of Government the agricultural and economic needs of the areas concerned. The boards consist of senior officers of the two departments and also representatives from the workers in the agricultural and co-operative field. They are presided over alternately by the assistant registrar and the deputy director of agriculture. The boards control the working of the taluka development associations and make recommendations for grants to the joint board which consists of the director of agriculture and the registrar and meets once a quarter and passes orders on all matters referred to it by the various divisional boards and sanctions the amounts of the Government grants payable to the various development associations.

The cotton superintendents and the agricultural overseers also render assistance to cotton sale societies in the Karnatak in respect of grading and auctioning produce sold by these societies.

With a view to securing better liason between the co-operative and the agricultural departments the Reorganisation Committee suggested the creation of a Board of Rural Development for the presidency proper with the director of agriculture as chairman and the registrar of co-operative societies as a deputy director of the Board. This suggestion has not been approved by Government. The question how the work of the department should be co-ordinated with that of other departments is, however, under consideration.

The Reorganisation Committee also suggested that the charge of the co-operative and veterinary departments in Sind should devolve on the chief agricultural officer in Sind. Government have come to the conclusion that there are insuperable administrative difficulties in any scheme in which the deputy registrar is placed in subordination to the chief agricultural officer. The suggestion has not, therefore, been accepted. In order, however, that there may be better co-ordination of effort between the co-operative, agricultural and veterinary departments, Government have decided that there should be periodical conferences between the heads of the three departments in Sind not less than thrice a year under the chairmanship of the commissioner in Sind or of one of the three departmental heads to be nominated by him.

IV. Matters and changes of importance carried out during the past five years.

10. (1) The issue of instructions to the registrar that, in view of the growth of unauthorised arrears of agricultural credit societies, he must con entrate on rectification rather than expansion.

(2) The appointment of special officers for the speedy recovery of unauthorised arrears in areas where they are heavy.

(3) The levy of audit fees on societies in pursuance of the scheme for effecting an improvement in supervision.

(4) The appointment of a special auditor in view of the increase in the number of urban banks and housing societies.

(5) The holding of two conferences—one at Poona and one at Karachi—at which all leading non-official co-operato

were present, to discuss outstanding questions connected with the co-operative movement.

(6) The registration and opening of land mortgage banks at Broach, Pachora (in East Khandesh) and Dharwar.

(7) The principal economies effected in the past five years were as follows :—

(*i*) abolition of a number of posts, the most important being 2 posts of assistant registrar and one of industrial organiser ;

(*ii*) reduction in the travelling allowance of the stipendiary staff and honorary organisers ;

(*iii*) replacement of 7 auditors by a similar number of sub-auditors.

V. Questions partly considered or dealt with.

11. The principal matters which Government have under examination in connection with the co-operative movement are the following :—

(1) The question how the activities of the co-operative department can best be co-ordinated with those of other departments and especially the agricultural department.

(2) Whether supervision of societies should not be temporarily entrusted to Government sub-auditors.

(3) Amendment of the Co-operative Societies Act so as to remove in respect of all future loans the power of recovery of dues as arrears of land revenue.

(4) Whether the system of co-operative land mortgage banks should be extended and, if so, on what lines.

(5) What steps should be taken by the societies to assist their members to withstand the effects of economic depression.

Three separate committees have been appointed by Government to report respectively on items Nos. (2), (4) and (5).

VI. Questions for the future and matters postponed.

12. There are no other questions which require to be considered in the near future or the consideration of which has been postponed on account of financial stringency or any other cause.

APPENDIX.

Statement showing the receipts and expenditure of the co-operative department in the Bombay presidency from the year 1904–05.

Year	Receipts	Expenditure
	Rs.	Rs.
1904–05		10,000
1905–06		28,000
1906–07		38,000
1907–08		23,000
1908–09		30,000
1909–10	*Nil*	32,000
1910–11		47,000
1911–12		65,000
1912–13		67,000
1913–14		79,000
1914–15		1,31,000
1915–16		1,01,000
1916–17	278	1,17,000
1917–18	444	1,44,000
1918–19	23	1,65,000
1919–20	*Nil*	2,30,000
1920–21	321	3,21,000
1921–22	6,300	4,21,000
1922–23	7,300	4,04,000
1923–24	2,900	4,24,000
1924–25	849	5,29,000
1925–26	1,300	4,95,000
1926–27	752	5,16,000
1927–28	1,400	5,23,000
1928–29	44,000	6,07,000
1929–30	45,000	6,16,000
1930–31	47,000	6,24,000
1931–32	1,14,000	5,67,000
1932–33	1,48,000	5,36,000
1933–34 (estimates)	1,70,000	6,00,000

Remarks.—The increase of receipts for the years 1928–29 to 1933–34 is due to (1) the recovery of fees for the audit of the societies' accounts and (2) the recovery of half the cost of a special mamlatdar for Dohad in the Panch Mahals district.

2. The steady increase of expenditure is due to the progress of the co-operative movement, especially after the inauguration of the

constitutional reforms. This progress is illustrated by the following figures of societies, membership and working capital :—

Year	Number of co-operative societies	Number of members	Working capital (in crores of rupees)
1921-22	3,411	328,000	4·35
1932-33	5,880	595,700	15·81
Increase ..	2,469	267,700	11·46

At the same time economy and retrenchment have been effected in the departmental expenditure since the year 1921-22 so as to release funds for use in the directions where they are essential. The principal items of retrenchment effected from the year 1921-22 are as follows :—

Item of retrenchment	Approximate annual saving
	Rs.
(*a*) Dispensing with the services of two divisional honorary organisers	2,600
(*b*) Dispensing with the services of seven district honorary organisers and nine taluka honorary organisers ..	2,400
(*c*) Reduction in the scale of pay of assistant registrars and special auditors	10,500
(*d*) Reduction of the non-gazetted establishment ..	25,000
(*e*) Reduction of travelling allowance of honorary organisers	33,000
(*f*) Abolition ofof assistant two posts registrars ..	13,000
(*g*) Reduction of travelling allowance of stipendiary staff	6,000

XVII—EXCISE AND MINOR PORTS

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XVII—EXCISE DEPARTMENT

I. Scope and functions of the department.

1. The main function of the department is to regulate the manufacture, sale and consumption of liquor and narcotic drugs and to safeguard Government revenue derived from the taxation of these articles. The department has also to take measures for the detection and prevention of illicit manufacture of such excisable articles. Proper vigilance by the excise preventive staff coupled with the present policy of control of sale is calculated to further the cause of temperance without encroaching unduly on individual liberty.

II. Existing organisation.

2. The administration of the department in the presidency proper is vested by the Bombay Abkari Act in the commissioner of excise. He is assisted by a staff consisting of one personal assistant, ten superintendents of excise, 262 inspectors (including assistant inspectors and sub-inspectors), 142 ministerial servants, and a constabulary staff of 1,792 men. The cost of this establishment is debited to provincial revenues.

The excise system was organised by Mr. Pritchard, commissioner of customs, in 1878. His recommendations were embodied in the Bombay Abkari Act which provided for a single officer to control the system in order to secure uniformity and efficiency. Before then the commissioners of divisions controlled the department, a division of control which Government stated had been found to be unsatisfactory and to involve the risk of failure. Government appointed the commissioner of customs commissioner of abkari, relieving him of the detailed administration of customs. The Indian Excise Committee of 1905–06 held that excise work to be efficient must become specialised and should not be combined with the work of other departments, a system which had been tried in the older provinces but had been or was being given up.

In all provinces and administrations there is now a commissioner of excise.

Since the institution of unitary control excise revenue in the presidency proper has risen from 32½ lakhs in 1879–80

to 357 lakhs in 1923–24 and normally forms the chief source of net revenue (i.e., after the cost of administration has been deducted) in the province, land revenue coming second. The commissioner controls the district collectors in excise work. The department in recent years has become specialised, technical and complicated. The contractor system of manufacture and distribution of spirit and management of shops has been replaced by departmental management. A central Government distillery under departmental management with 37 warehouses has replaced the various private and contract distilleries. The administration, for instance, of the Mhowra Act, the foreign liquor taxation system, the Dangerous Drugs Act and the connected League of Nations policy, the taxation of medicinal and toilet spirituous preparations, the policy of restricting consumption, the relations with States the excise of which is leased by Government and the control and discipline of a large staff necessitate more than ever the management of excise and cognate work by a single department.

The Reorganisation Committee stated that they would probably have recommended the substitution of a collector for the commissioner but for the fact that they proposed that the officer holding charge of this department should be a member of the Board of Revenue and that all members of that board should, in their opinion, be of equal status.

The salt and excise departments are combined in Sind and the administration is under the commissioner in Sind, who is assisted by one superintendent of salt and excise, two deputy superintendents, 42 inspectors (including assistant inspectors), 36 ministerial servants, and a constabulary staff of 217 men. One-fourth of the cost of this combined department is debited to the Government of India as the share of the salt department. The commissioner of excise acts in an advisory capacity towards the commissioner in Sind in excise matters pertaining to the sub-province.

The collectors of districts are responsible for the collection of the excise and opium revenue and the excise staff posted to districts is subordinate to them. Certain powers under the Act are also conferred on officers of kindred departments, such as the customs, salt, police and forest departments, who render assistance in checking the manufacture, importation or sale of excisable articles in contravention of the Act. The Nasik distillery, which is now the sole source of supply of country

liquor in the presidency proper except to the Akrani area, is controlled by a superintendent, subject to the orders of the commissioner. The bonded warehouses in the presidency proper have been divided into three circles viz., the northern, central and southern circles. There is a sub-inspector in immediate charge of each bonded warehouse and the warehouses in each circle are in charge of an inspector, to whom the sub-inspectors are directly subordinate. In Sind there are only three bonded warehouses, each in charge of an assistant inspector.

III. Duties of officers.

3. The principal duties of the various officers of the department are as follows :—

(*i*) COMMISSIONER OF EXCISE.

(1) Control and supervision over the collection of the excise and opium revenue by the collectors in the presidency proper.

(2) Control and supervision over the manufacture of spirit at the Government central distillery, Nasik, and careful watching of its economical working.

(3) Watching the concessions granted in the presidency proper for the use of alcohol in arts and industries and in manufacture of spirituous medicinal and toilet preparations.

(4) Watching the working of excise administration in each district in the presidency proper and correcting it when necessary.

(5) Scrutinising the views of collectors in the presidency proper in dealing with the recommendations on the proceedings of advisory committees.

(6) Control over the establishment employed in the presidency proper for excise purposes and their training, transfers, promotions, etc.

(7) Annual visit to Sind to review the excise arrangements and to advise the commissioner in Sind on important points.

(*ii*) PERSONAL ASSISTANT TO THE COMMISSIONER OF EXCISE.

In addition to his office work the personal assistant does inspection of various licensed premises, laboratories and warehouses and inspection of superintendents' and other offices.

(*iii*) COLLECTORS.

Collectors are mainly responsible for the collection of excise revenue and the grant of excise licenses. They also have to control the work of the excise staff in their respective districts.

(*iv*) Superintendents of excise.

There are ten superintendents of excise in the presidency proper, each having an independent charge consisting of two or three districts. The Reorganisation Committee suggested the reduction of superintendents' posts to nine by constituting Nasik district a minor charge under an inspector with a charge allowance but Government have decided that this is not practicable. There is one superintendent of salt and excise for Sind. Superintendents of excise are promoted from the ranks of inspectors and directly recruited in the proportion of two to one.

The powers and duties of the superintendents are defined below :—

(1) Inspection and examination of the accounts of licensed premises of all kinds. This is a check on inspectors' work.

(2) Disciplinary action against licensees and compounding of offences. These cases are common but simple.

(3) Supervising the work of inspectors and subordinates in the suppression of illicit distillation and illicit importation of excisable articles. In some cases they make personal enquiries.

(4) Control of tree-tapping and tree-numbering and watching and checking the work of excise staff in connection therewith (under the supervision of the collector).

(5) Initiating and dealing with proposals for the building of new bungalows and lines for officers and subordinates of the excise department.

(6) Correspondence with the public works department regarding repairs and alterations.

(7) Granting of leave up to a certain extent to non-gazetted executive officers and clerical establishments.

(8) Issue of clothing to the excise constabulary staff (subject to the control of the commissioner).

(9) Replacement of old and unserviceable arms and ammunition (subject to the control of the commissioner).

(10) Examination of offices of inspectors, assistant inspectors and sub-inspectors as to their accounts, records, statistics and cases. This is the superintendent's most important function.

(11) Control over the excise constabulary staff, their transfers, promotions and the like.

(*v*) Inspectors and assistant inspectors.

Assistant inspectors in most cases perform the same duties as inspectors and are practically junior inspectors. Inspectors

are normally promoted from the rank of sub-inspectors. Sub-inspectors are recruited from among matriculates. Of late graduates have sometimes been recruited as sub-inspectors.

(1) Inspection of all country liquor, opium, drugs, foreign liquor and toddy shops and booths.

(2) The periodical checking of the licenses and accounts for denatured spirits, cocaine, medical practitioners, poison, essences, perfumes, etc.

(3) The preparation of returns relating to all excisable articles. (The majority of inspectors have no clerks and so much of their time is spent on clerical work.)

(4) Watching revenue collections.

(5) Checking toddy numbering and illicit tapping.

(6) Detection of every kind of excise crime.

(7) Working up and prosecuting cases in court.

(*vi*) SUB-INSPECTORS.

Sub-inspectors work under the direct supervision of inspectors or assistant inspectors, their chief duties being the prevention and suppression of excise crime.

They also inspect excise shops in a limited area.

(*vii*) CONSTABULARY.

The constabulary obtain information relating to excise offences, accompany their officers to the place of offence, guard the accused and *corpus delicti* from the time arrest is made until the case is committed to court. They also perform out-post duty at railway stations and sentry duty at liquor warehouses, distillery or hemp drugs warehouses and other menial work.

IV. Distillery and warehouse officers.

4. The Nasik distillery supplies country spirit to the whole of the presidency proper except the Akrani area, which is supplied by the Government distillery at Dhadgaon. The abolition of the Dhadgaon distillery has sometimes been mooted. The principal reasons against it are :—

(1) the difficulty and cost of the transport of liquor from the railway to Dhadgaon by a light forest road which is only open to traffic in the fair season ;

(2) the desirability of utilising as much as possible of the mahura crop of the Akrani so that it will not be available for illicit distillation. It would be quite impossible on the score of cost to transport the Akrani mahura crop to Nasik. The cost of liquor sent from Nasik would, according to the last calculation, be considerably higher than the cost of liquor produced at the Dhadgaon distillery.

Besides country spirit, rectified spirit is manufactured at Nasik and Indian-made foreign liquor such as rum, gin and brandy. The distillery is in charge of a superintendent, who has under him a supervisor, process section, who is in charge of the manufacturing (process) section including the laboratory where analyses are carried out and an engineer in charge of all the machinery and electric plant and of the water supply to the distillery, security printing press and Nasik jail. The engineer also draws up plans and estimates for new projects, structures and the like.

A monthly report giving all the details of the work done at the distillery is submitted in duplicate to the commissioner of excise who submits one copy to Government in the revenue department. The distillery accounts are audited every half-year and reports are submitted to Government and to the commissioner by the accountant general, Bombay.

In the presidency proper there are 37 warehouses (including the distillery warehouses), which supply country spirit (plain and masala) to the licensed vendors. Each of the warehouses is in charge of an excise sub-inspector or inspector. The warehouse officers have to obtain country spirit from the distillery and issue it to licensed vendors and maintain the various prescribed accounts in connection therewith. They have to look to the proper maintenance of the warehouse plant in their charge. They have also to watch whether the cost price and still-head duty has been fully recovered on the quantity of liquor issued from the warehouses during each month. Each warehouse officer is given a limited constabulary staff, whose duty it is to keep a watch on the premises and help the warehouse officer to see that nothing against the departmental rules and regulations takes place on the warehouse premises.

The Reorganisation Committee examined the question whether the number of warehouses could be reduced and came to the conclusion that they could not. The only possibility of economy lies, according to the committee, in placing one officer in charge of two adjoining warehouses and keeping each open for half the week. This would, however, the committee found, cause such inconvenience to the contractors, who are mostly small men and unable to make their purchases in bulk, as to be unworkable. Government have accepted the committee's recommendation that a review of warehouses should be made every three years to see whether owing to any fundamental alteration of conditions, e.g., of sales or communications, any of them can be closed.

The inspectors of warehouses inspect at regular intervals the warehouses situated in their respective circles and check the accounts. The number of circles was increased from 2 to 3 in 1929.

The warehouse officers and the inspectors of warehouses in the presidency proper are responsible to the superintendent, Nasik distillery, in matters concerning the departmental management of warehouses, supply arrangements, warehouses plant, commercial establishment, etc. They have to furnish the superintendent with monthly statements of accounts and keep him well informed of all that takes place at the warehouses. The superintendent, Nasik distillery, is responsible to the commissioner for the proper working of the distillery and warehouses dependent on the distillery.

In Sind there is a distillery at Kotri, which is given out on contract. The three bonded warehouses in Sind receive their supply of country spirit from this distillery. The commissioner of excise holds that the abolition of the Kotri distillery and the supply of liquor to Sind from Nasik would result in an annual saving of at least rupees half a lakh. Against this a sum of about Rs. 2½ lakhs would be required to compensate the contractors at Kotri for their plant. The Reorganisation Committee recommended acceptance of the commissioner's proposal on the ground that, even if Sind were separated, it would still be cheaper to supply Sind from Nasik. After careful consideration Government decided that the commissioner's proposal could not be accepted. The contract for the supply of liquor to Sind has been renewed for a further period of two years ending 31st March 1935.

V. Tobacco.

5. The subject 'tobacco' is a reserved subject under the honourable member, revenue department, and there is some doubt whether it is an excise subject at all. Since however the duties arising out of the Bombay Tobacco Act IV of 1857 are carried out under Government by the commissioner of excise and his staff, they are described here. The staff employed for the purpose is paid out of the revenue collected under this Act and the balance is paid to the Bombay Municipality and the Bombay Improvement Trust in the proportion of one to three. This staff consists of:—

1 supervisor,
2 inspectors,
1 assistant inspectors, and
89 peons.

There are at present—

1,424 country tobacco licenses } in Bombay.
3,801 foreign tobacco licenses }

All the licenses have to be examined every month and their accounts checked. This work is done by the inspecting staff. The supervisor and an inspector are in charge of two bonded warehouses.

In addition to the inspection of licenses, enquiries have to be made by these officers into thousands of applications for country tobacco and foreign tobacco licenses and they have also to deal with tobacco smuggling into the city of Bombay.

The Tobacco Act has recently been amended and the duty raised from Rs. 7-8-0 to Rs. 30 per Bengal maund and the limit of possession reduced from 4 seers to ½ seer. This Act applies only to the city of Bombay. The deduction made for expenses before the receipts are paid over to the Bombay Municipality and the Bombay Improvement Trust did not cover any share of the cost of the collector of Bombay and the commissioner of excise. It also included, in the opinion of the Reorganisation Committee, only an inadequate share of the cost of the superintendent of excise, Bombay, and the excise accounts officer. The committee therefore recommended that an additional sum of Rs. 10,000 a year should be charged to the receipts. Government have accepted this recommendation and ordered that effect should be given to it.

VI. Excise advisory committees.

6. The collectors of districts are helped and advised in their respective districts by excise advisory committees.

The committees are predominantly non-official in constitution. There is a committee for every municipal town and every cantonment area having a cantonment board, provided there is at least one country spirit shop in the town or cantonment. Talukas and pethas, excluding municipal towns, which contain two or more country spirit shops also have advisory committees. In Bombay there is a general committee for the whole city and sub-committees for each ward to deal with questions pertaining to the wards.

The advisory committees advise the collector on the reduction in the number of, location of and hours of sale at liquor shops and as regards the fixation of the strength at which country spirit should be sold. In Bombay the ward sub-committee deals only with the location of shops and the general committee deals with all other matters. The decision

on all matters discussed by the committees and sub-committees rests with the collector subject to higher orders.

VII. Country spirit.

7. Country spirit is manufactured at the Government distilleries at Nasik and Dhadgaon and at the distillery at Kotri, which is given out on contract, and thence supplied to the dependent warehouses. The spirit is reduced at the warehouses to issue strengths and issued to licensees on payment of cost price and still-head duty. There are different rates of still-head duty and cost price for different areas. The right of sale of country liquor to the public is auctioned annually for each shop separately or, failing this, disposed of by tender or by negotiation.

VIII. Toddy.

8. Palm trees are tapped on payment of tree-tax to Government. The tree-tax rates vary for different areas. These have been revised in several districts for a period of one year with effect from 1st August 1933. The toddy tapped is sold under shop or booth licenses. The right of sale under these licenses is auctioned annually, or, failing this, disposed of by tender or negotiation In Bombay tappers are independent of the shop or booth licensees, while in the mofussil they are dependent on licensees, on whose application only tapping licenses are granted. Besides shop and booth licenses, domestic consumption licenses to tap a limited number of trees for private consumption are granted to owners of trees, on payment of tree-tax only. In the Panch Mahals district no tree-tax was until recently charged on trees tapped for domestic consumption up to a certain limit. This concession was abolished in July 1932 and a tax of annas eight a tree used for domestic consumption was imposed.

IX. Foreign liquor.

9. Foreign liquor is either (1) Indian-made, or (2) imported from overseas. Both Indian-made and imported foreign liquor has to pay vend (pass) fees at prescribed rates, when imported into this presidency. Indian-made foreign liquor has besides to pay excise duty. When an importer does not hold a trade and import license, he is charged, in addition to vend fees, special fees at prescribed rates. Foreign liquor imported by trade and import licensees is sold to the retail licensees, who sell it to the public. Retail licensees have all to pay license fees at specified rates per bottle on the actual volume of sales,

and, except in the case of "off" licenses (i.e. for selling liquor for consumption off the premises) they have in addition to pay a fixed license fee for the goodwill according to the general extent of their sales. For "on" licenses (selling liquor for consumption on premises only) in Bombay this license fee for the goodwill is usually determined by auction. These licenses have, however, been renewed to the old licensees for the last three years. The question is under consideration whether in the case of all new foreign liquor "off" and "on" licenses (with certain exceptions) outside Bombay City the license should be auctioned annually instead of the goodwill of the shop being sold once for all.

X. Opium.

10. Opium required for sale in this presidency is purchased from the Government of India's opium depôt at Ghazipur in the United Provinces, on payment of cost price. The opium is taken in the first instance to the Government depôts and thence issued to retail vendors or Indian States. Indian States are charged the cost price *plus* duty, the whole or part of which duty is subsequently remitted to them. Retail vendors are charged a price which includes a profit to Government, besides cost price and duty. The right of retail vend under licenses is usually disposed of annually by open auction, failing which it is disposed of by tender or negotiation.

XI. Hemp drugs.

11. Ganja is grown in Ahmednagar district under licenses issued by the excise department. The cultivators sell their crop to licensed manufacturers or harvest on their own account on taking out manufacturing licenses. The crops are harvested and manufactured into ganja under the supervision of the excise department. All intoxicating drugs manufactured are removed to a central bonded warehouse at Ahmednagar. From the central warehouse the drugs are issued on payment of duty to licensed dealers or removed in bond to other bonded warehouses, whence they are issued to licensed dealers on payment of duty. Licensed dealers can also import ganja from other provinces in bond and clear it from the warehouses on payment of duty.

Bhang is imported from other provinces in bond and cleared from the warehouse on payment of duty. It is not grown in the presidency proper.

Licenses for the sale of hemp drugs are of two kinds :—

(1) Wholesale ; and

(2) Retail.

Wholesale licenses are issued on fixed fees and sales can be made thereunder only to retail licensees or other wholesale licensees. The right of vend under retail licenses is disposed of annually by auction or, failing that method, by tender or negotiation.

Up to 1922 the sale of charas was allowed only in the town and island of Bombay, Ahmedabad city and Sind, under cover of licenses issued for the retail sale of ganja and bhang. The sale of charas was, however, prohibited with effect from 1st April 1922 in the town and island of Bombay and Ahmedabad city. The result of this prohibition was that illicit traffic in charas increased enormously to the great injury of excise revenue. Ultimately, with effect from 1st April 1931, Government reintroduced the sale of charas in these two cities.

Up to 1930–31 the licenses for the retail sale of hemp drugs in Bombay were disposed of by auction. In the succeeding year they were renewed to the old licensees. The licenses for 1932–33 were disposed of by auction and the same system was adopted for the year 1933–34.

XII. History of organisation of department.

12. The excise department in the presidency proper was organised somewhat on the present lines in 1907. Between 1917 and 1922 the establishments of the departments of salt and excise were, in accordance with the recommendation of the Indian Excise Committee of 1905–06, amalgamated step by step. In 1917 the superior controlling and supervising staffs of the two departments, in 1920 the non-gazetted establishments (excluding menials) and finally in 1922 the menial establishments were amalgamated. Shortly after on administrative and economic grounds it was considered desirable to sever the establishments of the two departments in the presidency proper and this was effected from 1st March 1924. In Sind the two departments have continued (since 1908) to remain combined, as Sind problems, differing materially from presidency problems, require a different treatment and the ends of economy are best served by this arrangement.

In 1921 and again in 1927 Government had under their consideration the question whether the excise administration in Sind should continue to remain under the control of the commissioner in Sind or should be transferred to the commissioner of excise. On both occasions Government came to the conclusion that amalgamation was not feasible. Not only are the problems presented widely different in the two cases

but the personal touch which is required of a department whose activities so vitally concern the daily life of the people can better be supplied by the organisation on the spot than by one which has its headquarters at Bombay. In 1927, in order to place the relations of the commissioner in Sind and of the commissioner of excise on a formal footing and co-ordinate their work, Government directed that (1) every new proposal affecting the general excise administration proposed by one commissioner should be referred to the other for opinion before the case was submitted to Government and (2) the commissioner of excise should visit Sind once a year for not less than a fortnight and consult the commissioner in Sind on general matters of excise policy. The commissioner of excise is at liberty to examine the work of any excise officer and to inspect any excise building, warehouse, etc., in Sind, but he does so purely in an advisory capacity.

XIII. Relations with Government and the secretariat.

13. The following is a provincial and transferred subject according to item 16 in part II of schedule I and item 12 in schedule II of the devolution rules :—

> ' Excise, that is to say, the control of production, manufacture, possession, transport, purchase and sale of alcoholic liquor and intoxicating drugs, and the levying of excise duties and license fees on or in relation to such articles, but excluding, in the case of opium, control of cultivation, manufacture and sale for export."

This subject is allotted to the honourable minister of education and is dealt with in the revenue department. " Opium " is partly a central and partly a provincial subject. According to item 21 in part I of schedule I of the devolution rules " Control of cultivation and manufacture of opium and sale of opium for export " is a central subject. The rest of the subject opium is covered by the definition of ' excise " cited above. The Government of India control the cultivation, manufacture and sale of opium for export. These aspects of the subject " opium " are regulated by a convention evolved at the Geneva Conference of 1924-25. The Government of India, who also control the consumption of opium in several Indian States, are a signatory to the convention. The existing provincial aspects of the subject are prescribed in the Opium Act, 1878, as amended. Section 5 of the Act authorises the local Government, subject to the control of the Government of India, to make rules consistent with

the Act to permit and regulate, within the presidency, the possession, transport, import, export and sale of opium. Section 13 authorises the local Government to make rules regarding the grant of rewards to officers and informants and the disposal of things confiscated.

XIV. Receipts and expenditure.

14. The following statement shows the receipts and expenditure of the excise department from the year 1904–05 :—

Year.	Receipts.	Expenditure.
	Rs.	Rs.
1904–05	1,39,67,000	4,70,000
1905–06	1,43,68,000	5,21,000
1906–07	1,48,36,000	5,58,000
1907–08	1,63,87,000	6,51,000
1908–09	1,68,45,000	10,19,000
1909–10	1,76,47,000	9,34,000
1910–11	1,89,73,000	9,46,000
1911–12	2,02,94,000	10,57,000
1912–13	2,12,27,000	10,80,000
1913–14	2,23,59,000	10,86,000
1914–15	2,20,08,000	11,43,000
1915–16	2,27,91,000	11,48,000
1916–17	2,60,51,000	11,24,000
1917–18	3,19,82,000	11,14,000
1918–19	3,73,89,000	12,99,000
1919–20	3,98,24,000	16,09,000
1920–21	4,54,86,000	38,09,000
1921–22	3,42,69,000	28,80,000
1922–23	4,22,79,000	32,76,000
1923–24	4,34,59,000	35,36,000
1924–25	4,42,98,000	40,39,000
1925–26	4,15,33,000	54,18,000
1926–27	4,09,39,000	64,02,000
1927–28	3,96,21,000	47,94,000
1928–29	3,92,26,000	46,32,000
1929–30	4,07,89,000	44,25,000
1930–31	3,04,36,000	41,68,000
1931–32	3,26,55,000	39,62,000
1932–33 (revised estimate)	3.41,50,000	48,27,000
1933–34 (estimate) ..	3,49,46,000	49,36,000

The receipts for the year 1920–21 were not the normal receipts of that year, as the figures for the years just previous and subsequent to that year show. The reason for the exceptionally large receipts for 1920–21 and exceptionally low receipts for 1921–22 was that, as a result of the orders of Government, the whole of the vend fees for the town liquor shops for 1921–22

were collected in advance and credited to the accounts of 1920–21, whereas in 1921–22 (the first year of the Reforms), in which the orders were cancelled, the instalment in the first quarter only was credited in advance. This caused an increase in the revenue of 1920–21 by nearly Rs. 20 lakhs and a decrease in that of the subsequent year by the same amount. The abnormal fall in the receipts for 1930–31 is due to the economic condition of the people and Congress interference by picketing and boycott. The receipts and expenditure budgetted for in 1932–33 and 1933–34 are both swollen by the inclusion of the accounts of the Nasik distillery.

The collection of exceptionally high receipts in 1920–21 led to an increase of expenditure during that year. The increase of expenditure since 1921–22 is due to several reasons viz., a different and more appropriate method of keeping accounts of opium sales, investments in Government commercial undertakings (distilleries), increased payment of excise compensations to Indian States, compensation to the Godhra distillery contractors for the purchase of the distillery plant and the larger and more costly establishment required owing to the restrictive excise policy adopted since the inauguration of the last reforms. At the same time economy and retrenchment have been practised since the year 1921–22 in order to release funds for expenditure in those directions where they are essential. The principal items of retrenchment effected since 1921–22 are as follows :—

Item of retrenchment.	Approximate annual saving.
	Rs.
(*a*) Retrenchment effected in 1922–23 by the abolition of the appointments of one deputy commissioner of excise, one supervisor of the tobacco department, 12 assistant inspectors of excise, 22 sub-inspectors, 79 clerks and by the abolition of a distillery and a warehouse branch .	95,000
(*b*) Separation in 1924 of the combined salt and excise department in the presidency proper and the resultant allocation of all appointments in the combined department, with the exception of the commissioner of customs, salt and excise, to the two departments separately ..	94,000

Item of retrenchment.	Approximate annual saving.
	Rs.
(*c*) Abolition from 1st March 1924 of the appointments of one deputy commissioner of excise, 1 chief inspector and 5 inspectors ..	53,800
(*d*) Further retrenchment in 1931 by the abolition of six posts of inspector, 15 of assistant inspector, 28 of sub-inspector, etc.	1,14,000
(*e*) Discontinuance in 1931 of the Mahi Kantha abkari leases	92,000

XV. Important differences in organisation in other provinces.

15. The following are worth mention :—

(*i*) CONTROL OVER THE DEPARTMENT.

In Madras the commissioner of excise is a member of the Board of Revenue. In Bihar and Orissa also the department is under the general supervision of the Board of Revenue. In the Punjab the department of excise is under the administrative control of one of the financial commissioners.

(*ii*) RELATIONS WITH OTHER DEPARTMENTS.

In Bengal and Bihar and Orissa the departments of salt and excise are amalgamated and under the control of a commissioner of excise and salt. In Assam the commissioner of excise is also in charge of the registration of joint-stock companies.

(*iii*) STANDING COMMITTEE.

In the Central Provinces the department is assisted by a standing committee consisting of nine members, of whom three are nominated by the Governor and six by the local Government on the recommendation of the president of the legislative council. The committee is expected to deal with items of new expenditure.

(*iv*) EXCISE LICENSING BOARDS.

For the city of Madras and for each of the major municipalities in the Madras presidency there are excise licensing boards containing a non-official majority and electing their own chairmen. The main function of the boards is to determine

the number and location of certain kinds of abkari shops. The functions of the excise advisory committees set up for the rural areas of the Madras presidency are purely advisory, as in the case of similar bodies in the Bombay presidency and in the Central Provinces.

(*v*) SUPERINTENDENT OF EXCISE, CRIME.

In the Central Provinces, there is an officer called superintendent of excise, crime, who in addition to the inspection of distillery and warehouses directs the collection and distribution of information regarding excise crime and criminals. He also examines and advises on the detective work of the district staff, but has nothing to do personally with the actual detection of crime.

XVI. Relations with Indian States.

16. A substantial part of the cost of the excise department, totalling Rs. 9,15,000 in the estimates of 1933–34, consists of the compensation paid to Indian States for the lease of their excise revenue. Political relations with all the States under the control of the Bombay Government have been transferred to the Government of India with effect from 1st April 1933. Kolhapur and many other States in the presidency manage their own excise administration and in 1931 the excise control of the Mahi Kantha talukas was handed over to the talukdars. Two of the talukas whose excise administration had been leased to the Bombay Government assumed charge of it themselves from 1st April 1933.

The compensation payable to the States for the lease of their excise arrangements is fixed in most cases at the average of the excise revenue of the three years preceding the leases. Government obtain no remission if actual receipts fall below the average but if they exceed it the balance goes to the States. The principal advantage which Government secure in return is the protection afforded to their revenues by preventing the establishment of different systems of excise administration on their boundaries.

XVII. Compensation in lieu of the one anna cess on excise.

17 The excise budget also bears the cost of the grants which are given to local boards in lieu of the one anna cess on excise revenue which they formerly received. The payment amounts to Rs. 1,55,000 a year. A similar grant amounting to

Rs. 1,43,750 is given to the Bombay Municipality, but in this case the grant was made statutory under section 63 of the Bombay Abkari Act of 1878. These grants properly form part of the general subventions paid to local bodies and there is no reason, other than the historical reason, why these should not be merged in the general grants and cease to be debited to the excise budget.

XVIII. Excise policy of Government with special reference to post-war development.

18. The excise policy of this Government has been governed in the past by two important considerations, first the sociological aim of discouraging excess of consumption, second and hardly less important, the fiscal consideration, the need of raising revenue for administration. The former aspect, however, has of late, especially since the American experiment in prohibition, come to be regarded as all-important and its exponents have become more and more vocal in the legislature of this province. In 1921 in pursuance of a resolution of the legislative council Government appointed an Excise Enquiry Committee to report upon the drink and drug traffic and its total prohibition. The committee reported in 1924 recommending that Government should declare in favour of prohibition. This recommendation was accepted by Government and complete prohibition by stages was taken to be the recognised goal. In order to achieve this end and in the meanwhile to train people to do gradually with less drink so that in fullness of time they might do with none at all, Government adopted a policy of partial prohibition and severe restriction, the chief features of which were (*i*) reduction of excise shops, (*ii*) restriction of days and hours of sale, (*iii*) reduction of strength of country liquor, (*iv*) restriction in quantity to be sold, possessed and transported, (*v*) progressive ration reduction of country liquor for shops, (*vi*) increase of still-head duty and supply price of country spirit, issue rate of opium, duty on ganja and license and other fees in connection with foreign liquor and (*vii*) forcing up selling prices by auctioning licenses without restricting the selling prices.

The next step was a resolution moved in the Bombay legislative council by Mr. R. G. Pradhan on 4th November 1925 to the effect that " a committee be appointed to consider and report on the financial measures that should be introduced in order to give full effect to the policy of prohibition of the traffic in alcoholic drink and drugs ".

This resolution was accepted and Government appointed in February 1926 the Prohibition (Finance) Committee to calculate the net loss likely to accrue to Government from total prohibition (including the cost of extra preventive staff) and to enquire into and suggest fresh avenues of taxation for making up the above loss. The committee reported that the loss would be Rs. 6 crores per annum including Rs. 2 crores on extra preventive establishment, but that they could not suggest alternative taxation of more than Rs. 2 crores. One result of the report of this committee was the realisation that progress towards prohibition had of necessity to be slow and dependent on the willingness of the province to submit to additional taxation. It was brought to the notice of Government that the result of the policy of severe restrictions and high prices adopted by them was in many respects extremely unsatisfactory. The chief consequences of the adoption of this policy were (1) the reduced consumption of the licit articles accompanied by a great increase in illicit distillation and illicit import of opium and charas, (2) the spread of illicit distillation in areas where it was previously unknown, (3) the increased resort to Indian States' shops, (4) the common use in some tracts of denatured spirit as a beverage, (5) a diversion from country spirit to intoxicating drugs in some areas and to toddy in others, (6) a diversion to foreign liquor, (7) an increased and, in the wilder areas, general disregard of excise laws over large tracts and (8) irritation in the leased Indian States.

It was realised that the measures adopted by Government had led to the dwindling of an important source of revenue without fully serving the cause of temperance and ultimate prohibition. Government therefore called a halt to the policy hitherto adopted and indeed went back part of the way. The policy of progressive ration reduction has recently been abandoned and that of transferring surplus ration from districts where it was available to districts where extra ration was required to counteract the tendency towards illicit distillation has taken its place. Additional liquor shops have been opened in certain districts and the strength of liquor in border shops and in certain other areas where there is a marked demand for stronger liquor and illicit manufacture is rife has been increased. While this is so, Government have, however, not lost sight of the final goal of their excise policy.

In September 1931 a conference of selected officers called by Government was held at Poona to discuss the relative

advantages of the several systems of the disposal of country spirit and other excise licenses and the general policy of excise as a result of the experience of the last ten years. The then minister for excise, Sir Rafiuddin Ahmad, presided and the then member for finance, Sir G. B. Pradhan, took part in the conference. The main points for consideration were stated to be :—

(*a*) the fall in excise revenue concurrently with the increase in the consumption of illicit liquor ;

(*b*) the steps to be taken to remould the excise policy which has led to the result indicated at (*a*) ; and

(*c*) the administrative measures necessary to carry out the policy that might eventually be decided on.

The recommendations made by the conference and the action taken on them are shown below :—

Recommendations made by the conference.	Action, if any, taken by Government.
1. Additional liquor shops should be opened where facilities for illicit distillation and importation exist if the existing shops are too far apart.	Accepted.
2. Where in a particular area a complaint about monopoly of liquor shops has been made, it should be looked into and relief should be given by opening more shops.	Accepted.
3. Where the liquor supplied by Government does not meet the demand regarding its strength and people are driven either to purchase foreign liquor or to illicit liquor, this should be prevented by giving them stronger liquor.	Accepted.

Recommendations made by the conference.	Action, if any, taken by Government.
4. The closing hour for liquor shops should continue to be 8 o'clock except in particular cases, for example, in the case of border shops where the trans-border shops are kept open till a later hour.	Accepted. Government have, however, extended, with effect from 1st April 1933, as an experiment, the closing hour for country spirit shops in the mofussil of the Presidency proper to 8-30 p.m. They have also ordered that this closing hour should be applied to all excise licenses which had the same closing hour as that of country spirit licenses.
5. Still-head duty should be substantially reduced in all border and criminal areas in order to provide cheap liquor to the people.	Accepted.
6. The question of increasing or decreasing still-head duty should be considered according to the requirements of different areas owing to depression in prices and various other factors.	Government agree that in some districts adjustments of some kind are necessary in view of the fall in consumption and the local facilities for illicit distillation or import. They have therefore reduced the rates of still-head duty in several areas. With effect from 1st April 1933 they have been reduced by 20 per cent. all round as an experiment in the districts of Kaira, Nasik, and Kanara in order to check illicit distillation. Government have also considered a proposal to increase the rates of still-head duty in the town and island of Bombay but have been unable to sanction it.

	Recommendations made by the conference.	Action, if any, taken by Government.
7.	In spite of certain unsatisfactory features, the system of disposing of liquor shop licenses by auction is the least objectionable and should therefore be continued.	Accepted by Government for adoption in the town and island of Bombay and the mofussil.
8.	Maximum prices for selling liquor should not be introduced in any area.	Accepted.
9.	Monthly rations for shops should be done away with.	Accepted.
10.	Restrictions on the number of shops, strength of liquor, fixed hours, etc., should be relaxed in regard to border shops on consideration of the merits of each case.	Accepted.
11.	Tree-tax in respect of toddy should not be altered at present.	No orders of Government are necessary. Government have however revised the rates of tree-tax in several districts for a period of one year with effect from 1st August 1933.
12.	The existing arrangements for the disposal of foreign liquor shops in the mofussil should continue.	Accepted.
13.	An unnecessary reduction in the number of licenses for selling denatured spirit in areas where it is drunk is likely to cause hardship to those who use it for legitimate purposes and the question of reduction in particular areas should be left to the discretion of collectors.	Government have approved, as a measure to be used at the discretion of collectors, a proposal to cancel licenses in rural areas where denatured spirit is used for drinking and not for *bona fide* purposes.
14.	Any enhancement of license fees for selling denatured spirits is likely to increase the selling rates and no change should therefore be made in the present license fees.	Accepted.

	Recommendations made by the conference.	Action, if any, taken by Government.
15.	In order to facilitate the detection of persons using denatured spirit for potable purposes, collectors should, as an experimental measure, be authorised to require the maintenance by licenses selling the spirit of registers of sales in those areas where it is used for such purposes.	Accepted.
16.	In order to ensure maintenance of correct accounts of sales of denatured spirit, retail licensees should, like wholesale licensees, be permitted to bottle the spirit on their premises.	Accepted.
17.	The present limit of five gallons in respect of the possession and retail sale of denatured spirit is too high and should be reduced to one gallon, but permits for the possession of larger quantities should be issued to persons requiring the spirit for industrial purposes.	Government have sanctioned the reduction of the limit to one gallon in areas where the abuse of the spirit is suspected.
18.	Steps should be taken to amend the Bombay Abkari Act so as to render the use of denatured spirit for potable purposes punishable under the Act.	The recommendation will be considered along with the omnibus bill for the amendment of the various sections of the Act.
19.	The system of auctioning border opium shops should continue.	Accepted.
20.	The existing restriction on selling hours for opium shops should be relaxed and the opening and closing hours should be 6-30 a.m. and 8-30 p.m. respectively.	Government have altered the opening hour of opium shops to 6-30 a.m. but retained the closing hour at 8 p.m.
21.	A representative of the excise licensees is necessary on each advisory committee.	Accepted.
22.	The collector should nominate on the advisory committee a person who, he thinks, would by putting the case of consumers help in the deliberations.	Accepted.

	Recommendations made by the conference.	Action, if any, taken by Government.
23.	Non-officials on the committee should consist of one representative selected by the licensees, whatever their number, one person to be nominated by the collector, and eight representatives of the local body.	Accepted.
24.	Government vacant sites, when available, may be reserved for excise shops, and provisional sanction should, as is done at present, be given by collectors to the use of premises chosen by licensees.	In order to lessen the difficulties of new licensees in securing suitable sites and premises for locating their shops, Government have directed that, should necessity arise, collectors may take steps to grant to licensees suitable vacant Government sites on which a licensee may build premises, subject to the condition that the site, with the buildings, will be made available at a fixed rental for another licensee whenever the owner of the premises fails to secure a license. Government have decided that advisory committees should be consulted before new sites are sanctioned except in very urgent cases, when the collector may give provisional sanction first and consult the committee afterwards.
25.	The collector should get a number of possible premises for a new shop approved by the advisory committee beforehand so that the licensee could choose and bargain accordingly with the landlord.	Under consideration.
26.	A change in the present excise year is necessary.	After consultation with district officers and further examination Government have decided that a change is undesirable.

XIX. Evolution of the excise policy of Government.

(*i*) Country liquor.

19. Up to the year 1877–78 the whole of the Bombay presidency with the exception of a few areas was under the out-still system. This system consisted in giving the excise revenue of a particular area in farm to the person willing to pay the highest price for it. He was allowed to set up stills at specified places and distil and sell liquor as he liked. There was no restriction on the strength or price of the liquor and no adequate supervision. From 1877–78 this system was gradually supplemented by that known as the district monopoly system. Under this system the exclusive privilege of manufacture and sale, or of sale only, of country spirit in a district was farmed out for a term of years (generally three years) to a contractor or farmer who manufactured the spirit under Government supervision at a public or private distillery or bought it from there and paid a still-head duty at the rate fixed by Government on passing it out for supply to his depôts or for sale in his shop, the number and locality of which were fixed. The contractor had to furnish a minimum guarantee, that is, he undertook that Government should not receive less than a fixed sum each year on account of still-head duty on liquor issued from the distillery and if the duty fell short of the guarantee he had to make up the balance, but received no refund for duty paid in excess of the guaranteed amount. The privilege of manufacture was separated from the right of vend and machinery was devised for ensuring to Government excise revenue in proportion to the prices paid for the liquor consumed by the adoption of what is known as the single shop system, which was first tried in 1902 at Belgaum and extended to Poona, Satara and Khandesh in 1903–04. Under this system, the privilege of manufacture and supply of country spirit for a district was given to the tenderer who offered to supply spirit of the sanctioned strength at the lowest rates and the privilege of retail vend was disposed of by public auction, the retail vendors being bound to obtain their supply from the contract distilleries at fixed rates. The system was tried both with and without maximum selling prices. In 1906 the commissioner of excise reported that the bids at the auction of retail shops were so reckless that no honest man could earn a livelihood by engaging in the retail liquor trade in the districts in which this system was in vogue. In view of these remarks Government ordered that the system of selling licenses to those offering the highest bids should not be extended, but

should be tried further in the districts to which it had already been applied. In 1905 the Indian Excise Committee was appointed by the Government of India to examine the excise administration of each province and to suggest in consultation with the local Governments such alterations as might seem desirable in view of local conditions and in the light of what had been found successful elsewhere. The committee's conclusion was that the auction system was the most suitable in regard to articles which paid no duty and the only mode of taxing which was by means of vend fees, but that in the case of articles which paid a direct duty (e.g., still-head duty) it had disadvantages which outweighed the advantages. The committee therefore recommended that the auction system should gradually be supplanted by the fixed fee system. The Government of India in passing orders on the committee's report considered that the arguments on which the committee laid stress were not really valid and that the proposals made by them were open to far graver objections. The Government of Bombay in a letter dated 1st July 1908 represented to the Government of India that the auction system took the taxation of liquor out of the control of Government and placed it in the hands of speculators and that it secured the maximum of revenue at the cost of demoralisation of the shopkeepers and of the consuming public. As a result of this letter the Government of India permitted the Government of Bombay to introduce the system of fixed fees in three districts as an experimental measure. The districts selected for the purpose were Ahmedabad, Nasik and Dharwar. In the other districts the shops were disposed of on the modified auction system, i.e., to approved bidders for sums not exceeding 25 per cent. of the estimated fees.. Finally the Government of India decided that with certain reservations the Government of Bombay should be allowed in future to settle the system under which licenses to sell intoxicants should be disposed of. The reservations were that consumption should be reduced by the steady pressure of taxation (i.e., still-head duty), that the minimum guarantee should in no circumstances have any place in the excise administration and lastly that in granting licenses on payment of fixed fees the danger of creating vested interests should not be lost sight of. Acting on the discretion thus allowed, the Government of Bombay extended the fixed fee system (with maximum selling prices also fixed), which obtained in the Ahmedabad, Nasik and Dharwar districts, to all other districts under the contract supply system and also to the town and island of Bombay with effect from 1912.

In December 1916 the commissioner of excise submitted a report to Government asking for a change of policy. He reported that the fixed fee system had created a special class of shop-keepers for a business which required no expert knowledge and led directly either to vested interests or to so strong a moral claim to retention of a license as to be scarcely distinguishable from a vested interest, that it enriched shop-keepers at the expense of the public revenue, demoralised the excise staff and deprived Government of a valuable indication of the adequacy or otherwise of the still-head duty. He proposed reversion to the auction system, auctions being free and open subject only to the production of a solvency certificate and absence of the name of the bidder from the collector's "black list". As a possible alternative the commissioner proposed the tender system. The majority of Government officers concerned agreed with the commissioner. On this report Government decided that the maximum selling price should be abolished except where in the entire absence of competition it was necessary to prevent extravagant prices being demanded and that auctions should be held in Bombay city, in other cities of the presidency proper and in head-quarter towns of districts and in other places, subject to the discretion of the commissioner, where there were three shops within a reasonably small area. In other areas the fixed fee system was continued. Government then considered it desirable that auctions should be for three years but since 1921 auctions have been held annually.

With the transfer of the excise department to popular control under a minister in 1921, excise problems began to be viewed from a new point of view. Up till this time controversy had always ranged round the question of the best method of disposal of country liquor shops. Since 1921 pursuit of the ideal of ultimate total prohibition has predominated in the excise policy of Government. In August 1921 the legislative council passed a resolution recommending the appointment of a committee to consider and report in all its aspects upon the drink and drug traffic in this presidency and the possibility of its total prohibition. Government accepted the recommendation and also started the policy of rationing the supply to country liquor shops with effect from 1st April 1922. The committee reported in 1924 and recommended that Government should declare that the ultimate object of their excise policy was total prohibition. As a first step in the direction of that goal, the committee advocated the giving by legislation to the people

of a definite area the option of declaring their intention to stop the liquor and toddy traffic in that area and also making it legally binding on Government to carry out the intention so declared within a reasonable time. It also recommended the definite adoption, with certain limitations, of the existing system of rationing the quantity of liquor supplied to shops, with a gradual reduction in the quantity issued to each, and suggested that rationing should also be applied to the sale of foreign liquor. Another important recommendation of the committee was that no new licenses should be henceforth issued by Government in any locality for the sale of country or foreign liquor or toddy, except where it was proposed to substitute a toddy shop for a liquor shop as a temporary measure. In the orders passed on the committee's report Government accepted the goal of prohibition and agreed to the continuance of the rationing system subject to certain reservations. They also accepted the suggestion that no new shops should be opened except in exceptional cases. Government at the same time pointed out that it would be impossible to pursue the policy of prohibition to its goal unless the gap which it would create in the provincial finances was gradually filled by revenue from other sources. In November 1925 the legislative council passed a resolution to the effect that a committee be appointed to consider and report on the financial measures that should be introduced in order to give full effect to the policy of prohibition of the traffic in alcoholic drink and drugs. A committee was appointed in conformity with this resolution and submitted its report in 1927. The majority of the committee calculated the net loss to Government from total prohibition at Rs. 6 crores, including Rs. 2 crores on extra preventive staff, but it could not suggest alternative taxation of more than Rs. 2 crores. In these circumstances Government were forced to the conclusion that the progress towards prohibition must necessarily be slow.

The Reorganisation Committee have brought out the important fact (*vide* pages 304 and 306 of their Report) that Excise and not Land Revenue is normally the largest revenue yielding head, whether gross or net revenue be regarded, of the various sources of revenue of the presidency.

The policy of rationing adopted by Government with a view to ultimate prohibition was put into effect from 1st April 1922. For each of the years 1922–23 to 1925–26 a reduction was made of 5 per cent. in the mofussil and 10 per cent. in the town and island of Bombay on the consumption of the year 1920–21.

In December 1916 the commissioner of excise submitted a report to Government asking for a change of policy. He reported that the fixed fee system had created a special class of shop-keepers for a business which required no expert knowledge and led directly either to vested interests or to so strong a moral claim to retention of a license as to be scarcely distinguishable from a vested interest, that it enriched shop-keepers at the expense of the public revenue, demoralised the excise staff and deprived Government of a valuable indication of the adequacy or otherwise of the still-head duty. He proposed reversion to the auction system, auctions being free and open subject only to the production of a solvency certificate and absence of the name of the bidder from the collector's "black list". As a possible alternative the commissioner proposed the tender system. The majority of Government officers concerned agreed with the commissioner. On this report Government decided that the maximum selling price should be abolished except where in the entire absence of competition it was necessary to prevent extravagant prices being demanded and that auctions should be held in Bombay city, in other cities of the presidency proper and in head-quarter towns of districts and in other places, subject to the discretion of the commissioner, where there were three shops within a reasonably small area. In other areas the fixed fee system was continued. Government then considered it desirable that auctions should be for three years but since 1921 auctions have been held annually.

With the transfer of the excise department to popular control under a minister in 1921, excise problems began to be viewed from a new point of view. Up till this time controversy had always ranged round the question of the best method of disposal of country liquor shops. Since 1921 pursuit of the ideal of ultimate total prohibition has predominated in the excise policy of Government. In August 1921 the legislative council passed a resolution recommending the appointment of a committee to consider and report in all its aspects upon the drink and drug traffic in this presidency and the possibility of its total prohibition. Government accepted the recommendation and also started the policy of rationing the supply to country liquor shops with effect from 1st April 1922. The committee reported in 1924 and recommended that Government should declare that the ultimate object of their excise policy was total prohibition. As a first step in the direction of that goal, the committee advocated the giving by legislation to the people

of a definite area the option of declaring their intention to stop the liquor and toddy traffic in that area and also making it legally binding on Government to carry out the intention so declared within a reasonable time. It also recommended the definite adoption, with certain limitations, of the existing system of rationing the quantity of liquor supplied to shops, with a gradual reduction in the quantity issued to each, and suggested that rationing should also be applied to the sale of foreign liquor. Another important recommendation of the committee was that no new licenses should be henceforth issued by Government in any locality for the sale of country or foreign liquor or toddy, except where it was proposed to substitute a toddy shop for a liquor shop as a temporary measure. In the orders passed on the committee's report Government accepted the goal of prohibition and agreed to the continuance of the rationing system subject to certain reservations. They also accepted the suggestion that no new shops should be opened except in exceptional cases. Government at the same time pointed out that it would be impossible to pursue the policy of prohibition to its goal unless the gap which it would create in the provincial finances was gradually filled by revenue from other sources. In November 1925 the legislative council passed a resolution to the effect that a committee be appointed to consider and report on the financial measures that should be introduced in order to give full effect to the policy of prohibition of the traffic in alcoholic drink and drugs. A committee was appointed in conformity with this resolution and submitted its report in 1927. The majority of the committee calculated the net loss to Government from total prohibition at Rs. 6 crores, including Rs. 2 crores on extra preventive staff, but it could not suggest alternative taxation of more than Rs. 2 crores. In these circumstances Government were forced to the conclusion that the progress towards prohibition must necessarily be slow.

The Reorganisation Committee have brought out the important fact (*vide* pages 304 and 306 of their Report) that Excise and not Land Revenue is normally the largest revenue yielding head, whether gross or net revenue be regarded, of the various sources of revenue of the presidency.

The policy of rationing adopted by Government with a view to ultimate prohibition was put into effect from 1st April 1922. For each of the years 1922–23 to 1925–26 a reduction was made of 5 per cent. in the mofussil and 10 per cent. in the town and island of Bombay on the consumption of the year 1920–21.

For 1926–27 the percentage rate was continued, but the reduction was based on the ration for the year 1925–26. For 1927–28 the reduction was 5 per cent. over the ration of the previous year throughout the presidency, except in the Panch Mahals and East and West Khandesh where further rationing was suspended. This was in order to restore licit consumption, which had been replaced very considerably by illicit liquor in those districts owing to the high prices of licit liquor and excessive restrictions on the procuring of it. Experience showed that the policy of high prices and severe restrictions resulted in reduced consumption of licit articles, a very great increase in illicit distillation, illicit import of opium and charas, increased resort to Indian States' shops, common use in some tracts of denatured spirit as a beverage, diversion from country liquor to intoxicating drugs in some areas and to toddy in others and diversion to foreign liquor. Government therefore decided to stop the progressive reduction of ration throughout the presidency proper with effect from 1st April 1928. Not only this, but the ration of some districts has been recently increased, additional liquor shops have been opened in most districts and the strength of liquor in border shops has been increased to prevent diversion of custom to Indian States' shops in the vicinity.

As regards disposal of shops, the usual practice till 1925–26 was to hold annual auctions for their disposal on different dates in different localities. When submitting his proposals for the excise arrangements for that year, the commissioner of excise observed that, owing to trade jealousy, competition, family feuds and blackmail, the bids at auctions in many cases went up to enormous amounts out of all proportion to the real value of shops. With a view to stop blackmailing, the commissioner proposed that auctions should be held simultaneously throughout the presidency. Government considered that the immediate effect of the proposal would be a fall in revenue from the bids which it would be found difficult to face. They accordingly directed that the existing system should continue and that collectors should fix stiff upset prices in the case of shops which were likely to go cheap for want of competition. A year later the commissioner renewed his proposal for simultaneous disposal of all shops if the auction system was to continue. He also made an alternative propcsal for a modified fixed fee system, namely, that the shops should be offered to the present licensees at a fair price, which could easily be arrived at by taking the average of past years excluding any abnormal years and making a deduction proportionate

to the reduction in ration. Government rejected the alternative proposal, but agreed to the auctions being held simultaneously throughout the presidency as an experimental measure. The system was however abandoned after only one year's trial, as it caused a serious loss of revenue. In September 1929, Government directed that every shop should be put to auction subject to a reserve price only and given to the *bona fide* bidder making the highest bid provided that it was not less than the reserve price. When the reserve price was not reached in auction and the collector considered that a re-auction was not likely to secure an adequate bid, Government directed that he should call for tenders and give the shop to the applicant who, other things being equal, made the best offer. In connection with the excise arrangements for 1929–30, the commissioner of excise recommended that maximum selling prices should be introduced for country spirit, the existing system of disposal of shops by auction for a period of one year being retained, with a view to checking illicit distillation. Government rejected the proposal in view of the fact that the system had been abandoned in 1917 as it could not be enforced properly in practice and it would involve the abandonment of the rationing policy and result in increased consumption by reason of the reduction in the present high prices and directed that shops both in the presidency proper and in Sind should be disposed of by auction for a period of one year without any restriction on maximum prices. The only change subsequently made was in the matter of disposal of shops in the town and island of Bombay. In March 1929 Government held that the auction system had favoured the growth of blackmailing and similar evil practices and directed that shops in Bombay city should be continued to the existing licensees on payment of a suitable upset price to be fixed by the collector. In March 1930, 1931 and 1933 the Bombay city shops were renewed to the old licensees on a fixed fee basis. In March 1932 they were disposed of by auction and it is proposed to continue this arrangement in future.

(*ii*) Sale of country spirit in sealed bottles.

Superior flavoured and extra superior flavoured spirit is, since the year 1926, being sold in sealed quart and pint bottles in Sind. Masala spirit has been sold in sealed bottles in all the districts of the presidency proper, including the leased areas, since May 1922. The system of selling country spirit in sealed bottles for consumption off the premises only is in vogue to a

considerable extent also in the United Provinces, Central Provinces and the Punjab.

Its chief advantages are that (*i*) it ensures that the liquor supplied is not diluted or adulterated and is not short in measure; (*ii*) it makes the question of shop sites immaterial; (*iii*) it puts an end to disorderly scenes at shops; (*iv*) it would permit the introduction of levying fixed fees per gallon and even fixed selling prices; and (*v*) it would make it possible for Government to carry on the sales departmentally, so as to do away with the licensees and middlemen and get the full benefit of all the profits. The main disadvantages of the system are (*i*) that the removal of the liquor to the home would tend to spread the drinking habit to the family, an evil which every effort should be made to arrest; (*ii*) the majority of the customers of country liquor shops being poor would not be able ordinarily to purchase whole bottles, and the *kevat* (retail sale) system might become widespread in rural areas; (*iii*) it might lead to drinking in open spaces and public places by persons joining together to share a bottle and would thus be demoralising to the public; and (*iv*) it would render detection of illicit consumption more difficult than at present. Government consider that the disadvantages of the sealed bottle system would in this presidency far outweigh its advantages if it were applied to unflavoured country liquor and do not therefore propose to extend its use.

(*iii*) Toddy.

In the case of toddy, in addition to direct taxation in the form of tree-tax, there is indirect taxation in the shape of license fees on shops and booths. When the auction system was generally introduced it was not applied to toddy in the town and island of Bombay, where booths and toddy shops were licensed on payment of a fixed fee. In 1913 Government directed that toddy shops in Surat city and ten miles round should also be disposed of at fixed fees, as the bidders had become so reckless that it was impossible in practice to dispose of the shops on the auction principle. In 1919 the fixed-fee system sanctioned in 1915 for Surat city and ten miles round it was replaced by the tender system. This was again replaced by the open auction system from 1st August 1924. The auction system of disposal was extended to the toddy shops in the town and island of Bombay with effect from 1st April 1919, the period of auction being three years. In March 1922, Government directed that tree-foot booths should also be

disposed of by auction, upset prices being fixed for each booth at the discretion of the collector and maximum selling prices being abolished. It was also directed that shops and booths should be auctioned for a year. With a view however to save the toddy licensees from the impositions of blackmailers, toddy licenses in Bombay were renewed in 1929 to the old licensees. As however this did not improve the revenue receipts the licenses were disposed of in 1930 by tender and negotiation. In 1931 the licenses were disposed of by tender only. In 1932 and 1933 they were disposed of by auction.

(*iv*) Foreign liquor.

Up to the end of 1921-22 the revenue for the privilege of vend of foreign liquor in this presidency was derived from fees fixed with reference to sales at each shop, the volume of business done being ascertained from the licensee's account books. From 1922-23 it was decided to tax the importers of and wholesale dealers in foreign liquor at rates fixed per unit of each kind of foreign liquor. Retail licensees were classified according to their business and assessed to fees on a fixed scale. In 1924 it was decided to double the scale of fees fixed for retail licenses in 1922 except for hotels, railway refreshment rooms, dining-cars and travellers' bungalow licensees. In 1926 orders were issued requiring clubs supplying liquor to their members to take out licenses on payment of fees fixed per unit of each kind of liquor. It was subsequently found that the statistics maintained by the retail foreign liquor licensees were not reliable. With a view therefore to obtain more correct statistics of the consumption of foreign liquor, Government sanctioned with effect from 1st April 1929 the introduction in the presidency proper of a new scheme, the main features of which were (*a*) restriction to the wholesale dealer of supply to the trade including recognised clubs only; (*b*) discouragement of private importation by the levy of license fee; and (*c*) control by permits of the transport of liquor from the wholesale dealer to the retail dealer and from one retail dealer to another and by private individuals after import. Simultaneously Government ordered that retail licensees in the presidency proper should pay fees at a fixed rate on actual sales. Refreshment rooms and hotels were in addition assessed to a fee of about one-third of the former scale. Foreign liquor "on" shops in the town and island of Bombay are disposed of by annual auction and those in some headquarter towns in Sind by auction for three years. So far as the "on" shops in

the town and island of Bombay are concerned, it is only the privilege to sell liquor on the premises that is auctioned, as the licensees have to pay on the scale fixed by Government on their actual sales. These licenses have, however, been renewed to the old licensees for the last three years. In the case of new foreign liquor " off " shops the selection of the first licensees is determined by auction, only such persons being allowed to bid as are considered suitable by the collector. The question is under consideration whether in the case of all new foreign liquor " off " and " on " licenses (with certain exceptions) outside Bombay city the license should be auctioned every year instead of the goodwill of the shop being sold once for all.

(*v*) Opium.

Till 1901 the right of vend of opium was purchased by contractors for the whole district in the case of the districts of Bijapur, Belgaum, Dharwar, Satara, Ratnagiri, Kanara, Thana and Kolaba. In that year Government directed that in all these districts the right of vend should in the first instance be put up to auction for single shops, no restriction being placed on the grant to one person of more than one shop. In any case in which bids were not made for single shops the collector, under the direction of the commissioner of customs, salt, opium and abkari, was to sell the right for groups or talukas or even for whole districts. Government also directed that the collector should not be bound to accept the highest bid and might refuse the bid of any person who was not in his opinion likely to exercise the privilege properly. Maximum selling prices were also abolished, as there was little fear of smuggling in those districts. For districts other than those mentioned above, the commissioner's proposal for the disposal of opium farms on the selection system was approved by Government. In December 1911 Government directed that opium shops, except in Gujarat, should be disposed of on the principle of fixed fees, but in March 1919 restored the auction system and abolished the system of maximum prices. In 1928 Government directed that the border opium shops should also be disposed of by open auction and that there should be no restriction on selling prices. For the year 1928–29 opium shops in the town and island of Bombay were disposed of on fixed fees. For 1929–30 they were disposed of by tender. For 1930–31 they were renewed to the old licensees. For 1931–32 the shops were given out by tender and for 1932–33 they were renewed to

the old licensees on payment of increased license fees. The tender system was reverted to in disposing of the shops in Bombay for the years 1933-34 to 1935-36.

XX. Matters of importance decided during the last five years.

(*a*) Economies effected.

20. (1) Retrenchment in the non-gazetted executive staff of the Excise Department with effect from 1st December 1931 resulting in a saving of Rs. 1,14,000.

(2) Abolition of the post of Deputy Commissioner of Excise with effect from 1st April 1931, and the creation in its stead of an appointment of Personal Assistant to the Commissioner of Excise who is borne on the cadre of Superintendents of Excise.

(3) Retrenchment in the staff at the Government Central Distillery, Nasik, with effect from 1st September 1932 resulting in a saving of Rs. 19,332.

(4) Closure of the Panvel Warehouse from 1st April 1933, as a measure of retrenchment.

(5) Closure of the Dabhoda Distillery from 1st April 1929.

(6) Abolition of one post of Deputy Superintendent of Salt and Excise and Personal Assistant to the Superintendent of Salt and Excise in Sind.

(7) Abolition of the posts of Inspector and clerks and a peon in the Combined Department of Salt and Excise in Sind.

(*b*) New changes introduced.

(1) The following changes in the territorial charges of superintendents of Excise in the presidency proper were effected from 1st November 1932 :—

(*a*) The Ahmedabad division was united with that of Kaira and Panch Mahals.

(*b*) A new division was formed consisting of Thana and Bombay Suburban districts.

(*c*) The three charges of Nasik, Poona and Belgaum were reconstituted and now consist of the following districts :—

Nasik—Nasik and Ahmednagar.

Poona—Poona, Satara and Sholapur.

Belgaum—Belgaum and Bijapur.

(2) With effect from 1st May 1932, a separate Chief Account Office was constituted for the Excise Department, the old arrangement under which the account work was done by the Salt Department being discontinued at the request of the Government of India.

(3) In the accounts of the Government Central Distillery, Nasik, the Personal Ledger Account was abolished with effect from 1st April 1932, and receipts and expenditure of the distillery are now accounted for under the head " VI-Excise " and " 6, Excise ", respectively. The object of this change was to give the Legislative Council fuller control over the receipts and expenditure of the distillery.

(4) Section 18-B of the Bombay Abkari Act relating to Mahura Flowers was extended to the whole of the presidency proper from 5th March 1930 in order to afford a closer control over the possession and transport of mahura flowers and thereby to check illicit distillation.

(5) The strength of plain spirit in a number of districts of the presidency proper was raised to 25° U.P. in the case of border shops and 30° U.P. in the case of interior shops.

(6) The still-head duty rates of country liquor were reduced in certain districts of the presidency proper in 1932-33 in order to reduce the temptation to resort to illicit liquor which an unduly high still-head duty would afford.

(7) Permission was granted in 1929 for the sale of masala liquor in sealed bottles and by draught in all districts of the presidency proper.

(8) In 1933-34 the strength of masala liquor was raised from 40° U.P. to 25° U.P.

(9) Additional excise shops have been opened in certain areas with a view to meet local demand, break monopolies and check illicit distillation and importation of illicit liquor.

(10) A new country liquor shop was opened at Redi in the Vengurla Peta of the Ratnagiri district on the outstill system for sale of kaju and toddy spirits from 1st April 1933 as an experiment, to meet the local demand and to check importation of such spirits from the Portuguese territory and resort to the Portuguese shops.

(11) The concession of free tapping of toddy trees for domestic consumption in the Panch Mahals district has been withdrawn in 1933-34 and a small tree-tax of annas 8 per tree tapped has been imposed.

(12) Tree-tax rates have this year been enhanced in all the districts of this presidency except Kaira and Nasik.

(13) The sale of charas has been reintroduced in the Town and Island of Bombay and in Ahmedabad City from 1st April 1931, in order to stop the illicit import of that drug.

(14) With effect from February 1933 a vend (pass) fee of 12 annas per bulk gallon or Re. 1-8-0 per dozen quart bottles has been imposed on denatured spirit manufactured in or imported into this presidency.

(15) The leases of the Abkari administration of the States and talukas in the Mahi Kantha Agency (except the taluka of Mahisa) fell in during the quinquennium and have not been renewed, the States concerned now conducting their own abkari administration.

(16) Government have now decided that important matters affecting both the Excise and other departments should be considered in the Commissioners' Conference. When questions affecting the Excise Department are considered in that Conference, the Commissioner of Excise sits as an additional member of the Conference.

(17) Other changes effected in the past five years are shown in items (4), (9), (10), (15) to (17), (20) and (24) of the list of recommendations made by the Excise Conference on pages 659 to 663 above.

(c) New laws enacted.

(1) Introduction of the Dangerous Drugs Act, 1930 (II of 1930), from 1st February 1931 to control all transactions in dangerous drugs.

(2) Amendment of the Bombay City Tobacco Act, with effect from 19th March 1932, the maundage duty on tobacco being raised from Rs. 7-8-0 to Rs. 30 per Bengal Maund and the limit of possession reduced from 4 to ½ seers.

(3) Further amendment of the Bombay City Tobacco Act with a view to allow a refund of duty paid on tobacco re-exported from the Town and Island of Bombay.

(4) Introduction of the Bombay (District) Tobacco Act, 1933 (Bom. II of 1933), with effect from 1st April 1933, with a view to bring the sale of tobacco in the mofussil under control by the levy of license fees.

XXI. Matters considered and postponed.

21. (1) At the suggestion of the Reorganization Committee, Government had considered the abolition of the Kotri Distillery in Sind and the supply of liquor to Sind from the Government Distillery at Nasik Road. Enquiry however showed that such an arrangement would not be economical at any rate at present, and it was therefore decided that the manufacture of country spirit at the Kotri Distillery for supply to Sind should continue for two years from 1st April 1933.

(2) Proposal to amend the Abkari Act so as to penalise the use of denatured spirit for potable purposes (*vide* item 18 on page 662 above).

XXII. Matters under consideration.

22. (1) Restriction of the purchases of mahura flowers for the Nasik distillery to British Districts as far as possible so as to reduce the material available for illicit distillation.

(2) Change in the designation of Deputy Superintendents of Salt and Excise and grant of certain powers to them.

(3) To these may be added items 21 to 23 shown on page 662 and 663 which are being considered along with the revision of the rules for the constitution of advisory committee.

XXIII. Matters to be considered in the near future.

23. Renewal or termination of the leases of the abkari administration of Indian States which expire on 31st July 1934 and the hemp drugs leases which expire on 31st March 1935.

A NOTE ON THE ADMINISTRATION OF MINOR PORTS.

ORGANISATION.

1. Minor ports are a reserved subject under the devolution rules. The subject is allotted to the honourable member for revenue and finance. The ports of Bombay, Karachi and Aden, have been declared major ports and are therefore the concern of the Central Government; the other ports which are called minor ports are 75 in number and are divided into two groups, the northern group comprising 25 ports in Gujarat and Thana district and the southern group comprising the remaining 50 ports in the vicinity of or south of Bombay. The administration of these ports, which is conducted through the agency of the salt department, is concerned with—

(1) Sea customs;

(2) Salt;

(3) Merchant shipping;

(4) Local funds—

(*a*) Northern group ports fund;

(*b*) Southern group ports fund;

(*c*) Landing and wharfage fees fund.

The work in connection with the first three items is the concern of the Central Government. The salt department administers the local funds of the minor ports.

Administration is carried out and financed under two Acts—

(*a*) the Indian Ports Act, under which port dues are levied on vessels of certain tonnage entering a port; and

(*b*) the Landing and Wharfage Fees Act, under which fees are recovered from passengers at the various ports south of Bombay and on goods not removed from the wharf within a certain free period.

With a view to economy in expenditure, the duties of collecting the port dues and wharfage fees, administering the proceeds of the funds and keeping their accounts have been entrusted to the Collector of Customs, Bombay, who now administers the Salt Department and his subordinate staff. In return for the services rendered the northern and southern group ports funds contribute Rs. 3,500, and Rs. 6,500, a year, respectively, to the Salt Department and it has now been decided that the Landing and Wharfage Fees Fund should also contribute henceforth Rs. 2,000 per annum. The question of increasing the contribution paid to the Salt Department for the management of the ports funds is under the consideration of the Government of India. The view of this Government is that it would be both extravagant and inadvisable to maintain a separate staff to administer these provincial funds and that there are obvious difficulties in placing their administration under the collector's of various districts.

ADMINISTRATION OF THE FUNDS.

2. The port dues of the northern and southern group ports funds are recovered by the local customs officers, if they are due on the entry of a vessel at a port. Steamers generally pay port dues every month into the chief account office of customs, salt and opium, Bombay, and produce valid receipts at the ports. The recovery of the dues is subject to audit by the assistant collectors of salt revenue and the collector of customs.

The steamer companies recover the landing fees on tickets issued and pay them to the chief account officer. The local customs officers recover fees from passengers travelling by country craft and on goods left at a port on the expiry of the free period.

The northern and southern group ports funds have been formed principally for the benefit of vessels using the port or the rivers or channels leading thereto; and from them are defrayed the cost of the—

(*i*) construction and maintenance of minor lighthouses at certain ports and of bandar lights at each of the minor ports;

(*ii*) purchase and maintenance of buoys and beacons and weather signals;

(*iii*) salaries, allowances and pensions to the establishment of the minor lighthouses;

(*iv*) construction and maintenance of lighthouse buildings and quarters;

(*v*) maintenance of wharves and landing places originally constructed from the ports funds;

(*vi*) survey of ports and navigable creeks.

The landing and wharfage fund is chiefly intended for the convenience of passengers travelling by sea and from it are defrayed the cost of the—

(*i*) construction and maintenance of piers, jetties or wharves for embarkation and disembarkation of passengers;

(*ii*) construction and maintenance of dharamshalas, waiting-rooms, latrines, water-supply, etc., for passengers at ports;

(*iii*) purchase and maintenance of Kitson or ordinary lights at landing places at ports.

The northern and southern group ports funds are administered by the following agencies:—

(*i*) The deputy superintendent of lights, with the assistance of the coast guard inspectors and the local salt and customs officers, maintains supervision over the lighthouses, buoys and beacons, buys their stores and arranges for the distribution and accounting of the stores.

(*ii*) The range assistant collectors, with the assistance of the salt and customs officers, control the jetties, wharves and the like constructed from the ports funds, the roadways within port limits and the bandar lights. They audit the accounts relating to the funds maintained by the local officers.

(*iii*) The salt and customs local officers make disbursements, keep accounts of the funds and render general assistance to the supervising officers in carrying out the administration.

(*iv*) The chief account officer of customs, salt and opium keeps consolidated accounts of the funds, prepares budget estimates and furnishes statistics to the collector of customs. The accounts are subject to annual audit by the examiner, outside audit.

The landing and wharfage fund is administered by the following agencies :—

(*i*) The collector of customs, assisted by a committee consisting of the collectors of Kolaba and Ratnagiri districts, the deputy collector of salt revenue, the assistant collector of salt revenue, Kolaba, the deputy superintendent of lights, the executive engineer, Ratnagiri district, two members representing respectively the Kolaba and Ratnagiri district local boards and a member representing the Bombay Steam Navigation Company, administers the fund and approves of the budget estimates and plans and estimates for works to be carried out.

(*ii*) The assistant collectors of salt revenue, Thana, Kolaba and Kanara ranges, are mainly responsible for the execution and maintenance of works, the provisions of various facilities and amenities for the comfort and convenience of passengers and the economical management of the various supplies and services. They also audit the accounts maintained by the local officers.

(*iii*) The local salt and customs officers carry out the assistant collector's orders, and make disbursements and keep regular accounts.

(*iv*) The chief account officer maintains consolidated accounts of the fund, prepares budget estimates and furnishes statistics to the collector of customs. The accounts are subject to annual audit by the examiner, outside audit.

Northern group ports fund.

Year.	Receipts.	Expenditure.	Balance.
	Rs.	Rs.	Rs.
1929-30	28,028	17,907	10,121
1930-31	25,590	23,754	1,836
1931-32 (Revised estimates)	26,123	21,954	4,169
1932-33 (Budget estimates)	27,905	23,743	4,162

Southern group ports fund.

Year.	Receipts.	Expenditure.	Balance.
	Rs.	Rs.	Rs.
1929-30	80,963	37,997	42,966
1930-31	82,397	40,198	42,199
1931-32 (Revised estimates)	85,097	57,635	27,462
1932-33 (Budget estimates)	85,664	1,01,164	−15,500*

* It is proposed to meet the excess expenditure by disposing of securities of the face value of Rs. 15,000.

Landing and wharfage fees fund.

Year.	Receipts.	Expenditure.	Balance.
	Rs.	Rs.	Rs.
1929-30	94,455	78,812	15,643
1930-31	93,059	38,103	54,956
1931-32 (Revised estimates)	95,204	39,827	55,377
1932-33 (Budget estimates)	93,211	1,41,140	− 47,929*

* It is proposed to meet the excess expenditure by selling the securities of the face value of Rs. 47,500.

IMPROVEMENTS MADE DURING THE LAST FIVE YEARS AND QUESTIONS UNDER CONSIDERATION.

3. At present there is no pier or jetty at Ratnagiri and the arrangements for landing are primitive. Passengers have to walk some distance in the water according to the height of the tide and thence get into lighters in order to reach the steamers at anchor outside. In the monsoon the port is entirely closed to passenger traffic. There is moreover no other port in the entire district where steamers can safely land passengers or unload cargo. Several schemes have been put forward in the past for improving this state of things, but none has proved satisfactory.

In 1927 a Committee consisting of both officials and non-officials was appointed to investigate the feasibility of improving the landing facilities at this port. The Committee was of the opinion that it was not possible to build a pier or a landing place that could be used all the year round and it recommended the construction of a boat pier or jetty at a particular site at which steamers could go alongside at high water springs or neaps. The cost of this scheme was estimated at nine lakhs of rupees. After careful consideration Government concluded that the project was financially impracticable. As the possibility of undertaking this scheme receded indefinitely to the back ground, the Superintending Engineer, S. C., prepared a more modest scheme of constructing a jetty which can be suitably used during eight months of the year. The scheme to which Government have accorded their approval is estimated to cost Rs. 96,000.

The Landing and Wharfage Fund Committee has agreed to bear this cost, and construction is in progress.

The question of improving the landing facilities at certain of the southern ports of the presidency is one to which Government have from time to time devoted attention. These ports are administered by the Collector of Salt Revenue who is the Chairman of the Landing and Wharfage Fund Committee which administers the fees levied at these ports and is responsible for their improvement. Several petitions have been addressed to Government by the residents of Mora (Uran) on the Kolaba side of Bombay harbour with regard to the landing facilities at Mora, and Government have been urged to take action for the building of a deep sea pier or jetty to obviate the present inconveniences experienced by passengers landing at that port. The existing jetty at Mora is such that even at high water it cannot be approached by the ferry steamers that ply between that place and Bombay, while at low water passengers have to wade or be carried ashore. The possibility of improving these conditions has been the subject of careful consideration for some years past and various projects have been suggested by expert engineers. Government had postponed the work from time to time mainly on account of financial stringency. The Landing and Wharfage Fund Committee recently prepared a scheme and agreed to pay for it from the accumulated balances of the Landing and Wharfage Fund and the Southern Group Ports Fund. After full investigation Government have accorded their approval to the scheme for a boat pier at Mora (Uran), District Kolaba. The contract for the construction of the pier at an estimated cost of Rs. 1,36,000 was placed with Messrs. Mawson Vernon, but as the firm went into liquidation, the question of giving the contract to another firm is under the consideration of the Landing and Wharfage Fund Committee.

XVIII—REGISTRATION DEPARTMENT

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XVIII—REGISTRATION DEPARTMENT

I. Scope and functions of the department.

1. The department makes provision for securing that parties to documents admit their execution before a Government officer and for tracing and supplying copies of old documents so registered. The Indian Registration Act (XVI of 1908) requires that the registering officer of Government, the local sub-registrar, should register the documents by copying them in the appropriate book or by filing copies of them and make an endorsement of the fact of registration on the original documents, which are then returned to the parties concerned. This service is done on payment of a small fee levied in accordance with a scale fixed by Government. Registration of some documents is voluntary and of others compulsory. The former class is comparatively unimportant, the fee receipts from it being about half a lakh of rupees against ten or eleven lakhs of rupees from compulsory registrations. The public may inspect registration books and copies of registered documents are given on payment of fees prescribed by Government. If a sub-registrar is not satisfied that a document has been properly executed or if he finds that it does not conform with any other requirements of the Registration Act he may refuse to admit it to registration, in which case he has to make an endorsement to that effect on the document presented to him and record reasons for his decision. In such cases, if a party feels aggrieved, he can appeal to the district registrar and, if dissatisfied with his order, resort to a civil court to obtain an order for the reversal of the decision. If the court makes such an order, the sub-registrar admits the document to registration.

II. Relations with legislature, Government and secretariat.

2. "Registration of deeds and documents" is a provincial subject, subject to legislation by the Indian legislature: *vide* item 21 in part II of schedule I to the devolution rules. The Indian Registration Act, 1908, continues accordingly as an Act of the central legislature. The local legislature has, however, authority under section 80-A of the Government of India Act to amend the Registration Act in its application to the presidency so far as it does not affect the general trade and commerce or any other central subject.

The subject is a transferred one: *vide* item 13 in schedule II to the devolution rules. It is in the portfolio of the honourable minister for education and is dealt with in the revenue department of the secretariat.

III. Inspector general of registration.

3. The inspector general of registration is the head of the department. Up to 31st March 1932 the post was amalgamated with that of settlement commissioner and director of land records, but from that date the post of settlement commissioner was placed in abeyance and the inspector generalship of registration was amalgamated with the commissionership of excise. The inspector general of registration is also registrar general of births, deaths and marriages. He is assisted by an officer called head assistant, who looks to the routine work of his office. Registration involves the classification and scrutiny of documents. Moreover nearly all documents dealing with land are compulsorily registerable and the changes which they record in the possession or ownership of land have to be recorded in the village records. They are also one of the principal materials upon which revision of settlements are based. The combination of the functions of settlement commissioner and director of land records and of inspector general of registration in one person was thus a logical arrangement. There is no corresponding affinity between the duties of the latter post and that of excise commissioner. If efficiency were the sole consideration, the two posts would be held by different persons. But the charge of the registration

department would not occupy the whole time of an officer and present arrangements will in all probability continue while the post of settlement commissioner is in abeyance.

It is necessary to have registration controlled by one authority to maintain uniformity of practice and to deal with matters of general policy.

IV. District registrars.

4. The actual registration of documents is done by sub-registrars, whose area of authority is usually a taluka. The sub-registrars are grouped under a district registrar. The collectors, including the deputy commissioner, Upper Sind Frontier, are always the district registrars. The district registrar hears appeals against sub-registrars' orders, and inspects the offices of sub-registrars on tour. He is directly under the inspector general of registration for the purposes of the department. There are also divisional inspectors of registration, whose sole duty is to inspect sub-registrars' offices.

The district registrar maintains control, supervision, and discipline over the sub-registrars in his district, and in his inspection, looks to the administrative side of the sub-registrar's work. The inspector of registration looks to the technical side by inspecting the documents registered by the sub-registrar so far as the correctness of the procedure, the proper levy of stamp duty and registration fee, etc., is concerned.

The district registrar now does no inspection of documents and registrations but merely inspects the sub-registrars' Offices.

Inspectors of registration forward their inspection memoranda with the instructions proposed thereon to the inspector general. The inspector general scrutinises the inspection memoranda, issues final orders thereon, and then sends them to the district registrars, who are thus kept in touch with the work of the sub-registrars.

The Royal Commission on the Public Services recommended that there should be whole-time district registrars everywhere, as in Madras. Though it may appear in theory to be better that registration work should be done by an officer who is a specialist in registration, the multiplication of specialist officers whose interests are limited to a single subject is an evil to be avoided. Registration

is largely a matter of procedure and any competent sub-registrar can do the greater part of the work without help and when he wants help he can ask for it from his superior officers. What is important is that the sub-registrar should work under the eye of an officer in close touch with the public, whose sense of proportion is preserved by coming into contact with all sides of public activity and who will appreciate justly how much the sub-registrar should do for the public and what he should not be expected to do. The collector is the only district officer who fulfils this requirement and who can perform this duty conveniently with his other work. A further objection to the commission's proposal is the expense involved. It is obviously impossible to have a separate district registrar for each district without great expenditure and there would not be enough work in one district for one whole-time officer. If one officer were appointed for two or three districts he would cease to be a district registrar and consequently lose the advantage of being in constant touch with one district.

V. Object of inspection.

5. The present system is based on the view that for the proper protection of the registering public all documents accepted for registration should be subjected to a second scrutiny, so that all mistakes which it is possible to correct may be corrected and if the registration is invalid the parties may be informed, so that they may be able to re-register the document if they so wish. As examples of serious mistakes which have to be guarded against, the following may be cited :—

(1) Section 21 of the Registration Act requires a description of property to which a deed relates sufficient to identify it.

If this is lacking, registration has to be refused.

(2) Section 33 of the Registration Act lays down that a power-of-attorney executed and authenticated by particular officers mentioned therein should alone be recognized for registration purposes. A power-of-attorney registered but not duly authenticated is not recognizable.

If a document is registered on the authority of such a power-of-attorney the registration is invalid.

(3) Sections 25 and 34 (proviso) direct that in cases of delay (in presentation and appearance of executant) only the district registrar can order registration on levy of fines. Documents are sometimes inadvertently accepted by sub-registrars without district registrars' sanction.

(4) Section 29 (2) requires that a copy of a decree may be presented for registration in the office of the sub-registrar in whose sub-district the original decree is made. In some cases it is presented in other offices than the section directs.

The sub-registrar ought not to accept the copy for registration. If he does and the document is registered, the registration is invalid.

(5) Section 40 (i) directs that a "will" sought to be registered should be presented for registration by the testator. In some cases it is presented by the person claiming under it.

The registration is invalid in such cases.

VI. Inspectors of registration.

6. The divisions of the five inspectors of registration are constituted on the language basis. There are one each for the Sindhi, Gujarathi and Kanarese areas and two for the Marathi area, in which the work is approximately double what it is in any of the other language divisions.

In accordance with the recommendations of the Reorganisation Committee, all attempt to inspect and check all documents and registrations has been abandoned. The district registrars now do no inspection of documents and their registration clerks have been dispensed with. At the same time there has been no increase in the number of inspectors.

VII. Sub-registrars.

7. The principal duties of a sub-registrar are :—

(1) to accept a document for registration after being satisfied personally—

(*a*) that it is presented by a person entitled to present it,

(*b*) that a person present is the person who executed the document.

(*c*) that he acknowledges that he did execute it;

(2) to check the stamp duty and see that the document is properly stamped;

(3) to assess registration fees;

(4) to make the necessary endorsements on the documents; and

(5) to copy out the document in the register.

Under the Registration Act the stamp duty has to be verified and registration and copying fee assessed and recovered before registration can be proceeded with. It is this which makes the process a complicated one.

The cadre of sub-registrars consist of a number of grades, with time-scales of pay within the grades. The top grade is filled entirely by selection. Sub-registrars are recruited by selection, usually of graduates. Sub-registrars are not transferred beyond their language divisions. The grades and scales of pay are as follows:—

Grade of Sub-Registrars.	Number of posts.	Scale of pay.	
		For existing incumbents.	For new entrants (i.e. from 1st April 1932).
		Rs.	Rs.
Bombay city.			
Sub-registrar, Bombay	1	360—30—600	320—20—480
Joint sub-registrar, Bombay ..	1	330—30—450	300—20—380
Mofussil.			
First grade	4	220—10—300	200—15/2—260
Second grade	36	125—15/2—200	100—15/2—175
Third grade	79	80—5—120	70—7/2—98
Fourth grade	90	50—3—80	50—2—70
Fifth grade	18	50—2—70	50—2—66

In small towns and talukas with scattered villages and a small population the work is sometimes insufficient for one sub-registrar, yet the public have to be provided with a means of registration. In such cases various methods have been tried, e.g., the appointment of aval karkuns as part-time sub-registrars. This has proved a failure, as the registration work is done when the revenue work permits and is seldom done well. Another method is to make the sub-registrar visit certain places in such scantily populated areas on certain days. Although this method is a workable one, it is costly in time and money.

There are now 210 sub-registrars' offices. Advantage has been taken of recent improvements in communications to amalgamate offices where work was not full-time. This process has gone somewhat further than is advisable in public interests and the Reorganisation Committee suggest that it should go no further.

Sub-registrars have to send extracts of documents which involve alteration of title to property to talatis and city survey officers for the correction of records of rights and property registers. Their offices are usually located in the mamlatdars' offices. In special cases they attend at private houses to register documents.

Sub-registrars are in addition registrars of Parsee marriages, marriage registrars under the Special Marriages Act of 1872 and in some cases also notaries public.

VIII. Photo-copying.

8. A large reduction of sub-registrars' clerks has been made possible by the introduction of photographic copying. This system is now recognised generally as much superior to hand copying. It was first started in the registration department in 1921. Until 1927 copying was done by the blue print process, but from 1st August 1927 a new and much improved system known as the " film process," was introduced and has been in use ever since. At present the system is applied to 45 offices including most of the larger ones. Photo-copying has not been extended to offices which are so small that the sub-registrar can only be fully employed if he does his own copying since the entire cost of the photo-copying without any countervailing saving would thereby be incurred. There

are 68 such offices. The staff of the Government photo-registry consists of 42 men divided into two units working two cameras and controlled by a supervisor. The staff is fully engaged.

IX. Registration fees.

9. The registration system greatly increases the security of contracts, property rights and trade and the value of this security is out of all proportion greater than the cost of maintaining the system. An elaborately organised system is maintained for these purposes and it is not possible to equate the price of registration in the individual case either to the cost of doing the work or to the value of the service rendered. Only the total costs and the total recoveries can be equated. The fees charged must therefore be arbitrary and be based on consideration of the value of services rendered, not on any theory of costs. The main cost to the public is not the registration fee but the value of the time lost in going to the sub-registrar's office and waiting there and the trouble and expense of arranging to have the parties and identifying witness or witnesses present there.

The present system of fees is based, apart from charging for the cost of copying each document according to its length, on the principle of levying a rate for the insurance or increased security given. This rate is calculated according to the value of the contract or settlement.

The policy of Government used to be to levy fees on such a scale as barely to cover the actual cost of the department and fees were not raised between 1883 and 1931. They were enhanced in 1931 and have again been increased this year in accordance with the recommendation of the Reorganisation Committee.

Even before the recent enhancement there was a considerable net revenue derived from the working of the department. The total number of documents registered is about three lakhs a year, the total value of transactions about Rs. 28 crores and the total cost of the registration system, apart from copying, about Rs. 5 lakhs. The fee receipts were, before the most recent enhancement of fees, over Rs. 8 lakhs. The cost of copying is about Rs. 1,68,000 and the recoveries from copying were about Rs. 2,68,000. The attached statement shows the

rates of registration fee before and after the recent enhancements :—

Values.	Scale before increase in 1931.	Scale after increase in 1931.	Scale as now sanctioned from 1st March 1933.
1	2	3	4
Values not exceeding—			
Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
50	0 4 0	0 8 0	0 12 0
100	0 8 0	0 12 0	1 2 0
200	1 0 0	1 4 0	1 14 0
400	2 0 0	2 0 0	3 0 0
600	3 0 0	3 0 0	4 8 0
1,000	4 0 0	4 0 0	6 0 0
2,000	6 0 0	6 0 0	9 0 0
3,000	8 0 0	8 0 0	12 0 0
4,000	10 0 0	10 0 0	15 0 0
5,000	12 0 0	12 0 0	18 0 0
6,000	14 0 0	14 0 0	20 0 0
7,000	14 0 0	14 0 0	22 0 0
8,000	16 0 0	16 0 0	24 0 0
9,000	16 0 0	16 0 0	26 0 0
10,000	16 0 0	16 0 0	28 0 0
11,000	18 0 0	17 0 0	30 0 0
12,000	18 0 0	18 0 0	32 0 0
13,000	18 0 0	19 0 0	34 0 0
14,000	18 0 0	20 0 0	36 0 0
15,000	18 0 0	21 0 0	38 0 0
16,000	20 0 0	22 0 0	40 0 0
17,000	20 0 0	23 0 0	42 0 0
18,000	20 0 0	24 0 0	44 0 0
19,000	20 0 0	25 0 0	46 0 0
20,000	20 0 0	26 0 0	48 0 0
For every additional Rs. 1,000 or part thereof ..	1 0 0	1 0 0	2 0 0

Note.—Government after carefully considering the Reorganisation Committee's recommendation to cancel the exemption from the payment of stamp duty and registration fee enjoyed by the co-operative societies decided to reject it.

X. Organisation in other provinces.

10. In the Punjab the deputy commissioners are ex-officio registrars in all districts. At certain district head-quarters sub-registrars have been appointed joint registrars under section 7 (2) of the Registration Act and draw ten per cent. of the fees of their offices. Registrations are made in the Punjab by both an official and a non-official agency. The official agency consists of officers of and above the rank of naib tahsildar, who do registration work as part of their ordinary duties without extra remuneration. The non-official agency consists of 60 non-official sub-registrars, of whom seven are honorary. Honorary sub-registrars receive one-third of the first Rs. 50 and one-sixth of the remainder of the fee income of their offices. The other non-official registrars are paid a fixed salary of Rs. 30 per mensem and in addition draw ten per cent. of their fee income. Some of the non-official sub-registrars are also honorary magistrates and in that case their registration work is restricted to certain fixed hours of the day.

In the United Provinces registration offices of minor importance are administered by tahsildars in addition to their revenue duties. The province is divided into registration districts which in some cases comprise more than one revenue district. The district judge functions as district registrar, inspects registration offices and passes orders under the general control of the inspector general on any technical questions which arise.

In the Central Provinces, the work of district registrars is usually done by treasury officers in addition to their revenue and magisterial duties without any extra remuneration.

In Madras, the registration department has an advisory committee with the minister as president, five members of the legislative council as members and the law secretary as the secretary. The post of inspector general of registration in that presidency is not combined with any other post. There are whole-time district registrars who supervise the work of sub-registrars and also do original work in a limited area. All district registrars are *ex-officio* assistant registrars of joint stock companies within their jurisdiction. All registering officers are registrars of births and deaths, many do sub-treasury work in addition, while several of them exercise

magisterial powers of the third class for the trial of offences punishable under the local laws.

The Inspector general of registration is, in Bihar and Orissa, also commissioner of salt and excise and in the Central Provinces commissioner of excise and superintendent of stamps.

XI. Improvements made during last five years.

11. A new grade of sub-registrars (V grade) on Rs. 50–2–70 was introduced for promoting deserving sub-registry clerks with long service. Ordinarily they are not eligible for being appointed as sub-registrars.

The establishment of the sub-registrar of Bombay was reorganised by replacing the attached sub-registrars by clerks and by giving them the same Bombay scale of pay sanctioned for clerks in other Government offices in Bombay. It secured a substantial saving in cost to Government.

The photographic system received recognition in law by the passing of the Bombay Act XVII of 1930. Twenty-nine offices were brought under photography during the five years.

The duties of the inspector general of registration were transferred to the commissioner of excise.

Inspection by district registrars was discontinued and posts of 17 registration clerks were abolished. The Reorganisation Committee accepted the inspector general's suggestion to recommend this.

As a measure of retrenchment many sub-registry offices were abolished. Small offices were closed and the areas amalgamated with those of the adjoining offices. In some cases, the sub-registrars pay periodical visits to the town in which the office used to be.

Registration fees were increased.

XII. Questions which have been partly considered or dealt with.

12. Revised proposals for the pay of the new entrants have been considered by Government who have sanctioned part of these proposals. The remainder are undergoing further examination.

XIII. Questions to be taken up in the near future.

13. There are no questions outstanding to be taken up in the near future.

APPENDIX.

Receipts and expenditure of the department.

The following statement shows the receipts and expenditure (in round figures) in the registration department from the year 1904-05 :—

Year.	Receipts.	Expenditure.
	Rs.	Rs.
1904-05	5,96,000	2,85,000
1905-06	6,74,000	3,09,000
1906-07	6,55,000	3,12,000
1907-08	6,95,000	3,26,000
1908-09	7,03,000	3,52,000
1909-10	7,15,000	3,62,000
1910-11	7,55,000	3,78,000
1911-12	7,43,000	3,80,000
1912-13	7,82,000	3,72,000
1913-14	8,28,000	3,70,000
1914-15	7,54,000	3,71,000
1915-16	7,96,000	3,72,000
1916-17	8,37,000	3,72,000
1917-18	9,25,000	3,87,000
1918-19	11,42,000	4,85,000
1919-20	13,38,000	5,35,000
1920-21	14,57,000	6,08,000
1921-22	13,27,000	6,67,000
1922-23	13,02,000	7,41,000
1923-24	12,87,000	6,63,000
1924-25	12,49,000	6,75,000
1925-26	12,78,000	6,63,000
1926-27	12,03,000	6,67,000
1927-28	11,82,000	6,53,000
1928-29	11,75,000	6,55,000
1929-30	12,33,000	6,64,000
1930-31	10,89,000	6,38,000
1931-32	11,36,000	6,29,000
1932-33	12,54,000	6,48,000
1933-34 (revised estimate)	16,00,000	6,28,000

REMARKS.—The increase of receipts which culminated in the year 1920-21 is attributed to (1) speculation, (2) the growth of business activities and investment of large profits derived from trade, and (3) the extraordinary rise in the value of immoveable property. The causes of the subsequent decrease of receipts are (1) the reaction following a period of abnormal speculative activity, (2) a continued decline in business activity and in the trade profits available for investment in land, and (3) the heavy fall in the value of land especially in the neighbourhood of large cities.

The increase of expenditure which culminated in the year 1922-23 is mainly due to the revision of the pay of the establishment. The subsequent decrease has been effected by the practice of stringent economy and retrenchment. The extent of the retrenchment since the year 1923-24 may be gauged from the following figures:—

Year.	Number of sub-registrars.	Number of karkuns.	Remarks.
1923-24 ..	306	297	
1932-33 ..	239*	201*	*Inclusive of reductions sanctioned in 1931-32 and 1932-33 and being effected as vacancies occur.
Difference ..	67	96	

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1909-10	7,15,000	3,62,000
1910-11	7,55,000	3,78,000
1911-12	7,43,000	3,80,000
1912-13	7,82,000	3,72,000
1913-14	8,28,000	3,70,000
1914-15	7,54,000	3,71,000
1915-16	7,96,000	3,72,000
1916-17	8,37,000	3,72,000
1917-18	9,25,000	3,87,000
1918-19	11,42,000	4,85,000
1919-20	13,38,000	5,35,000
1920-21	14,57,000	6,08,000
1921-22	13,27,000	6,67,000
1922-23	13,02,000	7,41,000
1923-24	12,87,000	6,63,000
1924-25	12,49,000	6,75,000
1925-26	12,78,000	6,63,000
1926-27	12,03,000	6,67,000
1927-28	11,82,000	6,53,000
1928-29	11,75,000	6,55,000
1929-30	12,33,000	6,64,000
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XIX—LOCAL SELF-GOVERNMENT

I. Development up to the present day.

Scope of the review.

1. This review summarises the present position of local self-governing bodies in the presidency in order to estimate how far they have succeeded in attaining the objects for which they were instituted, to indicate the difficulties in the way of the realisation of those objects, to suggest, where possible, means by which these difficulties can be avoided or the machinery otherwise improved and to obtain views and suggestions from those interested in the problem.

Local self-governing bodies include municipalities, local boards, village panchayats, notified area committees, sanitary boards and committees, cantonments, port trusts and the Bombay Improvement Trust. Of these, the last three represent types of specialised administration, and are not discussed in this review. The municipal administration of the city of Bombay also has always been on an entirely different plane from that of other cities in the presidency : and is fully dealt with in Mr. R. P. Masani's recent book " Evolution of Local Self-Government in Bombay." The relations of the Bombay Municipality with Government are therefore only touched upon for the purpose of a comparison with those existing between Government and other municipalities.

Pre-British period.

2. Several writers on Indian history have been at pains to show that it is incorrect to conclude " that the system of local self-government in India is an exotic grafted on the patriarchal system of Indian administration." Up to the 7th century A.D. there existed in various parts of India elaborate self-governing organisations, the powers of which the rulers of those days upheld and confirmed. In certain cases there is evidence that even the elective principle was well-known if not in common use. But there is no reason to believe that any such organisation ever attempted to combine rural areas for

the common good. The village or town community was economically and socially self-contained and self-supporting and was itself responsible only for what was within the limits of its own area. Such through roads as existed were built on that principle, save when the power of an overlord compelled otherwise. In any case when the British assumed territorial sovereignty in India all traces of such popular institutions had disappeared, at least from western India, with the exception of the panchayats which existed in the Peshwa's dominions. Panchayats however were never organised and had no direct relations with the Government of the time. Their concern was entirely with internal matters and they have continued to exist as a means of voicing village opinion principally in caste and social questions. The attempt to turn them to account as a link in the general scheme of Government is a recent development and will be described in this review.

Early British policy.

3. It was not the intention of the British Government to destroy such local organisations. In 1861 Mr. Laing, financial member of the viceregal council, stated "it is of the first importance to break through the habit of keeping everything in dependence on Calcutta and to teach people not to look to Government for things which they can do far better themselves." This principle was reaffirmed in the following resolution of the Government of India in 1864 :—

> "When the people see that they have the management of their own affairs in their own hands, they will feel confident to do things which they would not have accepted from Government. When the field is open, the more advanced members of the community naturally take the lead. The municipal feeling is deeply rooted in them. The village communities, each of which is a little republic, are the most useful of Indian institutions. They maintained the framework of society while successive swarms of invaders swept over the country. In the cities also the people cluster in their wards, trade guilds and panchayats and show much capacity for corporate action. Holding the position we do in India, every view of duty and policy should induce us to leave as much as possible of the business of the country to be done by the people by means of funds raised by themselves and to confine ourselves to doing those things which must be done by Government and to influencing and directing in a general way all the movements of the social machine."

In 1870 concurrently with the inauguration of provincial responsibility the desirability of encouraging the growth of local boards was emphasised and in 1882 Lord Ripon set forth in a resolution "the general mode in which he would wish to see effect being given to the principle of local self-government throughout British India, outside of the presidency towns." The principles enunciated by the Government of India were intended to apply to all forms of local self-government, whether urban or rural. In tracing the manner in which they were applied in the Bombay presidency it is however, preferable to deal separately with each class.

URBAN DEVELOPMENT UP TO 1884.

4. In all countries the development of urban self-government has been an easier problem than that of self-government in rural areas. The unit is fixed automatically and there is less difficulty in making the individual citizen realise that attempts are being made to work for a common goal and in bringing home to him the needs of his neighbours. In India organisation by individual towns and villages was traditional and in Bombay a beginning had already been made before the British Crown assumed responsibility for the administration. The first piece of muncipal legislation—a regulation applying to the island of Bombay only—was passed in 1812. Act XXVI of 1850 provided for the establishment of a municipal agency in any town or suburb on the application of its residents. This agency was that of a magistrate assisted by a committee of members appointed and removable from office by Government. A subsequent Act of 1862 prescribed that the number of ex-officio members of the committee should not exceed one-third of the total number of non-official members. Act VI of 1873 gave the Governor in Council the power to direct that the whole or any part of the non-official commissioners should be appointed by election; but it was not till 1882 that the elective element was actually introduced in respect of one-half of the total number of members in the ten city municipalities then existing. A further advance was made by Act II of 1884 in response to Lord Ripon's resolution of May, 1882. By this all municipalities were given the right of electing half their members and the number of nominated members who could be salaried servants of Government was reduced.

Rural development up to 1884.

5. The origin of local self-government in the rural areas is traceable back to 1860, when it was the practice in certain districts to levy a cess of one anna on each rupee of land revenue for local purposes, such as the establishment of schools and dispensaries and the construction of roads. This levy was not at first sanctioned by any statutory enactment, but after the pronouncement by Mr. Laing already referred to, steps were taken to regularise the procedure. Orders were issued for the establishment of local funds consisting of (1) the local cess on land; (2) all toll and ferry receipts not specially excepted; (3) cattle pound funds; and (4) such other items as Government might from time to time direct to be added. One-third of the cess was to be used for education and the remaining two-thirds for roads, repairs to village wells and buildings, the planting of roadside trees and other objects of public utility. By Act III of 1869 legislative sanction was given to the establishment of district local funds committees. The members of these committees were at first all appointed by Government, though half of them were non-officials. They were all of them removable from office by Government. There was no provision in the Act for the formation of taluka committees, but actually such committees were established for consultative and advisory purposes. The members of these committees were at first all nominated with the exception of one inamdar who as elected. As a result of Lord Ripon's resolution of May 1882 the Bombay Local Boards Act of 1884 was enacted. It provided that there should be one local board for each district and also one for each taluka as constituted under the Bombay Land Revenue Code, 1879, or for such area consisting of one or more such talukas or portions of talukas as the Governor in Council should deem fit. Municipal districts and cantonments were excluded from the jurisdiction of these boards, which were made to consist both of elected and nominated members with the proviso that the number of elected members should not be less than one-half of the whole board exclusive of the president and that not more than one-half of the nominated members should be salaried servants of Government. Provision was made for an electorate for the purpose of electing certain members of the taluka local boards, the principal qualification being the holding of land assessed at Rs. 48 per annum, but there was no direct election to district local boards. Ordinarily the collector of the district was the ex-officio president of the

latter and the sub-divisional officer or mamlatdar of the former, while the vice-president was elected.

Subsequent policy up to the present time.

6. The results of the changes initiated at this time were reviewed a generation later by the central Government in two resolutions dated April 1915 and May 1918. The first of these claimed that substantial progress had been achieved particularly in the towns and laid down broad principles for further advance. The chief of these, as far as municipalities and local boards were concerned, were a reduction of the nominated membership to a number sufficient to "provide for the due representation of minorities and official experience," the substitution of non-official for official chairman, the strengthening of the executive and an endorsement of the opinion of the Royal Commission on Decentralisation, 1909, that municipal bodies could attain adequate financial responsibility only by the exercise of greater powers and by having to bear the consequences of their own errors. This resolution also endorsed the opinion of the commission that steps should be taken to encourage the establishment of panchayats in villages where the conditions were favourable and laid down certain general principles, which will be referred to in detail later, as most likely to produce the object desired. The resolution of 1918, which was issued after the announcement in the House of Commons on the 20th of August, 1917, that the policy of His Majesty's Government in respect of the future of India was the gradual development of self-governing institutions with a view to the progressive realisation of responsible Government in India as an integral part of the British Empire, pointed out that "the domain of urban and rural self-government was the great training ground from which political progress and a sense of responsibility have taken their start." It supplemented the resolution of 1915 and stated as follows:—

> "The object of local self-government being to train people in the management of their own local affairs, political education of this sort must in the main take precedence over all considerations of departmental efficiency. It follows from this that the local bodies should be as representative as possible of the people whose affairs they are called on to administer, that their authority in the matters entrusted to them should be real and not nominal, and that

they should not be subjected to unnecessary control but should learn by making mistakes and profiting by them. The control of Government over local bodies is at present exercised both from within and from without and it is mainly by the substitution of outside for inside control and by the reduction of outside control, so far as compatible with safety, that progress in the desired direction will be achieved."

Until the reforms local self-government in India belonged to the decentralised type and resembled the French system. The district officer was an officer of the Government operating in a particular district and as chairman of one or more municipalities and of the district local board he was carrying out the will of Government. He was just as much the agent of Government as when acting as revenue officer or district magistrate and local administration was but one of his activities. Whatever may have been the intention of Lord Ripon in 1882, it is quite clear that by custom or force of habit there was apathy and lack of desire on the part of those elected to local bodies to assume responsibilities, and in the majority of districts local administration remained one of the functions of the district officer. In many towns the municipality continued to approve of the decisions of the official chairman and where the duties were entrusted to the vice-chairman the latter merely acted under the chairman's orders.

The foundation of the old system was thus the position of the district officer as president of the municipality and the district local board. As head of the district his work extended to every corner of his chart and enabled him to keep in touch without any extra expenditure with the requirements of local board administration. He was not only the presiding member but actually the chief executive officer of the local body and he could and often did utilize his revenue officers for municipal and local board duties.

The most important of the changes effected in 1918 was the appointment of non-official presidents for local bodies. The position was that the non-official was to take the place of the district officer as presiding member, also without remuneration, and in his spare time was to be the chief executive officer with the meagre assistance of an under-paid chief officer. On the whole there was as a result a fall from the previous level of efficiency.

URBAN DEVELOPMENT AFTER 1884.

7. The Bombay District Municipal Act of 1901 gave Government power to permit any municipality to elect its own president and to increase the number of elected members by executive order. Under this power in 1908 it was laid down as a general rule that two-thirds of the members of district municipalities should be elected and also that municipalities should, except for special reasons, elect their own presidents. The chief object in retaining the system of appointing a percentage of members by nomination was to secure the representation of minorities and in 1917 the principle of communal representation through election was introduced for Muhammadans. In 1920 a further step in the direction of revising the constitution of municipalities was taken. All municipalities were granted the right to elect their own presidents, the total number of councillors was increased and the number of nominated councillors reduced to one-fifth. At the same time steps were taken to widen the franchise so that, whereas in 1919 only 167,000 out of a total population of 2,375,000 resident within municipal limits in the Bombay presidency, excluding Bombay city, were entitled to vote at municipal elections, the number rose by 1926 to 505,000. Thus the electorate which up to 1920 had represented only 7 per cent. of the municipal population had by 1926 come to represent nearly 20 per cent. In 1924 the disqualification of women to serve as municipal councillors was removed. By the Municipal Boroughs Act of 1925 communal representation was granted to Muhammadans and depressed classes in all municipal boroughs. This act provided a more elaborate system of administration for the larger municipal towns.

RURAL DEVELOPMENT AFTER 1884.

8. The position of local boards was reviewed in 1915 and it was found that the progress made by them had been disappointingly slow. Government accordingly appointed the Lawrence Committee to report what changes it was desirable to effect in the constitution of these boards "so as to bring about the infusion of a more vital and real spirit into the principle of local self-government." As a result of the recommendations of that committee certain changes were introduced. The number of nominated members was reduced to one-half of the number of elected members and in certain selected districts non-official presidents were appointed. In 1918

Mr. J. R. Martin, I.C.S., was placed on special duty to review the position of the local board administration of the presidency, and as a result of his recommendations the present Local Boards Act (No. VI of 1923) was passed. Under this Act the elective element was fixed at a minimum of three-fourths of the total number of members of each board and for the first time direct election to district local boards was allowed. The electoral qualification was reduced to the holding of land assessed at Rs. 32 in the case of district boards, except in three districts where for special reasons the qualification was fixed at Rs. 16, and Rs. 8 in the case of taluka local boards. As a result of this measure the number of the present electorate for district local boards is about 388,000 and for taluka local boards about 1,205,000, or, taking approximately 17 millions (17,450,212 is the latest figure available) as the number of the population concerned, about 2 per cent. and 7 per cent. respectively. It will be apparent that this system of franchise gives no privilege or responsibility to the large number of persons who are not payers of local fund cess. At the same time steps were taken for securing special representation for Muhammadans and for the removal of the disqualification of women from membership of local boards. Salaried servants of Government were declared ineligible for the posts of president and vice-president. The board was made a body corporate with perpetual succession and a common seal and a standing committee instituted to exercise the powers of the board subject to any prescribed limitations.

Present position.

9. At the present time, excluding the city of Bombay, there are in the presidency 154 municipalities operating under the two different Acts and 28 district and 222 taluka local boards operating under the Local Boards Act of 1923 and it is pertinent to enquire whether the present constitution of these bodies is sufficiently liberal and their powers are sufficiently wide to foster a proper sense of responsibility. The policy laid down by the Government of India was, as stated above, that the membership of local bodies should be representative, their authority real rather than nominal and such control as was necessary external rather than internal. How far these objects have been achieved can be judged by an examination of the present constitution and powers of the local bodies, the degree of control exercised over them by Government and the growth of public interest in their activities.

II. Municipal administration.

MUNICIPAL BOROUGHS AND MUNICIPALITIES.

10. Among municipalities, which as we have seen were until 1882 wholly nominated, " boroughs " now elect at least four-fifths of their members and official members average little more than one per municipality. Though sometimes the elimination of even this amount of nomination is demanded, the present practice is in accordance with the finding of the Government of India on the report of the Decentralization Committee of 1915 that nomination is justified as providing for the representation of minorities and official experience. From the point of view of Government it is advantageous for local officials to obtain experience of the inner working of municipalities and the problems with which they are confronted.

Large minorities are now usually provided for by special communal wards, as in the case of the provincial and central legislatures. This system, however, cannot be applied to small minorities. Nomination, therefore, is available to rectify glaring omissions and it has also been found that persons of position and experience are sometimes loth to undergo the trouble, expense and inconvenience of elections. In England this difficulty is met by the co-option of aldermen; but a modified form of co-option which was introduced into the Bombay corporation was not a success. The co-opted seats were canvassed on party or communal lines and at the instance of a non official member of the legislature and with the support of the corporation this experiment in co-option was terminated by Bombay Act XVII of 1931. Under the present system the municipal body is usually fairly representative of the population and there appears no immediate need for a change. The electorate of about 20 per cent. compares with a general percentage of literacy in the presidency of about 15 per cent.

The Municipal Boroughs Act, 1925, prescribed that the borough should consist of elected and nominated councillors, of whom not less than four-fifths should be elected, and that of the nominated members not more than one-half should be Government servants. The Bombay District Municipal Act, 1901, prescribed that the elected councillors should not be less than one-half of the whole including the president and that not more than one-half of the nominated councillors should be Government servants. The number of councillors

is determined by Government and their term of office is three years. Government nominate councillors to municipal boroughs and commissioners to district municipalities.

Municipal taxation.

11. The Scheduled Taxes Rules authorise the legislative council to make any law imposing or authorising any local authority to impose for their own purposes any of the undermentioned taxes :—

(*i*) a toll ;
(*ii*) a tax on land or land values ;
(*iii*) a tax on buildings ;
(*iv*) a tax on vehicles or boats ;
(*v*) a tax on animals ;
(*vi*) a tax on menials and domestic servants ;
(*vii*) an octroi ;
(*viii*) a terminal tax ;
(*ix*) a tax on trades, professions and callings ;
(*x*) a tax on private markets ; and
(*xi*) a tax imposed in return for services rendered, such as :
  (*a*) a water rate ;
  (*b*) a lighting rate ;
  (*c*) a scavenging, sanitary or sewage rate ;
  (*d*) a drainage tax ; and
  (*e*) fees for the use of markets and other public conveniences.

In addition to the above, a local authority can impose a tax when the right to do so is conferred upon it by any law which is in force. For example, a municipal borough can impose a special educational tax. A proposal to impose a tax after it has been approved by the municipality or municipal borough requires the sanction of Government or of the Commissioner. The principal sources of municipal revenue are octroi, terminal tax, house tax, land tax and general sanitary cess. Only six of the 25 municipalities in Sind have levied a house tax. A source of taxation which is not well developed is that of professions and trades. Though about 40 municipalities levied this tax in 1931–32 the revenue from it was negligible. It may be possible to increase receipts from this tax after

experience has been gained from its introduction, which is now under contemplation, in local board areas. The average incidence of taxation per head of population is Rs. 5-4-8 and that of income Rs. 7-5-8. An increasingly serious feature of municipal taxation is the late collection of taxes, municipal councillors themselves being very frequently among the defaulters. The Reorganisation Committee consider that, though mofussil municipalities are unlikely ever to become entirely independent of Government aid, they should be induced to raise a larger proportion of their revenues locally and therefore propose a reduction of Rs. 10 lakhs in the amount of Government grants. Government have decided to leave it to municipalities themselves to take steps to increase their revenues and not to interfere with their discretion in the matter.

Powers and duties of municipalities.

12. The Municipal Acts divide municipal functions into (1) obligatory, and (2) optional. The former include all matters essential to the health, safety, convenience and well-being of the population concerned, while the latter are matters which, though they are legitimate objects of local expenditure, are not considered absolutely essential. Local bodies in this presidency have no reason to complain of any undue curtailment of their spheres of activity. Their complaint is rather that their resources are inadequate to provide for their obligatory duties.

Education.

13. The Primary Education Act of 1923 resulted in the wholesale transfer of responsibility for primary education to local authorities. A municipality which is considered by Government suitable for the purpose is constituted a local authority for educational purposes and must entrust the management of its schools to a school board consisting of from seven to nine persons elected by its members not necessarily from among their own body and not more than three persons nominated by Government. The school boards perform the duties of the local authority in respect of primary education, subject to the general control of the local authority. The executive officer of the school board, called the "administrative officer", is appointed by the local authority with the sanction of Government. The control of the local authority is intended to be a general one, but the

formulation of elaborate rules defining the powers of the administrative officer, the school board and the local authority, has not prevented local authorities from interfering in minor matters of administration, with serious effects on the education imparted in schools. In the Bombay Municipality, where the relations between the corporation and the schools committee are similar to those existing between the local authority and the school board, the corporation have normally maintained a proper attitude in the interests of discipline and efficiency. It is anticipated that with more experience local authorities in the mofussil will restrict their attention to their proper sphere of laying down the general principles and refrain from interference in the details of the administration.

The incidence of Government grants for educational purposes was in 1931–32 as. 6-8 per head of population in municipal areas and as. 8-7 in those of local boards.

Medicine and public health.

14. Municipalities are required by executive orders of Government to set apart at least 4 per cent. of their expenditure for medical relief. They have been allowed to include within this sum the expenditure which some municipalities incur on ayurvedic dispensaries. Grants-in-aid, other than those contained in the portion of the pay and allowances of medical officers which Government defray, are rarely made to municipal dispensaries. But if any Government assistance is obtained, the municipal dispensary must comply with the grant-in-aid code and maintain its dispensary in good condition to the satisfaction of the surgeon-general.

The question of enacting a Public Health Act which would divide public health work into local sanitation, which would be the duty of local bodies, and general sanitation, which should be primarily a provincial concern, is discussed in the ' Review of the Public Health Department." Government lend free of charge to municipalities the services of their consulting surveyor for the purpose of town planning schemes. Considerable advantage has been taken of his services. Local bodies were until recently taking more and more advantage of the services of the superintending engineer, public health, for their water-supply and drainage projects; but in view of the state of their finances Government have now accepted the recommendation of the Reorganisation

Committee that the public health engineering department should be curtailed and consist merely of a consulting engineer with a small office establishment. In the past Government gave grants-in-aid, often equal to half of the cost of approved schemes and in almost all cases sufficient to cover the full establishment, tools and plant and other overhead charges. Not only have these concessions been withdrawn, but Government have accepted the recommendation of the Reorganisation Committee that the preparation of detailed plans and estimates and the supervision of the execution of works should be charged for. Experience will show what effect these changes will have upon the agency which local bodies employ in carrying out their water and drainage schemes.

Relations of the Bombay Municipality with Government.

15. The grants paid by the Government of Bombay to the Bombay Municipality consist of—

(1) A contribution of Rs. 1,44,000 under section 63 of the Bombay Abkari Act, 1878, in lieu of the one anna cess on excise revenue formerly paid to that body.

(2) A grant of Rs. 6,000 towards the cost of maintaining a lethal chamber.

(3) A grant of Rs. 25,000 in consideration of the removal of tolls from the Mahim and Kurla causeways.

(4) A grant-in-aid of primary education, under a scheme approved in 1919. The grant is subject to a maximum of Rs. 6,25,000 a year in respect of voluntary primary education and to a maximum of Rs. 2,70,000 a year in respect of compulsory education. The total grant in 1932-33, after being subjected to a twenty per cent. cut, amounted to Rs. 6,67,000.

Government on the other hand receive from the Bombay Municipality—

(1) A contribution of Rs. 25,000 a year towards the cost of the Prince of Wales Museum.

(2) A contribution of Rs. 4,14,500 a year towards the cost of upkeep of the Government hospitals in Bombay.

The contributions which Government receive from the municipality are both statutory, while, of the grants which

Government pay to the municipality, the grant-in-aid of voluntary primary education is wholly discretionary, the grant towards the maintenance of the lethal chamber is for services performed, the grant paid for the removal of tolls is subject to an undertaking and the grants paid in lieu of the cess on excise revenue and towards compulsory primary education are statutory.

The scheme of the Police Charges Act, 1907, and the financial relations of the Bombay Municipality and Government are described in the " Review of the Medical Department ". Since 1907 Government have exceeded the terms of the contract under which they took over the whole cost of the police in the city in return for the municipality taking over the cost of education and the expansion of medical relief etc., to the extent of their contribution to education and the improvements which they have made in the Government hospitals in Bombay city since that year.

In some matters in which mofussil municipalities receive financial assistance from Government the Bombay Municipality is entirely self-supporting. The public works department, the public health engineering department and the consulting surveyor's department are not called upon to assist or advise the Bombay Municipality because that body employs an adequate expert staff of its own. Vaccination, which in the mofussil is generally subject to Government direction and financial aid, is in Bombay city independent of Government assistance. The Bombay Municipality maintains its own leper asylum without Government contribution so far as its own inhabitants are concerned. In Bombay the Government and municipal hospital arrangements are entirely separate.

The rates and taxes paid by Government to the Bombay Municipality in respect of buildings owned by Government in Bombay city amount to Rs. 2,64,000 a year.

GOVERNMENT GRANTS TO MOFUSSIL MUNICIPALITIES.

16. The educational grants made by Government to all local bodies other than the Bombay Municipality amounted in 1932-33 to Rs. 1,00,70,000. The other grants given by Government to mofussil municipalities in that year were :

Grants to mofussil municipalities in 1932–33.

Budget head.	Description of grants.	Nature of the grant.	Total of the grants to municipalities in each division.	Rs. (thousands).
32–Medical ..	For dispensaries ..	Discretionary.	Northern division ..	15
			Central division ..	20
			Southern division ..	22
			Sind	20
				77
33–Public Health ..	On account of health officers and sanitary inspectors.	Do. ..	Central division ..	51
			Southern division ..	9
			Northern division ..	35
			Sind	16
				1,11
			Less 10 per cent. cut ..	11
				1,00
Do. ..	In connection with a scheme for pay of vaccinators.	Do. ..	(Includes grants to local boards.)	24
Do. ..	For works executed through the agency of the public works department (rebate charges).	Do. ..	....	11
Do. ..	For establishment, tools and plant charges in the case of works financed entirely by local bodies.	Do. ..	Central division ..	58
			Southern division ..	2
				60
Do. ..	To the Poona city municipality at 50 per cent. of cost on account of Poona Drainage Scheme, 1st section.	Do. ..	....	96
47–Miscellaneous ..	To Satara Suburban municipality in lieu of grazing proceeds of certain Government lands assigned to it.	Do. ..	....	2
	To Poona Suburban municipality on account of the electric lighting of the Ganeshkhind Road.	Do. ..	....	0·5
	To the Mahableshwar municipality for Mahableshwar Station Fund.	Do. ..	....	3
41–Civil Works ..	To Mahableshwar municipality for upkeep of certain roads and roads outside municipal limits.	Do. ..	....	0·5
	Grant to Ahmedabad municipality for the metalling of roads between the railway station and Shahibag.	Do. ..	....	1·5

Relations of mofussil municipalities with Government.

17. The following statement shows the position of mofussil municipalities *vis-a-vis* the Government departments :—

Duty.	By what agency executed.	Financial assistance given by Government.	Other assistance given by Government.
(a) Obligatory.			
1. Lighting, cleansing and watering public streets and places. 2. Cleansing sewers, removing noxious vegetation and abating public nuisances. 3. Extinguishing fires and protecting life and property when fires occur. 4. Constructing, altering and maintaining public streets, etc., markets, slaughter-houses, drains, sewers, etc. 5. Obtaining a sufficient supply of drinking water.	By the municipal staff.	Two-thirds of the pay of a health officer and half of the pay and allowances of sanitary inspectors. Government render assistance for sanitary projects by granting loans at rates of interest which are often lower than those at which a municipality could borrow itself. The period for the repayment of loans is extended by Government up to 50 years according to the life of the project.	The public health engineering department assists local bodies in preparing and checking projects for water-works and drainage, preparing estimates and also giving technical advice after the request of the local body has been sanctioned by the Sanitary Board. Though preparation of estimates will be charged for, the giving of advice will not be charged for. The public health department gives advice free to local bodies. Land required by municipalities for their improvement schemes is, if necessary, acquired compulsorily by the revenue department of Govt. at the cost of the municipality.
6. Public vaccination.		No exact proportion is laid down in which the expenditure is divided between municipalities and Govt. But Govt. have undertaken to bear the cost of revision of pay of vaccinators and to make a contribution of Rs. 5 per mensem per candidate vaccinator provided the local body gives to the candidate vaccinator a pay of Rs. 20—1—25 per mensem. Govt. bear the cost of vaccinators' pensions.	

Duty.	By what agency executed.	Financial assistance given by Government.	Other assistance given by Government.
(a) Obligatory—contd.			
7. Establishing and maintaining public hospitals and dispensaries and providing public medical relief.	Dispensaries are generally in charge of Subordinate Medical Service officers lent by Government.	Government give annual grants for maintenance and non-recurring grants for the construction of new dispensary buildings. The amount of the annual grant is not to exceed one-half the net cost of maintenance of a dispensary as approved by the commissioner and surgeon-general and arrived at after deducting private donations or endowments from the total expenditure, or one-third of the actual expenditure of a dispensary, whichever is less. The grant for the construction of a dispensary building is not to exceed 50 per cent. of the net cost arrived at after deducting the amounts of private donations received by the local body concerned. The amount of the annual grant is subject to revision every five years.	The cost of maintenance is to include a contribution of Rs. 200 per mensem on account of a B. M. S. officer or Rs. 90 per mensem on account of a S. M. S. officer, as the case may be, if it is intended to place the dispensary in charge of a Government medical officer. The balance of the medical officer's pay and allowances and the leave and pension contribution on their account is borne by Government. The first supply of all necessary surgical and other instruments for a dispensary is issued free from the Government medical stores. Medicines and medical stores are supplied at cost price *plus* 10 per cent. for departmental charges.
8. Payment at such rates as Govt. by general or special orders prescribe, for the maintenance and treatment either in the municipal district or at any asylum, hospital or house, whether within or without such district, declared by notification to be suitable for such purpose, of pauper lunatics and lepers habitually resident in and removed from such district.	In the case of lunatics the bills for maintenance are preferred by the superintendents of mental hospitals. The magistrate who passes the reception order fixes the liability of the municipality concerned. It is reported that charges for the maintenance of lepers are not being recovered owing to certain difficulties. Steps are, however, being taken to remove them.	*Nil* ..	*Nil.*

Duty.	By what agency executed.	Financial assistance given by Government.	Other assistance given by Government.
(*a*) *Obligatory*—concld.			
9. Establishing and maintaining primary schools.	By the school board of the municipality or of the local board according to whether the municipality is a local authority or not.	One-half grant to local authority municipalities and two-thirds grant to local boards.	
10. Providing for any other measures likely to promote the public safety, health, convenience or education.	By their own staff.	*Nil* ..	The services of the consulting surveyor to Government and his department are placed at the disposal of local bodies undertaking town-planning and development schemes without charges so far as mere advice is concerned.
(*b*) *Optional.*			
11. Furthering educational objects other than primary education.	By their own staff.	Many institutions get from Government annual recurring maintenance grants and non-recurring building and equipment grants.	
12. Maintenance of veterinary dispensaries.	Under No. 28 of veterinary dispensary rules the affairs of each veterinary dispensary are supervised by a veterinary dispensary committee appointed by the municipality. A separate committee is appointed for each dispensary.	Government make to some dispensaries an annual grant-in-aid ordinarily not exceeding one-half the total cost of maintenance by the municipality. When buildings are to be constructed the Government contribution varies between ¼ and half the total cost of the building. Government also provide for the pay and travelling allowance of veterinary assistant surgeons in charge of veterinary dispensaries.	

Municipal expenditure.

18. The taxes available for municipalities are more numerous than those available for local boards and, though the imposition of fresh taxation is unpopular, the incidence of municipal taxation per head of population rose from Rs. 1-8-10 in 1901-02 to Rs. 6-12-0 in 1929-30. Grants from provincial revenues for various purposes have been on a more generous scale than in other parts of India. For example, those for primary education rose from Rs. 33 lakhs in 1914–15 to Rs. 133 lakhs in 1929-30, an increase of 300 per cent. The amounts of other grants have also been largely increased, though not in the same proportion. In other respects local bodies have a considerable degree of financial autonomy. It is true that if they require a loan they have to obtain the sanction of Government, but this is almost the universal rule in all countries. It was in the past the invariable rule in this presidency that any large expenditure was met by a grant-in-aid from Government to cover establishment and tools and plant charges when works were executed by Government agency and by the raising of a loan. The following statement indicates the amount of grants given in the year 1931–32 to municipalities for special purposes together with the total revenue of all municipalities. The expenditure on public health includes capital expenditure on water-supply schemes and drainage schemes. The expenditure on education amounted to 21 per cent. of the total revenue. Under the head "public safety" come charges for lighting and the prevention of fire. The expenditure on lighting for the whole presidency amounted to no less than Rs. 13,52,000.

	Expenditure (in thousands of rupees).						
	General administration.	Public safety.	Public health.	Public works.	Educational.	Miscellaneous (contributions for general purposes shown in brackets).	Total.
Northern division ..	6,79	4,83	24,27	6,27	15,22	4,92 (7)	62,37
Central division (including Bombay Suburban district).	7,48	4,06	33,40	10,50	16,51	6,35 (52)	78,82
Southern division ..	3,19	1,39	8,63	2,36	6,68	61 (18)	23,04
Sind	7,46	6,92	25,09	8,06	10,70	8,78 (16)	67,17

	Income (in thousands of rupees).				
	Rates and taxes.	Municipal property, etc., apart from taxation.	Grants.	Miscellaneous (realisations under special Acts shown in brackets).	Total.
Northern division ..	47,37	6,67	4,08	62 (21)	58,95
Central division (including Bombay Suburban district).	51,99	12,44	9,31	4,61 (62)	78,97
Southern division ..	18,18	2,99	2,55	50 (12)	24,34
Sind	47,85	12,19	3,69	3,34 (51)	67,58

NOTIFIED AREA COMMITTEES.

19. The Bombay District Municipal Act, 1901, permits Government to constitute in towns which are the headquarters of the taluka or within a distance of one mile from a railway station "notified area committees". All members of these committees are appointed by Government. The committees are miniature municipalities intended for areas intermediate in importance between villages and municipalities and the notification which constitutes them prescribes what sections of the Municipal Act are made applicable to them. The taxes which they have been authorised to levy include house tax, sanitary cess, octroi and toll. Some, however, levy no taxation at all but merely control the erection of buildings in areas which are developing.

After the passing of the Village Panchayats Act in 1920 Government adopted the policy of replacing notified area committees, wherever possible, by panchayats. As a result there are now only 15 such committees in the presidency, eight of them being in the Bombay Suburban district. These committees have thus ceased to be of great importance as a method of local self-government.

III. Criticisms and suggestions relating to municipal administration.

PRESENT STATE OF MUNICIPAL ADMINISTRATION.

20. The primary object of introducing elective local bodies is to break down the indifference to public life (which is marked

in this presidency) and to provide a training ground for the development of the democratic system. If the interest in elections is any guide to the interest that is taken in local self-government, there is reason to believe that this object is being achieved. It has not been uncommon of recent years for 50 per cent. of the municipal electors to vote and in exceptional cases a 75 per cent. vote has been recorded. It is in the smaller municipalities principally that indifference exists. In them meetings are commonly adjourned for want of a quorum and the members betray little interest in municipal affairs. The attempt to make municipal administration an arena for giving vent to political feelings became somewhat pronounced in some parts of the presidency during the early stages of the civil disobedience movement. Such action has however been held to be *ultra vires* of the law.

The devolution of power to local bodies has been very rapid in this presidency ; but even so there is some doubt as to whether the decrease of efficiency with which it has undoubtedly been attended in many cases can be attributed primarily to a want of public spirit or devotion to duty. When revenue officers were presidents of municipalities they had at their disposal the whole machinery of Government ; but, when the official president was replaced by an elected president, the necessity of furnishing him with a competent chief officer or town clerk and adequate staff was not properly appreciated. The principal object of passing the Municipal Boroughs Act was to provide for a chief officer with adequate powers in the case of those municipalities which had sufficient funds to employ a competent executive officer and sufficient breadth of view to be willing to delegate power to him. The District Municipal Act, 1901, will also come up for revision in the near future. It is probable that in the early days there was an excessive readiness to create municipalities, with the result that in many instances powers were entrusted to local bodies which had not the necessary funds, education or experience to shoulder the responsibilities placed upon them. From the point of view of the administration it would have been a better policy perhaps to have restricted municipalities to those areas which could afford a properly paid staff.

Security of municipal staff.

21. An essential condition of satisfactory service is that the superior staff of local bodies should have adequate security of tenure and adequate control over the subordinate staff. Under the District Municipalities Act, once the schedule of

appointments is approved by Government or the commissioner, the municipality has a free hand in the selection, punishment and dismissal of personnel. It may delegate its powers to its president, vice-president or the chairman of any of its committees, but in practice district municipalities are tenacious of their powers of patronage. Communal bias enters largely into questions of appointments and discipline and it is not uncommon for old and experienced hands to be dismissed and a new staff recruited on a new party coming into power. Instances have occurred of Government servants whose services had been lent to local bodies resigning owing to the harassment to which they were subjected on personal or communal grounds.

Under the Municipal Boroughs Act, which is far in advance of the District Municipalities Act in this respect, the chief officer, health officer and engineer may not be removed, reduced or suspended except by a two-thirds vote and may not be fined. The chief officer is invested under the Act with powers to fine, reduce, suspend and dismiss all municipal servants whose pay does not exceed Rs. 30 and other municipal servants except the health officer, engineer and auditor subject to rules made by the municipality. There is an appeal to the municipality or standing committee from all punishments other than a fine not exceeding a week's salary.

The Reorganisation Committee consider that the position would be improved if the power of appointing chief officers, engineers and health officers were statutorily imposed on the appropriate committee or, where it does not exist, on the standing committee. Disciplinary action should only be taken against these officers in accordance with a two-thirds vote of the municipality passed at a special meeting with the previous sanction of Government where their approval was necessary to the appointment. The chief officer, engineer and health officer should have the power of appointing and punishing all of their subordinates whose pay is on a scale not rising above Rs. 150 per month. There should be an appeal to the president in the case of employees appointed by an executive officer and in other cases to the boards. In all other cases the president should make appointments and take disciplinary action.

Government have these proposals under examination at present.

Recruitment.

22. The Reorganisation Committee have not recommended either the appointment of superior municipal servants by an

outside body, on the lines of a public service commission, or the device of restricting the field of selection to persons on a list approved by Government, or an extension of Government cadres for municipal service on the principle already obtaining in the medical and veterinary services.

Proposals on these lines all involve a considerable derogation from the powers of local bodies, but have often been mooted and not only by Government or by Government officers. A committee of the local legislature which sat in 1918 recommended the formation of a local self-government service under the control of a standing committee of the legislative council. Such a standing committee might not be free from the communal bias and other failings to which local bodies are themselves subject. An alternative arrangement would be the establishment of a municipal service commission. In Madras, a Government service of local board engineers, recruited, transferred and paid by Government, is maintained and this Government had recently under examination a proposal for the formation of a service of local board engineers controlled by the minister with the assistance of an advisory board drawn mainly from those members of the legislature who represent local bodies. An objection to all proposals for the maintenance of single cadres for all local bodies or classes of local bodies is that the requirements and finances of the various bodies are so various that their choice could not without great difficulty be limited to a common list. As regards the derogation from the powers of local bodies, the Reorganisation Committee considered that the maintenance of a Government service of local board engineers was no improvement, from the point of view of the development of local self-government, upon the present arrangements.

AUDIT.

23. Government audit of the accounts of municipalities and local boards was first introduced in 1907. Before that there was merely an examination of accounts in the office of the accountant general and this was mainly for the purpose of preparing statistics for the use of Government. When local audit was first introduced it was applied only to those municipalities which were prepared to pay for it. Later on an audit on the spot of the accounts of all local bodies was decided upon and has of course been amply justified by the results. Local bodies have, on the whole, been very slow to realise the importance of audit and the responsibility which rests upon them of taking quick and adequate action on the

irregularities pointed out. The application to this presidency of the principles of disallowance and surcharge in force in England was suggested by Mr. Martin in order to bring home to the members of local bodies better sense of their responsibilities. The principles are stated thus in section 247 (7) of the English Public Health Act, 1875 :—

> "Any auditor acting in pursuance of this section shall disallow every item of account contrary to law, and surcharge the same on the person making or authorising the making of the illegal payment, and shall charge against any persons accounting the amount of any deficiency or less incurred by the negligence or misconduct of that person."

These principles were embodied in a new Act, the Local Fund Audit Act of 1930, which provides for the surcharging of members and officers of local bodies in respect of unlawful expenditure or loss caused through their misconduct or negligence. The effect of this measure has still to be gauged. The number of cases of embezzlement and misappropriation in connection with local funds detected by the audit department of this presidency averages about 50 a year. Here, again, the great desideratum is an improvement in the staff of local bodies.

IV. Local boards.

District and taluka local boards.

24. The Bombay Local Boards Act, 1923, which supersedes all previous legislation on the subject, makes the establishment of a district local board compulsory in each district and the establishment of taluka local boards, for such areas within the district as Government may deem fit, discretionary with Government. An important legislation (amendment to section 4 of the Act) has recently been passed by the Legislative Council which empowers Government to mantain two or more than two district local boards when two revenue districts are combined into one. Local boards consist of elected and nominated members, but the nominated members may not be more than one-fourth of the whole and not more than one-half of the nominated members may be Government servants.

Local board taxation.

25. A committee of the legislative council, presided over by Sir Ghulam Hussain Hidayatallah, was appointed in 1925 to consider and report on the question of financial assistance to local boards and every means by which they might be

enabled to increase their resources by local taxation. The committee unanimously recommended that the Government grant to all boards should be at the rate of two-thirds of the expenditure of the boards on all subjects other than education. They also found that the remaining possible sources of additional taxation were (1) a terminal tax; and (2) a tax on trades, professions and callings.

Terminal tax and octroi.

26. The committee of 1925 recognised that the collection of a terminal tax in local board areas would be a matter of difficulty and would not be suitable for all areas. The only local board which has so far raised funds from octroi is the Ratnagiri board. The octroi of this board produced in 1931-32 an income of Rs. 1,10,288 and the experience of this board has shown that there is great opportunity for friction when a local board and municipalities levy octroi or terminal tax in the same district.

Local fund cess.

27. The Reorganisation Committee consider that there are possibilities of substantially increasing the revenue of local boards by means of :—

(1) a compulsory enhancement of the local fund cess everywhere ;
(2) the introduction of a profession tax in all districts ; and
(3) an increase of toll revenue.

Under section 93 of the Local Boards Act, 1923, Government levy a rate of one anna on every rupee which is either payable as land revenue or would have been payable had the revenue not been alienated. This rate may be increased to a sum not exceeding two annas on the application of any local board. The Taxation Enquiry Committee, 1924-25, suggested the general stabilisation of Government demand for land revenue at a rate roughly corresponding to its then scale and the restriction of the enhancement of demand on agricultural incomes to the increase of local fund cess, which might, they considered, go as high as four annas in the rupee. There has been no increase of land revenue in the presidency proper for many years, but there has been no corresponding tendency of late on the part of local boards to increase their cess. The Reorganisation Committee recommend that the policy of Government should be compulsorily to raise the rate to two annas thus giving local boards Rs. 20¾ lakhs

of additional revenue. They do not specifically propos that the law should be amended immediately ; the preser time, owing to the general fall in agricultural income might be considered an inopportune one for this step. A pointed out by the committee, however, nine of the twenty seven boards at present levy a rate of two annas, four of $1\frac{1}{2}$ anna and four of $1\frac{1}{4}$ annas and it is undoubtedly inequitable tha some boards should contribute to what is really a commo purse on a higher scale than others. An increase of the ces has this advantage over an increase of land revenue that it i free from alienations. The recommendation of the Committe has, however, been rejected by the Government.

Local boards have to spend one-third of their receipts fro local fund cess on education. They have also to pay to ever municipality within their area two-thirds of the revenu derived from the cess on agricultural land within the muni cipal district and under the Bombay Village Panchayats Act 1933. They have to pay to panchayats one-fifth of the ces collected within the boundaries of a panchayat.

Profession tax.

28. Government appointed in November 1930 a specia officer to investigate the possibilities of a tax on trades an professions as a source of local board revenue and to mak concrete proposals. Since the receipt of the report Govern ment have framed and published model rules for the levy o the tax. The Reorganisation Committee consider that th tax is suitable for adoption in all districts of the presidenc excluding Sind and that an additional local board revenue o four lakhs of rupees might well be expected from it. The suggest an experimental introduction of the tax in a fe districts, with a later extension, if the experiment is successful to all districts, if necessary by legislation.

Tolls.

29. The toll revenue of local bodies varies greatly. Th Thana board in 1931–32 drew over one lakh of rupees fro this source, Belgaum and East Khandesh half a lakh an Kaira nothing at all. The remaining boards received sum ranging from one thousand to forty thousand rupees. Th total revenue received by boards in 1931–32 from this sourc was over Rs. 6 lakhs. The rates at which tolls are levie by local boards are generally the same as those sanctioned by Government for provincial roads. A proposal to replace toll and other taxes on vehicles by a provincial tax was late

considered by Government, but dropped as impracticable. Tolls are a very unpopular tax as they hamper free traffic, are very inconvenient and lead to frequent stoppages and petty annoyance. For these and other causes Government have more than once resolved gradually to abolish tolls in accordance with the advice of numerous committees. But Government have now decided that they went too far in this direction and have recently agreed to a recommendation of the Reorganisation Committee that increased revenue should be obtained from tolls on provincial roads. The Reorganisation Committee thought there was room for a better distribution of local board tolls and an increase of local board toll receipts. Government do not, however, propose to take any action at present in the matter. The Committee also thought that the subsidies paid to the Bombay Municipality and the Thana and Bombay suburban local boards in lieu of toll receipts should be withdrawn, these bodies being permitted to restore the tolls if they so desired. Government have decided not to pursue the former proposal any further but to maintain the existing arrangement. Government have not accepted the latter proposal.

Water rate.

30. Under section 95 of the District Local Boards Act, 1923, Government have the power to levy a cess not exceeding two annas on every rupee of water rate leviable under the provisions of the Bombay Irrigation Act, 1879, and under section 80A of the Act a specified portion of the net proceeds of the cess, as may be determined by Government in consultation with the district local board, must in any district notified by Government in that behalf be utilised towards the improvement of communications in irrigated tracts in the district. The question of notifying the districts and of determining the apportionment of the net proceeds is under the consideration of Government.

Government grants.

31. The dependence of local boards on Government grants is a fact which has been generally recognised as unsatisfactory. The Reorganisation Committee point out that in 1930-31 these grants totalled Rs. 1,23,95,000 compared with Rs. 61 lakhs raised by the boards themselves and Rs. 47,75,000 derived from local fund cess. The Reorganisation Committee suggest that the policy of Government should be to compel local boards to increase their own revenue and to reduce

grants *pari pasu* with the growth of local revenues. They estimate that in course of time it would be possible to reduce grants to local boards by Rs. 28 lakhs by these means. This saving is based on the three proposals referred to in the beginning of paragraph 27 of the Review. Government have not accepted the proposal regarding compulsory enhancement of the local fund cess, while they do not intend to take any action at present on the proposal for the increase of toll revenues. The Reorganisation Committee have estimated an income of Rs. 4 lakhs from the profession tax but it is to be seen whether the expected income will be realised.

The grants made in 1932–33 in aid of education to local authorities other than Bombay Municipality were Rs. 1,00,70,000 (including Rs. 20,000 for building grants). These grants are, apart from a statutory grant of about Rs. one lakh made in aid of compulsory schemes of education, discretionary with Government. The amount of grants made in aid of other local board services in 1932–33 is given in the statement attached :—

Grants to local boards in 1932–33.

Budget head.	Description of grants-in-aid.	Nature of grant.	Total grants.	
				Rs. (thousands)
	(a) *General department.*			
32–Medical ..	For dispensaries ..	Discretionary ..	Northern division.	32
			Central division ..	31
			Southern division..	28
			Sind	39
				1,30
33–Public Health	(1) To the Satara and Dharwar boards in connection with the employment of health officers.	Statutory section 119 (2), Local Boards Act.	Central division ..	2
			Southern division.	2
				4
	(2) For village water supply.	Discretionary ..	Northern division.	18
			Central division ..	25
			Southern division	24
			Sind	23
			Reserve with Government ..	10
				1,00
	(3) In connection with a scheme for pay of vaccinators.	Do. ..	(Including grants to municipalities)	24

Budget head.	Description of grants-in-aid.	Nature of grant.	Total grants.	
				Rs. (thousands)
	(a) *General department*—contd.			
41–Civil Works ..	For Local public works.	Discretionary ..	Northern division.	1,63
			Central division (including Bombay Suburban district) ..	2,82
			Southern division.	1,68
			Sind	1,68
				8,00
	For works executed through the public works department agency.	Do. ..	(Including grants to municipalities)	5
47–Miscellaneous Transferred.	To Bombay Suburban and Thana boards for the abolition of tolls.	Do. ..		13
	For expenditure in connection with their elections.	Do. ..	Northern division.	2
			Central division (including Bombay Suburban district) ..	2
			Southern division.	32
			Sind	24
				60
	Towards the salaries of chief officers and engineers.	Statutory section 119 (2) Local Boards Act.	Northern division.	13
			Central division ..	21
			Southern division	15
			Sind	20
			Bombay Suburban district ..	2
			Reserve with Government ..	3
				74
	Towards pay of clerical establishment.	Discretionary ..	Northern division.	23
			Central division (including Bombay Suburban district) ..	30
			Southern division.	23
			Sind	27
				1,03

Budget head.	Description of grants-in-aid.	Nature of grant.	Total grants.	
				Rs. (thousands)
	(b) *Revenue department.*			
6-Excise ..	(1) Contribution in lieu of one anna cess on excise revenue.	Discretionary ..	Northern division.	40
			Central division ..	36
			Southern division.	54
			Sind	25
				1,55
34-Agriculture ..	(2) To veterinary hospitals and dispensaries.	Do. ..	Northern division.	3
			Central division ..	3
			Southern division.	4
			Sind	10
				20
	(3) To Kanara board in lieu of house-rent.			1
	(c) *Public works department.*			
41-Civil Works ..	(1) To the district local board, Kanara, for the use of its roads by the forest department.	Discretionary ..		25
	(2) To the district local boards in the central circle and the Deccan irrigation circle under the Bombay Ferries Act, 1868, for ferries vested in them.	Obligatory ..	Central circle ..	7
			Deccan irrigation circle ..	3
				10

POWERS AND DUTIES OF LOCAL BOARDS.

32. The duties of district and taluka local boards under the present Act have been classified as—

(*a*) obligatory, and

(*b*) optional.

The former include the construction and maintenance of communications, hospitals, dispensaries, markets and other public buildings, public tanks and the supply of water from them and all other amenities which the residents of the areas have a right to expect in return for the rates and taxes paid by them. The optional functions include matters which are not absolutely essential but are legitimate objects of expenditure from local revenues.

Taluka local boards are subject to the control of the district local boards and, if the latter so desire, may be the agents of the district local boards in respect of road works, buildings, services and institutions.

RELATIONS OF LOCAL BOARDS WITH GOVERNMENT.

33. The statement appended to this paragraph shows the position of local boards *vis-a-vis* the Government department. In the view of some protagonists of local self-Government the policy of Government should be to transfer further services to local bodies together with resources corresponding to the Government expenditure on those services: the boards would administer the services more economically than Government and thus have a balance available for other activities. A committee presided over by Sir Ghulam Hussain Hidayatallah in 1925–26 recommended the transfer of medical, vaccination and veterinary staff to local boards. Government have issued orders as to the conditions on which they are prepared to hand over control of vaccination (see the "Review of the Public Health Department"). The terms involve no financial benefit to local bodies. As regards medical relief the Reorganisation Committee had recommended the constitution of "district medical boards". On the recommendation of the Divisional Commissioners and of the Surgeon General, Government have decided to take no action on the recommendation of the Reorganisation Committee. Grants to veterinary hospitals have already been reduced and the Reorganisation Committee have recommended their abolition and the reduction of Government aid in this department to the loan of the services of veterinary assistants. Government have decided that cash grants to Veterinary Dispensaries should not be abolished but that they should be continued.

Duty.	By what agency executed.
(*a*) *Obligatory.*	
(1) (*i*) The construction of roads and other means of communication and the maintenance and repair of all roads and other means of communication vesting in them [section 50(*a*) of the Bombay Local Boards Act].	By the public works department or the district local board engineers whose appointments have been approved by Government [*vide* sections 45 (1) (2), 45 (A) and 89 (1) (*b*) of the Act and paragraph 1 of Government Resolution No. 4453, dated 19th August 1924].
(*ii*) The construction and repair of markets, dharmashalas and other public buildings [section 50 (*b*) of the Bombay Local Boards Act].	
(2) The construction and repair of hospitals and dispensaries and the visiting, management and maintenance of such institutions [*vide* section 50 (*b*) of the Act].	The construction and repairs are carried out by the public works department or the district local board engineers. The dispensaries are generally in charge of S. M. S. officers lent by Government.
(3) The construction and repair of public tanks, wells and water works, the supply of water from them and from other sources and construction and maintenance of works for the preservation of water for drinking and cooking purposes from pollution [section 50(*c*), Bombay Local Boards Act, 1923].	The same as (1) above ..
(4) Primary education ..	The duty is carried out through school boards appointed under the provisions of the Bombay Primary Education Act, 1923.

Financial assistance given by Government.	Other assistance given by Government.
A statutory grant equal to two-thirds of the salary of an engineer whose appointment is approved by Government and discretionary grants for (*a*) local public works, and (*b*) works executed through public works department agency.	It is open to the local boards to require the presence of any officer of the public works department not lower in rank than an overseer at their meetings.
The same as to municipalities.	
Government give grants for village water supply.	The same as (1) above.
The annual recurring grant given by Government is equal to the recurring grant paid by them to the board in the year previous to that in which control of primary education was transferred to the board *plus* two-thirds of all new approved expenditure incurred subsequent to the transfer of control. Non-recurring grants are also paid under rules 114–116 of the Primary Education Rules. Government give to the boards a grant equal to the full cost of the supervising and inspecting staff taken over by them on datum line conditions. Government have also given a recurring grant equal to one-twelfth of the local assets of the district local board in the datum line year towards meeting the cost of non-recurring expenditure and have decided to give a grant to the boards on the basis of the expenditure incurred by Government on contingencies, stationery, travelling allowance of the inspecting staff, etc., prior to the transfer of control of primary education to the boards and on account of grants-in-aid to approved primary schools.	

Duty.	By what agency executed.
(*a*) *Obligatory*—contd.	
(5) Public vaccination and sanitary works and measures necessary for the public health.	The Chief executive for carrying out these duties is the Public Health Committee, which a board may appoint. The committee may co-opt the civil surgeon of the district or any other officer of Government or a legally qualified medical practitioner. Boards also employ health officers and vaccinators for carrying out these duties.
(*b*) *Optional.*	
(1) The establishment and maintenace of relief and local relief works in times of famine or scarcity.	....
(2) Provision for educational objects other than those relating to primary education.	The work of the schools is generally carried out by the staff of local boards.
(3) Any other local works or measures likely to promote the health, safety, comfort, or convenience of the public.	....
(4) With the previous concurrence of the collector, any public reception ceremony, entertainment or exhibition.	Collectors have been instructed to sanction expenditure on public receptions unless in exceptional cases they consider that the expenditure is open to objection.
(5) Local board elections ..	Elections are conducted by Government officers of the revenue department.

Financial assistance given by Government.	Other assistance given by Government.
Where a board appoints a health officer and such appointment is approved by Government, two-thirds of the salary of such officer is paid by Government. Grants on account of sanitary inspectors are based on one-half of their salary. Government give grants on account of pay of vaccinators; in regard to candidate vaccinators Government make a contribution of Rs. 3-12-0 per mensem per candidate provided the local body pays Rs. 15 per mensem. Government also make a contribution of Rs. 5 per mensem per vaccinator maintaining a pony or other conveyance.	During epidemics, etc., Government give quinine tablets, serum, etc., free of cost to district local boards.
Special grants are made in times of famine or scarcity.	
Most of the institutions get recurring and non-recurring grants from Government under the grant-in-aid code.	
....	
Nil.	
Government defray the cost of local board elections.	

INCOME AND EXPENDITURE OF LOCAL BOARDS.

34. The following are the details of income and expenditure of boards under major heads in 1931-32 :—

	EXPENDITURE (in thousands of rupees).						
	Administration.	Police.	Education.	Medical.	Public Works.	Miscellaneous.	Total.
Northern division ..	1,50	16	24,65	2,59	9,29	94	39,13
Central division ..	2,08	51	45,51	3,70	14,58	2,24	68,62
Southern division ..	1,71	20	31,89	2,63	10,65	1,06	48,14
Bombay Suburban district ..	11	1	92	17	63	16	2,00
Sind ..	2,00	94	14,82	3,38	7,95	2,81	31,90

	INCOME (in thousands of rupees).						
	Land Revenue.	Local rates.	Police.	Education.	Medical and Public Works.	Miscellaneous.	Total.
Northern division ..	49	10,50	54	20,30	6,02	3,79	41,64
Central division ..	57	16,11	1,49	38,48	7,08	2,34	66,07
Southern division ..	17	12,88	39	28,20	6,27	92	48,83
Bombay Suburban district ..	4	24	3	77	62	15	1,85
Sind ..	2,14	10,36	1,20	12,04	4,46	1,54	31,74

From the above statement it will be seen that more is spent on education than on any other subject. In the central division no less than 64 per cent. of the total expenditure comes under this head. As regards expenditure on civil works all local boards have manifested considerable energy in building schools and dispensaries so far as their funds have permitted.

V. Suggestions relating to local board administration.

PRESENT STATE OF LOCAL BOARD ADMINISTRATION.

35. Much less interest is taken in the elections of district and taluka local boards than in those of municipalities. It is not uncommon for elections to be uncontested and seats to be filled by nomination. In the Belgaum district in 1922-23

contests occurred in only 27 out of 40 groups. The lack of interest is particularly noticeable in some Muhammadan constituencies. It is possible that the small percentage of population represented by the electorate in these bodies is to some extent accountable for this lack of interest; but the question whether the franchise should be lowered is one which will have to be postponed till after the new constitutional reforms.

Before the Local Boards Act of 1923 was passed, the collector as official chairman of the board required only a small local board staff, because he could, at need, indent upon the services of Government officers for local board work. The non-official chairman who took the collector's place after the passing of this Act had none of the same advantages and it must necessarily take time before the boards obtain a staff of the required calibre. Government have given the boards fairly substantial assistance to enable them to recruit an adequate and competent staff; but in the case of many boards the same difficulties have arisen as have already been described in treating of municipal staff. Here again, Government have under consideration the proposals of the Reorganisation Committee as regards the statutory delegation to committees of the powers of appointment and control of superior local board officers and the delegation to those officers of control over their subordinates.

Taluka local boards.

36. The Royal Commission on Decentralisation, 1911, discussing the comparative merits of district and taluka boards, expressed the opinion that while the district local board should be the direct instrument of local self-government, sub-district boards should as far as possible be constituted as the principal agencies of local board administration. The Lawrence Committee stated that "As between the district and the taluka local board we hold very strongly that the former be given the preference. These boards already attract to themselves men of higher status, of better education and of wider knowledge of the world and of public affairs than can ordinarily be found in the talukas. There is a general concensus of opinion that the progress of local self-government is bound up with the development of the district board." The Lawrence Committee did not, however, recommend the abolition of taluka local boards. Their complete abolition might lead to administrative difficulties, as a single district local board with taluka representation and taluka committee might not prove workable. Mr. Martin

INCOME AND EXPENDITURE OF LOCAL BOARDS.

34. The following are the details of income and expenditure of boards under major heads in 1931–32 :—

	EXPENDITURE (in thousands of rupees).						
	Administration.	Police.	Education.	Medical.	Public Works.	Miscellaneous.	Total.
Northern division ..	1,50	16	24,65	2,59	9,29	94	39,13
Central division ..	2,08	51	45,51	3,70	14,58	2,24	68,62
Southern division ..	1,71	20	31,89	2,63	10,65	1,06	48,14
Bombay Suburban district ..	11	1	92	17	63	16	2,00
Sind ..	2,00	94	14,82	3,38	7,95	2,81	31,90

	INCOME (in thousands of rupees).						
	Land Revenue.	Local rates.	Police.	Education.	Medical and Public Works.	Miscellaneous.	Total.
Northern division ..	49	10,50	54	20,30	6,02	3,79	41,64
Central division ..	57	16,11	1,49	38,48	7,08	2,34	66,07
Southern division ..	17	12,88	39	28,20	6,27	92	48,83
Bombay Suburban district ..	4	24	3	77	62	15	1,85
Sind ..	2,14	10,36	1,20	12,04	4,46	1,54	31,74

From the above statement it will be seen that more is spent on education than on any other subject. In the central division no less than 64 per cent. of the total expenditure comes under this head. As regards expenditure on civil works all local boards have manifested considerable energy in building schools and dispensaries so far as their funds have permitted.

V. Suggestions relating to local board administration.

PRESENT STATE OF LOCAL BOARD ADMINISTRATION.

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in his report discussed the same question. He found that though few of the revenue officers were in favour of the continuance of taluka boards, unofficial opinion was, on the whole, opposed to their abolition. The present position is however admittedly unsatisfactory. Taluka local boards have practically no resources and most of what little they have go in the payment of establishment charges. They cannot indeed be condemned unless it is proved that they cannot be provided with increased funds, a better staff and a freer constitution. Their position has now been affected by the prospect of a large increase in the number of panchayats. If in view of the new Act, panchayats are generally established taluka local boards will be left with very little to do.

The following statement shows the expenditure and income of taluka local boards in each division during 1931-32 :—

	Income (in thousands of rupees).					
	Opening balance.	Received from district local boards.	Land revenue and other source.	Police.	Civil works.	Total excluding opening balance.
Northern division ..	3,39	2,11	2,26	48	76	5,61
Central division ..	1,67	2,04	2,15	1,35	21	5,75
Southern division ..	1,46	1,82	82	23	26	3,13
Sind ..	1,41	1,24	1,92	77	49	4,42

	Expenditure (in thousands of rupees).			
	Civil works.	Other heads.	Total.	Closing balance.
Northern division ..	3,54	1,08	4,62	4,38
Central division ..	3,08	2,69	5,77	1,65
Southern division ..	2,60	87	3,47	1,12
Sind ..	2,45	1,56	4,01	1,82

Government have the question of whether the continuance of taluka local boards is justified in present circumstances a question which was also considered by the Reorganisation Committee, under consideration.

INSPECTION OF LOCAL BOARD WORKS.

37. The future policy of inspection of local board works is bound up with the policy of devolution of roads and buildings work to local boards, a subject which is discussed in the "Review of the Public Works Department: Roads and Buildings Branch". It is however certain that even if the policy of complete transfer is adopted, it must be a slow process and, in the meantime, provision of an adequate system of Government inspection of works subsidised by Government grants is an obvious and essential duty of Government. Under the most recent orders of Government, all local board works executed with the aid of Government money are liable to inspection by officers of the public works department and the local bodies have to submit regularly to the Government executive engineer of the district information of all works which are due for execution and to make available to him and his subordinates the plans and estimates of the works. Under Government orders all district local boards works estimated to cost Rs. 10,000 or over must be inspected by the Government executive engineer himself. The executive engineer is required to report to his superintending engineer on the works carried out with the aid of Government grants, the inspections of them performed by him and the manner in which the works have been executed.

VI. Minor rural local bodies.

VILLAGE SANITARY COMMITTEES AND BOARDS.

38. Village sanitary committees and boards are constituted under parts II and III respectively of the Bombay Village Sanitation Act of 1889 as amended by Bombay Act XXV of 1931. The application of the Act is made in the case of a committee by the collector and in the case of a board by the commissioner. A sanitary committee consists of three or more adult householders who are residents of the village, chosen with their consent by the collector. The police patil must be a member unless the collector otherwise determines. A sanitary board consists of such number of members not less than seven as the collector may determine. Not less than two-thirds of the members must be elected and there must be one elected member for every 50 houses within the area of a board. The remaining members of the board are appointed by the collector. The collector can remove any member of a committee and the commissioner any member of a board. These committees were the first attempt in this presidency to

resuscitate the village as a unit of local self-government. The object of forming them is the improvement of the sanitary conditions of villages; and though the Act allows a sanitary committee or board to be established for a group of villages, it is believed that in no case has one been established for more than a single village. In 1920–21 there were 700 sanitary committees in the presidency but at the present time there are 357.

The boards and committees have no power to impose taxes on the inhabitants of the villages. They may raise by voluntary subscription any sum of money required for necessary works. If the amount that is required is not forthcoming, it may be recovered by a rate fixed with the approval of the collector and assessed by the sanitary committee on the inhabitants of the village. The aggregate amount so charged in any year may not exceed one-half of the amount leviable in the year as local fund cess except with the permission of the collector.

Sanitary committees and boards also receive contributions from district local boards. Government have recently ordered that, to every three rupees contributed by the inhabitants of sanitary committees and boards and by the local boards taken together, they will add one rupee by way of contribution. The question whether it would be feasible to reduce Government contributions to village sanitary committees and boards in view of the increased resources which they have been given by the amending Act of 1931 has been referred to the commissioners. Under the Act of 1931, which was passed with a view to encouraging sanitary committees and boards, these bodies have been made corporate bodies competent to acquire, hold and transfer immoveable property. The elective principle was also introduced into the constitution of the sanitary boards by that Act.

Panchayats.

39. Prior to the passing of the Bombay Village Panchayats Act in 1920, the village as such had no real self-governing institution in this Presidency. The Bombay Village Sanitation Act, 1889, provided for the establishment of sanitary committees and sanitary boards, but the duties of these bodies were confined merely to looking after the sanitation of the village. Their income was very limited and did not admit of any schemes of permanent benefit to the village being carried out. The establishment of sanitary committees did not on this account provide sufficient inducement to the villagers

to interest themselves in local affairs. The first definite suggestion regarding the formation of village panchayats was made by the Decentralisation Commission of 1909. The question was later taken up by the Government of India first in 1915 and again in 1918. In the latter year the Government of Bombay appointed a special officer to investigate the question of the establishment of village panchayats in the Presidency, and it was the report of this officer which formed the basis of the Bombay Village Panchayats Act, 1920. With the passing of this Act a number of village panchayats came to be established but after the lapse of a few years it was found that the working of the village panchayats on the whole was not successful. Government, therefore, appointed in 1925 a Committee to examine the whole question of the future of village panchayats and to consider how panchayats could be made more successful. The Committee submitted its recommendations in 1926 and as a result of these recommendations and the recommendations of the Conference of certain members of the Bombay Legislative Council which was convened by the Honourable Minister for Local Self-Government to consider the draft Bill for the amendment of the Act, a self-contained new Act called the Bombay Village Panchayats Act, 1933, has been enacted in supersession of the old one and it has come into operation from 12th June 1933. The important features of the new Act as distinguished from the old one are :—

(*i*) Power of villagers to take steps for the establishment of a Village Panchayat.

(*ii*) The extension of the franchise to women, to those assessed to house tax and to the holders of inam and sharakati villages.

(*iii*) The increase in the power of taxation of panchayats.

(*iv*) The allocation to Village Panchayats of 1/5th of the local fund cess, realised within the limits of Village Panchayats.

(*v*) Grant of loans to Village Panchayats by District Local Boards.

(*vi*) The power of panchayats to try certain civil and criminal cases of a petty nature.

(*vii*) The power of Village Panchayats to hold, acquire and transfer property.

Under the new Act the Village Panchayat will consist of (*i*) such elected members not being less than 5 or more than 11 as the collector after consultation with the district local

board may determine, (*ii*) an officiating patel and (*iii*) the holder of a revenue village. The collector has also been empowered to nominate not more than 2 members on the village panchayat when among the elected members there is not a member of any class of persons which in his opinion, should, in the public interest, be represented on the panchayat. The obligatory duties of the village panchayats are :—

(*a*) the supply of water for domestic use ;

(*b*) the cleansing of the public roads, drains, bunds, tanks and wells (other than tanks and wells used for irrigation) and other public places or works ;

(*c*) the construction, maintenance and repair of public roads, drains, bunds and bridges ;

(*d*) sanitation, conservancy, and the prevention and abatement of nuisances ;

(*e*) the preservation and improvement of the public health ;

(*f*) the maintenance and regulation of the use of public buildings, grazing lands, forest lands (including lands assigned under section 28 of the Indian Forest Act, 1927), tanks and wells (other than tanks and wells used for irrigation), vesting in or under the control of the panchayat ;

(*g*) the lighting of the village ;

(*h*) control of fairs, bazars, slaughter-houses and cart-stands ;

(*i*) provision and maintenance of burning and burial grounds ;

(*j*) supervision of the village school and carrying out necessary repairs thereto ;

(*k*) supervision of the labour employed by local boards on village works ;

(*l*) supervision of repairs to dharamsalas ;

(*m*) management and maintenance of cattle pounds ; and

(*n*) execution of such works as are entrusted by the district local board.

The discretionary duties of the Village Panchayat are :—

(*a*) Carrying out work or measure likely to promote the health, safety, education, comfort, convenience or social or economic well-being of the inhabitants of the village.

(*b*) Carrying out such administrative duties including the distribution of irrigation water as may be assigned to it by Government.

Taxes and fees leviable by a Panchayat under the Act—

(*i*) a tax upon the owners or occupiers of houses and lands within the limits of the village ;

(*ii*) a pilgrim tax ;

(*iii*) a tax on fairs and festivals ;

(*iv*) a tax on sales of goods ;

(*v*) octroi ;

(*vi*) a tax on marriages, adoptions and feasts ;

(*vii*) any other tax which may have been approved by the district local board and sanctioned by Government.

Government have in the budget of 1933–34 made a provision of Rs. 25,000 for grants to Village Panchayats. The question as to how this provision should be utilised is at present under the consideration of Government.

The total number of Village Panchayats during 1931–32 is as shown below :—

Sind	*Nil.*
Bombay Suburban District	*Nil.*
Northern Division	58
Central Division	126
Southern Division	72
	256

VII. Control.

Statutory control.

40. In this presidency statutory control is exercised by way of powers conferred on the officers of Government and by powers reserved to Government itself. The collector of a district or the divisional commissioner has, under the Municipal and Local Boards Acts, the following powers :—

(*a*) inspection and supervision ;

(*b*) suspension of the execution of orders ; and

(*c*) extraordinary powers in the case of an emergency.

Collectors or commissioners also exercise control through provisions of the Acts which require their sanction in certain cases.

Under the Local Boards Act, the president of each local board has to forward to the collector a copy of every budget estimate and a statement of every re-appropriation as finally approved.

The commissioner is empowered to prevent extravagance in establishments retained by a local body.

The collector exercises considerable control over sanitary boards and committees. Proposed new rules require the approval of the collector, who can also suspend the operation of any rule. Under the Village Panchayats Act, 1933, the collector exercises considerable power. The Commissioner is empowered (*i*) to declare a local area to be a village for the purposes of the Act, (*ii*) to remove certain disqualifications in respect of election or nomination, (*iii*) to decide appeals against the levy or increase of tax or reduction of establishment, (*iv*) to revise or modify the orders of collectors or District Local Boards in certain matters, (*v*) to dissolve and reconstitute panchayats on alteration of limits and (*vi*) to sanction bye-laws.

These powers are by no means unnecessarily extensive, even when compared with the English or the American systems. In England there is central control in certain matters other than in those relating to finance. For example, the bye-laws of any local authority except the village panchayat must be confirmed by a Government department and town-planning schemes must have the approval of the Minister of Health, while financial control is exercised through restrictions on the resources from which local bodies may obtain their revenues, by requiring approval by a superior authority of the estimates, budgets or other decisions relating to financial matters before they become effective or by an audit of the accounts by a superior authority. The systems of France, Germany and other continental nations give very extensive powers of control to the local representatives of the central Government as well as to that Government itself. Thus in France, the council of a Commune can be suspended by the prefect for one month or dissolved by the decree of the president. Until a new election is held, the functions of the council are exercised by a nominated delegation. If the mayor refuses or neglects to perform any of the acts prescribed for him by the law, the prefect can proceed to do them in person or by deputy. He can suspend the mayor for a term not exceeding a month. These powers are not infrequently exercised even at the present time in France.

The principle laid down by the Government of India in their resolution of 1918 was that "except in cases of really grave mismanagement, local bodies should be permitted to make mistakes and learn by them rather than be subjected to interference either from within or from outside". Where the powers

of subordinate legislation, accompanied by penalties as in the case of bye-laws, or of imposing taxation, raising loans and pledging the credit and future revenues of local bodies, are granted, it is obvious that supervision by the state is necessary; and where grants are made from public funds, it is both the duty and the right of Government to see that the money is properly spent. The real test for the necessity of control is whether occasion actually arises for the utilization of the powers of control or not. If no such occasion arises, there may be a *prima facie* case for their abolition; where they are in frequent use and the facts of each case are made public at the time when they are exercised and thereby every opportunity is given for public criticism, it is unreasonable to suggest that the powers are arbitrary or unnecessary.

The special powers reserved by Government are :—

(*a*) to provide for the performance of duties in the event of default by a local body (Section 127 of the Local Boards Act; Section 178 of Act III of 1901 and Section 218 of Act XVIII of 1925);

(*b*) to enquire into the affairs of local bodies (Section 128 of the Local Boards Act; Section 217 of Act XVIII of 1925); and

(*c*) dissolution and supersession (Section 129 of the Local Boards Act; Section 179 of Act III of 1901; Section 219 of Act XVIII of 1925).

Frequent cases have occurred during the past decade in which Government has found it necessary to exercise powers under these sections.

Government control over panchayats is practically the same as that over local boards; for instance, if a panchayat exceeds or abuses its powers or makes persistent default, Government can supersede it and all its powers and duties devolve during the period of supersession upon the persons appointed by the district local board.

Audit.

41. Control by audit and the power of surcharge have been discussed in paragraph 23 above. Audit is largely the basis of Government control of municipalities and local boards and inspections by district officers are to a great extent complementary to it.

Sanitary boards and committees are not audited by trained auditors. Their accounts are inspected by mamlatdars and sub-divisional officers during their tours. The collector must

under the Act approve the budget estimates and supplementary demands proposed by sanitary committees, while sanitary boards have to submit to district local boards annual financial returns on dates and in forms prescribed by the collector. The budget estimates of Village Panchayats are approved and their accounts audited by District Local Boards.

ADMINISTRATIVE CONTROL.

42. This method of control can be exercised in two ways :—

(*a*) by the regulation of grants ; and

(*b*) by advice and supervision.

In England the system of grants-in-aid has done much to stimulate the development of particular services, though such grants are generally made conditional on the imposition of adequate taxation and the acceptance of a considerable measure of central control by the local authorities themselves. In this presidency grants-in-aid are frequently given unconditionally.

Most of the functions of local bodies involve some degree of expert knowledge. As regards the maintenance of water works and drainage schemes and roads and buildings, the officers of the public works and public health engineering departments are always available for advice and supervision. Officers of the public health department give help and advice in public health matters. Dispensaries and hospitals are visited periodically by the divisional commissioner, the surgeon-general, the collector and the civil surgeon. Difficulties with regard to primary education are referred to the director of public instruction.

VIII. Conclusion.

THE PRESENT SITUATION.

43. There is no reason to suppose that the general principles on which municipal administration is organised require any radical revision. The revision of the District Municipal Act, 1901, is under consideration, but the object in view is not so much to make fundamental changes as to bring the Act into line with present day conditions and remove any anomalies or difficulties which have come to notice during the last thirty years. The electorates are taking a slowly increasing interest in municipal affairs. Any measures which would tend to attract more public interest to this branch of the administration deserve encouragement. A sufficient number of men of standing

are usually forthcoming as candidates at elections. Though there is room for improvement in most phases of municipal administration, it is nevertheless true to say that municipalities are discharging the functions entrusted to them by the legislature and that their work is, on the whole, not much below the standard which the bulk of the public at present desire. The growing demands for better roads, water supply, lighting, drainage, education and public health administration prevent the councils from stagnating, but the advance is naturally limited by the willingness of the public to tax themselves in order to provide the amenities they require. Certain of the largest towns naturally develop special problems of their own and may, in the course of time, require special municipal Acts somewhat on the lines of the City of Bombay Municipal Act. Karachi is an example of this for which a special enactment has now been passed. The other municipal Acts undergo constant amendments as need arises at the instance of the non-official members of the legislature as well as of Government, but the general principles on which they are framed have not been challenged.

In rural areas the institution of district local boards has proved on the whole not unsuccessful. The recent substitution of non-official for official chairmen has had far-reaching consequences of which the implications have not yet been fully realised. It is true that the electorates still take insufficient interest in the affairs of the boards, but with the spread of education and possibly with an extension of the franchise a gradual improvement in this respect may be looked for. The Act has been thoroughly overhauled as recently as 1923 and on the whole is working satisfactorily.

It is with respect to the minor local bodies in rural areas that the policy of Government has not yet achieved success. The unsatisfactory position of taluka local boards has already been described. Sanitary boards and committees, while useful in a few petty matters, are too rudimentary. The principal hope of development lies in the panchayats.

LEGISLATION.

44. (*i*) *Local Boards and Village Panchayats.*—The following legislative measures have been passed since the first edition of the review was issued :—

(*a*) The Bombay Village Panchayats Act, 1933.

(*b*) Bombay Act XVI of 1933, amending sections 4 and 61-A of the Bombay Local Boards Act, 1923.

The draft rules under the Bombay Village Panchayats Act, 1933, are under the consideration of Government. The draft rules under the Bombay Weights and Measures Act, 1932, have been published for public criticism and will be issued finally as soon as possible. The draft model rules under sections 11 and 20 of the Bombay Village Sanitation Act, 1889, as amended by the Bombay Act XXV of 1931 are under the consideration of Government and will be issued shortly.

(*ii*) *Municipalities.*—In view of the growing importance of the City of Karachi, a special Act, viz., the City of Karachi Municipal Act, 1933, has been passed and put into operation with effect from 1st November 1933.

IMPORTANT REFORMS, DEVELOPMENTS AND ECONOMIES CARRIED OUT DURING THE LAST 5 YEARS.

45. (*i*) *Local Boards.*—During the last 5 years there were no special developments so far as Local Boards are concerned, except that with the creation of the new District of Dadu, a new District Local Board has come into existence with effect from 1st April 1933, and the other District Local Boards in Sind whose territorial jurisdiction was affected, as a result of the constitution of the district of Dadu, were reconstituted from the same date.

In view of the passing of the new Village Panchayats Act and for other reasons Government have decided as an experimental measure to abolish taluka local boards in one selected district in each Division of the Presidency, including Sind, as soon as the necessary amendment is made in the Local Boards Act for the appointment of Taluka Committees by the District Local Boards. Among the several questions raised and suggestions made by the Reorganisation Committee, Government have already issued model rules and bye-laws for the levy of profession tax by District Local Boards.

The following proposals made by the Reorganisation Committee have been rejected by Government :—

(*a*) To undertake legislation for the uniform increase of the local fund cess to 2 annas.

(*b*) To discontinue the subsidy paid to the Thana and Bombay Suburban District Local Boards on account of the abolition of tolls on the Bandra Ghodbundar Road.

(*c*) To increase the revenues of local boards by an extension of the toll system.

The other suggestions of the Reorganisation Committee, which are under consideration of Government, are :—

(*i*) Increasing the security of the staff of local bodies and securing to their executive officers powers of control over their subordinates.

(*ii*) Transfer of roads and buildings to local boards.

As regards (*i*) the question of amending section 120 of the Bombay Local Boards Act, so as to enable the Chief Officer of a District Local Board to make appointments of local board's servants on pay not exceeding Rs. 50 per mensem is under consideration. It is also proposed to amend rules on the subject in order to enable the Chief Officer to exercise powers under section 120 of the Act. As regards (*ii*), the matter is pending the decision of Government in the Public Works Department.

In the previous edition of the review, reference was made *inter alia* to the following three outstanding questions :—

(*i*) Reduction of Government grants to Sanitary Committees,

(*ii*) Scheme for making grants by Government to panchayats, and

(*iii*) Allocation of a portion of the receipts of local boards from the cess on irrigation revenue for the improvement of communications in irrigated tracts under section 80-A of the Local Boards Act.

(*i*) It is proposed not to reduce the grants to Sanitary Committees for a further period of at least 2 years.

(*ii*) The question of making grants to Village Panchayats is pending the consideration of the joint report of the Commissioners on the question of co-ordinating efforts to promote village reorganization in the Bombay Presidency.

(*iii*) It has been decided to issue orders under section 80-A of the Local Boards Act.

Government have been obliged to curtail grants to District Local Boards for various purposes on account of the continued financial stringency. The grant for local public works has been reduced from Rs. 11 lakhs to Rs. 8 lakhs per year and that for village water supply from Rs. 3 lakhs to Rs. 1 lakh. The grant on account of clerical establishment has been reduced by 25 per cent.

(*ii*) *Municipalities.*—Government have rejected the suggestion of the Reorganisation Committee to require municipal bodies to raise their revenues so as to enable Government to reduce its aid to them, as in their opinion it is desirable to leave the question of raising revenues to the discretion of the local bodies concerned. They have also rejected the suggestion of the Committee to discontinue the subsidy of Rs. 25,000 paid to the Bombay Municipality on account of abolition of tolls. With regard to the question of increasing the security of the staff of municipalities, they have come to the conclusion that so far as the provisions of the Bombay Municipal Boroughs Act, 1925, are concerned, they are adequate. But as regards the staff of town municipalities they consider it desirable to make provision in the proposed Minor Municipalities' Bill, which is separately under consideration, for—

(*i*) prescribing the minimum qualifications of the superior staff and empowering Government to prescribe their minimum scales of pay by rule,

(*ii*) empowering Government to make rules laying down the procedure to be followed and the sanctions required in case of punishment or dismissal.

Government have owing to financial stringency discontinued the payment of grants to municipalities in aid of their sanitary schemes. They had, however, decided in the meanwhile tentatively to charge reduced centage charges. But, in view of the Auditor General's recent ruling regarding the levy of centage charges, the question is under reconsideration.

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XX—MEDICAL DEPARTMENT

I. General.

THE DEPARTMENT AND ITS ACTIVITIES.

1. Formerly the surgeon general had control of all hospitals and medical establishments belonging to the native army in addition to that of the institutions and establishments of the civil medical department. He was responsible to His Excellency the commander-in-chief for his duties connected with the native army and to the Government of Bombay for his duties, sanitary and medical, connected with the civil medical department. As time went on the control of the native army hospitals was transferred to the military department and the department became entirely civil. The activities of the department, however, continually increased.

The Grant medical college, Bombay, was established in 1845 with the object of "imparting, through a scientific system, the benefit of medical instruction to the natives of western India". The institution was originally under the joint control of the educational and medical departments, but is now under the entire control of the latter department.

With a view to providing suitable men to hold independent charge of dispensaries in the mofussil, the department started medical schools at Poona, Ahmedabad and Hyderabad (Sind) about 1879 to take the place of the vernacular courses previously given at the medical college. The students were examined and certified by the three schools concerned until 1917, when the schools were affiliated to the College of Physicians and Surgeons, Bombay, which was started in 1911.

The Bombay bacteriological laboratory was originally started by the late Mr. Haffkine solely for the manufacture of anti-plague vaccine in 1899. The laboratory now undertakes in addition the manufacture of anti-rabic, anti-tetanic and other vaccines and other research work. The institution is now a fully developed research institute and is named after the founder.

Port health departments were started from 1884 at Bombay and Karachi with a view to the prevention of the exportation and importation of infectious diseases by vessels.

The College of Physicians and Surgeons, Bombay, was started in 1911 to serve the long felt need for a qualification in medicine and surgery which could be acquired by those who desired to become medical practitioners, but were unable to afford the expenditure of time or money necessary to take a university degree.

The Bombay Medical Council was established under the Bombay Medical Act VI of 1912 for the registration of private medical practitioners and to secure co-ordination of private medical practice.

The Bombay Presidency Nursing Association, to which the other nursing associations are affiliated, was established about 1909 with a view primarily to registering all nurses qualifying under the system regulated by, and holding the certificates of, the association.

The training of dais and midwives is also undertaken at some of the hospitals.

The relations between the medical and public health departments are described in the " Review of the Public Health Department ".

The appointment of chemical analyser in Sind created in 1906 was transferred to the public health department in 1927.

II. General organisation.

Nature of the organisation.

2. The medical organisation of the presidency as distinct from its public health organisation is essentially a hospital organisation designed to render medical relief to the general population with ancillary specialist sections providing for medical relief, medical teaching, laboratory assistance and research. The medical organisation, which is the frame work of the scheme, is based on the district as the primary unit. Excluding Bombay city and suburbs, there is at every district headquarters, except Nawabshah, which has a local board dispensary, a hospital styled the " civil hospital " which is owned, staffed, financed and controlled by Government. The civil hospital is the centre of the official system of medical relief and is a superior hospital for the whole district. Subsidiary to it are Government-aided dispensaries which are scattered throughout the districts.

With a few exceptions, these dispensaries are owned and managed by municipalities or district local boards. Under the respective Acts the responsibility for the provision of medical relief is laid on the local bodies of the various areas.

Headquarter administration.

3. The subject " medical " is transferred, is in the portfolio of the honourable minister for local self-government and is administered in the general department. The surgeon general as the head of the department is an officer of the Indian Medical Service with the rank of Major-General. He corresponds direct with the secretariat and is responsible to Government for the efficient administration of the department.

The surgeon general exercises authority over the department through the civil surgeons of the districts, who take all orders from him and are directly responsible to him.

The director of the Haffkine Institute, Bombay, the chemical analyser to Government, Bombay, the dean, Grant medical college, Bombay, the superintendents of the three medical schools, Ahmedabad, Poona and Hyderabad, the superintendents of the Bombay hospitals, the superintendents of the mental hospitals and the port health officers, Bombay and Karachi, are subordinate to the surgeon general.

Civil hospitals.

4. In every district the civil hospital at headquarters constitutes the standard permanent official organisation for medical relief. In addition to the 26 district civil hospitals, including the newly opened dispensary at Dadu which is the district headquarters medical institution for that district, there are two other hospitals, namely, those at Mahableshwar and Matheran, classed as civil hospitals. There are no civil surgeons at Mahableshwar and Matheran. The medical officer is called " superintendent " and exercises civil administrative and petty magisterial functions as well as medical functions.

At Jacobabad the charge of the civil hospital is held by the civil surgeon, Sukkur.

The civil surgeon or the officer in charge of a civil hospital is responsible, in addition to his medical work proper, for the administration of the civil hospital. He is expected to keep himself well informed as to all medical matters in his district and to be able to furnish any information on medical matters which may be required by Government. In the event of

outbreaks of epidemic disease, when requested either by the district local board or the collector, he can order any dispensary medical officer or any of his own medical staff to investigate the occurrence and render necessary aid. The civil surgeon acts in such cases in full co-operation with the assistant director of public health concerned and the extra medical staff sent into the district works either directly under him or under his supervision. Any official agencies for rendering medical aid make their arrangements in consultation with him and generally all authorities and individuals refer to him for any information, advice or assistance they may want in regard to medical matters in his district.

At the civil hospitals at Poona, Ahmedabad, Hyderabad (Sind), Surat, Jalgaon, Sholapur, Ahmednagar, Belgaum, Karachi, Karwar, Dhulia, Broach and Jacobabad there is an honorary medical staff in addition to the Government staff. The civil surgeon correlates the honorary staff to the general working of the hospital and exercises general supervision over it in that respect. In addition to the honorary staff where it exists the permanent medical staff of the hospital consists of Bombay Medical Service and Subordinate Medical Service officers. The postings of both classes are made by the surgeon general. The civil surgeon allots the duties of these officers, but has no power of punishment and must report to the surgeon general cases requiring disciplinary action. Nurses for civil hospitals are appointed by the local nursing association where one exists, but at the Sassoon hospital, Poona, and the Cama and Albless hospitals, Bombay, where the nursing arrangements have been taken over by Government, by the surgeon general. Compounders, clerks and certain menials whose pay exceeds Rs. 20 are appointed by the surgeon general, while menials whose pay does not exceed Rs. 20 are appointed by the civil surgeon.

On the professional side, the civil surgeon is physician, surgeon and obstetrician to the hospital and ordinarily does all the important professional work of the hospital. In the case of the civil hospitals at Poona, Belgaum, Dharwar, Ahmedabad, Karachi and Hyderabad (Sind) there is an advisory committee, whose function is to advise the civil surgeon on matters concerning the welfare and comfort of the patients. Government have recently sanctioned the appointment of advisory committees at the civil hospitals at Sholapur, Satara, Ahmednagar, Bijapur, Jalgaon, Surat, Sukkur and Nasik also.

Dispensaries.

5. Scattered throughout the districts are 363 dispensaries equipped and staffed to provide medical and surgical treatment. In western countries the term "dispensary" implies a place where people can go and obtain medical advice free or on payment according to the nature of the management. In India, however, it means a subordinate medical charge and beyond indicating that buildings are included in the charge gives no information as to its nature.

In this presidency, there are two kinds of dispensaries :—

(*a*) Bed dispensaries,

(*b*) Non-bed dispensaries.

The number of beds in a bed dispensary is usually small and varies from 8 to 10. It may happen that a bed dispensary may have greater bed accommodation than a civil hospital.

Non-bed dispensaries are more akin to the dispensaries in western countries in that they are places where outdoor treatment is provided from public funds. The medical officer in charge has no official visiting duties and is only available outside the dispensary by private arrangement.

Of the 363 dispensaries in the presidency the following six are Government dispensaries solely managed and financed by the medical department :—

(1) K. B. P. S. dispensary, Poona.

(2) Khandalla dispensary.

(3) Peint dispensary (Nasik district).

(4) Dhadgaon dispensary (East Khandesh).

(5) Bechardas dispensary, Ahmedabad.

(6) Mangho-Pir dispensary, Karachi.

Besides the above dispensaries there are the following eight state special institutions :—

Four police hospitals.

One canals hospital.

One salt department dispensary (Maurypur).

One dispensary at the Reformatory and Industrial Institute, Matunga.

One dispensary at the agricultural college, Poona.

The rest are owned and managed by local bodies. The medical officers in charge of the dispensaries are for the most

part Government servants, who draw their pay and pensions directly from Government. The local body pays a contribution at the rate of Rs. 200 a month for a Bombay Medical Service officer and Rs. 90 a month for a Subordinate Medical Service officer to Government. It also receives from Government an annual grant not exceeding half the net cost of the maintenance of the dispensary as approved by the surgeon general after deducting private donations or endowments or one-third of the actual expenditure of the dispensary, whichever is less, so far as the budget allotment placed at the disposal of the surgeon general permits. Of late years in one or two cases local bodies have decided to do without Government assistance by way of grant-in-aid and the loan of the services of a medical officer and have employed medical officers of their own selection.

A condition of the acceptance of a grant-in-aid is the performance of medico-legal work such as post-mortem for Government and the free treatment of Government servants at the dispensary.

With few exceptions dispensaries are located in urban areas and have not been brought into existence on any definite plan but merely in answer to the demands of the inhabitants of the area concerned.

Infectious diseases.

6. Cases of infectious diseases are provided for by special wards in compounds of civil hospitals and some large dispensaries. In the case of epidemics reliance is placed on emergency structures and arrangements by a temporary staff.

At Poona there is an infectious diseases hospital financed by Government with the help of contributions levied on a population basis from all the local bodies who make use of it. It is controlled by a committee under the chairmanship of the director of public health.

Miscellaneous.

7. In several districts there are non-official societies and associations with funds at their disposal which render sporadic medical relief either directly or by arrangement with the civil surgeon.

Arrangements for midwifery are defective, but some local bodies employ a midwife and there is usually a bed or two available for midwifery cases in bed dispensaries.

VILLAGE AID SCHEME.

8. Under the village aid scheme selected school masters are given three months' training at an approved civil hospital in "first aid", particular attention being paid to the simple dressing of wounds and the treatment of conjunctivitis. The "village aid post" is then established in connection with the school, where the school master puts into practice what he has learnt. The cost of each such aid post is Rs. 300 per annum, the total being made up of a monthly allowance of Rs. 10 to the school master and a grant of Rs. 180 for the purchase of drugs, dressings etc.

The scheme is in operation in four districts only. The subjoined table gives the details of it. Though the scheme is of only local application at present it serves a useful purpose :—

District.	Number of posts.	Allowances to village aid teachers at Rs. 10 per month.	Contingencies.	Total grant.
		Rs.	Rs.	Rs.
1. Poona	10	1,200	1,800	3,000
2. Bijapur	10	1,200	1,800	3,000
3. Sholapur	5	600	900	1,500
4. Dharwar	5	600	900	1,500
Total ..	30	3,600	5,400	9,000

RED CROSS SOCIETY.

9. The Bombay Presidency Branch of the Indian Red Cross Society, which has among its objects the promotion of infant welfare, has its executive committees at Poona, Belgaum, Bijapur, Surat, Godhra, Broach and Ahmedabad. The committees work in conjunction with the local civil hospitals and contribute to the comfort of patients.

MATERNITY AND CHILD WELFARE.

10. The Bombay Presidency Baby and Health Week Association was established in 1925 with a view to—

(*a*) conducting an organised campaign of mass education in the elementary principles of health and hygiene and maternal and infant care ; and

(*b*) awakening the sanitary and social conscience of the public in order to create a demand for the establishment of welfare institutions, such as infant welfare centres and maternity homes, and for the passing of public health laws to reduce suffering and mortality.

Several bodies which have the above objects in view have been affiliated to the association and its activities are spread over a number of districts in the presidency. Among the affiliated bodies may be mentioned the Bombay Presidency Infant Welfare Society which seeks to promote infant welfare by providing aid and assistance to infants, expectant mothers, mothers in child birth and to mothers and all others in charge of infants. The society has nine centres in Bombay city and two branches in the mofussil, one at Poona and the other at Tarapur (Thana district).

III. Special institutions.

Mental hospitals.

11. Mental hospitals have been established by Government under section 84 of the Indian Lunacy Act IV of 1912 at the following stations in the Bombay Presidency for the reception and treatment of mental patients of all classes from any part of the presidency :—

Name.	Authorised accommodation.
(1) Central mental hospital, Yeravda, Poona	860
(2) Narotamdas Madhavdas mental hospital, Naupada, Thana ..	318
(3) Mental hospital, Ahmedabad ..	128
(4) Mental hospital, Dharwar ..	171
(5) Mental hospital, Ratnagiri ..	176
(6) Sir C. J. mental hospital, Hyderabad, Sind	159

The central mental hospital, Yeravda, is in charge of an Indian Medical Service specialist in mental diseases supplied from the alienist department of the Government of India and the mental hospital at Naupada is in charge of a non-Indian Medical Service specialist. The remaining four mental hospitals are administered by the civil surgeons of the districts in which they lie.

Patients treated in mental hospitals are of the following classes :—

(*a*) Voluntary boarders—section 4 of the Indian Lunacy Act.
(*b*) Patients admitted on petition—sections 5–11 of the Indian Lunacy Act.
(*c*) Patients sent by the police, i.e., those wandering at large, dangerous etc.—sections 14, 15, 17 of the Indian Lunacy Act.
(*d*) Patients under observation—section 16 of the Indian Lunacy Act.
(*e*) Criminal insanes and lunatic prisoners—sections 466 and 471, Criminal Procedure Code, and section 30 (1) Prisoners Act, III of 1900.
(*f*) British military insanes—section 12 of the Indian Lunacy Act.
(*g*) Lunatics found by inquisition—section 25 of the Indian Lunacy Act.

An authority making an order for the reception of a person in a mental hospital must ascertain before making the order that accommodation exists in the mental hospital to which the patient is to be sent. All documents prescribed by the law must accompany the patient or be sent to the superintendent of the hospital as soon as possible afterwards.

Under section 28 of the Indian Lunacy Act IV of 1912 Government appoint visitors for every mental hospital. The number of such visitors is not less than three, one of whom must be a medical officer. The visitors inspect every part of the hospital and see and examine, as far as circumstances permit, persons confined therein and the order and certificate for admission of every insane admitted since their last visit. They record in a book kept for the purpose their remarks in regard to the management and condition of the hospital and its inmates. A copy of the remarks is sent to the surgeon general for information.

The visitors may direct the discharge from the mental hospital of any person confined therein under sections 31–33 of the Indian Lunacy Act. They have also to make a special report every six months on the criminal insanes confined in a mental hospital—section 30 of the Act.

Under the Act Government must pay the cost of all lunatics committed to mental hospitals if they have no estate or relative able to support them or if they are criminal insanes or lunatic

prisoners. A recovery of 6 annas a day (which is considerably below the real cost) is made from municipalities and cantonments in respect of pauper lunatics received from their areas. No such recovery is made from local boards.

The fees charged for the maintenance of civil inmates of mental hospitals are, when a person who is in receipt of an annual income of Rs. 1,000 or more or is a member of the family of such person and actually dependent on him is admitted for treatment into a mental hospital, annas 6 per diem when the income is Rs. 100 or less per mensem ; annas 8 when the income is above Rs. 100 and an addtional annas 8 per diem for each complete Rs. 50 of income in excess of the above amounts, subject to a maximum of Rs. 15 per diem. Military insanes are charged fees at the rates prescribed in Army Regulations, India.

The making available of larger sums for mental hospitals is a vital need. One method of securing more funds which is being further examined by Government is to relieve the exchequer of the cost of maintaining those patients who ought not to be a charge upon it. On 1st January 1931 there were in all the mental hospitals of the presidency 1,427 non-paying patients and 1,223 paying patients, among the latter being included those on whose account contributions were recovered from local bodies. The number of voluntary boarders was 33.

The magistrate who issues a maintenance order uses police agency to obtain information about the income of patients. The enquiries often take a long time, so that a charge cannot sometimes be made until large arrears have been incurred. It would possibly be a better arrangement, if funds were available, to have separate paying and pauper wards in hospitals. There would then be a greater incentive to those who could afford to pay to do so and enquiries as to income might be done away with. The local Government also maintain in their mental hospitals a large number of foreigners and residents of other provinces and States. In some cases recoveries are made on their account, but recoveries are in almost all cases inadequate and the burden of proof that a certain person is not a native of the presidency is not always easy to discharge. At the instance of the Reorganisation Committee Government have abrogated, with effect from 30th November 1933, the reciprocal arrangement which they had entered into with other local Governments in India, whereby they were precluded from preferring a claim on those Governments for the maintenance in Government mental hospitals in this Presidency of mental

patients belonging to provinces administered by those Governments.

There is undoubtedly great overcrowding in the mental hospitals and a serious lack of staff. All the hospitals, except two, have only part-time superintendents. An economical and convenient unit for a mental hospital is 1,000 beds. At Yeravda, which is the largest one, there is authorised accommodation for 860 but a population always in excess of this number.

Leper asylums.

12. Under section 3 of Act III of 1898 the local Government may specify local areas from which lepers may be sent to places notified as leper asylums. Within such an area a police officer may arrest any pauper leper, i.e. a leper who has no ostensible means of subsistence or publicly solicits alms or exposes sores, and put him before a magistrate who may commit him to detention in a leper asylum. Such lepers are "statutory lepers." Other lepers are voluntary boarders.

There are in the presidency the fourteen leper asylums noted in the margin. These asylums provide accommodation for some 1,565 lepers. A number of the asylums are maintained by the Mission to Lepers with contributions from local bodies and Government. The Kagrapeth leper asylum at Ahmedabad is the only one maintained entirely by Government. The Acworth leper asylum, Matunga, is maintained entirely by the Bombay corporation, but the maintenance charges of lepers from areas outside Bombay city detained in the asylum are paid by Government. The Sir D. M. Petit asylum, Ratnagiri, which was formerly maintained by Government, has been handed over to the district local board, Ratnagiri, subject to certain conditions.

1. Acworth leper asylum, Matunga, Bombay.
2. E. F. Albless leper home, Trombay (Bombay Suburban district).
3. Sir D. M. Petit leper asylum, Ratnagiri.
4. Leper asylum, Vengurla (Ratnagiri district).
5. Leper asylum, Pui (Kolaba district).
6. Leper asylum, Poladpur (Kolaba district).
7. Leper asylum, Kondhwa (Poona).
8. Leper asylum, Nasik.
9. Leper asylum, Sholapur.
10. Leper asylum, Hindalge, Belgaum.
11. Leper asylum, Miraj.
12. Leper asylum, Ahmedabad.
13. Parvatibai leper infirmary, Surat.
14. Hiranand leper asylum, Karachi.

The Acworth leper asylum, Matunga, and the asylums at Ratnagiri, Ahmedabad, Poona, Nasik, Sholapur and Belgaum have been appointed leper asylums for the purposes of segregating lepers from certain specified areas in the presidency to which the Lepers Act has been made applicable.

The capitation rate paid by Government for the maintenance of statutory lepers at the leper asylums at Nasik, Poona, Sholapur, Ratnagiri and Belgaum (Hindalge) is Rs. 10 a month for an adult leper and Rs. 5 a month for a child leper and that paid by Government for the maintenance of non-statutory lepers at the leper asylums at Pui, Poladpur, Nasik, Belgaum, Poona and Sholapur is Rs. 5 a month for an adult leper and Rs. 2-8-0 for a child leper.

Leper asylums are in charge of superintendents and are open to inspection by officers of Government.

Broadly, the policy of Government with regard to leper asylums is to collaborate with the British Empire Leprosy Relief Association (Indian Council), Bombay Presidency Branch, in the establishment of out-door clinics in the places most heavily infected and in propaganda work and in aiding the Mission to Lepers or others to establish a sufficient number of asylums to make it possible to apply the Lepers Act to the whole presidency. It has so far been applied only to certain areas in the districts mentioned below in addition to Bombay city, owing to the insufficiency of accommodation provided for lepers in asylums :—

Ahmedabad,	Nasik,
Kaira,	East Khandesh,
Broach,	Sholapur,
Surat,	Ratnagiri,
Bombay Suburban,	Belgaum,
Thana,	Dharwar, and
Poona,	Bijapur.

ST. GEORGE'S HOSPITAL.

13. St. George's hospital is intended for the reception and treatment of sick Europeans and others of European habits whom the medical officer in charge may deem to be suitable patients for this hospital. It contains 220 beds of which only 192 are open at present.

The medical staff of the hospital consists of a superintendent and a resident medical officer with minor medical staff and of honorary staff. The superintendent is in medical as well as administrative charge of the hospital. The resident medical officer assists the superintendent in the work of the hospital and is in charge of such wards and patients as are assigned to him.

There is a visiting committee for the hospital, whose duties are to visit the hospital together at least once a month, to note

any defects in the arrangements which seem to require improvement and to offer suggestions. A ladies' visiting sub-committee has also been constituted with similar duties.

The Port Trustees, Bombay, pay annually towards the maintenance of the hospital and its nursing association a sum revised every three years in accordance with the number of sailors as compared with the total number of patients treated in accordance with section 36 (5) (*d*) of the Indian Ports Act.

The Reorganisation Committee called attention to the facts that—

(*i*) only a part of the hospital is at present utilised;
(*ii*) the hospital is being used primarily not for Europeans but for others; and
(*iii*) the hospital occupies an unnecessarily large site of 16 acres in all.

The obligation of maintaining St. George's hospital is imposed upon Government by law under the Police Charges Act, 1907. This hospital is the only one in Bombay which has the type of accommodation required by paying European patients and provides the only means of giving nursing home accommodation to those Europeans who need it and are prepared to pay for it. Before, therefore, the present hospital could be closed a new hospital would have to be built in its place.

Of the 220 beds in the hospital twenty are reserved for infectious and two for mental cases. Of the remaining 198 beds, 109 are for men and 89 for women and children. Seventeen beds are in private rooms (including the nursing home) for which Rs. 15 a day are charged, 32 beds are in Rs. 8 wards, 37 in Rs. 3 wards, 30 in a ward containing Rs. 8, Rs. 3 and Rs. 1-8-0 beds and the rest in wards which are mostly free but contain some Rs. 8, Rs. 3 and Rs. 1-8-0 beds. Of these two wards for men containing 14 beds each have since been closed by Government as a measure of retrenchment.

At the present moment the hospital is almost half empty and the average number of Europeans in it does not exceed thirty. The principal causes of this are the decrease of malaria in Bombay, the decreased tonnage of shipping using the port and the reduction of European staff in Bombay offices.

The Reorganisation Committee suggest that a hospital of a hundred beds would be adequate for European requirements and that it would probably be more economical to provide a hospital of this size on another site and accommodate the

non-Europeans who at present make use of St. George's hospital in some of the wards at present lying vacant in other hospitals. This question is at present under the consideration of Government.

Other Government hospitals in Bombay.

14. Section 62 (1) of the City of Bombay Municipal Act as amended by section 10 of the City of Bombay Police Charges Act III of 1907 imposes upon Government the obligation in consideration of the payment by the municipality to Government of Rs. 4,14,500 per annum, of controlling and maintaining the following institutions according to the accommodation provided and in the state of efficiency required in 1907 :—

The Jamsetjee Jeejeebhoy hospital.
The Bai Motlibai obstetric hospital.
The Sir Dinsha Maneckji Petit hospital.
The Dwarkadas Lallubhai dispensary.
St. George's hospital.
The Gokaldas Tejpal hospital.
The Pestanji Hormasji Cama hospital.
The Albless obstetric hospital.
The Jaffar Suleman dispensary.
The Jehangir Nasarwanji Wadia dispensary, Mahim.

The old Gokaldas Tejpal hospital with 120 beds is a charitable institution intended for poor Indians of all classes. Recent extensions have increased the accommodation to 226 beds. The hospital is in charge of a superintendent assisted by a resident medical officer and honorary staff and is equipped with an up-to-date X-ray installation.

The Cama and Albless hospitals are intended for the treatment of women and children and are under the management of women doctors. The number of beds available at present for obstetric and other cases is 138. Patients requiring out-door treatment are treated at the Jaffar Suleman dispensary, which forms an out-patient department of the hospitals.

The Jamsetjee Jeejeebhoy group of hospitals, which has recently been largely extended under the reconstruction scheme with the help of the Governor's Hospital Fund, comprises the Jamsetjee Jeejeebhoy hospital with 329 beds, the Bai Motlibai and Petit hospitals with 80 beds, the ophthalmic hospital with 100 beds (of which only 73 are in use) and the ByramjiJeejeebhoy hospital for children with 100 beds (of which only 50 have been taken into use). These hospitals, other than the children's

hospital, are run as independent units in charge of superintendents. The Jamsetjee Jeejeebhoy hospital has also a large honorary staff to assist in its work. The hospitals serve as teaching institutions of the Grant medical college. The Bai Motlibai hospital which is an obstetric institution, and the Petit hospital, which is a general hospital, are intended exclusively for the treatment ot women. The Dwarkadas Lallubhai dispensary serves as an out-patient department of these two hospitals. In addition to the above is the Sir Sassoon David hospital with 97 beds, which has not yet been opened for financial reasons, and the Ellappa Balaram pavilion of 104 beds, of which 52 beds have never been utilised for the same reason, while the remaining 52 were taken into use and then closed but 26 of them again reopened.

The Bombay hospitals are subject to the hospital fees rules. A poor fund is also maintained from money paid into the poor box by patients or their friends on leaving the hospitals. Each of these hospitals except the Cama and Albless hospitals, the nursing arrangements of which were taken over by Government in April 1931, has its own nursing association. A part, usually a half, of the expenditure of the association is borne by Government. The hospitals have attached to them advisory committees, whose main function is to look into the comfort and welfare of patients under treatment.

Haffkine Institute.

15. In 1899 Mr. Haffkine, who had previously prepared his prophylactic vaccine against plague at various temporary laboratories in the city, obtained permission to take over old Government House, Parel, for the manufacture of his vaccine. This institution became known as the "plague research laboratory" and expanded till it became the principal centre for research into plague and other diseases as well and a diagnostic centre for the clinical requirements of western India. In consequence of this its name was changed in 1906 to the "Bombay bacteriological laboratory". Of recent years its activities have further extended to include anti-rabic, pharmacological and biochemical research, while its name was changed in 1925 to the "Haffkine Institute" in memory of its founder. The pharmacological section was closed with effect from 1st April 1933.

The more important functions of the institute in relation to the Bombay Government are—

(1) *Manufacture of anti-plague and other prophylactic bacterial vacci* —So far as anti-plague vaccine is concerned the

laboratory was for long the manufacturing centre for the world, but in recent years some countries have made their own arrangements for the manufacture of the vaccine. The laboratory, however, still holds pride of place and is the only official manufacturing centre for India. The sale of plague vaccine is the principal source of income of the institute. Owing to the decrease of plague in India and the consequent fall in sales of vaccine the price of the vaccine was raised in December 1930 with the object of making its production more nearly self-supporting. The total cost of the institute in 1931–32, apart from the cost of the biochemical and pharmacological sections and without including the cost of the pensions of the staff and the initial cost and cost of upkeep of the buildings, was just over Rs. 3 lakhs. The receipts from plague vaccine were Rs. 1,65,000 from India and Rs. 2,000 from foreign countries, those from anti-rabic vaccine Rs. 61,000 and those from other vaccines Rs. 2,000—a total of some Rs. 2,30,000. The Bombay Government thus to some extent finance the campaign against plague not only in this presidency but throughout India and are likely to continue to do so as long as the present welcome decrease in the incidence of plague continues. The difficulty of making a further increase in the selling price of vaccine lies of course in the danger of a diminished demand. At present the rate charged to consumers in India is half that charged to consumers outside India, but the demand from outside India has almost disappeared.

(2) *Preparation of anti-rabic vaccine for the province.*—The vaccine is prepared at the laboratory and sent out to various civil hospitals which function as local anti-rabic centres. The laboratory itself also functions as a treatment centre. A fee of Rs. 10 per treatment was up to now recovered from all except indigent persons, but this has now been reduced to Rs. 5.

(3) *Pathological diagnosis.*—The laboratory undertakes the examination of all specimens sent by Government medical officers for opinion, this service being free. Private persons and institutions can obtain similar service on payment of fees according to a fixed scale.

(4) *Storage and supply on sale of Lister sera* and supply on sale of certain equipment and reagents to Government institutions.

(5) *Providing facilities for research and instruction* in the newer methods of diagnosis of pathological specimens.

(6) *Anti-rabic treatment.*—During the year ending 31st December 1931, 1,692 persons applied for anti-rabic treatment

in the Haffkine Institute ; of this number 1,061 underwent the full course of treatment, 195 discontinued the treatment and 436 persons were advised that no treatment was necessary as the animals which had bitten them were found to be alive and well. There was not a single case of hydrophobia during the year in Bombay city. Anti-rabic treatment is also given at the civil hospitals at Ahmedabad, Ahmednagar, Belgaum, Hyderabad (Sind), Jalgaon, Karachi, Karwar, Nasik, Poona, Ratnagiri, Sholapur and Surat. During the year ending 31st December 1930, 5,340 anti-rabic treatments were issued to 43 out-centres including 25 in this presidency. The vaccine is issued in treatments of 14 doses and despatched from Bombay in ice-boxes. 161 treatments were issued to various veterinary centres for treating animals bitten by rabid animals.

In addition to these activities the laboratory undertakes systematic rat examination for the Bombay municipality. The director is ex-officio consulting bacteriologist to the Grant medical college and the Government hospitals in Bombay. The laboratory also undertakes systematic research on behalf of the Indian Research Fund Association, the cost of such research being borne by that body.

In its provincial functions and in all purely administrative details the laboratory is entirely under the administrative control of the local Government, but as regards the technical aspect of certain all-India functions the Government of India exercise control.

The director and certain other officers who are supplied from the medical research department are appointed by the Government of India, the rest of the staff being appointed by the local Government. The institute is financed by the local Government and the surgeon general is its controlling officer. The question of reorganising the staff of the institute on a self-supporting basis is being considered by Government.

IV. Special departments.

Chemical analyser's department.

16. The chemical analyser is appointed by the Government of India from specialist Indian Medical Service officers. When, however, the service lien on this appointment lapses the post will be provincialised. The chemical analyser is the medico-legal expert to the Government of Bombay and works under the control of the surgeon general. His principal duty is the examination of medico-legal exhibits, but he analyses and

reports on a wide range of samples submitted by the various departments of the Government and also, on payment, on those submitted by private firms. The assistant staff is appointed by the local Government. The local Government bears the whole cost of the department. The Reorganisation Committee have recommended an increase in the Government share of receipts from private analyses from four per cent. to 50 per cent. This proposal is under the consideration of Government.

Port health and quarantine.

17. There is one appointment of port health officer for the port of Bombay reserved for a European officer of the Indian Medical Service and made by the Government of India and one for the port of Karachi. These officers are under the control of the surgeon general. "Ports" being a central reserved subject the central Government exercises final control in matters beyond the scope of the local Government and the cost of the port health departments was until recently apportioned between the local Government, local port trusts and the central Government in the proportion of $\frac{1}{4} : \frac{1}{2} : \frac{1}{4}$. It appeared that in Calcutta and Madras the provincial Governments paid no part of the cost of port health work and the Bombay Government considered that the same arrangement should apply in respect of the Bombay and Karachi establishments. The matter having been represented to the Government of India they have now agreed to relieve the local Government of this expenditure with effect from 1st April 1932.

V. Medical education.

The medical college.

18. The Grant medical college, Bombay, is a Government institution affiliated to the University of Bombay. Funds for the support of the college, with the exception of certain endowments for the encouragement of deserving students, are provided by Government.

The college provides education for—

(1) Graduates and under-graduates of Bombay and other recognised universities for medical degrees;

(2) Under-graduates and others for the diploma of M.C.P.S. (Bombay).

The total number of regular students on the rolls of the college in the spring term of 1933 was 551. There were also 208 casual students.

The college is controlled by the dean under the surgeon general. A college council consisting of nine major professors and two representatives of the minor professors acts in an advisory capacity. The dean, if not otherwise a member of the council, serves on it in his own right. The most senior in rank among the professors is the president of the council.

With a view to encouraging women students to adopt the medical profession, Government have instituted two scholarships of Rs. 40 each tenable for five years at the Grant medical college, Bombay, or at any other medical college recognised by Government.

There is also a municipal medical college, known as the Gordhandas Sunderdas medical college, in Bombay. Its students are limited by the conditions of its affiliation to the Bombay University to 120. Its fees are approximately the same as those at the Grant medical college. There is plenty of room for both colleges in Bombay. At the moment the medical profession is overcrowded in the sense that there are more medical practitioners than the public are prepared to pay adequately, but practitioners are entirely insufficient for the needs of the population.

The Reorganisation Committee consider the retention of the Grant medical college necessary, but propose that its net cost, which they estimate at Rs. 2,70,000 a year, should be reduced ultimately by Rs. 36,000 a year by enhancing the fees of students who come from other provinces and Indian States. Government have accepted this recommendation, which will not, however, affect students already enrolled.

Medical schools.

19. There are Government medical schools at three stations in the Bombay presidency, namely, Poona, Ahmedabad and Hyderabad (Sind).

The medical schools have been established primarily with the object of training a sufficient staff of subordinate medical officers who will be content with a small salary on a shortened course of study with a view to their obtaining one of the minor medical qualifications.

The schools are affiliated to the College of Physicians and Surgeons, Bombay, and the students are eligible to become licentiates of that college.

Management of the schools is vested under the general control of the surgeon general in the superintendents, who are

the civil surgeons of the districts in which the schools are situated. Admission of candidates is restricted to natives of the presidency who have the same language and customs as the people among whom they will work.

The number of students attending the three schools on 31st December 1932 was—Poona 300, Ahmedabad 162 and Hyderabad 114.

The surgeon general is authorised to sanction the award of stipends, scholarships and prizes to pupils undergoing training at the schools.

Dental school.

20. The building which houses the Sir Currimbhoy Ibrahim dental school and hospital was constructed in 1929, out of the donation of Rs. one lakh made by the committee of the Sir Currimbhoy Ibrahim Memorial Fund. Owing to financial stringency it has not been possible to open this institution. When it is opened the school is to be treated as an independent section attached to the Grant medical college, while the course of studies, which will be open to qualified medical men only, will be of eighteen months. Admissions of students to the school will be made by the dean, Grant medical college.

VI. Miscellaneous.

Hospital nursing associations.

21. The provision of trained nurses in most of the large hospitals of the presidency is based on a scheme formulated in 1902 by which grants-in-aid of nursing are, subject to the exigencies of the financial situation, admissible to Government hospitals, so as to enable them to obtain the nursing staff which they themselves require and at the same time to afford additional facilities for the training of a body of qualified local nurses who will be available subsequently to attend to private cases, or for employment in the event of any serious epidemic. These grants-in-aid are subject to the condition that whenever Indian sisters and nurses of sufficient education and who have undergone proper training are available for nursing Indian patients they should be appointed in preference to others as far as local circumstances permit.

Any hospital in the presidency is eligible for a grant-in-aid for the above purpose under the following rules :—

(1) The grant is equal to half such of the expenditure of the association as is approved by Government limited to a certain maximum refixed every

three years. In the case, however, of the associations mentioned below the grant is equal to the difference between the gross expenditure and the income of the association from other sources subject to a certain maximum refixed every three years.

Association	Approved estimated expenditure	Estimated income from sources other than Government grant	Government grant
	Rs.	Rs.	Rs.
J. J. Hospital Nursing Association	1,76,000	86,000	80,000 (The grant is subject to this maximum because Government were unable to increase it owing to financial stringency.)
G. T. Hospital Nursing Association	61,000	22,500	38,400
Dharwar C. H. Nursing Association	4,350	2,700	1,500
Matheran C. H. Nursing Association	2,250	1,800	500

The associations' receipts from sources other than Government consist of :—

(*i*) Endowments ;
(*ii*) Private subscriptions ; and
(*iii*) Contributions from local bodies.

Twenty nursing associations, registered under Act XXI of 1860, have been constituted under this scheme, three of them being in Bombay city. The grants which they receive from Government amounted to Rs. 3,08,000 in 1932–33. The nursing association at the Sassoon hospital, Poona, was dissolved in 1919 and that at the Cama and Albless hospitals in 1931 and Government have since provided the nursing facilities at those hospitals. The associations have to keep an account of their funds in a form prescribed by the surgeon general. The accounts are audited by the local fund audit department of the accountant general. The surgeon general supervises the grants and sees that the conditions under which they are given are fulfilled, but the general management of the association is in the hands of their committees. These grants are purely discretionary with Government.

Bombay Presidency Nursing Association.

22. This is the parent association to which the hospital nursing associations are affiliated. Its functions are primarily to register all nurses qualifying under the system regulated by it and holding its certificates. The association is managed by a central committee which includes the surgeon general among its members. The association derives its income from fees for diplomas, registration fees, interest on investments, contributions from affiliated associations etc.

Other associations.

23. The Bombay branch of the Countess of Dufferin Fund used to maintain a school for the training of pupil nurses in connection with the Cama and Albless hospitals, but in 1931 Government took over the school along with the control of nursing at the hospital. Funds amounting to Rs. 2,49,000 belonging to the fund are vested in the treasurer of charitable endowments.

Training of midwives and dais.

24. Arrangements for the training of dais exist at the civil hospital, Belgaum, King Edward Memorial hospital, Poona, the M. V. dispensary, Surat, the V. J. hospital, Ahmedabad, and the Louise Lawrence Institute, Karachi. The dais are awarded a scholarship of Rs. 20 per mensem each with free quarters, if available, or Rs. 5 in lieu thereof. The course of study lasts for a year. The cost of the scheme is Rs. 3,000 to Rs. 4,000 a year.

The Lady Wilson Village Baby Scheme provides for the training of village dais by means of verbal and written instructions and for the equipment of the trained dais with the necessary outfit. The association receives a Government grant at one-third of its actual annual expenditure subject to a maximum of Rs. 5,000 per annum.

A scheme for the improvement of dais in Sind introduced by Miss Piggott has been in force there for some years. Under this scheme dais are trained by theoretical and practical instruction and when trained are visited and supervised at their work. The scheme is supported by Government with an annual grant of Rs. 3,000

Medical boards.

25. Medical boards are convened to examine sick officers and others who have applied to be invalided or for leave on

medical certificate or commutation of pension and to perform such other business as may be entrusted to them. The power of convening medical boards rests with the surgeon general but has been delegated in the case of Sind to the civil surgeon, Karachi, and in that of Bombay to the superintendent, J. J. hospital. A fee of rupees sixteen, of which the local Government retain rupees four, is charged to the central Government when one of their servants is examined.

The personnel of the boards in the presidency town is :—

A—The J. J. hospital medical board—

President.

The superintendent, Bai Motlibai and Petit hospitals.

Members.

Professor of medicine, Grant medical college, and physician, J. J. hospital.

The superintendent, ophthalmic hospital.

B—The St. George's hospital medical board—

President.

The presidency surgeon, Bombay.

Members.

The superintendent, St. George's hospital.

The superintendent, G. T. hospital.

VII. Staff.

Surgeon General.

26. The surgeon general is appointed by the Government of India in consultation with the local Government from the general cadre of the Indian Medical Service, the tenure of the post being for four years subject to an age-limit of 60 years.

When the claims of Indian Medical Service officers in service before 1928 to the post are liquidated the appointment will be provincialised.

The surgeon general is responsible to Government for the administration of the civil medical department including hospitals, dispensaries, mental hospitals, leper asylums and medical schools, subject to general rules laid down from time to time by Government. He advises Government on all matters relating to the appointments and transfers made by them in the department, to the conduct and service of Indian

Medical Service officers in civil employ and of Bombay Medical Service officers, to the supply of medicine and hospital stores and generally on all matters affecting the medical department. Examples of important questions on which his advice has recently been sought by Government are budgetary reductions, the radium question, Government policy in relation to hospitals and the claims of the Bombay hospitals in relation to the claims of the mofussil to medical relief. He is the official president of the Bombay Medical Council and the Bombay Presidency Nursing Association and is a nominated fellow of Bombay University.

The surgeon general controls on behalf of Government all expenditure provided in the budget estimates for the administration of the medical department under " 32-Medical." He also controls that part of the expenditure under " 33-Public Health " which pertains to the port health and Haffkine Institute establishments.

Indian Medical Service.

27. The number of Indian Medical Service officers to be employed in the civil department and their conditions of employment are regulated by the Secretary of State by rules made under the Government of India Act. By these rules 20 posts with a reserve at 27½ per cent. are reserved in this presidency for that service. Of these posts four are in the jail department and one in the public health department, the remaining fifteen being in the medical department and directly under the control of the surgeon general, viz. :—

1 Superintendent, mental hospital, Yeravda.
1 Presidency surgeon, Bombay.
1 Superintendent, St. George's hospital, Bombay.
1 Resident medical officer, St. George's hospital, Bombay.
1 Professor of gynaecology, Grant medical college, Bombay.
1 Director or assistant director, Haffkine Institute, Bombay.
1 Port health officer, Bombay.
8 Civil surgeons, Ahmedabad, Poona, Belgaum, Karachi, Nasik, Hyderabad (Sind), Dharwar and Sholapur.

Officers for civil employment are posted to the province by the Government of India from the general cadre of the Indian Medical Service on the requisition of the local Government.

With certain specified exceptions all officers are liable to recall to military duty on mobilisation, the surgeon general being responsible for maintaining the mobilisation list and submitting it annually to the director general, Indian Medical Service.

The Indian Medical Service is retained primarily to meet the needs of the Army. It also provides European medical attendants for European Government servants and their families. Under the Secretary of State's orders the following fourteen posts are reserved for European officers of the service :—

Superintendent, mental hospital, Yeravda.

Presidency surgeon, Bombay.

Superintendent, St. George's hospital.

Resident medical officer, St. George's hospital.

Professor of gynaecology.

Port health officer, Bombay.

Seven civil surgeoncies (Ahmedabad, Poona, Karachi, Nasik, Hyderabad, Dharwar and Sholapur).

The Reorganisation Committee recommend that after a new European hospital has been built in Bombay the posts of presidency surgeon and superintendent, European general hospital, should be amalgamated. They also propose that, since in their opinion medical officers both Indian and European of the requisite qualifications could be recruited locally, the Government of India should be asked to pay to the local Government the difference between the estimated cost of such locally recruited medical officers and of officers deputed from the Indian Medical Service so long as the system of deputing officers from that service obtains. Government have these proposals under consideration.

Bombay Medical Service.

28. This service has now been re-organised into class I and class II. The former includes the posts relinquished by the Indian Medical Service and other superior appointments. The scale of pay for class I is Rs. 350—25—400—30—550—efficiency bar—35—760—40—1,000. But as a result of the general revision effected on the recommendations of the Reorganisation Committee, it has since been reduced to Rs. 350—25—400—30—550—efficiency bar—585—35—760—efficiency bar—805—45—850. Direct recruits to the service are to be on probation

for two years and during the period of probation they are allowed a pay of Rs. 300 per mensem only. The new scales have not yet been brought into operation.

The Bombay Medical Service class I is divided into two divisions as under :—

Division I.—This division is composed of 18 posts served by a general cadre.

Division II.—This is made up of ten special posts filled by individual recruitment.

Class I, division I.—Appointments to the cadre of this division will be made from candidates possessing the degree of M.B.B.S. or other equivalent degree and in addition such higher qualifications—Indian or British—in medicine or surgery as imply fitness for the medical or surgical charge of a general hospital. Selected candidates will be on probation for two years, their confirmation in the service depending upon the professional efficiency displayed and their general conduct during the period.

Class I, division II.—All posts in this division are substantive appointments and will be filled from candidates possessing the high special qualifications and experience considered essential for the performance of the duties attached to their respective posts. Selected candidates will be on probation for one year, their confirmation in the service depending upon their professional efficiency and general conduct.

Direct recruits in both divisions will be required to execute bonds to serve for a period of five years and in default to forfeit a sum of Rs. 500 or such other amount as Government may, from time to time, prescribe. Recruits will also have to enter into an agreement prescribed by Government embodying the conditions of their service. The leave reserve for division I will be the Bombay Medical Service class II.

The Bombay Medical Service class II is designed for graduates of the Bombay University, but officers of the Subordinate Medical Service who have obtained higher qualifications or fulfilled other conditions may be promoted to it. Direct recruits upon appointment have to execute bonds to serve Government for at least five years and in default to forfeit the sum of Rs. 500 or such other amount as Government may from time to time prescribe. Recruits will have to enter into an agreement prescribed by Government embodying the

conditions of their service. Officers of the Bombay Medical Service class II have to pass two efficiency bar examinations. Officers displaying marked ability are placed on a selected list for superior posts when they reach the fourteenth year of their service. Appointments to superior posts are made only from men on this list and according to merit and academical and professional qualifications.

In this class there are 44 appointments plus nine leave reserve posts calculated at 15 per cent. of the posts in class I, division I, and class II combined. The scale of pay for the Bombay Medical Service class II is Rs. 200—40/3—400—50—450 with efficiency bars at Rs. 240 and Rs. 320. The scale has recently been revised by Government to Rs. 200—40/3—400. Probationers are to draw Rs. 150 per mensem for the 1st year and Rs. 180 for the 2nd year. The revised scale has not yet been brought into operation. Officers of this service are attached to civil hospitals, medical schools and dispensaries.

There are also three posts of woman assistant surgeon in a separate cadre at the civil hospitals at Ahmedabad, Dharwar and Hyderabad. The sanctioned scale of their pay is Rs. 250—40/3—450—50—500. This scale has recently been revised to Rs. 200—40/3—400—50—450. Probationers, as in the case of men, are to draw Rs. 150 per mensem for the first year and Rs. 180 per mensem for the second year. The revised scale has not yet been brought into operation.

Indian Medical Department.

29. Military assistant surgeons are employed under local Governments in much the same way as officers of the Indian Medical Service. Transfers of these officers from military to civil employment and *vice versa* are arranged between the director, medical services in India, and the director general, Indian Medical Service, on requisition made by the surgeon general subject to the general instructions of the local Government. The military assistant surgeons selected for civil employment are appointed on probation during the first five years and it is open to the local Government to move the Government of India to revert them at any time during this period to military duty on the ground of unsuitability. The following are the rates of pay :—

	Pay Rs.
Senior assistant surgeon with the honorary rank of major	700
Senior assistant surgeon with the honorary rank of captain	650

	Pay Rs.
Senior assistant surgeon with the honorary rank of lieutenant	500
Assistant surgeon, 1st class (over 20 years' service)	450
Assistant surgeon, 1st class	400
Assistant surgeon, 2nd class	360
Assistant surgeon, 3rd class	275
Assistant surgeon, 4th class	200

Originally twenty-four appointments were reserved for officers of this service in the presidency with a leave reserve of three posts, but the cadre is being reduced gradually as vacancies occur to ten appointments and one leave reserve post. At present there are fourteen Indian Medical Department officers in civil employment in this presidency. The Reorganisation Committee propose that as in the case of the Indian Medical Service the Government of India should be asked to bear the excess cost of employing officers of this service.

Subordinate Medical Service.

30. This service is recruited from men possessing the L.C.P.S. diploma. The grade pay is Rs. 60—7—200. The cadre contains 463 appointments including a reserve at 18 per cent. In the case of this service the reserve is not only for leave vacancies but for epidemic, famine, flood and other emergent service. These officers are attached both to Government hospitals and dispensaries and to the 246 dispensaries under local bodies.

VIII. Relations with other departments etc.

Relations with other departments etc.

31. The medical department does the following work for other departments of Government :—

(1) Medico-legal work and post-mortems for the police.

(2) Certification for invalidity or fitness for duty of Government servants and all applicants for Government service.

(3) Medical attendance on all Government servants.

The surgeon general has to deal with local bodies in regard to the medical staff employed by them and their expenditure

on hospitals and dispensaries. He distributes to these bodies annually the Government grant-in-aid of their dispensaries.

The civil surgeons of Dhulia, Bijapur, Ratnagiri and Karwar are ex-officio superintendents of the district prisons.

According to section 10 of the Famine Relief Code, the civil surgeon is under the general orders of the collector in so far as medical and sanitary arrangements on scarcity and famine relief work are concerned.

IX. Defects in organisation and proposals.

Absence of rural organisation.

32. From the broad view point, the medical organisation of the presidency is defective in the following respects :—

(1) Being a hospital organisation it is incapable of serving the needs of the rural population.

(2) It does not provide the equivalent of the poor law infirmary and in consequence all hospitals have to function as such infirmaries.

These propositions require detailed consideration.

The essential features of a hospital organisation is that the patient must come to the hospital for such medical assistance as may be required. The regular staff of a hospital are tied to it and can go to the patient only in exceptional circumstances. In consequence so far as the general population is concerned the hospital organisation can render no service beyond the hospital walls other than occasional flying visits in emergencies. The limitation of medical relief to a hospital organisation results in the organisation being unable to apprehend or control infectious diseases and also entails a great mass of unattended and therefore unrelieved sickness.

In urban areas the shortcomings of this type of organisation are not very much in evidence. The hospital is close to the people and it will be seldom that a sick person cannot get there. Then as regards preventive medicine there are private medical practitioners who can be utilised as sources of information and agents for control either by statutory enactment or direct agreement. In the rural areas, however, there are no medical practitioners who can be utilised as sources of information and agents for control in respect of preventable disease, with the consequence that the greater part of the population is at the mercy of epidemic diseases.

In India there are now two outstanding methods of providing medical relief for the rural areas, known respectively as the Madras system and the Punjab system. The Madras system qualitatively hardly differs from the English Poor Law system. Practitioners willing to settle in specified villages can obtain a subsidy from public funds in return for which they must render a certain degree of public service. The system is simple, comparatively cheap and with various modifications is largely followed in other large provinces.

The Punjab system is part of a very comprehensive scheme for systematising medical relief, in which the bed dispensaries of a district are graded and grouped in relation to each other and the district headquarter hospitals. In this system either a geographical unit (100 square miles) or a population unit (32,000 people) is taken. For this unit a dispensary termed a " rural dispensary " is built on a standard plan to provide accommodation for one medical practitioner. The medical officer in every case is a whole-time employee of the district board and so far as medicine is concerned renders all public service in the area allotted to him. This system is costly but effective.

Grouping and grading hospitals.

33. Medicine is a rapidly advancing science requiring for its application apparatus of ever-increasing complexity and cost. When the existing civil hospitals were built radiology and electro-therapy were unknown and much the same can be said for the more important aspects of modern clinical pathology. On financial grounds it would be impossible to bring all civil hospitals up to a uniform standard and if discrimination between them is not upon some ordered plan the result will be the waste attendant on haphazard development. Government have therefore recently grouped district headquarters hospitals into four groups with a major hospital for each group at Poona, Ahmedabad, Karachi and Bombay, respectively. One advantage of this system of grouping and grading of hospitals is that it enables concentration of efforts on bringing the selected hospital of the group up to the standard of a really modern hospital without frittering money away on the hopeless task of bringing all the hospitals of the group up to that standard. The scheme will not result in a reduction of present expenditure, but will secure that such additional sums as may become available are spent in a regulated way.

INFIRMARIES.

34. The term "infirmary" varies in significance in various parts of the Empire, but is used here in the same sense as in the English Poor Law. For practical purposes it may be taken to mean a hospital built, staffed and equipped to provide reasonable accommodation, care and attention for indigent persons. If an infirmary is in the neighbourhood of a civil hospital, as it should be, infirmary patients can be temporarily transferred to the civil hospital for operations or other assistance not provided by the infirmary. The chief function of this type of hospital is to relieve the strain on the resources of the costly hospitals whilst providing medical care and attention at a much lower rate.

It is the duty of a municipality to provide medical relief for the indigent sick and on general grounds it would appear undesirable that the cost of such relief should be a charge on provincial revenues. Municipalities as a rule make considerable provision for medical relief by means of specialised hospitals and satellite dispensaries, but so far no municipality has established an infirmary. The tendency, where funds are available, appears to be in the direction of erecting a general hospital of the most costly type in addition to the existing civil hospital, a proceeding which is definitely wasteful. Provision of an infirmary for the indigent sick coupled possibly with some extension of the civil hospital would meet all requirements in most cases and at a much smaller initial and recurring cost.

MEDICAL EXPENDITURE OF LOCAL BOARDS.

35. The duty of providing medical relief in their areas is laid by law on the municipalities and district local boards. To fulfil this obligation Government have prescribed that municipalities must devote at least four per cent. of their expenditure to medical relief. Reports are submitted each year to Government showing how far this obligation is carried out. Government are considering the question of prescribing an appropriate percentage of expenditure on medical relief in the case of local boards.

LAY ADMINISTRATION OF HOSPITALS.

36. The lay administration of all hospitals except the J. J. hospital group is in the hands of the medical officer in charge, much of whose time is thus taken up in attending to administrative details to the detriment of his professional work.

Owing to the recent expansion of the J. J. hospitals group a "lay secretary" with experience of supply and accounting work was appointed to that hospital in 1930. Previously all the hospitals in this group had their separate supply arrangements. Unification was the first step and this has resulted in large economy. In addition to this, great room for increased efficiency has been discovered. In one year's working it has been found possible to save about Rs. 50,000 in supplies and contingencies out of a total expenditure of Rs. 2,85,000 in this group. The lay secretary has his central office for supply services in which the stewards' departments of the several hospitals are merged.

The system has recently been extended beyond the J. J. group. Government have decided that all the Bombay hospitals should be pooled for purposes of contracts and have entrusted the work to the lay secretary. The annual expenditure on diets alone of these hospitals amounts to about Rs. 3 lakhs. The Lay Secretary has also been entrusted with the work of obtaining contracts for the N. M. Mental Hospital, Naupada, Thana, and is also going into the question of economical contracts for articles of general hospital supply for all the mofussil hospitals. The Reorganisation Committee consider that care should be taken to see that the responsibilities of the lay secretary do not clash with those of the superintendents of the hospitals concerned and that they should be limited to questions of supply. They propose that the holder of the post should be designated "hospital supply officer" and should be engaged on a lower scale of pay than at present. Government will consider these proposals generally when the three years' contract of the present incumbent of the post, who has himself been engaged on much lower pay than his predecessor, expires in November 1935.

Hospital fees.

37. The privilege of free attendance extends only to servants of the local Government. Servants of the central Government pay fees according to the rules. Under the dispensary and hospital fees rules well-to-do persons are not to be treated as out-patients at Government or aided dispensaries or hospitals but may be treated as in-patients on payment of the prescribed fees. Recently Government have issued orders for the levy of a uniform minimum fee of one anna in the case of out-patients and two annas in the case of in-patients at all Government and aided hospitals and dispensaries. They

have also issued orders that all patients should provide their own diets. These orders will not apply to the really indigent but to the large proportion of the wage-earning population who previously escaped payment altogether as they did not come within the definition of "well-to-do" persons. The old definition of a well-to-do person was one having an annual income of Rs. 1,800 per annum. This has now been reduced to Rs. 1,000, but the chief difficulty is that medical officers are unable to obtain reliable information about the means of the patient and to enforce payment. In these circumstances Government and aided hospitals and dispensaries have been in the past regularly taken advantage of, without payment, by people who could afford to pay for medical treatment.

The remedy for such abuses as exist lies in the growth of public spirit, but something can be achieved by gradually raising the level of fees to a more suitable level and eventually perhaps by placing fees and their recovery on a statutory basis. The Reorganisation Committee recommend that the effect of the recent changes in the rule should be watched and fees gradually raised, the well-to-do being charged full economic rates for treatment and nursing as well as for dieting.

District Hospital Funds.

38. In order to enable private charity to supplement the grants for the medicines and diets of civil hospitals, which were reduced from the year 1931-32 for financial reasons, District Hospital Funds have been constituted in every district. The collector is usually chairman and the civil surgeon secretary. These funds have been remarkably successful. They have as a general rule not merely resulted in the deficit in the Government grant being made good, but enabled some extension of medical relief to be made. The amount collected in all districts in 1932-33 (April-January) was about Rs. 27,600 while the grants for diets and medicines for all Government mofussil hospitals for that year amounted to Rs. 2,33,000.

Hospitals Maintenance Committee, Bombay.

39. In Bombay city a joint committee, styled the Hospitals Maintenance Committee, consisting of members nominated by Government, by the corporation and by the committee of the Governor's Hospital Fund has been formed. This committee corresponds to the District Hospital Fund committees in that its chief object is to raise public subscriptions for the benefit of the hospitals in its area. The net receipts are divided

between Government, municipal and private hospitals in Bombay and the Sassoon Hospital, Poona.

Commitments in Bombay city.

40. Until 1907, when the Police Charges Act was enacted, the Bombay Municipality bore three-quarters of the cost of the police of the city. In that year Government suggested that, in return for the transfer of the whole cost of the police to Government, the municipality should undertake to defray certain charges previously borne by Government in the city, including all medical charges except those of certain institutions which were unsuitable for transfer. Towards these the municipality should contribute a fixed grant-in-aid. In making the proposals Government stated that

> "The grant-in-aid to hospitals to be paid by the municipality will differ essentially from their payments on account of police, in that the municipal liability in regard to these institutions is fixed once for all and their liability for increased expenditure under this head will take the shape of supplying, as necessity occurs, new institutions over which they will have full control."

The idea underlying the proposal was thus that the municipality, in exchange for the expanding liability for police charges which gave rise to continual controversy between Government and the municipality, should undertake the liability for all expansion of medical relief, all such extensions of activity being entirely under their control and so not a source of controversy.

The Bombay Municipal Act, 1888, as it stood before the passing of the Police Charges Act, 1907, did not impose upon the municipality the duty of making adequate provision for medical relief in the city. By the new Act, this duty was made an obligatory function of the municipality, as it was already of all other municipalities in the presidency. Government however were, under the Act, to be entirely responsible for the maintenance of the following institutions up to their then state of efficiency subject to the payment by the municipality of the sum of Rs. 4,14,500 a year towards the cost of their upkeep :—

Sir J. J. and allied hospitals (four hospitals in all).
St. George's hospital.
Gokaldas Tejpal hospital.
Cama hospital.
Albless hospital.
Jaffer Sulleman dispensary.
Wadia dispensary, Mahim.

In making their offer to the municipality, however, Government also undertook to make such expansion in the case of St. George's hospital and in the Grant medical college, which they also undertook to maintain (since these two institutions served the whole presidency and not merely the city of Bombay) as the future might demand.

The Police Charges Act was brought fully into operation on 1st March 1909. At that time the municipal contribution towards the police would have been about Rs. 5,10,000. But for the Act the liability in 1930–31 would have been Rs. 29,03,000. The expenditure of the municipality in 1908 on medical relief was about Rs. 5,22,000. The recurring charges incurred by the municipality on medical relief in 1930–31 were Rs. 18,05,000. In that year the sum which Government spent on the maintenance of the Government medical institutions in Bombay city and on the provision of medical relief in the city generally amounted to Rs. 15,34,000. The extensions of hospital accommodation and medical relief made by Government in Bombay since 1909 have been made purely of their own volition. It was during the governorship of Sir Leslie Wilson that the Bombay Government determined to make a concerted effort to increase the hospital accommodation in Bombay city. The Governor's Hospital Fund was formed with the object of inviting subscriptions from the public, principally for the creation of new wards in existing hospitals, both Government and municipal, in the city. Government undertook to make to all approved schemes of new construction a contribution equal to the amount provided from the fund. The maintenance of the increased accommodation in Government hospitals devolved upon Government. The total sum subscribed by the public to the fund amounted to about Rs. 18 lakhs and Government made a contribution of Rs. 10 lakhs towards the erection of the undermentioned hospital extensions from the fund. The only extension made in municipal hospitals with fund monies is the provision of a plague ward of 36 beds at the Arthur Road Hospital at a cost of Rs. 95,000.

J. J. GROUP OF HOSPITALS.

Sir Sassoon David hospital	..	97 beds.
B. J. Children's hospital	..	100 beds.
Rebuilding of the Sir Cowasjee Jehangir ophthalmic hospital with addition of 27 beds	..	27 beds.
Dental school and hospital.		

Quarters for 99 additional nurses required for the extension.

Quarters for the extra medical staff, clerks, compounders etc.

Quarters for the extra servants and sweepers.

The Elappa Balaram pavilion of 104 beds, though forming part of the J. J. hospital expansion scheme, was constructed entirely out of the amount bequeathed by the donor whose name it bears.

In addition to the above a new ward called the Prince of Wales' Ward containing 130 beds was added to the Gokaldas Tejpal hospital in 1927 with the balance of the public subscriptions collected to finance the celebrations in connection with the Prince of Wales' visit in 1921. An additional ward of 16 beds was also added to the top of the north wing of the Gokaldas Tejpal hospital at Government expense in 1927 and a surgical extension of 12 beds at the Cama and Albless hospitals.

Out of this additional accommodation of 486 beds in the Government hospitals a block of 50 beds in the B. J. Children's hospital has been continually in use since its erection. A further 144 beds, consisting of 52 beds in the Elappa Balaram pavilion, 80 beds in the Prince of Wales' ward and twelve beds in the surgical extension of the Cama and Albless hospitals, were taken into use from the time they became available but closed at the beginning of 1931–32 owing to the inability of Government to maintain them. At one time there were thus 436 beds lying vacant in the Government hospitals in Bombay city. In October 1932 twenty-six beds in the Elappa Balaram pavilion were reopened and the sixteen beds in the north wing of the Gokaldas Tejpal hospital were newly opened with funds provided by the Bombay Hospital Maintenance Committee. The number of vacant beds is thus 394 at the present time. They are unlikely to be brought into use unless and until endowments are forthcoming from charitable sources for the purpose.

The Reorganisation Committee have recommended that Government should undertake no further direct obligation for medical relief in Bombay city and that the provision of fresh institutions should be held to be the responsibility of the corporation or of charitable bodies, Government contributing nothing beyond such grants-in-aid as they may be prepared to give with due regard to the state of their finances. Government have accepted this recommendation.

X. Summary of reforms, developments and economies effected during the last five years.

41. Several important reforms, developments and economies have been effected in the Medical Department during the last five years. The more important among them are the reconstitution of the Bombay Medical Service into two classes, the appointment of a Lay Secretary for Hospital Administration and the unification of the supply arrangements for the hospitals included in the J. J. Group in Bombay which has resulted in a large measure of economy, the provision of increased hospital accommodation in Bombay, the revision of the rules for the levy of fees in Government and State-aided hospitals and dispensaries so as to ensure that non-indigent people who take advantage of the facilities provided by these institutions pay a modest charge for them, the taking over by Government of the management of the nursing arrangements at the Cama and Albless Hospitals and of the training school for nurses attached to the hospital, the creation of new appointments of honorary medical officers in mofussil hospitals, the institution of district hospital funds with a view to supplement the diet and medicine grants of mofussil hospitals, the grouping and grading of hospitals with a view to regulate expenditure on their future development, the conversion of a number of highly paid posts into posts on a lower salary, e.g. provincialisation of the posts of Superintendents of Mahabaleshwar and Matheran, appointment of the Superintendent of the N. M. Mental Hospital, Thana, on a contract basis and on a lower salary, substitution of Subordinate Medical Service officers for Bombay Medical Service Class II officers at the Uran and Kharagoda dispensaries, substitution of short-term house appointments with the designation of " casualty medical officers " on a pay of Rs. 50 per mensem each for three appointments of Military Assistant Surgeons in the J. J. Hospital, Bombay, the abolition of the post of Civil Surgeon, Godhra, and its replacement by a post of Medical Officer in Bombay Medical Service Class II, the abolition of the post of Medical Registrar, B. J. Medical School, Ahmedabad, the replacement of the post of Assistant to the Dean, Grant Medical College, Bombay, which was formerly held by a Bombay Medical Service Class II officer in the scale of Rs. 200—40/3—400—50—450 by that of an Office Superintendent on Rs. 200—10—350, increase in the fees charged in the Government Medical institutions and reduction in the number of scholarships and free-studentships awarded by Government. The

various economies effected by Government during recent years have enabled them to continue to maintain their medical arrangements on a satisfactory basis in spite of severe financial stringency. A proposal made by the Reorganisation Committee to establish district medical boards to manage all dispensaries belonging to local bodies in the mofussil was considered and rejected by Government on the advice of the Divisional Commissioners and the Surgeon General.

XI. Questions before Government which have been partly considered.

42. The following are the principal matters now under the consideration of Government :—

(1) *Registration of nurses and midwives.*—A Bill to provide for this has been drafted and is now under the consideration of Government.

(2) *Constitution of a Presidency Leprosy Board and appointment of a whole time Government Leprosy Officer.*—The Surgeon General has been asked to revise his proposals in the light of the criticism made in the Secretariat.

(3) *Increase of accommodation and staff in Mental Hospitals.*—Government have administratively approved certain proposals for increase in staff and accommodation of the Central Mental Hospital, Yeravda, submitted by the Surgeon General.

(4) *Increase in Government share of receipts from private analysis performed by the Chemical Analyser's Department.*—As Government wish to have a uniform set of rules applicable both to All-India Service Officers and to officers of the Provincial Service, they are awaiting the orders of the Government of India regarding the percentage of fees for such work to be paid to Indian Medical Service officers.

(5) *Increasing the receipts and making more funds available at Mental Hospitals.*—On the advice of the Reorganisation Committee Government have decided to abrogate with effect from 30th November 1933 the reciprocal arrangement entered into by them with other Local Governments in India whereby they were precluded from raising any claims against those Governments for the maintenance in mental hospitals in this Presidency of mental patients belonging to their provinces. The question of revising the charges for the maintenance of mental patients in Government mental hospitals on an economic basis is under consideration. A report from the Surgeon General is awaited.

(6) *Making the Haffkine Institute self-supporting.*—The proposals submitted by the Director, Haffkine Institute and the Surgeon General are under the consideration of Government.

(7) *Provision for Radium in Government hospitals in Bombay.*—Owing to financial stringency and the difficulty of raising an adequate endowment fund Government had to give up a comprehensive scheme for the provision of a 2 gramme Radium service for the Presidency as a whole. They are now considering a smaller scheme mainly for the Bombay hospitals.

(8) *Bringing the G. T. and Cama and Albless Hospitals under the administration of the Lay Secretary.*—The proposal is under the consideration of Government who have called for further information from the Surgeon General.

(9) *Scheme for rural medical relief.*—Government have considered the various alternative proposals submitted by the Surgeon General for the extension of medical relief in rural areas and have asked him to submit a properly considered scheme in consultation with the Divisional Commissioners.

(10) *The future of the St. George's Hospital, Bombay.*—Government are considering in consultation with all parties concerned, various alternatives in light of the Report of the Reorganisation Committee.

XII. Matters the consideration of which has been postponed.

43. Consideration of the following proposals has had to be postponed by Government on account of financial stringency :—

(*i*) Revision of the staff of Pathological and Bacteriological laboratories at the Grant Medical College, Bombay.

(*ii*) Appointment of a full-time professor of Pharmacology at the Grant Medical College.

(*iii*) Scheme for the extension of the Central Mental Hospital, Yeravda, involving an additional expenditure of about Rs. 11,50,000.

XIII. Question to be taken up in the future.

44. The following questions will have to be considered by Government in the near future :—

(*i*) Opening of the Dental School and Hospital.

(*ii*) Dental Registration Act.

(*iii*) Improvements at the medical schools, staff, equipment, preliminary qualifications, course, etc.

(*iv*) Improvement in training of compounders.

(*v*) Post graduate training of Government medical officers.

(*vi*) Increase in nursing staff in hospitals.

(*vii*) Provision of X-ray apparatus and proper clinical laboratories at all large headquarters hospitals.

(*viii*) Increase in the number of maternity hospitals.

(*ix*) Establishment of special tuberculosis hospitals.

(*x*) Electrification of all major hospitals.

(*xi*) Standardization of articles of hospital supply.

(*xii*) The revision of the Civil Medical Code.

(*xiii*) Establishment of a cadre of combined qualified midwives and women vaccinators.

XX—PUBLIC HEALTH DEPARTMENT

I. Organisation.

General.

1. "Public health" is a transferred subject under the devolution rules. It is in the portfolio of the honourable minister for local self-government and administered in the general department of the secretariat.

The director of public health has under his immediate control four assistant directors of public health, one director of the vaccine institute, Belgaum, and two officers in charge of the public health laboratories at Poona and Karachi.

Maintenance of separate director of public health.

2. A resolution of the Government of India, dated 26th October 1895, proposed in effect the abolition of all sanitary departments by making the civil surgeon, the district sanitary officer and the sanitary commissioner, now known as the director of public health, subordinate to the head of the medical department. The Government of India gave effect to this principle by abolishing the post of sanitary commissioner to the Government of India and transferring his duties to the director-general, Indian Medical Service. The Government of Bombay accepted the principle to the extent of declaring their sanitary commissioner subordinate to their surgeon general (resolution of 23rd June 1900).

In the meantime, plague having broken out in India, the public health organisation of the country came into the limelight, with the result that the Frazer Commission in 1898 stressed the necessity for the appointment of district medical officers of health. The principle of this recommendation was not accepted, but for the time being in various provinces district plague medical officers working under the civil surgeons were

appointed and the appointments subsequently retrenched as plague abated.

In 1905 the Government of India, having doubts as to the wisdom of the policy of 1895, on a reference from the Government of Bengal reopened the question of restoring the sanitary commissioner to his former status. The Government of Bengal disapproved this subordination, and the surgeon general, Bombay, who was consulted agreed that no advantage had accrued from it. The Government of Bombay, however, decided to continue the arrangement.

In 1908 the Government of India finally rescinded the policy of 1895, recreated the post of sanitary commissioner with the Government of India making him independent of the director-general, Indian Medical Service, and again asked the Government of Bombay to reconsider the matter. On the recommendation of a committee appointed to consider the reference the Government of Bombay, by a resolution of the 26th January 1911, restored the sanitary commissioner to his previous position as an independent officer. Thereafter the public health department of this presidency began to develop and, as far as superior personnel and laboratory organisation were concerned, soon outstripped all other provinces.

The Retrenchment Committee of 1921 recommended the abolition of the post of director of public health and the substitution for it of a post of assistant director of public health in the office of the surgeon general. At the same time it recommended the appointment of a district health staff, a recommendation which would have involved expense in excess of the economy proposed. Government rejected the proposal to abolish the post of director and postponed decision on the question of appointing a district health staff.

In 1926 Mr. Shillidy, as retrenchment officer, considered the same proposal but refused to recommend it. The Reorganisation Committee has now proposed, not that there should be any amalgamation of staff or duties of the medical and public health departments, but that there should be one head in charge of the two departments. The views of Major-General Forster, who was then surgeon general and of the late director of public health, which were placed before the committee, were that the heads of the two departments should remain separate, that the combined work would be too much for one man, that one man might not have the qualifications necessary to administer both departments, that the heads of the two

departments should be housed in the same building and, so to speak, next door to each other, a principle generally enforced in other major provinces, that, when possible, joint tours should be arranged, since experience had shown them to be mutually advantageous, and that medicine, public health and local self-government should constitute the portfolio of one minister who should be designated "minister for health". They also suggested that the heads of the two departments should be secretaries in the general department. By this means they considered that there would be amalgamation of the two branches of medicine in the general department of the secretariat.

The Reorganisation Committee claim that their proposal does not involve any amalgamation of the two services, which would remain entirely distinct, that there would be no diminution of public health services, that the amalgamation of interests and association between the two departments would be best secured by their having a common head, that the duties of neither office are so onerous as to make the arrangement unworkable and that it would always be possible to arrange that the head of the two departments either possessed the necessary qualifications himself or had a personal assistant with public health qualifications. Government have accepted the proposal and have applied to the Secretary of State for sanction to the abolition of the post of director of public health.

ASSISTANT DIRECTORS AND OTHERS.

3. The scales of pay now in force for non-Indian Medical Service officers in the department are as follows :—

	Rs.
Director of public health..	1,700—50—1,950
Director, vaccine institute, Belgaum ..	450—40—850—70—1,200
Officer in charge, public health laboratory, Poona ..	450—25—700—40—1,100
Assistant directors of public health ..	450—35—800—40—1,200
Officer in charge, chemico-bacteriological laboratory, Karachi ..	300—40/3—500—50/2—600

The following revised scales have recently been approved by Government :—

	Rs.
Assistant Directors of Public Health ..	400—30—700—35—1,050 Probationers 400 (2 years).
Director, Vaccine Institute, Belgaum ..	400—35—750—60—1,050
Officer in charge, Public Health Laboratory, Poona ..	400—25—650—35—1,000
Officer in charge, Chemico-Bacteriological Laboratory, Karachi ..	300—40/3—500—50/2—600 plus special pay of Rs. 100.

The revised scales have, however, not yet been brought into operation.

All officers in the department are debarred from private practice.

It was in 1912 that the Government of India decided to throw open the posts of deputy sanitary commissioner, as the assistant directors were then called, to officers not belonging to the Indian Medical Service who possessed British public health qualifications. These new non-Indian Medical Service appointments were non-pensionable. The Public Service Commission of 1912 recommended that they should be made pensionable, but the Government of India decided instead to institute a provident fund for them. The rules of the fund are still under consideration. Now one post in the provincial service alone is reserved for the Indian Medical Service. The post of director of public health is open to all members of the department.

The Retrenchment Committee of 1931 and the Reorganisation Committee recommended that the reservation of one post for the Indian Medical Service should be cancelled as a measure of economy. Government, however, propose to transfer the post to the surgeon general's office and convert it into one of deputy to the surgeon general. The sanction of the Secretary of State to this proposal has been applied for. The number of assistant directors was reduced from five to four in 1931 as the result of a recommendation of the Retrenchment Committee of 1931. The Reorganisation Committee has given it as its opinion that no further reduction of assistant directors is

possible. That committee recommends that the designation of the assistant directors should be changed to that of "superintendents of public health". After the posts of surgeon general and director of public health have been amalgamated this recommendation will be considered by Government.

The present jurisdiction of the assistant directors is shown below :—

Registration district.	Districts.	Population (census 1931).	Area in square miles.	No. of villages.
Northern (headquarters, Ahmedabad).	Surat, Broach, Kaira, Panch Mahals, Ahmedabad, East and West Khandesh.	5,125,821	20,134	..
Central (headquarters, Poona).	Poona, Nasik, Ahmednagar, Thana, Kolaba, Ratnagiri and Bombay Suburban.	6,105,449	27,578	21,263
Southern (headquarters, Belgaum).	Belgaum, Dharwar, Bijapur, Kanara, Satara and Sholapur.	5,523,665	28,336	..
Sind (headquarters, Karachi).	Karachi, Dadu, Larkana, Upper Sind Frontier, Sukkur, Nawabshah, Hyderabad and Thar Parkar.	3,260,778	46,506	5,108
		20,015,713	122,554	26,371

Duties of assistant directors.

4. The following is a resumé of the duties of the assistant directors :

(*a*) vaccination ;

(*b*) giving advice with regard to sanitation in the urban and rural circles of their charges, submission of special sanitary reports on the larger towns and the sanitary inspection of villages ;

(*c*) inspection of birth and death registers when on tour and the compilation of vital statistics ; (Compilation cannot be centralised owing to the language difficulty;)

(*d*) inspection of mofussil dispensaries ;

(*e*) inspection of factories ; (Assistant directors are ex-officio medical inspectors of factories and report to the chief inspector of factories ; twenty-five factories were inspected by them in 1931;)

(*f*) inspection of sites proposed for schools, police lines and other Government buildings, burial grounds, latrines, etc. ;

(*g*) direction of measures during epidemics, visiting areas affected ;

(*h*) minor or preliminary epidemiological surveys of special areas ;

(*i*) fairs ; (There are ten large pilgrim centres demanding the presence either of the assistant director or of the director ;)

(*j*) special enquiries made at the instance of Government, for instance, as a result of questions in the legislative council ; and

(*k*) supervision of the general health of their registration districts, ascertaining fluctuations in epidemic diseases recurring therein and their causes and promptly advising the revenue authorities as to remedial measures ;

(*l*) inspection of mines (Assistant Directors are ex-officio Inspectors of mines.)

VACCINE INSTITUTE.

5. Until 1903 calf to arm vaccination was the only form of vaccination in the presidency. It was carried on regularly at large centres such as Bombay, Karachi, Poona, Ahmednagar and Sholapur and intermittently at a few smaller towns and villages from inoculated calves sent from the larger centres. Although the amount of work done in this manner increased from year to year, it could only meet a fraction of the needs of the presidency. Any considerable extension of animal vaccination depended on the substitution of the use of preserved lymph for the calf to arm method. In 1904 the Belgaum vaccine institute was started under the direction of the late Major-General Hutchinson, I.M.S.

The capital cost of the institute was Rs. 3,81,000 ; its area is 133 acres ; its staff consists of 38 men. The institute has its own electrical generating plant. Glycerinated vaccine is prepared, purified and distributed throughout the Bombay presidency for both civil and military requirements, to some Indian States, to other parts of British India, to Portuguese India, Zanzibar, Africa, Bahrein, Bushire, Bunder Abbas, Muskat etc. In 1932–33, 1,651,555 doses were sent out.

Ordinarily a regular contribution is levied for the supply of vaccine on the basis of the population served, irrespective of the actual supply made in any year. The charge is Rs. 2-8-0

i.e., the actual cost of producing 41 doses of lymph, per annum per thousand of population. Non-contributing bodies are charged by the dose at a slightly higher rate. Apart from small-pox lymph, autogenous vaccines for outside patients are prepared at the institute.

Public health laboratories.

6. Two laboratories are maintained by the department. That at Poona was established in 1913 and that at Karachi in 1920. They perform both chemical and bacteriological analyses and conduct the routine bacteriological examination of samples of water supply from the headquarter local bodies. The laboratories are equipped for a large field of public health work besides work in connection with water supply and sewage purification. The laboratory at Karachi has been a combined public health and chemical analyser's laboratory since 1927.

II. Fairs and pilgrimages.

Haj.

7. Sanitary and medical arrangements are made for haj pilgrims at Bombay and Karachi, which are the principal ports of embarkation and disembarkation for the haj. The port health officers, who are not under the director of public health, are in charge of these arrangements. There are also official protectors of pilgrims at Bombay and Karachi.

Pilgrim centres.

8. It is only during the last thirteen years that special attention has been paid to places of pilgrimage. A pilgrim committee appointed in 1916 submitted a valuable report on the principal pilgrimages of the presidency. There are ten important pilgrim centres in the presidency, extending from Sehwan in Sind to Gokarn in the south, namely, Dakore, Pandharpur, Nasik, Trimbak, Alandi, Jejuri, Yellama, Gokarn, Yemnur and Sehwan. Of these all except Sehwan, which is a place of Muslim pilgrimage, are Hindu holy places. The fair at Yemnur is managed by the Dharwar district local board. All the other fairs are managed by municipalities, that at Gokarn by a periodical municipality specially constituted for the purpose of the fairs, and those at Alandi, Jejuri, Trimbak and Yellama by permanent municipalities specially constituted because of the fairs. The other places are sufficiently important to have had municipalities independently of the fairs.

The fairs at the smaller pilgrim centres in the rural areas are generally managed by revenue officers under the orders of the district magistrate in accordance with rules framed under section 45 of the District Police Act.

Pilgrim tax.

9. To meet the cost of the sanitary works for the pilgrims visiting the fairs a small capitation tax, generally called the pilgrim tax, is levied under the Municipal Act or the District Police Act. In the year 1931-32 the receipts from the pilgrim tax were Rs. 82,800 at Pandharpur, Rs. 22,000 at Alandi, Rs. 21,600 at Dakore and Rs. 15,000 at Yellama. At other centres they were considerably smaller. In some minor places of pilgrimage a small fee is levied on every goat sacrificed instead of a capitation charge.

To the receipts from this source municipalities debit not merely the actual cost of the special arrangements made for the pilgrims, but also a certain proportion, fixed either by the commissioner or by Government, of their general overhead charges, such as establishment, water supply and medical expenses.

As however municipalities generally failed to adhere to the prescribed proportions and appropriated pilgrim receipts to their general expenditure Government amended the Municipal Acts in the following way :—Every municipality which levies a tax on pilgrims resorting periodically to a shrine within the municipal limits is required to credit the proceeds to a separate account called the "pilgrim fund account," after making reasonable provision for the payment to the municipality of such percentage of the proceeds of the tax as may be determined from time to time by the municipality with the approval of the commissioner for (*i*) the performance of all obligations imposed or which may be imposed on it by law, (*ii*) such general duties as are connected with the health, safety and convenience of the pilgrims and (*iii*) the cost of collection of the tax. The sums so credited to the pilgrim fund account are to be devoted to works conducive to the health, convenience and safety of the pilgrims.

Sanitation of pilgrim centres.

10. Sources of water supplies at all these centres are chlorinated or permanganated before, during and after the festivals. Wells and other water-supplies lying on the roads of

pilgrims and palkhis are sterilized at the time of the festival and attention is also paid to the cleanliness of the surroundings of these sources to ensure their safety. Trench latrines are provided in the pilgrim town, where necessary sweepers and other staff are engaged temporarily to cope with the work and disinfectants, such as phenyle and crude oil, are freely used. Special medical officers are appointed for the inspection of pilgrims at the railway stations and in towns during important festivals. Minor fairs are visited by the inspectors of sanitation and vaccination, who assist the mamlatdars in making efficient sanitary arrangements. In the case of big centres the sanitary arrangements are made under the personal advice of the assistant director of public health concerned and are supervised by him during the festivals. These arrangements are also inspected on occasion by the director. Temporary infectious diseases hospitals are opened in certain pilgrim centres for the isolation and treatment of patients and their contacts and placed in the charge of the medical officers of the areas.

Palkhis.

11. Palkhis, which are a form of itinerary congregation peculiar to this presidency, have often proved a means of disseminating cholera. During the Ashadhi fair at Pandharpur some 19 of these are brought on foot by road from different places. The itinerary varies from 100 to 600 miles. To follow a palkhi is considered meritorious among Hindus and there are devotees who have visited Pandharpur with the palkhis year after year for forty years. The number of pilgrims following these palkhis varies from 60 or so at the start to 50,000 when nearing Pandharpur. The following preventive measures are taken :—

(1) All the followers who collect at the starting point are medically examined. The programme of route of each palkhi is fixed in advance and at each stopping place the followers are medically examined. If a case of epidemic disease is detected, the patient and contacts are segregated and sent to the nearest dispensary.

(2) Sources of drinking water supply all along the routes are sterilized, both before the palkhi arrives and after it leaves.

(3) Arrangements are made for conservancy and inspection of food supplies.

(4) Medical officers are requisitioned through the surgeon general from the dispensaries along the route and the assistant

director of public health is informed of the health conditions of the followers as the palkhi progresses.

Recently more progress has been made by enlisting the co-operation of the " boas " or palkhi leaders. They have to a certain extent assumed the responsibility of looking after the health of their followers. A small pamphlet of " Do's " and " Don'ts " as regards personal hygiene have been given to each of them and they read it out after their " kirtans " or religious services. It is hoped that advice will be more strictly followed when it is tendered by the religious leaders than when it is offered by the department.

Fairs and epidemics.

12. The sanitary management of fairs has engaged the attention of sanitarians in Western India since the middle of the last century, but the bigotry of the people and vested interests of the priests proved till recently a formidable obstacle to any substantial progress. Within the last few years the growth of education among the people has served to remove this handicap to a marked extent and, with the additional aid of the conciliatory policy adopted by the present-day sanitarians, considerable progress has been achieved.

Fairs and festivals play a very important part in the dissemination of epidemic diseases, especially cholera. Some of the places of pilgrimage were till comparatively recently looked upon as hot-beds of cholera. Epidemics following in the wake of pilgrimages and spreading over the whole country were of frequent occurrence. It has been proved that by proper sanitary arrangements at fairs cholera can be to some extent controlled, as will be seen from the statistical returns of the disease at Pandharpur, Nasik and other pilgrim centres.

III. Epidemic diseases.

Agency for control.

13. It is a statutory duty of municipalities to provide special medical aid and accommodation for the sick in times of epidemics and to take such measures as may be required to prevent the outbreak of and suppress epidemics. In rural areas the primary responsibility in dealing with outbreaks of epidemics rests with the district local boards. According to a Government resolution of 21st November 1927 local boards are required to set apart annually a lump sum to meet expenditure incurred in this connection. The collector is

empowered to take action in consultation with the assistant director of public health if he finds the measures taken by the boards inadequate. Similar powers have been conferred on the collectors in respect of urban areas also.

Reports of outbreaks.

14. For the intimation of the outbreak of epidemic disease printed post-cards are used. These have the names of the notifiable diseases printed on them in the four languages of the province—Marathi, Gujarati, Kanarese and Sindhi. They are supplied in duplicate, one being addressed to the taluka officer and the other to the assistant director of public health. The duty of despatching the cards devolves in the presidency proper upon the village patel and in Sind upon the tapedar or a selected zamindar or mukhi. These persons are instructed to place on the post-card a mark against the printed name of the disease occurring in the village. A single card on the occurrence of the first case is all that is required in order to warn the authorities of the occurrence of an outbreak.

Thereafter the progress of the epidemic is reported to the mamlatdar daily by the village officers and the mamlatdar forwards a consolidated statement for his taluka to the assistant director of public health. Municipalities and cantonment authorities communicate the occurrence of an outbreak directly to the assistant director. The assistant director compiles a consolidated return and submits it to the director of public health. Reports of epidemic outbreaks on railway premises are sent by the railway authorities by wire to the director of public health.

Small-pox.

15. Small-pox, one of the three major epidemic diseases in India, was the first to be dealt with in an organised way. The department was in its infancy primarily regarded as a department for vaccination. Vaccination was first introduced into the presidency in 1830. In 1850 the presidency was divided into seven vaccination circles, each with its superintendent, under the control of a medical board. In 1867 the post of superintendent-general of vaccination was created and the vaccination organisation of the presidency thus completed. Each superintendent had an assistant for each collectorate of his circle and there were at least one, and sometimes two, peregrinating vaccinators in each taluka. There were also stationary vaccinators in large towns. Every vaccinator

had a peon. The vaccinators in British territory were paid from local funds except in towns where they were paid from municipal funds. Those in the Indian States were paid for by the States. In 1857 registration of births and deaths and work in connection with other epidemic diseases and sanitation generally were also entrusted to superintendents of vaccination and the vaccination circles were distributed into registration districts, the superintendents being called "deputy sanitary commissioners".

Vaccination staff.

16. The deputy sanitary commissioners, now styled assistant directors of public health, are in charge of the vaccination arrangements not only in British territory but in the territory of the Indian States which fall in their charge. They have under them 32 inspectors of sanitation and vaccination who are generally one, but sometimes two, in each district. There are 466 vaccinators in the presidency, of whom 344 are local fund vaccinators, 45 municipal vaccinators and 77 Indian State vaccinators. There are also some 34 candidate vaccinators.

Control of vaccination.

17. In Bombay and Karachi vaccination is under the sole control of the municipalities. In Deolali, Poona, Kirkee, Ahmednagar and Belgaum cantonments it is under the control of the cantonment authorities. Vaccination was made compulsory in Bombay in 1877 and in Karachi in 1879 and afterwards in 32 other towns and cantonments in the presidency.

The total expenditure on vaccination including the cost of the inspectors, vaccinating staff, lymph etc. in 1932-33 was Rs. 4,74,315, of which Rs. 3,48,406 fell on the local bodies and Rs. 1,25,909 on Government. Government also bear the whole cost of the pension charges of the staff except in districts in which control has been transferred wholly to local bodies.

In 1911 the control of vaccination was transferred at the instance of the Government of India to the local boards of one collectorate in each of the five registration districts as an experiment. The supervision remained with the department. The view of the department has throughout been that this experiment has not been a successful one. Government have, however, recently by a resolution dated the 23rd

October 1931, laid down fresh conditions under which they are ready to extend the transfer of vaccination to any local board which applies for it. This policy is based upon the fact that adequate provision for public vaccination is laid upon local bodies as an obligatory duty both under the Municipal Acts and the Local Boards Act and was prompted to some extent by the expression of a desire by some local bodies to assume control over their vaccination staffs. The conditions are as follows :—

(1) the local body must have an approved health officer to assume the duties of the assistant director as controller of the whole establishment ;

(2) the rules for the qualifications, recruitment and training of the vaccination and inspecting staff must be subject to Government approval ;

(3) the minimum staff which the local body must maintain may be prescribed by Government but not so as to exceed the cost per head of population of the staff at present maintained. The prescription of minimum staff will however only be made after consultation with the local body ;

(4) the minimum equipment for the vaccinators will be prescribed by the director, but not so as to exceed the existing scale ;

(5) the lymph must be obtained from the vaccine institute ;

(6) the existing staff of inspectors, vaccinators and peons must, if Government so direct, be taken over by the local body on the terms and conditions on which they are at present employed, which terms and conditions must not be altered to their disadvantage without the sanction of Government. A right of appeal to the director must be reserved to the staff so taken over against any order involving dismissal or reduction ;

(7) the pensionary rights of existing staff must be safeguarded and the local bodies must pay to Government the assessed cost of pensions earned after transfer ;

(8) the local body must provide for the maintenance of such registers and the submission of such reports and returns as may be prescribed by Government and give facilities for supervision

and inspection by Government officers of the public health department, who will be entitled to make suggestions and recommendations for the consideration of the local bodies; and

(9) a local body may make arrangements to use the services of the staff of other local bodies on payment subject to the decision of an officer appointed by Government in cases of difference of opinion.

The Satara local board has accepted these conditions and taken over control of vaccination in that district from the 1st of April 1933.

The transfer of vaccination staff benefits Government to the extent that it relieves Government of pensionary liabilities. Government have at present under consideration the question whether States should contribute or not towards the cost of the supervision of their vaccination arrangements.

Duties of vaccinators.

18. Vaccinators must visit all villages in their charge in a serial order at least once a year and villages with a population of over 500 at least twice a year. In addition special monsoon campaigns are conducted by the inspectors of sanitation and vaccination in taluka headquarters and other large rural towns in order to reduce to the minimum the number of unprotected school children.

Training of Vaccinators.

19. Candidates for posts of vaccinator must be between 18 and 20 years of age, have passed at least the vernacular final examination and be physically fit. On selection candidates take a course of instruction under a senior taluka vaccinator. During this period they must perform at least 300 primary operations and learn all the duties of a vaccinator. After this training, if they prove satisfactory, they undergo a further course of instruction under a town vaccinator at the headquarters of an assistant director. If after this training they possess the necessary skill and knowledge, they are enrolled as trained candidates. The number of men required to fill the expected number of vacancies every year is selected from a roll of trained candidates and deputed to a special twelve weeks' training class at

the vaccine institute. They are not charged fees but undergo the training at their own expense. Candidates are also trained at Karachi by the superintendent of vaccination.

Plague.

20. The present policy in relation to plague aims at the denial of access to man to infected rats and their fleas and also at counteracting the effects of infection. To achieve the former object rat destruction and the evacuation of infected areas are the means employed. The latter object is served by inoculation.

The director employs temporarily a number of trained inoculators of the Subordinate Medical Service. They are sent on the application of the collectors to those districts the residents of which appear likely to take advantage of inoculation. The vaccine is obtained from the Haffkine Institute and inoculation is not charged for.

Cholera.

21. Every mamlatdar keeps in his office a small emergency stock of potassium permanganate and cholera pills, of which he makes use when necessary for the disinfection of wells and the treatment of patients. The dispensary medical officers keep a stock of anti-cholera vaccine and Tomb's Mixture. In addition medical officers are temporarily recruited to the Subordinate Medical Service and employed on anti-cholera duty during epidemics. The anti-cholera vaccine is obtained from the Central Research Institute, Kasauli. The number of inoculators engaged ordinarily varies from six to fifteen, but depends on the progress of cholera epidemics. The cost of the special staff and of the drugs and vaccine used by them is met by Government.

Malaria.

22. Temporary officers are also recruited to the Subordinate Medical Service every year for anti-malaria work in malarious districts. These officers also deal with other diseases besides malaria. The control of the officers so employed was recently transferred from the surgeon general to the director with the idea of making possible the combination of the anti-malarial and anti-plague staff arrangements. The director has accordingly been empowered to train the combined staff

in both inoculation and anti-malarial work and to employ as many officers for such period as may be necessary subject to the limit of the grant placed at his disposal.

QUININE.

23. Quinine sulphate is obtained in powder form from Madras and made up by prison labour at the Yeravda Central Prison into five grain tablets with the use of machinery. Quinine hydrochloride treatments are also made up at the prison.

The free distribution of quinine sulphate to the public and to school children was introduced in 1919 and for three years a budget provision varying from Rs. 1 lakh to Rs. 50,000 was made for the purpose. For some years thereafter there was no such grant, but regular grants have been made since 1924.

The following agencies are employed for the free distribution of quinine :—

(*a*) collectors and their subordinates ;

(*b*) administrative officers of school boards and chief officers of district local boards ;

(*c*) officers of the public health department ; and

(*d*) during floods and widespread epidemics only, presidents of district local boards.

The requirements of collectors are supplied on indent to the director through the assistant directors who scrutinise the indents with reference to the prevalence of malaria in each taluka. Children are particularly susceptible to malaria and conditions in schools are particularly suitable for the regular administration of the drug. The quininisation of school children has been carried out by the department since 1924.

The free supply of quinine was first made as an experiment in Dharwar and Kanara districts, but as other local boards applied for free quinine and were generally supported by district officers, the scheme was extended to the whole of Sind, to Kaira, Panch Mahals, Thana, Surat and West Khandesh.

There is ground to believe that a good deal of the quinine supplied by Government is wasted or goes to the wrong people and Government have now under consideration the

question of revising their orders regarding the free distribution of quinine with a view to prevent this waste.

Quinine is also sold at post offices on a non-profit making basis. This scheme was introduced at the suggestion of the Government of India with a view to securing that the rural population both in British India and the States should be able to obtain pure quinine cheaply and without difficulty. At first the quinine sulphate was sold at post offices in powder form in ten grain twin packets at a price which varied at different times from one anna to a quarter anna. Since 1927 the quinine has been sold in tablets, two to a packet, each of five grains and with instructions in English and the vernaculars at a cost of six pies a packet. A small bonus of one anna per rupee's worth of quinine sold is paid to the postmaster.

In 1911 in order to provide quinine in a more attractive and palatable form Government introduced quinine hydrochloride (a more expensive drug) in the form not of doses but of treatments, each treatment consisting of twenty tablets first of four, now of five, grains made up in small glass tubes with instructions in English and the vernaculars. A parcel of ten such tubes sells at present at Rs. 3-12-0.

IV. Famine.

Famine.

24. The director is generally responsible under the orders of the commissioner for famine relief measures in their sanitary aspect. The more important duties laid upon the director in the Famine Relief Code are :—

(1) to prepare in consultation with the collectors and forward to the surgeon general an estimate of the extra trained medical staff likely to be immediately required ;

(2) to see that medical officers are appointed to famine relief works which may be opened ;

(3) to supervise the whole medical staff employed in relief operations ;

(4) to scrutinise mortality returns both before and during scarcity or famine for any indication of the existence or approach of scarcity or famine in any district ;

(5) to draw up a standard scale of medicines, instruments, stores etc. to be issued on the opening of a hospital; and

(6) to issue general instructions in regard to hospital diets and the issue of extra food or drink for various classes of patients.

V. Courses of instruction.

SANITARY INSPECTORS' CLASS.

25. In order to provide a supply of men versed in the practice of sanitation for employment as engineers or medical officers in mofussil municipalities, a class for the training of sanitary inspectors has since 1902 met under the executive health officer, Bombay Municipality. Candidates possessing engineering qualifications who have passed this examination are eligible for employment either as engineers or sanitary inspectors, while those who do not possess engineering qualifications are eligible for employment only as sanitary inspectors. The course ordinarily lasts for six months and ends with an examination held in May under the auspices of the Royal Sanitary Institute, London. Certificates of competency in sanitary science bearing the seal of the institute and signed by the board of examiners are granted to successful candidates. The director is president of the board and the superintending engineer, public health, and the executive health officer, Bombay Municipality, are members.

The class is open to all who have passed an examination of a standard not lower than either the school final examination or the matriculation examination of the Bombay or other Indian university. It is also open to those who have already served as overseers or sub-overseers in engineering, Subordinate Medical Service officers, inspectors of sanitation and vaccination and compilers and vaccinators of the public health department. The executive health officer, Bombay Municipality, has discretion to waive the preliminary qualification in the case of servants of any municipal sanitary department.

Private students pay Rs. 150 as instruction fee for the course. All students pay an examination fee of Rs. 50. The receipts from and cost of the class balance at about Rs. 5,000 a year.

Four students selected by Government are admitted to the class without fee. Government also provide examination prizes of Rs. 25 per month of the class in lump after the results of the examination are announced to the first four Government nominees of the class who obtain the certificate of the Royal Sanitary Institute, London, and one prize of the same amount to a student who is not a Government nominee.

Junior health officers' class.

26. An advanced course for subordinate medical officers wishing to qualify as medical officers of health in second class towns was instituted by Government in 1921. The first examination was held in 1923. The class is held concurrently with the sanitary inspectors' class and the examination is conducted by the director as president of the board of examiners with the executive health officer, Bombay Municipality, as member. A prize of the value of Rs. 25 per mensem is given to a L.C.P.S. student who passes the examination with distinction.

VI. Statistics.

Rural areas.

27. In the presidency proper birth and death registers are kept by the police patil, if he is literate, otherwise by the talathi. In Sind they are kept by the village school masters, shop-keepers, intelligent zamindars and others, most of whom are unpaid. The whole of Sind is not covered by these agencies and the figures are in consequence inaccurate and deficient. They are collected by the tapedar and entered in his register. At the end of the month the patil, talathi or tapedar forwards an extract from his register to the mamlatdar or mukhtiarkar, who consolidates the extracts for his taluka and transmits them to the assistant director.

Urban areas.

28. Registration of births and deaths is compulsory in municipal towns. In practice defaulters are very rarely prosecuted, though prosecution is usually possible under by-laws. A register is maintained in the municipal office under the control of the secretary, chief officer or, in some small municipalities, the sanitary inspector. In large municipalities there are sometimes subsidiary registers in

different parts of the town. The responsibility of reporting is generally laid on parents, guardians, relatives or owners of houses in which births or deaths occur. Sometimes special clerks are engaged to make daily visits from house to house, sometimes sanitary inspectors make house-to-house enquiries, sometimes dais and sweepers are relied upon for information of births. Rewards are usually given to persons furnishing information which leads to convictions for not reporting births or deaths.

Registration, usually a subsidiary registration, of deaths is also carried out at the octroi post or toll gate which funeral parties have to pass on their way to burial grounds or burning ghats. Vaccinators are expected to check the registration of births. All municipalities, except Bombay, send their returns to the assistant director. Those with a medical officer of health also send a weekly, and those with a population of over 10,000 a monthly, return of vital statistics straight to the director.

In cantonments registration is maintained by the cantonment magistrate. Registration is compulsory under the Cantonment Act. A monthly return is sent by the cantonment magistrate to the assistant director.

Notifications of births and deaths occurring within station limits are sent monthly by the station masters to the mamlatdars, who forward them to the assistant directors.

Births and deaths occurring among Anglo-Indians and Europeans are registered in the collector's or cantonment magistrate's office, whence returns are sent straight to the director. The information for Bombay city is sent by the executive health officer to the director.

VII. Sanitation.

URBAN SANITATION.

29. The obligatory duties of municipalities in sanitary matters are described in the Acts as :—

(*a*) Lighting public streets, places and buildings ;

(*b*) Watering public streets and places ;

(*c*) Cleansing public streets, places and sewers, and all spaces, not being private property, which are open to the enjoyment of the public, whether such places are vested in the municipality or

not; removing noxious vegetation; and abating all public nuisances;

(*d*) Regulating or abating offensive or dangerous trades or practices;

(*e*) Reclaiming unhealthy localities;

(*f*) Acquiring and maintaining, changing and regulating places for the disposal of the dead;

(*g*) Constructing, altering and maintaining public streets, culverts, markets, slaughter-houses, latrines, privies, urinals, drains, sewers, drainage works, sewerage works, baths, washing places, tanks, wells and the like;

(*h*) Obtaining a supply or an additional supply of water, proper and sufficient for preventing danger to the health of the inhabitants from the insufficiency or unwholesomeness of the existing supply, when such supply or additional supply can be obtained at a reasonable cost;

(*i*) Public vaccination; and

(*j*) Registering births and deaths.

The Government of India in 1913 formulated a scheme for the appointment of medical officers of health and sanitary inspectors, applicable to municipalities with a population of not less than 20,000. In order to foster the scheme Government offered a grant-in-aid of two-thirds of the pay of medical officers of health and one-third of the pay of sanitary inspectors. In 1921 the scheme was extended to apply to municipalities with a population of not less than 15,000 and Government's contribution towards the pay of sanitary inspectors was raised to one-half. For the purpose of the scheme municipalities are divided into three classes according to population :—

Class I—those with a population of 50,000 and upward;
,, II—those with a population of 30,000 and under 50,000; and
,, III—those with a population of 15,000 and under 30,000.

Nine municipalities, including two special ones, have been placed in class I, twelve in class II and twenty-six in class III. The scale of appointments for these three classes is :—

Class I—a medical officer of health possessing both a medical qualification registrable by the General

Council of Medical Education and Registration in the United Kingdom and a British diploma in public health or an equivalent Indian diploma approved by Government,

a sanitary inspector for every 20,000 of the population and in addition a chief sanitary inspector when the population exceeds one lakh.

Class II—a medical officer of health who possesses a medical qualification registrable by the Bombay Medical Council, preferably the M.B. B.S. of an Indian university, and has passed the examination for medical officers of health for second class towns,

a sanitary inspector for every 20,000 of the population.

Class III—a medical officer of health qualified for appointment to a class II municipality at the option of the municipality,

at least one sanitary inspector and preferably a chief sanitary inspector when there is no medical officer of health.

The following rates of pay have been prescribed by Government :—

Medical officers of health :

For class I towns—

Rs. 400—25—750 for medical officers possessing British qualifications ;

Rs. 300—25—600 for medical officers possessing Indian qualifications approved by Government.

For classes II and III towns—Rs. 250—25—450.

Chief sanitary inspector—Rs. 85—5—125 *plus* cycle allowance.

Sanitary inspector—Rs. 60—5—100 *plus* cycle allowance.

According to the census of 1921 thirty-seven municipalities had a population of 15,000 and over and thus qualified for the scheme. Thirty of these took advantage of the scheme and in addition fourteen municipalities which were strictly ineligible. On the basis of the census of 1931 fifty-two municipalities are now eligible for the scheme.

Seventeen municipalities have so far appointed medical officers of health and forty-four have appointed sanitary inspectors, the total number of sanitary inspectors, including sixteen chief sanitary inspectors, being eighty-seven.

The present cost of the system to Government, without taking into account the emergency cut in pay, is :—

	Rs.
medical officers of health ..	61,000
chief sanitary inspectors	12,500
sanitary inspectors	40,000
Total ..	1,13,500

RURAL SANITATION.

30. There must be by law a district local board for every district and there may in addition be taluka local boards for the talukas. Municipal and cantonment areas are excluded from the jurisdiction of local boards. The total population within the jurisdiction of the 28 district local boards in the presidency is 17,450,212. The obligatory duties in sanitary matters of local boards are—

(1) Public vaccination and sanitary work and measures necessary for public health; and

(2) the construction, maintenance and repair of public tanks, wells and water works; the supply of water from these and other sources and the conversion of step-wells into draw-wells.

A district local board which appoints a health officer is entitled, if the appointment is approved by Government, to a subsidy of two-thirds of the pay of the post. The minimum qualification prescribed for district local board medical officers of health is a British diploma in public health or the degree of M.B.B.S. of the Bombay university or an equivalent degree of any Indian or British university or the degree of B.Hy., Bombay, or the degree of D.P.H., Calcutta.

The scheme is defective in that it does not secure that a local board, having appointed a medical officer of health, provides him with adequate staff and appliances.

The boards of Dharwar and Satara districts only have so far taken advantage of the scheme. The Larkana board has appointed a health officer, but his appointment has not been approved because he does not possess the minimum qualifications required.

There are also sanitary boards and sanitary committees, constituted under the Bombay Village Sanitation Act of 1889 which was extensively revised in 1931, and panchayats,

constituted under the Act of 1920 has now been superseded by Bombay Act no. VI of 1933. The main sanitary functions of panchayats are—

(*a*) water supply ;

(*b*) cleansing of roads, drains, bunds, tanks, wells and other public places ;

(*c*) sanitation, conservancy and prevention or abatement of all nuisances ;

(*d*) preservation and improvement of public health ; and

(*e*) lighting.

There are no village panchayats in Sind or the Bombay Suburban district at present. Inasmuch as the new Panchayat Act is designed to secure greater powers and resources to panchayats, it will enable panchayats to do much more for village sanitation than they have been able to do hitherto.

VIII. Problems and difficulties.

Lack of adequate agency.

31. From the nature of the case a public health department can never have a large personnel, the administrative principle being that all public health work other than that of a specialised nature is done by the general body of medical practitioners, the superior control of whom in this respect is exercised, on the authority of legislation, by a small body of specially trained and qualified officers known as medical officers of health.

Viewed in its broadest aspect the function of a public health department is to prevent sickness and mortality and for that purpose it requires an agency by which information can be obtained and through which preventive measures can be applied. The more numerous and the more skilled the general practitioners, the better the results will be. In most of the major provinces of India the general organisation has been standardised on the following principle :—

one assistant director for each revenue division,

one medical officer of health for each district,

whilst the organisation of the medical department is relied on to assist the provision of a net-work of practitioners who will constitute the agency through which the department will function.

Public health administration in this presidency is still in an undeveloped stage. In most of the provinces of India and in

countries outside India the tendency is to develop a Government public health service. In this province the policy is to induce local bodies everywhere to provide themselves with medical officers of health recruited from among general practitioners. But scarcely any progress has been made in rural areas.

There is a sharp distinction, however, between general sanitation, including water supply, conservancy, dwelling houses and what may be called general or environmental factors and national services including epidemics, fairs and special health work, such as maternity and child welfare, hygiene in schools, industrial hygiene and other matters which affect the whole country.

General sanitation is properly the work of local bodies and it may be provided for with or without a Government cadre of health officers. The national service must, however, be directly controlled by Government.

Public Health Act.

32. The greatest desideratum is a Public Health Act. An all-India Act would be the best, but since that cannot be expected under present conditions it is desirable that an Act should be drawn up for this presidency. The Royal Commission on Labour in India recommended the enactment of comprehensive Public Health Acts in all provinces. The first object of the Act would be to define what should be the obligatory duties of every local body in general matters of sanitation and the action which the public health department might take in the event of a local body failing to fulfil its statutory duties.

It is idle to hope that in the conditions of India sanitary improvements can be effected without legislation. In other countries sanitary improvements, especially in the initial stages, had to be accomplished with the help of legal coercion and India cannot expect to be an exception to this rule.

Control of epidemics.

33. According to a Government resolution of 21st November 1927 the responsibility for dealing with epidemics rests mainly upon local bodies, but Government assist them with advice and by the provision of inoculators and vaccine free of charge.

The District Local Boards Act, however, makes this vital duty obligatory upon the boards only "so far as the local

funds at their disposal permit." There is no statutory obligation upon the boards to set apart any fixed proportion of their income for epidemic work. When an epidemic breaks out, they rely upon Government to come to their assistance, because they have no funds available to meet the emergency. Epidemic work should be principally prophylactic and, if an epidemic breaks out, time is an important factor in dealing with it. Once it has been given a good start, much greater exertion and expenditure are required to overtake it. But, except in the case of small-pox, there is little standing organisation to deal with epidemics. The recruitment of a temporary staff and the collection of material takes time. It is illogical that the whole expense of dealing with epidemics should fall upon the inhabitants of the area in which they occur. There is a very grave danger, moreover, in trying to deal with epidemics on territorial lines. No single body can maintain a personnel adequate to deal with such eventualities. However remote from them an epidemic may be, it is in the interests of all local bodies that it should be fought before it spreads.

The soundest plan would, therefore, be for Government to control all epidemic work. Funds could be made available if all local bodies were compelled by law to set aside a fixed percentage of their income for public health purposes. Of this income a part would be at the disposal of the local bodies themselves for environmental sanitation and the rest would be a contribution to Government for epidemic work. It would form an epidemic fund, the balances of which would not lapse to Government at the end of the financial year.

The inequity of the present arrangement is illustrated by the incidence on the boards of the cost of maintaining their vaccination staff in the interests not only of themselves but of the whole presidency. The income of the Poona local board is about Rs. 9 lakhs and that of the Ratnagiri local board just over Rs. 7½ lakhs, but the vaccination staff which each board has to maintain is about the same. For the Poona board the expenditure on vaccination is about 1·45 per cent. of its income: for the Ratnagiri board the percentage is 2·40.

The fund suggested is in the nature of an insurance from which a local body would obtain, when it required it, the maximum benefit without any additional strain on its resources in a particular year. The existence of such a fund would enable all epidemics to be effectively countered. The

Government contribution would, under the system proposed, be a fixed amount added yearly into the epidemic fund.

In the report of the special advisory committee which was appointed by the Indian Railways Conference Association in 1929 to consider the control of epidemics as it affected railways, a report which the association unanimously adopted, attention is drawn to the very inadequate provision made for infectious diseases by the civil authorities throughout the greater part of India and to the fact that the municipal Acts, as a rule, appeared to be ineffective in dealing with infectious diseases. The Government of Bombay considered the report but decided that their own and the local bodies' financial condition prevented anything more being done in this presidency than is being done at present.

Flying parties.

34. The present staff at the disposal of the public health department is insufficient to deal with outbreaks of epidemics. Inspectors of sanitation and vaccination can at most disinfect wells in cholera epidemics and explain preventive measures. Medical officers in charge of dispensaries can do the initial work, but they cannot stay out of their headquarters for prolonged periods without detriment to their dispensary duties. Thus many rural areas do not get adequate preventive and curative aid and rural sanitation in this presidency is far behind that of other major provinces. As has been pointed out, staff is at present temporarily recruited after an epidemic breaks out. The training that the temporary inoculators and medical officers appointed on malarial duty obtain is now wasted because they are disbanded as soon as the epidemic is over. If there is a small nucleus, expansion is easier and more efficient. What is required is a permanent trained staff to deal promptly with epidemics. At present Government spend about Rs. 58,000 a year on epidemic work and it has been calculated that two flying parties, each consisting of a subordinate medical officer and a peon, could be permanently maintained within this expenditure in each assistant director's registration district. Additional expenditure would be required only at times of severe epidemics.

Pilgrim work.

35. At present every pilgrim centre is treated entirely as a separate entity and has to be provided with a pucca water

supply and an independent sanitary and conservancy staff for the short period of the fair. If the administration of the larger centres of pilgrimage were properly co-ordinated, it might be possible to arrange to substitute for the temporary, expensive and somewhat inefficient arrangements made for each fair at present, a mobile body of highly trained men with all the necessary paraphernalia. The principle underlying such an arrangement is not only the consideration of economy and efficiency but also the fact that pilgrim centres are a provincial concern from the sanitary and epidemiological standpoint. If such a scheme were instituted, the permanent staff of medical officers, sanitary inspectors, bhangis etc. would be permanently located at the most important of the fair centres with which they had to deal, such as Pandharpur or Dakore and would be sent out, with such temporary additional staff as might from time to time be necessary, to other fair centres within their jurisdiction. It might also be possible to substitute portable pumps fitted on lorries with portable chlorinating apparatus for permanent water works provided good wells with adequate supply were available.

URBAN SANITATION.

36. Although, owing to the large subsidy granted by Government, all the major municipalities have a fairly adequate sanitary staff, the efficiency of medical officers of health suffers from want of security of tenure and lack of adequate powers over their subordinates. This subject has been dealt with in the "Review of Local Self-Government." The Royal Commission on Labour in India observe that—

> "Health officers are to be found in most of the larger municipalities, but their work is too often ineffective because they have incomplete control of the health organisations or because their recommendations fail to receive active consideration from the Councils. It is important that security of tenure for these officers should be ensured and, to obtain this, we recommend that they should belong to a Government cadre although their salaries and allowances should be a charge on municipal funds."

In most provinces medical officers of health and sanitary inspectors are Government servants. Since the impartial discharge of their duties may frequently bring them into

disfavour with members of their municipalities, protection is particularly necessary for them. The Reorganisation Committee do not recommend the provincialisation of their service but statutory protection and statutory delegation of powers of control over subordinate staff.

Rural sanitation.

37. Apart from the hospital organisation, the vaccination staff and the temporary employment of inoculators and anti-malarial workers, there is no sanitary staff in the rural areas of this presidency except that the three district local boards of Larkana, Satara and Dharwar have engaged medical officers of health. It is generally recognised that the employment of a medical officer of health with adequate staff and apparatus in every local board area is a matter of the most urgent importance. It is one, however, which must remain unattended to so long as the present financial crisis exists.

Summary of reforms, developments and economies effected during the last five years.

38. During the last five years several reforms have been carried out in the Public Health Department mainly with the object of running the Department as economically as possible. On the recommendation of the Retrenchment Committee of 1931 one post of Assistant Director of Public Health was abolished and the Registration Districts were reconstituted and as a consequence 2 clerical and 2 menial appointments were abolished. Government also decided to charge fees for candidates deputed by Indian States and other Provinces to the Vaccinators' Class or for advanced training at the Vaccine Institute, Belgaum. Control of vaccination in the Satara District Local Board area was transferred to that Board with effect from 1st April 1933. Other important measures were the application of the provisions of the Bombay Prevention of Adulteration Act, 1925, to the Karachi and Ahmedabad municipal areas and the appointment of Public Analysts for those areas, the amendment of the Municipal Acts with a view to authorising the formation of Pilgrim Committees and the appointment of one such Committee at Dakore. An important question which Government considered during this period but had ultimately to reject owing to financial stringency was that of provincialising the services of Health Officers and Sanitary Inspectors.

Questions before Government.

39. The following are the principal matters under the consideration of Government in this Department :—

(1) Enhancement of the contributions from Indian States towards the cost of superintending vaccinators.

(2) A revised scheme for free distribution of quinine. The scheme has been examined in detail by Government and their orders will be issued shortly.

(3) With a view to making the Public Health Laboratory at Poona self-supporting a proposal was made to municipalities having piped water supplies to get their water analysed regularly and to contribute to the Laboratory at the rate of Re. 1 a year for every 1,000 gallons of water consumed daily subject to a maximum of Rs. 5,000 per annum. Most of the municipalities are, however, averse to accepting the proposal. This question is being further considered.

(4) The question of reduction of grants towards the pay and allowances of Health Officers and Sanitary Inspectors from $\frac{2}{3}$rd to $\frac{1}{2}$ and from $\frac{1}{2}$ to $\frac{1}{3}$ respectively has been referred to the Commissioners.

(5) Introduction of a Public Health Act for the Presidency.

(6) Proposals for co-ordination of pilgrim centre work.

(7) Transfer of control of vaccination in Larkana District Local Board area to the District Local Board. This will be effected as soon as the District Local Board accept the conditions which have been forwarded to them.

(8) Consideration of the proposals to form a permanent nucleus cadre or " Flying squad " and epidemic fund which was postponed pending the decision of Government regarding the future of the Department has now been taken in hand.

Questions to be taken up in the near future.

40. The following questions will be taken up by Government in the near future :—

(1) Making the Chemico-Bacteriological Laboratory, Karachi, self-supporting.

(2) Amending the Bombay Prevention of Adulteration Act.

(3) Appointment of a larger number of District Health Officers with adequate staff and equipment.

XXI- PUBLIC WORKS DEPARTMENT: ROADS AND BUILDINGS AND THE SPECIALIST BRANCHES

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XXI—PUBLIC WORKS DEPARTMENT: ROADS AND BUILDINGS AND THE SPECIALIST BRANCHES

I. Administration.

Relations with Government.

1. This review deals with all subjects administered in the public works department except irrigation. Provincial roads and buildings are under the devolution rules a transferred subject and are in the portfolio of the minister for local self-government. The same minister is in charge of the sanitary engineering branch (now known as public health branch) of the department, the construction and maintenance of electrical installations in Government buildings by the electrical engineering branch and the Salsette and Ambernath water-supply schemes, which were formerly administered by the Bombay development department. All other subjects transferred from the development department to the public works department are reserved subjects and are in the portfolio of the home and general member, who also has charge of matters connected with buildings constructed or maintained by the department for the central Government. Other reserved subjects allotted to the public works department, namely, railways, air-craft, the administration of the Indian Electricity Act and the expenditure on Government Houses are in the portfolio of the revenue and finance member.

Headquarters administration.

2. Government have decided that, subject to the sanction of the Secretary of State which has been applied for, there shall, with effect from November 1933, be a single secretary to Government in this department, who is the chief engineer for both irrigation and roads and buildings.

The proposals of the Reorganisation Committee that—

(*i*) There should be a Board of Works for the presidency proper located in Poona ;

(*ii*) One post of deputy secretary should be permanently retrenched and the other post converted into one of secretary to the Board of Works ;

have been rejected by Government as they involved enhanced cost without corresponding administrative convenience.

The proposal that the single chief engineer who should be retained for the presidency proper should be the chairman of the Board and cease to be secretary to Government has been partially accepted in that there will now be only one chief engineer.

The remaining proposals of the Reorganisation Committee that—

(1) One post of superintending engineer, roads and buildings, should be reduced ;

(2) The Kaira and Panch Mahals division should be abolished ;

and

(3) The posts of assistant engineers in superintending engineers' offices should be abolished ;

are under the consideration of Government.

As regards the reduction of one post of superintending engineer (roads and buildings), it is considered that the abolition of the post is not feasible without further delegation of powers to executive engineers. This matter is being further considered. The questions (2) and (3) depend upon the decision arrived at on (1) and their further consideration is in consequence deferred.

Circles and divisions.

3. The present distribution of circles and divisions is as follows. Of the divisions only six are purely roads and buildings divisions, namely, Thana, Poona, Presidency, Nasik, Ratnagiri and Karachi Buildings, and only six irrigation divisions, the Nasik Irrigation division, the Irrigation Research division, the Development and Research division, Mechanical division, Plant division, and Drainage division, are solely concerned with irrigation. Of these the last four divisions are in Sind and are temporary. The remainder are all composite divisions.

I. Presidency, excluding Sind.

Name of circle.	Name of division.
Deccan Irrigation ..	.. 1. Nira Right Bank Canal. 2. Nasik Irrigation. 3. Ahmednagar. 4. Poona Irrigation. 5. Irrigation Research. 6. Poona Water Works.
Northern ..	.. 1. Ahmedabad. 2. Kaira and Panch Mahals. 3. Surat and Broach. 4. Presidency. 5. Thana.
Central ..	.. 1. Khandesh. 2. Sholapur. 3. Poona. 4. Nasik. 5. Executive mechanical engineer, Government central stores, workshop and training centre, Dapuri.
Southern ..	.. 1. Belgaum. 2. Kanara. 3. Dharwar. 4. Ratnagiri.

II. Sind.

Directly under chief engineer	.. 1. Personal assistant to chief engineer (temporary). 2. Development and research. 3. Mechanical (temporary). 4. Plant (temporary). 5. Drainage Division (temporary).
Northern Sind ..	.. 1. Khirtar. 2. North-Western Canal. 3. Begari Canals. 4. Shikarpur Canals. 5. Barrage.
Western Sind ..	.. 1. Northern Dadu. 2. Warah. 3. Rice Canals. 4. Southern Dadu. 5. Manchar Drainage (temporary).

Name of circle.	Name of division.
Rohri Canal ..	.. 1. Rohri. 2. Nasrat. 3. Dad. 4. Hala.
Southern Sind ..	.. 1. Nasir. 2. Hyderabad. 3. Karachi Canals. 4. Karachi Buildings. 5. Fuleli Canals.
Eastern Sind ..	.. 1. Northern Jamrao. 2. Southern Jamrao. 3. Khipro. 4. Mithrao.

Reduction of establishment.

4. The Reorganisation Committee made no general enquiry into the subdivisional and subordinate establishment maintained by the department. There would seem to be a fairly general belief that Government have not taken full advantage of the opportunity given by the present restrictions on expenditure on works to reduce their public works establishment. It is however inevitable that as works expenditure decreases the proportionate cost of establishment must increase, as there is a minimum below which it is not practicable to reduce establishment. The elimination of new works means the elimination of works the supervision of which is comparatively cheap and easy, while the supervision of maintenance and repairs is inevitably expensive. The bulk of ordinary administrative work is moreover scarcely affected by the elimination of original works.

Viewed in this light the reduction in the department's establishment during the last two years evidences a really vigorous effort in search of economy. The principal reductions in the roads and buildings branch effected recently before the Reorganisation Committee reported were :—

Divisions abolished.

Name of division.	Date of abolition.	Annual saving.
		Rs.
East Khandesh ..	.. 1st November 1930	34,700
Headquarter works ..	.. 1st November 1930	42,200

The Satara Division has been temporarily held in abeyance with effect from the 1st June 1932 and an annual saving of Rs. 30,000 has been effected.

Sub-divisions abolished.

Name of sub-division.	Division.	Date of abolition.	Annual saving.
			Rs.
Salsette water supply	Thana ..	1st November 1931..	9,000
Prantij	Ahmedabad ..	1st November 1931..	6,500
Alibag	Thana	23rd December 1931.	7,500
Parsi	Sholapur ..	14th February 1932..	7,100
Government House, Mahableshwar ..	Poona	1st June 1932 ..	11,032
"B"	Presidency ..	15th October 1932 ..	24,900
Andheri	Thana	Do. ..	
Ankleshwar ..	Surat and Broach ..	Do. ..	
Dohad	Kaira and Panch Mahals ..	15th November 1932.	6,700 (approx.)

Government have also amalgamated the Bombay Government House Sub-Divisions in Bombay and Poona and effected a further annual saving of about Rs. 2,000. It is considered that further reduction in the number of sub-divisions is not feasible.

The department also effected a saving of Rs. 73,600 by reconstruction of sub-charges.

Government have also under examination a proposal of the Reorganisation Committee that one roads and buildings division in Gujarat should be abolished.

The annual saving from the amalgamation of the posts of chief engineer for irrigation and chief engineer for roads and buildings will amount to Rs. 39,600 in a full year. Further retrenchments, involving a saving of about Rs. 2,35,000 a year, have been effected in the specialist branches. These will be dealt with in subsequent paragraphs.

II. Buildings.

Extent of the responsibility.

5. The public works department is responsible among other things for the construction and maintenance of all Government buildings. Buildings are classed as—

(1) residential, and

(2) non-residential.

The number of each class of building which the roads and buildings branch of the department has in its charge in the presidency (taking the word "building" to mean a residence or office with all its subsidiary buildings, e.g., a group of police lines or a Government House and all its attendant buildings) is—

	Provincial buildings.	Central buildings.
Residential	1,568	358
Non-residential	4,651	364

The value of the whole is some Rs. 15·84 crores and the annual cost of ordinary repairs executed by the department amounts to about Rs. 14·72 lakhs for provincial and Rs. 1·27 lakhs for central buildings. The irrigation branch of the department is in addition responsible for the maintenance of 1,184 residential and 1,347 non-residential buildings, all provincial. The value of these buildings is Rs. 1·16 crores and the annual cost of their maintenance is Rs. 1·68 lakhs. Though the maintenance in a proper state of repair of this large number of buildings does not involve great expenditure, it does take up a very large part of the time and energy of the officers and subordinates of the department. This upkeep of Government buildings is in consequence primarily responsible for the high ratio which the cost of public works establishment bears to the expenditure on works.

Suggested methods of relief.

6. If the department could be relieved of the work of maintaining buildings, a further considerable reduction would be possible in its establishment. Two methods of achieving this object which have been suggested are worth recording because, though after examination Government have rejected them as unworkable, they do appear *prima facie* attractive. They are :—

(1) The transfer of responsibility for the maintenance of buildings to the departments which occupy them.

(2) Entrusting repairs to contractors, the department merely inspecting buildings after repair and certifying them as in a good state of repair.

The first method was advocated by the Sly Committee of 1917 for the maintenance of non-residential buildings. It however involves non-technical control, the danger of which

appears so great to the Reorganisation Committee that they recommend as preferable the transfer of the maintenance of Government buildings to local boards, which, although they would have no direct interest in Government buildings, would at least be able to provide a professional agency to superintend their maintenance.

The second suggestion aims at eliminating the work which the department performs in preparing estimates for repairs and supervising the actual construction of works. Unfortunately no class of contractors who can prepare satisfactory estimates and employ a staff of such a calibre that they can be trusted to execute works to specification exists in India outside of the large cities.

Other methods of securing economy.

7. Apart from economies resulting from a reduction of staff and offices and the introduction of new scales of pay, the Reorganisation Committee proposed the following methods of reducing the net cost of the construction and maintenance of Government buildings :—

(1) The increased use of standard measurement books to facilitate the preparation of repair estimates, or the allotment of fixed sums for the repair of each building or group of buildings ;

(2) Charging all Government servants, who are not specifically exempted from the payment of rent or specifically granted residences at a reduced rent, ten per cent. of their pay as rent, whatever the accommodation occupied ;

(3) The reduction within very narrow limits of the privilege of occupying residences free or at reduced rent and, when necessary, if the concession is granted in return for extra duties performed, granting instead increased pay, such increased pay not counting for leave and pension payments ;

(4) A drastic overhaul of all standard plans of buildings ;

(5) A general use of a substantially cheaper type of construction, except in the case of important buildings ;

(6) A survey of all Government buildings to see whether any buildings could be rendered surplus and disposed of ; and

(7) The abolition of the practice of charging establishment to work and the substitution of temporary establishment for work-charged establishment.

Government have ordered the increased use of standard measurement books and a survey of buildings with a view to

disposing of those which are found surplus. They have rejected the proposal to charge Government servants occupying Government residences ten per cent. of their pay as unfair in principle and the proposal to abolish the practice of charging establishment to works as involving extra expense. Government have not so far adopted the Reorganisation Committee's principles for the occupation of residences rent free or at reduced rents, but they have ordered re-examination of all cases of rent concessions in the light of the committee's remarks. The recommendation of the Reorganisation Committee for adoption of a cheaper type of construction of buildings has been accepted and will be given effect to when the preparation of plans and estimates for new buildings is taken up.

III. Roads.

Separation of irrigation and roads and buildings.

8. In the "Review of the Public Works Department, Irrigation Branch" the history of the proposal to separate that branch from the roads and buildings branch in this presidency has been outlined and it has been explained that for financial reasons the only feasible method of effecting the separation is by transferring all roads and buildings works to local bodies. It was principally to facilitate this transfer that the separation of the two branches was originally mooted by the Public Works Department Reorganisation Committee of 1917. The "reservation" of irrigation and "transfer" of roads and buildings under the Montagu-Chelmsford reforms and consequent abolition of recruitment to the Indian Service of Engineers for the latter branch in 1926 brought this question to the fore again, but the imminence of fresh constitutional reforms involving the disappearance of dyarchy have again put the constitutional factor in the background. The question is essentially one of the advancement of local self-government.

History of transfer in Bombay presidency.

9. It may be admitted at once that in present circumstances, when the technical skill, powers, security, accounting and audit of the engineering departments of local boards are generally inadequate to secure the proper execution and maintenance of all public works in a district, the most efficient and economical system would be to centralise all

works in a division under the Government engineer. The view however of the Sly Committee of 1917 was that

> The centralisation of such works in a Government department would result in a serious discouragement to local self-government, which it is the policy of Government to advance ..... The general trend in the advance of local self-government in all countries is for the transfer of public works from Government to local bodies and we recommend that it should be the declared policy in India to transfer public works (excluding irrigation which was outside the scope of our reference) from the public works department to local bodies.

DISTRICT BOARD ENGINEERS.

10. The possibility of transfer depends first on the employment by district boards of "engineers of the same professional qualifications as the present executive engineers of the public works department, competent in every respect to do the work of all kinds now performed by the latter". (Report of the Bombay Reorganisation Committee, paragraph 420).

The Government of Madras have sought to fulfil this primary condition by forming a service of district board engineers, controlled, transferred, paid and pensioned by Government. Mr. Braganza, an executive engineer of the Bombay public works department, and Dewan Bahadur Godbole, formerly president of the Poona local board were deputed to Madras to examine the system there in 1926 and recommended its adoption in this presidency. The provincial road board made a similar recommendation in 1927. This method is employed in this presidency in the staffing of municipal and local board hospitals, dispensaries and veterinary dispensaries. As a method of supplying local bodies with engineers it was condemned by the Government of India in their preliminary orders on the Sly Committee's report as one which would—

> Effect little more than a change in the name and organisation of the department; it would give to the district boards no responsibility in regard to their engineering staffs and, in some provinces, would remove from them definitely powers which they even now possess. To this extent it would be a retrograde measure, and in no case does it appear to offer any very material advantages over the present system ..... The primary object of any reorganisation

should be decentralisation and the widening of the scope of local self-government, neither of which would be effected by the institution of a new Government service in place of the existing department.

A proposal to form a cadre of local board engineers who should be controlled by a board containing four elected members of the legislative council nominated by Government from a panel consisting of presidents and ex-presidents of district local boards, one president or ex-president of a local board who was not a member of the legislature, the chief engineer, roads and buildings, the commissioner, central division, and the secretary, general department, with the honourable minister for local self-government as chairman, was recently sent by Government to all local boards and many officials for their opinion. The board was to make rules for the cadre, recruitment, leave and conditions of service of the engineers, while the chairman was to conduct their postings, transfers, grant of leave etc. Recruits would be selected by a sub-committee of the board under the chairmanship of the minister. Opinions received were generally in favour of the constitution of a provincial cadre, but against a controlling board of the nature proposed. The Reorganisation Committee, which had before them this proposal and the opinions received on it, held that it was subject to all the disadvantages of a Government service and that the choice of their engineers must rest with the local boards.

No local board can be expected to appoint an engineer of the calibre required unless it can offer him adequate scope. At present the local boards of the presidency are generally not in a position to do this. The question of transfer is thus to a great extent involved in the general question of future road policy, a matter which cannot be successfully solved until after the new reforms have taken shape.

History of local board engineering.

11. Up to 1874 many district local boards had their own engineers, but in that year their appointments were abolished and Government handed over the execution of all important local board works to the public works department. The reasons assigned for this decision were that—

(*i*) The works would be in the hands of a competent authority;

(*ii*) Since the boards would initiate projects and assign funds for them, the province of local self-government would not be invaded;

(*iii*) The waste attendant on duplication by the maintenance of two district staffs side by side would be avoided and costs reduced ;

(*iv*) The engineers would have the advantage of belonging to a recognised service ; and

(*v*) All-India, provincial and local finances and interests were virtually one and would be best served by the arrangement proposed.

The position was again changed on the passing of the Local Boards Act in 1923. Under this Act the powers of the boards in respect of the works under their control were extended and unlimited powers of approving plans and estimates were granted to those boards which appointed engineers approved by Government. The result has been that almost all local board roads have since that year been transferred from the public works department to the boards.

Classification of roads.

12. The distinction drawn between Government and local board works depends on a number of local considerations. Government roads in the presidency have up till now been divided into trunk and feeder roads. This classification was subject to a further sub-division of portions of roads into " heavy motor traffic," " medium traffic " and " light traffic " portions. This method of classification has however now been abandoned in favour of that advocated by the Standing Committee for Roads of the legislative assembly. Under this classification roads will be of the following categories :—

Class I.—Roads of importance from the point of view of more than one province or State or more than one commissioner's division.

Class II.—(*a*) Roads of major importance from the point of view of more than one collector's district and also roads serving as important feeders to railways, waterways and to class I roads.

(*b*) Roads of minor importance of the same class.

Class III.—Roads which do not fall under either class I or class II.

The new classification has been undertaken primarily for the purpose of the allocation of grants from the petrol tax

by the Government of India on the advice of the Standing Committee for Roads but it is proposed to adopt it for all purposes.

The department is classifying all the roads in the presidency.

After the classification is complete and has been considered by the Road Board, Government will take into consideration the transfer of roads to local boards. The intention of Government before they received the Reorganisation Committee's report was to reserve to themselves roads of classes I and II (*a*) and to transfer other roads to the local boards, but this intention will now be reviewed in the light of that committee's remarks on the policy of retaining dual roads and buildings establishments in most districts.

This system of dual establishments is not, in the opinion of the Reorganisation Committee, compatible with any satisfactory scheme of transfer. It is however clear that roads of national importance cannot be vested in local bodies whose interests are limited to their districts. The Reorganisation Committee suggest meeting this difficulty by making the boards the agents for maintaining and conditioning these roads, under a system of Government grants-in-aid and inspection. If therefore the opinion of the committee that either all or none of the roads and buildings work in a district must be transferred is accepted, the question of transfer becomes a matter of interest to the central Government, since it seems inevitable that the central authority must be able to satisfy itself that the works which it finances are carried out by a reliable agency.

The Ahmednagar-Poona experiment.

13. It is necessary to touch upon an experiment which this Government have been making since 1923 of handing over certain provincial roads in the Ahmednagar district to the Ahmednagar local board. The scheme was in 1925 extended to the Poona district. Government propose to retain the scheme in operation until 31st March 1934. It has not however served as any guide to the financial implications of transfer. It was made on too small a scale to enable Government to dispense with any superior establishment and has actually added to the roads and buildings expenditure of Government in the two districts concerned, if the sum total of direct Government expenditure and Government grants-in-aid is considered.

REORGANISATION COMMITTEE'S VIEWS.

14. The Reorganisation Committee consider that transfer is possible in the presidency excluding Sind on the following conditions :—

(1) that the boards obtain engineers as competent as the present public works department staff ;

(2) that all the Government roads and buildings works in the districts concerned are handed over to the boards. Unless this condition is fulfilled the committee consider the scheme will be impossible on financial grounds. The condition involves the transfer of Government buildings except in Bombay and Poona, and, since the boards can have no direct interest in Government buildings, this is an admitted weakness of the scheme ;

(3) that adequate security and control over their staffs is given to the boards' engineers by amendment of the Act ;

(4) that there is an adequate system of Government inspection ;

(5) that accounts and audit are as strictly maintained as in the case of the public works department at present ;

(6) that Government have effective powers of interference if the money is not properly spent ; and

(7) that the whole Government roads and buildings staff in a district is disbanded at the same time that the transfer is made.

The committee recommend that this scheme should be given a thorough trial in a selected district for five years and that Government, after reviewing the whole question in the light of the experience gained, should either discontinue the experiment or confirm the arrangement and extend it to other districts. Government have the matter under their consideration.

CENTRALISATION OF ROAD POLICY.

15. Until 1925 roads in this province were in practice a purely provincial concern. Whatever general superintendence the Government of India may have formerly exercised ceased with the complete provincialisation of roads under the Government of India Act of 1919. Meanwhile a centralising tendency began to manifest itself in other countries. The British Development and Roads Improvement Act of 1909 created the British Road Board and for the first time imposed upon the British national exchequer a charge for roads. After

the war there was created the Roads Department of the Ministry of Transport which administered large funds and assumed large responsibility for the improvement of road communications on a national basis. Centralisation was accentuated by the utilisation of road grants as a means of relieving unemployment. In Australia there is a Federal Aid Roads Board administering substantial federal contributions towards the construction and reconstruction of roads of more than state importance. Canada and South Africa have similar arrangements. In the United States of America there is a very complete Bureau of Public Roads under the federal secretary of agriculture which co-ordinates and directs the development of federal-aid roads, administers very large federal-aid appropriations and embodies an elaborate organisation.

An aspect of road development which vitally concerns the Governments of most countries is the preservation of the interests of railways and the co-ordination of roads and railways with a view to the elimination of wasteful expenditure. In India this is a problem of vast importance to national development.

In June 1932 the Government of India in the railway department appointed Mr. K. G. Mitchell, road engineer with the Government of India, and Mr. L. H. Kirkness, a railway officer attached to the Railway Board, to investigate this question. In the course of their enquiry these officers visited the Bombay presidency and Sind, among other provinces, and held conferences with Government officers, railway officers and the representatives of various commercial and transport associations. Their report has been published. The Government of India drafted certain resolutions in view of the recommendations contained in this report and convened a Road Rail Conference at Simla in April 1933 to discuss the same. The resolutions were amended at the Conference in view of discussions held there. The Government of India are now in correspondence with the local Governments in respect of the resolutions passed at the Conference. The resolutions are printed in Appendix I to this Review.

There can of course be no question that railways and roads should be regarded as complementary to each other and not as competitive. This is the view of the Royal Commission on Agriculture and the Bombay Government have ordered their officers to deal with all questions concerning road or railway projects which come before them in the light of this principle.

It may be remarked that the rules for the preparation of railway projects provide for the grant by railway authorities of concessions for the building of road bridges alongside railway bridges.

PROVINCIAL CO-ORDINATION.

16. With a view to the co-ordination of road development within the province the Bombay Government formed in 1926 a provincial Road Board under the chairmanship of the honourable minister in charge of the subject with official and non-official members, the latter including one representative of the Western India Automobile Association, one of the Chamber of Commerce, one of the Indian Merchants Chamber and one of the Indian Roads and Transport Development Association. The functions of the board are to advise Government on :—

(1) The division of roads into classes in accordance with their importance and utility ;

(2) The laying down of standards to which each class of road should conform ;

(3) The allocation of the funds which may from time to time be available for road construction and improvement ;

(4) The policy to be followed in regard to the provincialisation of roads ; and

(5) The construction of new roads and extension and improvement of existing roads and their utilisation by various forms of transport.

The provincial Road Board has held altogether thirteen meetings. It has exerted its influence in the following among other ways :—

(1) in moving the Government of India, through the local Government, to appoint the Road Development Committee and levy the petrol tax ;

(2) in recommending certain road specifications which have been adopted by Government ;

(3) in compiling a table of the comparative costs of road surfaces of different kinds ;

(4) in compiling a priority list of road works to be financed from petrol tax funds and from general revenues ;

(5) in classifying roads ; and

(6) in advising Government in respect of the resolutions of the Road Rail Conference referred to it for opinion.

The board has also advised this Government to move the Government of India to increase the allocation of the petrol tax for road development and to make provision for road loans. It has appointed one sub-committee to consider the

question of introducing speed-governors for heavy motor vehicles and buses to eliminate the damage done to roads by such vehicles travelling at excessive speed.

The board also regularly advises Government on the programme of works to be executed from the petrol tax proceeds. Government place the programmes before it for its approval before submitting them to the Government of India.

The board thus performs a number of most useful functions. Government have recently revised the constitution of the Road Board with a view to provide for representation of the interests of Railways. A representative of the Railway has been appointed on the Road Board. Representation has also been given on the Board to the Karachi Chamber of Commerce and the Maharashtra Chamber of Commerce. Joint representation has been given to the Karachi Indian Merchants' Association and the Karachi Buyers' and Shippers' Chamber. The total strength of the Board now consists of 24 members as against 30 members of the originally constituted Board. The Board has recently suggested that the reconstituted Road Board should in future be designated the Provincial Board of Communications.

Co-ordination in Sind.

17. The undeveloped state of Sind and the complete transformation which the successful exploitation of the Barrage will entail make the improvement of road communications there a special problem of its own. In 1927 Government constituted an Advisory Communications Board for Sind consisting of twelve official and eight non-official members under the chairmanship of the commissioner in Sind. Twelve of its members form its Roads Sub-Committee. The Advisory Communications Board has so far only met once, but the Roads Sub-Committee has held several meetings.

As stated in paragraphs 37–38 of the "Review of Sind and the Lloyd Barrage", an Executive Engineer was as a first step placed on special duty to prepare a programme of road development in Sind and the Roads Sub-Committee had formulated on the basis of his report a scheme (originally estimated to involve an expenditure of Rs. 50 lakhs from provincial revenues but actually involving a smaller sum). This scheme was considered by Government but in the meantime the financial position of the Presidency had become considerably worse and Government found themselves unable to finance even this smaller scheme. The position was explained to the Government of India who have agreed to

assist this Government and as a preliminary measure to bear the cost of a fresh enquiry. This enquiry will embrace a survey of funds now available and likely to be available in the near future from all sources and the extent to which the resources of local bodies will be adequate to discharge their responsibilities whether for roads or for other matters. The enquiry will also embrace a complete classification of roads with respect to their form of construction and cost and with respect to the authority to be responsible for their maintenance.

The Government of India have appointed for a period of six months from November 1933 Mr. S. G. Stubbs, Officiating Road Engineer to the Government of India, with a small staff to conduct the enquiry.

All-India co-ordination.

18. In 1927 the Government of India appointed a Road Development Committee under the chairmanship of Mr. M. R. Jayakar, M.L.A., to :—

(1) examine the desirability of developing the road system of India and in particular the means by which such development could most suitably be financed ; and

(2) consider with due regard to the distribution of central and provincial functions whether it is desirable that steps should be taken for the co-ordination of road development and research in road construction by the formation of a Central Road Board or otherwise.

A summary of the recommendations made by the committee will be found at pages 53–57 of its report.

The steps taken to give effect to the report are embodied in the following resolution which was moved by the Honourable Sir Bhupendra Nath Mitra and passed by the legislative assembly on 4th February 1930 :—

"This Assembly, after taking into consideration paragraphs 70 to 79 of the report of the Indian Road Development Committee, recommends to the Governor-General in Council that—

(1) The increase in the import and excise duties on motor spirit from 4 to 6 annas per gallon, introduced by the Indian Finance Act for the current year, shall be maintained for a period of five years in the first instance.

(2) The proceeds of the additional duty during the same period after deducting such amounts as may be required for grants-in-aid to users of petrol for aviation purposes according to rules issued by Government on a scale not exceeding the additional duty on petrol actually consumed for such purposes shall be allotted as a block grant for expenditure on road development to be credited to a separate road development account, the unexpended balance of which shall not lapse at the end of the financial year.

(3) The annual grant shall be divided as follows :—

(*a*) A certain proportion shall be retained by the Government of India as a reserve and such proportion shall be ten per cent. for the two years ending March 1931 and the position shall be reviewed thereafter and the balance, if any, on 31st March 1931 or any subsequent date of review, which is not required for the purposes approved in paragraph 75 of the report, shall be distributed among the Governors' provinces and the Government of India in the manner provided for the remainder in sub-clause (*b*) ;

(*b*) Out of the remainder—

(*i*) An apportionment shall be made among the Governors' provinces in the ratio which the consumption of petrol in each such province bears to the total consumption in India in the preceding calendar year ;

(*ii*) The balance, representing the consumption of petrol in provinces other than Governors' provinces, administered areas and Indian States, shall be allotted as a lump sum to the Government of India.

(4) If any part of the amount apportioned to a Governor's province in any financial year remains unexpended at the end of that year, it shall be carried over for expenditure in that province in the following year.

(5) Grants shall be made to each Governor's province, up to the amount available for it in each year, for expenditure on schemes approved by the Governor-General in Council with the advice of the Standing Committee for Roads. As an exception to this rule, the amount available for Burma may, for the present, be spent on any scheme of road development that is approved by the local Government with the concurrence of the local legislature ; but

if at any future time the question of road connection with India becomes a live issue, the position shall be reconsidered.

(6) A Standing Committee for Roads shall be constituted every year after the financial year 1929–30 consisting of one nominated official member of the legislative assembly, a second nominated official member, three members elected by the Council of State from their body and six members elected by the legislative assembly from their body. The member of the Governor-General's Executive Council in charge of the Department that deals with roads shall be the Chairman of the Committee; and the members of the Committee who are members of the legislative assembly shall form its Finance Sub-Committee which shall be presided over by the Chairman of the Committee if he is a member of the legislative assembly, and otherwise by the official member of the committee who is a member of the legislative assembly.

(7) The functions of the Standing Committee for Roads including that appointed in pursuance of the motion adopted in the legislative assembly on the 2nd September 1929 shall be—

(*i*) to consider the annual budget and accounts of the separate road development account of the Government of India.

(*ii*) to consider all proposals submitted by Governments of Governors' provinces to the Government of India for which grants from the road development account are requested; provided that the function of the Standing Committee and of its Finance Sub-Committee shall be confined to determining whether the scheme is one for which an allotment from the Central Road Development Account should be made;

(*iii*) to advise the Government of India generally on all questions relating to roads and traffic on roads and in particular on—

(*a*) any action to be taken by the Government of India on the proceedings of periodical Road Conferences;

(*b*) Central research in all matters connected with roads, road construction and maintenance;

(*c*) statistics and intelligence, the preparation and publication of maps and the collection and dissemination of information relating to road development, administration and finance in India and in other countries;

(*d*) proposals other than those relating to Indian States on which it is desired to incur expenditure out of the portions of the annual grant referred to in clauses (3) (*a*) and (3) (*b*) (*ii*).

(8) All proposals for expenditure from the annual grant or its accumulated balance shall be transmitted by the Standing Committee to its Finance Sub-Committee for approval before recording its final acceptance; and the Standing Committee shall not record its acceptance to any such proposals unless it has received the approval of the Sub-Committee."

In accordance with the recommendations of the Indian Road Development Committee, the Government of India hold annual conferences to which representatives of the local Governments are invited. So far four such conferences, the last one being the Road Rail Conference, have been held. As decided by the Road Conference and approved by the Government of India, the following kinds of roads only may at present be financed from the petrol tax fund:—

(1) Class I roads, i.e. roads of importance from the point of view of more than one province or State or more than one commissioner's division.

(2) Class II roads, i.e. roads of importance from the point of view of more than one collector's district and also roads serving as important feeders to railways, waterways and to class I roads.

In view of one of the resolutions passed at the Road Rail Conference, regarding the continuance of the Road Development Account under the new constitution and the reconsideration of the class of roads to which the Road Development Account should be applied, including the maintenance of roads constructed from that Account, the Government of India propose to place before the central legislature a revised draft resolution in place of the one mentioned above.

Petrol tax expenditure in Bombay.

19. For the present however the Government of India have restricted the use of funds from the petrol tax to roads of class I only. The following twelve schemes have so far been submitted to and approved by the Government of India for construction from the proceeds of the petrol tax :—

	Road.	Estimated cost.
		Rs.
1.	Bombay-Poona-Aurangabad	84,000
2.	Bombay-Rajputana	12,32,000
3.	Dhulia-Bhusaval-Edlabad-Nagpur	2,70,000
4.	Bombay-Agra	3,82,000
5.	Karwar-Bellary	1,92,000
6.	Bombay-Goa (or " Konkan North to South ")..	28,89,000
7.	Bombay-Poona-Sholapur-Hyderabad ..	7,23,000
8.	Bombay-Poona-Bangalore	1,87,000
9.	Karachi-Sukkur-Punjab (or west side of Indus).	approximately 3,00,00,000
10.	Karachi-Sukkur-Punjab (or east side of Indus)..	
11.	Hyderabad-Mirpurkhas-Rajputana ..	
12.	Sukkur-Shikarpur-Jacobabad-Quetta ..	

The estimated annual share of this Government in the petrol tax proceeds is Rs. 16 lakhs. For the period ending on 31st March 1933 a sum of Rs. 57,70,148 was received from the fund.

Owing to their acute financial difficulties the Bombay Government diverted, with the permission of the Government of India, Rs. 16 lakhs during 1931–32 from their share of the fund to the maintenance of existing roads on the understanding that the transfer was to be treated as a temporary interest-free loan and that a programme of works on which the money would have been expended would be submitted to the Government of India. A programme was accordingly submitted but the Government of India have returned it with the intimation that they have decided to waive that condition.

The expenditure incurred from the fund up to the 31st March 1933 amounted to Rs. 46,80,641 allocated thus :—

	1930–31.	1931–32.	1932–33.
	Rs.	Rs.	Rs.
Presidency proper (new works).	3,00,076	7,35,710	8,97,644
Sind (new works)	....	4,81,903	6,51,730
Whole presidency (repairs) ..	....	16,00,000	13,578
	3,00,076	28,17,613	15,62,952

The following are the most important works executed at the expense of the fund :—

		Estimated cost.
		Rs.
1.	Talasri-Vapi road (Thana)	3,65,000
2.	Improving Manor-Varoti road (Thana) ..	2,01,000
3.	Improving Viramgam-Mandal road (Ahmedabad) ..	2,91,000
4.	Improvements to miles 75–84 of Bombay-Poona road (Poona).	2,82,000
5.	Improvements to Wadkal-Mahad and Mahad-Poladpur roads (Ratnagiri).	2,87,000
6.	Improvement to Kumta-Hubli road (Kanara) ..	2,41,000
7.	Reconstructing Karachi-Kotri road (Karachi) ..	4,93,000
8.	Roadway in connection with Kotri bridge project (Karachi).	7,89,000

In addition to their allotment from the fund for new works the provinces may obtain from the Government of India grant for experiments and research out of the tenth part of the fund reserved to themselves by the Government of India. This reserve is also intended to supply grants in aid towards constructing works of all-India importance which are considered to be too expensive for the local Governments and States to finance them unaided. The local Government submitted to the Government of India four schemes which they considered to be of this nature, but without success. They have however received grants amounting to Rs. 66,000 towards experiments which are being carried out with road surfaces in the presidency proper and in Sind.

PRESENT POSITION IN REGARD TO CENTRAL CO-ORDINATION.

20. The great weakness of the present scheme, a weakness inherent in its temporary nature, is that the funds allotted to the province on the advice of the Standing Committee for Roads of the central legislature are devoted solely to development and the province is left to meet the whole burden of maintenance from its ordinary revenue.

Any scheme of a road fund would however be subject to one even more important defect. The allocation of particular resources to particular services is a departure from accepted financial canons. It has resulted in the anomaly that at a time when retrenchment has had to be enforced in all other directions in the presidency large sums are available for new road

construction. Although the position in England is on an altogether different plane, the criticisms of the May Committee, 1931, on the administration of the English Road Fund are not without application to Bombay. That committee stated :—

> As it is now being administered this Fund has become a liability on the national finances and in our view drastic action is necessary to remedy the position. First among the steps we recommend is the abolition of the Fund and placing expenditure on road grants on the annual votes of Parliament.

As regards the future of federal control of road policy, a permanent arrangement, statutorily provided for in the constitution, is in any case desirable. Central research and the co-ordination of provincial research must eventually be provided for and, if the financial settlement involves the continuance of the system of federal aid for roads, it appears essential that the maintenance of roads of federal importance should particularly in years of stringency take precedence over new construction as an object of federal concern.

Financing of provincial road works.

21. The funds which have been provided from revenue for—

(*a*) the maintenance of provincial roads ;
(*b*) the construction of new road works ; and
(*c*) grants in aid to local boards for communications

during the last ten years are shown below :—

Year.	Amount spent on maintenance of provincial roads.	Amount spent on the construction of new road works.	Amount spent on grants-in-aid to local boards for communications.
1	2	3	4
	Rs.	Rs.	Rs.
1923-24	31,05,538	12,37,755	18,60,000
1924-25	31,99,600	6,26,995	11,00,000
1925-26	32,90,288	9,79,287	18,42,000
1926-27	35,22,825	13,82,865	19,00,000
1927-28	37,04,805	10,54,147	19,00,000
1928-29	35,60,110	9,53,654	19,00,000
1929-30	36,05,452	7,02,415	16,00,000
1930-31	34,73,293	3,98,203	16,00,000
1931-32	32,80,516	1,68,980	10,75,000
1932-33	26,48,221	1,49,687	8,00,000

The position at present is, apart from the expenditure made from petrol tax grants, one of stagnation. The great need is additional provincial revenue for roads and the fairest and probably only means of obtaining this is by taxing the users of roads. The taxation of motor cars is heavy, but with the exception of registration fees, accrues to the central Government. The taxation of other vehicles takes the form of wheel tax in a few municipal areas, but is in general restricted to tolls. The revenue raised from tolls on provincial roads during 1931–32 and 1932–33 was Rs. 9½ lakhs and Rs. 10·87 lakhs respectively. The Reorganisation Committee drew attention to the uneven distribution of tolls and to the fact, that tolls are the only means at present available of taxing road users other than motorists. Government have accepted the recommendation and have thereby retraced their policy of gradually abolishing tolls. The increased revenue expected from this source for the year 1933–34 is nearly Rs. 7 lakhs.

ABOLITION OF TOLLS.

22. Government have under consideration the question of levying a vehicle tax which will have the effect of superseding the tolls and compounding all other forms of taxes on vehicles plying on Provincial, District Local Board and Municipal roads. A conference was accordingly convened by Government on 4th October 1933 in order to elicit the views of the representatives of the local bodies and Transport Associations. Government will carefully consider the views of the representatives as elicited at the Conference with a view to evolving a measure which will be generally acceptable.

IV. Miscellaneous activities.

MISCELLANEOUS ACTIVITIES.

23. Of the miscellaneous matters with which the public works department is concerned the most important are tramways, railways and aircraft. The most important tramways working in the presidency are the Matheran, Bombay city and Karachi tramways. Though railways are a central subject, the local Government is concerned with them in a number of ways, in particular with the investigation of new lines, improvements to existing lines, local advisory committees,

railway tariffs and timings, bridges and level crossings, the maintenance of railway plans and the like. It is at the instance of this Government that the railway board ordered the investigation of the question of communications necessary for the Nira Valley area by Messrs. W. A. Evershed, and R. O. C. Thompson, executive engineers, appointed by this Government and the railway board respectively. Their chief recommendations include the construction of a 2′–6″ gauge railway from Baramati to Pandharpur, passing through or near Asu, Dharampuri, Nateputa, Malsiras, Akluj and Velapur, and also construction of certain new roads and improvements to others. Their report is under the consideration of Government.

This is the first example of a co-ordinated expert investigation into the communications of any area in the Bombay Presidency. The collaboration of a railway officer, having no connection with or direct interest in any of the railways in the neighbourhood, and an irrigation officer, who is only interested in communications in so far as they provide an outlet for produce from the land under command of the canals has resulted in the problem being approached from an entirely impartial standpoint.

In aviation matters the local Government, as agent of the Government of India, deals with aircraft accidents, movements of foreign aircraft, prohibited areas, mooring masts, landing grounds and breaches of the Indian Aircraft Act and the rules thereunder.

The local Government may be called upon to construct buildings and works for outside bodies. For works carried out for the public works departments of other provinces, the railways, military works services, the posts and telegraph department and the archæological department an establishment charge of 24 per cent., a tools and plant charge of 3 per cent. and in the case of some classes of works an audit and accounts charge of 1 per cent. are levied. These percentage charges were previously nominally applicable to works carried out for local bodies, but in the past were usually waived in part or whole. Government have however now decided to levy the following reduced charges in respect of works carried out for local bodies by the agency of the public works department :—

$2\frac{1}{2}$ per cent. on the cost of works etc. for the preparation of plans and estimates ; and

$12\frac{1}{2}$ per cent. on the cost of works etc. for the execution of works inclusive of charges for establishment, tools and plant, audit etc.

V. Public health branch.

History up to 1910.

24. The Bombay Sanitary Board (now designated Board of Public Health Works, Bombay Presidency) was first formed in 1892 to give advice and assistance to municipalities and district local boards and to all departments of Government in matters relating to public health etc. with the sanitary commissioner and the sanitary engineer to Government (later designated superintending engineer, public health, Bombay) as its two members; it has since been reconstituted and strengthened from time to time.

From 1892 to 1910 the duties of the sanitary engineer to Government were almost entirely advisory, though the original Pandharpur water-supply project was both prepared and carried out by his staff. It was felt at an early date that for this officer to be in a position to give sound advice in connection with public health projects it was necessary for him to have his own staff for the collection of data and the investigation of detailed proposals. When, later on, the preparation of sanitary projects was made an essential part of his duties, the staff provided for this purpose was strengthened. Two regular sub-divisions under the sanitary engineer were constituted in 1910, in which year also the "boring branch" for the investigation of underground water-supplies was brought under the control of the sanitary engineer.

The major public health works began during this early period include water-supply projects for Ahmedabad, Dhulia, Hubli, Sukkur, Surat, Pandharpur, Jalgaon, Dharwar and Nasik and the Ahmedabad drainage scheme.

The period 1910–20.

25. From 1910 onwards all public health projects were prepared by the sanitary engineer's branch, their execution being handed over to the local public works department executive engineer supervised by officers of the sanitary engineer's branch.

In July 1915 the northern and southern sanitary districts were formed, with executive engineers in charge and headquarters at Nasik and Belgaum, for the preparation of projects and the execution and control of works of sanitation and water-supply in the presidency proper, works in Sind being left under

the immediate control of the sanitary engineer to Government. In July 1919 the Poona water works district was formed under the sanitary engineer and in April 1920 a temporary office was opened under an executive engineer for the preparation of the Poona drainage improvement scheme. In 1917 the Public Works Department Reorganization Committee reported decisively in favour of all major public health works being carried out by the sanitary branch, on the ground that design should go hand in hand with execution; and in September of that year Government ordered that public health works costing over Rs. 50,000 should be designed by the sanitary engineer's branch and, when not carried out by the local bodies' staffs, should be executed by officers of that branch.

The major works begun during this second period (1910-1920) include the following:—

Poona city drainage, Poona city water-supply improvement, Bijapur water-supply, Sholapur water-supply improvement, Karad water-supply, Lonavla water-supply, Ahmedabad water-supply improvement, Khanapur distillery spent wash disposal, Ahmednagar water-supply, Trimbak water-supply, Nasik (Panchvati) drainage, Sukkur water-supply improvement and Hyderabad water-supply improvement.

Position in 1920.

26. In 1920 Government decided that it was desirable that the post of sanitary engineer to Government should be held by a specialist officer with wide European experience of public health engineering and Mr. A. P. Maddocks, who had over twenty-seven years' experience in positions of responsibility in connection with large municipal water-supply and drainage undertakings in England, was appointed at the end of that year.

The sanitary engineer's branch then consisted of the following officers:—

(*i*) Sanitary engineer to Government in Poona, with one sub-division directly under him;

(*ii*) Executive engineer, northern sanitary district, Nasik, with three sub-divisions;

(*iii*) Executive engineer, southern sanitary district, at Belgaum, with three sub-divisions;

(*iv*) Executive engineer, Poona water works division;

(*v*) Executive engineer, Poona drainage construction; and

(*vi*) Executive engineer in charge of boring works.

Subsequent reorganisation.

27. In 1922, in consequence of the then urgent necessity for retrenchment, the offices of the executive engineers, northern sanitary district and southern sanitary district, were abolished and one project office under an executive engineer in Poona, working in close touch with the sanitary engineer to Government, was opened in their place; the number of sub-divisions was reduced from seven to six and all of them were brought under the immediate control of the sanitary engineer. The provision for establishment was reduced from Rs. 4,82,000 to Rs. 3,57,000, a reduction of Rs. 1,25,000.

About the same time the Government central store and workshops at Dapuri (now known as Government central stores, workshop and training centre, Dapuri), until that date under the mechanical engineer to Government, were placed under the administrative control of the superintending engineer, public health.

In order to relieve the superintending engineer, public health, direct control of the Gujarat sanitary sub-division was in 1929 placed under the executive engineer, Poona drainage construction division. In 1930 control of the Sind sanitary sub-division and the Thana (previously called Kalyan) sanitary sub-division was transferred to the same executive engineeer.

The boring branch was closed on 1st March 1931 and the sanitary project office was amalgamated with the Poona drainage construction division from the same date, the combined charge being termed the public health works division. Its jurisdiction extended over the whole presidency, including Sind, and the six sanitary sub-divisions were all under its control.

The Salsette water supply sub-division, which on the abolition of the Bombay development department was placed under the Thana division, was transferred to the public health branch and amalgamated with the Thana sanitary sub-division of the public health works division.

As a result of this further reorganisation the superintending engineer had under his control three divisions, viz. those of the—

(1) Executive engineer, Poona water works division, in charge of the Poona cantonment water works, the Kirkee water-supply and the Poona drainage pumping station and sewage disposal works.

(2) Executive engineer, public health works division, controlling the six sanitary sub-divisions.

(3) Executive engineer and works manager, Government central store and workshops, Dapuri (now known as executive mechanical engineer and works manager, Government central stores, workshop and training centre, Dapuri).

WORKS EXECUTED, 1921–31.

28. In addition to the works mentioned in paragraph 25, works in connection with the below-noted projects were carried out by this branch during the years 1921–31 :—

Northern division.	Central division.	Southern division.	Sind.
Ahmedabad— (*i*) Cantonment water-supply. (*ii*) Improvements to city water-supply.	Alandi water-supply. Dhulia main drainage. Jalgaon water-supply improvements.	Belgaum— (*i*) Drainage. (*ii*) Hindalgi central prison water-supply.	Hyderabad— (*i*) Water-supply improvements. (*ii*) Gidu water-supply. (*iii*) Transfuleli water-supply.
Dholka water-supply. Kapadwanj water-supply and drainage.	Khandala water-supply. Kirkee water-supply improvements.	Dharwar police lines water-supply and drainage.	Jacobabad water-supply.
Matheran water-supply.	Lonavla water-supply improvements.	Gadag-Bettigeri drainage.	Shikarpur drainage.
Surat— (*i*) water-supply improvements. (*ii*) Infiltration gallery. (*iii*) Trunk and rider mains.	Mahableshwar— (*i*) Chlorination of Bishop tank. (*ii*) Chlorination of Elphinstone tank. Nandurbar water-supply. Nasik— (*i*) Distillery spent wash disposal. (*ii*) Central prison water-supply and drainage.	Nargund water-supply improvements. Nipani water-supply improvements. Ratnagiri— Improvements to water-supply.	Tando Adam surface drainage.

Northern division.	Central division.	Southern division.	Sind.
		Shingnapur water-supply.	
		Uran water-supply (Kharapat villages).	
	Panchgani surface drainage.	Yellamma hill water-supply.	
	Pandharpur— (*i*) Water-supply improvements.		
	(*ii*) Drainage outfall sewer.		
	Poona— (*i*) Improvements to cantonment water-supply.		
	(*ii*) Improvements to city water-supply.		
	(*iii*) City drainage improvements.		
	(*iv*) Internal drainage for suburban area.		
	Sholapur— (*i*) Water-supply (Sadar Bazar main).		
	(*ii*) Main drainage.		
	Vita water-supply.		

Besides carrying out these works this branch was also entrusted with the maintenance and repairs works of Uran water-works, Matheran water-works, Kapadvanj water-works, Karad water-works, Pandharpur water-works, Ratnagiri water-supply, Salsette water-supply, Satara camp water-supply and Shingnapur and Alandi water-supply.

During the same period, 1921–31, successful deep borings were put down at Nadiad, Bavla, Tejpur, Sanand, Detroj, Sitapur, Utelia, Gedia, Thori Mubarak, Rupal, Arnej, Kariala, Aden, Mahuda, Jakshi, Sarkhej, Thori Thamba, Sindhraj, Manipur, Bamroli, Suvala, Amarapura, Chaloda, Koth, Zinzara, Kalyangadh, Gunjala, Asalgam, Derwala and Bagodra. Besides these deep borings extensive shallow borings have been carried out in Ratnagiri, Nasik and West Khandesh districts with a

view to augmenting the yield of the wells and in connection with the Karachi water-supply improvements and in the Bijapur district, where acute deficiency is felt, to improve supplies of drinking water.

Several test borings at Broach and in the bed of the Sabarmati River at Ahmedabad were also taken in connection with their water-supply schemes.

Works in progress.

29. At present the following works are in progress :—

Jacobabad water-supply, Shikarpur drainage, improvements to Hyderabad bazar water-supply, Kapadwanj water-supply, improvements to Khadi drainage at Surat (now held in abeyance), Dhulia main drainage, Nandurbar water-supply and drainage, Panchgani surface drainage, Poona cantonment water-supply improvements, improvements to Kirkee water-supply, Poona drainage remodelling scheme, Poona Suburban municipal drainage, improvements to Sholapur water-supply and drainage, Pandharpur drainage extension, Nasik water-supply improvements, Amalner drainage, improvements to Salsette water-supply, improvements to Uran water-works, Gadag-Bettigeri drainage and improvements to Khed water-supply (Ratnagiri district).

The expenditure on works carried out by this Branch during the year 1932-33 was approximately Rs. 13,30,000.

In addition to the construction works in progress, projects for the following schemes which are likely to be taken in hand, are either prepared in the public health circle or in course of preparation with the local public works department executive engineers :—

Northern division.	Central division.	Southern division.	Sind.
Bhiwandi Water-supply Improvements.	*Sholapur*— Improvements to distribution system.	*Mahad* Water-supply.	
		Chiplun Water-supply.	
Bandra Drainage.	Extension of outfall sewer.		
		Khed Water-supply (Ratnagiri district).	

Surveys and investigation for the following works are in progress :—

Northern division.	Central division.	Southern division.	Sind.
Alibag Water-supply.	*Sholapur*— Water purification works.		*Karachi* Improvements to water-supply.
Kalyan Drainage.	Further extension of outfall sewer and disposal works.	*Ratnagiri* Water-supply "Panwal Nalla" scheme.	*Transfuleli Quarters, Hyderabad* Surface drainage
Kurla Drainage.	*Barsi* Drainage.		*Jacobabad* Drainage.
Panvel Water-supply.	Improvements to water-supply.		*Gidu* Drainage.
Andheri Drainage.	*Panaharpur* Improvements to water-supply (high level area).		
Salsette— Kanheri valley scheme. Powai lake scheme.			

VOLUME OF WORK.

30. The cost of the works designed and actually executed by the public health engineering branch since 1917–18 is as follows :—

Year.	Expenditure on		
	Water-supply.	Drainage.	Total.
1	2	3	4
	Rs.	Rs.	Rs.
1917–18	5,19,562	99,817	6,49,379
1918–19	3,04,073	1,28,266	4,32,339
1919–20	4,29,559	1,83,243	6,12,802
1920–21	4,88,523	87,431	5,75,954
1921–22	5,19,727	74,390	5,94,117
1922–23	3,52,648	1,20,000	4,72,648
1923–24	6,46,515	1,99,259	8,45,774
1924–25	3,94,871	1,15,838	5,10,709
1925–26	7,25,062	4,58,357	11,83,419
1926–27	8,75,590	11,40,616	20,16,206

Year.	Expenditure on		
	Water-supply.	Drainage.	Total.
1	2	3	4
	Rs.	Rs.	Rs.
1927-28	9,95,483	6,02,614	15,98,097
1928-29	9,37,802	7,07,925	16,45,727
1929-30	12,47,512	6,76,820	19,24,332
1930-31	15,92,416	5,58,329	21,50,745
1931-32	10,59,441	3,52,042	14,11,483
1932-33	9,45,000	3,85,000	13,30,000*
Total ..	1,20,63,784	58,89,947	1,79,53,731

*Note.—The expenditure during 1932-33 decreased on account of stoppage of grants-in-aid by Government to cover centage charges for new works.

POLICY OF THE BRANCH.

31. The works carried out by this branch are mostly of a highly specialised nature requiring specialised experience of public health engineering for their efficient and economical execution and the fact that most of them are carried out on behalf of local bodies makes it desirable that they should be supervised by a staff trained for this particular line of work and directed by an officer of considerable municipal experience.

The municipalities are taking a rapidly increasing interest in all matters relating to these works, the proper and economical execution of which is likely to affect both their health and their pockets. The placing of contracts for material and construction, the original cost, the subsequent cost of maintenance and operation are matters to which local bodies are now paying close attention. It is in consequence important that there should be no falling off in the standard of design and execution of such works.

Not only must the best interests of local bodies be considered, but their desires and criticisms must be taken as fully as possible into account and the fullest possible opportunities afforded to them of inspecting works during construction, of testing sewers etc. for water-tightness and of seeing the account documents, so as to inspire them with confidence in the suitability and soundness of the works. By careful attention to these matters the prejudices which some local bodies previously held (partly as the result of exaggerated reports of

unsatisfactory work done elsewhere in the past) are disappearing and local bodies have shown a readiness not only to take up public health works with the aid of Government but also to finance from their own resources schemes of sanitary value which are within their means.

Agency for construction.

32. From the technical point of view it is desirable, as pointed out by the Public Works Department Reorganisation Committee of 1917, that the agency of design and of execution should be the same. The best way of training a technical staff in the sound and economical design of work is to give it opportunities of gaining practical experience on the actual construction of the works. Such practice should result not only in the efficient and economical design and execution of the works, but also in the gradual formation of a properly trained public health engineering staff.

Nature of work.

33. The general work hitherto performed by the branch has comprised :—

(*i*) Advising and helping local bodies and Government institutions throughout the presidency with regard to their existing public health works and improvements of them and, when required, supervising or carrying out the necessary improvements ;

(*ii*) Examining and reporting on minor sanitary schemes for which grants-in-aid are asked by local bodies ;

(*iii*) Advising local bodies and Government institutions with regard to new public health projects and preparing outlines of projects for their consideration ;

(*iv*) Where it is found that there is a reasonable prospect of such suggested new projects being financed, preparing the projects for execution.

Few municipalities outside Bombay, Karachi and possibly Ahmedabad have, or can be expected to provide in the near future, a technical staff competent either to prepare or to execute large schemes of public health improvements and in the interest of efficiency and economy it is necessary that the advice and help of the public health branch should be readily placed at the disposal of the local bodies, who may thereby be encouraged to undertake works of improvement.

(*v*) Scrutinising large projects prepared by those few local bodies who have their own technical staff, such as the important schemes for the improvement of the Ahmedabad water-supply and the improvement and extension of the Ahmedabad drainage scheme, at an estimated total cost of about 91 lakhs of rupees and the improvement and extension of the Karachi drainage at a cost of about Rs. 15 lakhs.

In the interests of the public it is necessary in India, as in England, that projects of this kind for which public loans are raised should be carefully scrutinised by the Government technical adviser and such duties naturally entail a considerable amount of work; and

(*vi*) The execution of major sanitary works.

Revenue of branch.

34. The Poona water works division is not only self-supporting but revenue-earning. From 1st April 1930 the Government of Bombay purchased from the Government of India (army department) the Kirkee water-supply system and its maintenance and control was placed with the public health branch. The revenue assessed for the year 1932-33 is Rs. 4,92,176 and the probable revenue for 1933-34 is Rs. 5,10,000.

The working of the Poona cantonment water works has been encouraging since the rate was raised with effect from 1st August 1925 from six to eight annas per 1,000 gallons, as will be seen from the following figures :—

	Loss (—) or profit (+).
	Rs.
1922-23	—19,346
1923-24	— 4,179
1924-25	+25,158
1925-26	+37,145
1926-27	+86,745
1927-28	+61,854
1928-29	+70,298
1929-30	+69,077
1930-31	+44,084
1931-32	— 5,775*

*Combined *pro-forma* revenue account for Poona and Kirkee Water Works.

The public health works division was revenue-earning in respect of Pandharpur, Karad, Satara Camp, Ratnagiri

and Salsette water-supplies. The total revenue assessed for Salsette and Ambernath water-supplies was Rs. 5,01,616 and the probable revenue for 1933–34 is Rs. 5,00,000.

Reorganisation decided upon.

35. It is not possible to estimate what part of the activity in making public health improvements which local bodies have shown in recent years has been due to greater need for and greater appreciation of the value of such works and what part has been due to the liberal subventions which Government have made. Government aid has in the past taken the following forms :—

(*i*) The placing of the services of the superintending engineer and his officers at the disposal of local bodies without charge either for advice or for the drawing up of plans and estimates of works.

(*ii*) Half remission of establishment, tools and plant and audit charges in the case of water works and whole remission in the case of drainage works.

(*iii*) Grants-in-aid of sums often up to half the estimated cost of works.

(*iv*) The provision of loans at low rates of interest for the balance of cost.

Of late years Government have not been in a position to provide grants-in-aid except to a small extent. Even these grants have usually been given in fulfilment of promises made before the present financial stringency. Again the credit of municipalities has so improved that it is often possible for them to raise loans in the market at satisfactory rates of interest.

But in addition to the denial of grants-in-aid Government now contemplate, on the advice of the Reorganisation Committee, taking the following steps to place the department on a more self-supporting basis :—

(1) The branch will be a purely consultant branch under a consulting public health engineer of executive engineer's rank with an establishment of two assistants, five clerks, one draftsman and two tracers.

(2) The execution of public health projects will be entrusted to the executive engineers of divisions, who will carry out such works in consultation with the public health engineer to Government,

(3) The executive engineer, Poona water works division, and the executive mechanical engineer, Government central stores, workshop and training centre, Dapuri, are subordinate to the superintending engineers, Deccan irrigation circle and the Central circle, respectively. The executive engineer, Poona water works division, has retained charge of the Matheran and Ambernath water-supplies and the Kalyan water supply scheme.

(4) The Gujarat, Khandesh, Sholapur and Belgaum sanitary sub-divisions have been abolished and the works in them transferred to existing local public works sub-divisions. The Sind sanitary sub-division has become a sub-division of the Karachi Buildings division. The Thana sanitary and Salsette water-supply sub-division with the exception of the Matheran and Ambernath water-supplies and the Kalyan water-supply scheme has been transferred to the northern circle.

(5) Fees will be charged for consultation and plans and also for superintendence, which can in future be performed on behalf of Government only by the regular line of the public works department. As regards the charges to be levied from local or outside bodies for work done on their behalf by the consulting public health engineer to Government and the public works department, Government have fixed the following scale :—

(1) *For preliminary investigation and report.*—For a local body—no charge. For outside body the daily pay of the officer making the investigation and the staff which accompanies him from the date of leaving headquarters till the date of return *plus* 50 per cent. for a period not exceeding seven days.

For periods in excess of seven days the charge will be as above for the first seven days and thereafter :—

Daily pay of the officer making the investigation and the staff which accompanies him *plus* 100 per cent.

In all cases the travelling and halting allowances of the consulting public health engineer and his staff will be paid by the local or outside body concerned.

(2) *For carrying out detailed surveys in connection with a project.*—The estimated cost of the survey, including cost of establishment to be engaged, shall be recovered.

(3) *For the preparation of a project complete with all necessary drawings and estimates.*—$2\frac{1}{2}$ per cent. of the estimated cost less the amounts paid under (1) and (2) above.

(4) *For the scrutiny by the consulting public health engineer of a project prepared for a local or outside body by an agency other than the public works department.*—1¼ per cent. of the estimated cost of the project.

(5) *Inspection by the consulting public health engineer of public health works under construction, if constructed by an agency other than the public works department.*—1¼ per cent. of the estimated cost of the project.

So far as casual advice is concerned if the Consulting public health engineer is asked to act continuously as consultant for any work and has accordingly to visit that work from time to time as it progresses, the charge should be 1¼ per cent. If at the request of the local body he pays an occasional visit his charge will be Rs. 100 *plus* the actual expenses of journey *plus* usual travelling allowance etc. But no charge should be made for visits made by him on his own initiative or advice offered on such visits or for visits by the engineer of local bodies to him at his office to consult him about any particular point that arises.

(6) *Construction of works by the public works department on behalf of a local body.*—Establishment and tools and plant charges at 15 per cent. of the estimated cost of the project inclusive of 2½ per cent. for preparation of plans and estimates.

At the same time Government propose to adopt a working rule that no application for raising a loan either from Government or in the open market will be sanctioned except in respect of a public health scheme approved by the consulting public health engineer to Government. Furthermore if the body applying for sanction to the loan is a municipality which has a staff capable of carrying out the work on the lines approved by the consulting public health engineer, Government will stipulate before sanctioning the loan that the municipality must agree in advance to employ either the Government consulting engineer or some other consulting engineer approved by Government to supervise the work. If the body is a municipality which does not possess a staff capable of carrying out the work on the lines approved by the consulting public health engineer, Government will stipulate before sanctioning the loan that the work should be carried out by Government.

The saving which it is estimated will accrue in a full year by the substitution of a consulting public health engineer

and his staff for the superintending engineer, public health, and his staff is Rs. 1,45,000 a year.

VI. Government central stores, workshop and training centre, Dapuri.

History of the workshop.

36. In 1914 the Government of Bombay appointed a committee to consider and submit proposals regarding the establishment of a central store in Poona and in October of that year they bought Messrs. Meakin's brewery at Dapuri, with the object of converting it into a central stores and workshop, and placed it under the control of the mechanical engineer to Government for administrative purposes.

The property was bought for Rs. 1,25,000, a mere fraction of its capital value, and against this there were large realisations from the sale of the old brewery plant and materials, which reduced the net cost of the property to some Rs. 50,000 only. Immediately afterwards the value of the property rose very considerably owing to the war. The purchase was probably one of the best bargains which Government have ever made. The first works undertaken were the clearing up of the old brewery stores, the repair of the existing buildings and their modification for workshop purposes. In 1916 executive engineers began to send surplus plant etc. to Dapuri for storage and on 28th May 1917 the first repair job was undertaken.

In 1920 the workshop was transferred from the public works department to the industries department and remained under the control of that department until March 1923, when the public works department again resumed control. While the workshop was under the control of the industries department, the work done included the manufacture of experimental silk-twisting machines, a casein dryer, a fish press, rosha oil distilling plant and button machinery.

In March 1923 Mr. C. Holliman was appointed manager of the workshop and is still in charge. During Mr. Holliman's absences on leave the executive engineer, Poona water works division, has held the charge of the workshop in addition to his own duties.

Mr. Thiselton-Dyer as mechanical engineer (and for the period 1919–23 as deputy director of industries) exercised administrative control over the workshop from its inception to the date on which he proceeded on leave, viz. 29th November 1924. Mr. C. Holliman, works manager, exercised executive

as well as administrative control over the workshop from the 29th November 1924 to 31st December 1925. Thereafter the workshop was placed under the administrative control of the superintending engineer, public health, but since the recent reorganisation of the public health branch it has been placed under the administrative control of the superintending engineer, central circle. A mechanical engineering assistant was placed under the sanitary engineer on 14th September 1927 to assist him in connection with mechanical matters pertaining to public health works and the post of mechanical engineer to Government was abolished from that date. This mechanical assistant resigned his post on the 2nd June 1929. Instead of filling the assistant mechanical engineer's post by fresh recruitment Government decided to utilise the services of Mr. C. Holliman, the works manager, as assistant mechanical engineer in addition without extra remuneration and the designation of the post has been changed to "executive mechanical engineer and works manager, Government central stores, workshop and training centre, Dapuri".

Volume of work.

37. In 1917 the total number of machine tools was four, and the capacity of the foundry in weight of casting about half a hundred-weight. The number of machines is now 61, and castings up to two tons in weight can now be turned out. Oxy-acetylene welding is done, a small pneumatic riveting plant has been installed and the latest addition is a punching, cropping and shearing machine. The latter is of the most up-to-date type.

The value of the work done has been as under:—

	Rs.
1918–19	1,32,759
1919–20	1,50,625
1920–21	1,85,422
1921–22	1,52,203
1922–23	1,79,253
1923–24	2,13,050
1924–25	2,97,344
1925–26	2,99,654
1926–27	1,98,402
1927–28	1,89,052
1928–29	1,89,507
1929–30	1,51,150
1930–31	1,67,066
1931–32	1,21,706

The work included the following :—

(*a*) 11 cast iron sluice gates, 6′ × 3′ opening, with lifting arrangement.

(*b*) 174 observation tubes for the special irrigation division.

(*c*) 14 sets of iron clothing racks for Nasik Road central prison.

(*d*) Repairs to machinery at Karad water works.

(*e*) Repairs to hay-pressing machinery for military grass farms.

(*f*) 3 cast iron one-ton bullock rollers.

(*g*) 15 cast iron stand posts for Indian stores department.

(*h*) Repairs to the Worthington engines at Pandharpur water works.

(*i*) Repairs to the Worthington engines at Poona water works.

(*j*) 63 tons of special pipes from 3″ to 15″.

(*k*) 36 tons of manholes and valve boxes.

(*l*) 20 tons of steam road roller rims.

(*m*) 2 cast iron 30″circular penstock gates.

(*n*) The re-erection of a 150 brake horse power Ruston Hornsby oil engine, originally installed at Daruwalla Bridge at Bahiroba pumping station, together with a new Mather and Platt gear-driven pump of a capacity of 2,500 to 2,750 gallons per minute. The work entailed considerable modification to the engine crank-shaft to adapt the old engine to the new working conditions. This modification was successfully accomplished although the works had no machine big enough to operate on the crankshaft without alteration. The plant has now been running without trouble for about five months.

(*o*) Repair work was carried out on centrifugal pumps, oil engines—large and small—steam road rollers, portable steam engines, concrete mixers, printing machines, agricultural machinery and boring machinery, etc., etc.

In 1922 it was suggested that the bulk of the work done at the agricultural engineer's workshop should be undertaken at Dapuri and after a year's trial the scheme was found successful and the majority of the machine tools in the agricultural engineer's workshop were transferred to Dapuri. Only very small repairs are now undertaken by the agricultural

engineer. The transfer has resulted in appreciable annual savings.

Stores.

38. In 1922 a most valuable scheme was instituted whereby executive engineers could send to Dapuri all their surplus plant, such as steam road rollers, portable engines, oil engines, pumps etc. for overhaul and storage. The arrangement is that the workshops receive an annual grant for the carriage of the machinery to Dapuri, where they repair it for future issue to other divisions as required. By this system a large sum (which obviously cannot be assessed in rupees) is saved annually to Government. At the cost of a few thousand rupees a year a large number of expensive machines, which would otherwise be lying idle, are thoroughly overhauled and reconditioned, whereby depreciation is reduced, the cost of new machines saved and a central stock provided for immediate issue and use on work.

The nature of the work undertaken at Dapuri is very varied, and may be anything from overhauling a steam road roller —necessitating the manufacture of the heavy C. I. rim— to the making of parts of delicate machinery such as printing machines, small oil engines and gauges for measuring 1/1000 of a foot.

A small quantity of work is undertaken for public bodies, private individuals or local firms and mainly consists of repairs or replacements of an urgent nature which could not be done locally. Such work, while of distinct advantage to those for whom it is done, helps to keep labour and machinery employed at slack periods and further gives students undergoing training an insight into work of a varied and special nature.

Apprentice training.

39. In August 1922 the Government of Bombay announced a scheme of admitting apprentices to the workshop. Forty boys of different castes were at first received for training, but the number has now been raised to 60. This number will be attained gradually. In 1931-32 there were 33 boys and 3 graduates under training. The three classes are :—

Class I for boys up to the age of 17 who have passed the III standard examination ; five years' training to be given with a starting wage of 6 annas per day ; increment of 2 annas to 4 annas per day to be given each year according to qualifications.

Class II for 25 boys up to the age of 17 who have passed the V standard English; five years' training to be given with a starting wage of 6 annas per day; increment of 2 annas to 4 annas per day to be given each year according to qualifications.

Class III for 5 passed graduates B.E. (mechanical); two years' training, wages Re. 1 per day with an increment of 8 annas for the second year.

In addition to the 25 boys in class II some diplomates in mechanical engineering are taken as class II apprentices for two years' training. They are paid 8 annas a day as wages for the first year and Re. 1 a day for the second year in addition to their stipends.

The percentage of apprentices and past apprentices among the total skilled labour employed is 63 and the general quality of workmanship of their finished products is of a high order.

Nine years ago there were no apprentices and all the labour employed was "foreign". This asset to Government and the country cannot, unfortunately, be shown in the profit and loss account, but it should be considered and weighed against the indirect loss, which is mainly interest and depreciation of buildings and machinery.

Financial results.

40. Although the workshop does not show a profit when interest on capital and depreciation are taken into account, the loss may be considered as indirect as, during the past six years, the workshop has more than repaid the yearly budget allotment.

To compensate for the indirect loss abovementioned, the following indirect advantages are derived from the workshop:—

(1) The benefit derived by the public works department through the surplus tools and plant system, which renders it possible to supply such plant immediately an emergency arises;

(2) The use of Dapuri as a training centre for young graduates and apprentices;

(3) The functions of the workshop as a price controller;

(4) The appreciable annual saving due to the transfer of the agricultural engineer's workshop to Dapuri;

(5) The assistance rendered by the modification of designs. A striking instance of the assistance rendered by the

modification of designs, whereby Government save money, is given below:—

An executive engineer required fifty-one double socketed sluice valves. The lowest market price of these was Rs. 206 each. Dapuri was asked to design and manufacture something suitable for the job and did so at a cost of Rs. 140 each.

Other instances of a similar nature were:—

	Saving. Rs.	
Manufacture of cabins for road roller drivers	675	
Bullock road rollers	464	
Meter boxes	700	per year.
Clothing racks	1,450	
Roller parts in one division only ..	1,050	

(6) Competent workmen are sent out into the districts to repair and make adjustments to steam road rollers, oil engines, pumps etc. During 1931-32 fourteen men and boys were sent to different parts of the presidency.

(7) Really urgent work is taken in hand at once at all times, as a number of the workmen live on the premises. No extra charge is made except ordinary overtime charges A concrete case of this nature occurred when part of a weir was washed away by floods. Twenty sets of iron work including $1\frac{1}{2}$ tons of castings were made and despatched in four days. This was an extremely urgent job as late delivery might have meant that the water from the late rains could not have been impounded, with the result that a guaranteed supply would not have been given. This would possibly have meant a claim for compensation involving great loss to Government.

During 1930 the whole of the irrigation surplus plant was taken over by Dapuri. Much of this machinery has been repaired and is therefore ready for immediate use on other projects.

The whole of the machinery of the late boring department was also taken over in March 1931.

VII. Electrical branch.

Beginnings.

41. In the year 1905 Government first granted a license to the Bombay Electric Supply and Tramways Company

Limited for supplying electric energy to the public for lighting purposes and also granted a traction license in 1907 for running the local tram service. Government in the Public Works Department considered it desirable to create a special branch for supervising the work of the electric installation of Government buildings and also for controlling the activities of supply companies in the Presidency. In the year 1908, on the enactment of the Indian Electricity Act, the appointment of an electrical inspector became necessary, in addition to the electrical engineer.

Hydro-electric schemes.

42. The Tata Hydro-Electric Power Company was inaugurated in the year 1915 with a view to energising the Bombay Mills and so doing away with the smoke nuisance, since which time the Tata Company has gradually increased its generating stations, so that the entire Island of Bombay and the Suburbs are now supplied with the power generated by them from their stations at Khopoli, Bhivpuri and Bhira.

Owing to the very rapid utilisation of electricity in almost all towns of importance in the Presidency during the last 19 years, the activities of the Department have greatly increased, details of which are as follows.

Work of the branch.

43. The Electrical Branch is carrying out advisory, administrative and executive work.

The advisory work consists of advising Government on all electrical matters in regard to the grant of licenses to private companies, persons and local bodies for the supply of electrical energy to the public and other matters connected therewith, such as scrutiny of the conditions and rates of supply, methods of construction etc., as also revision of tariffs every seven years.

The administrative work consists of the supervision of the working of the various electrical undertakings, and the inspection of all medium and high pressure installations, of places of public amusement, mills, factories, power stations etc. which have to be carried out in the interest of public safety. It also comprises the examination of and the grant of licenses and competency certificates to electrical contractors, electricians and wiremen.

The executive work consists of the preparation of plans and estimates for electrical installations in Government buildings for the whole of the Presidency, and the supervision of such works when executed by contractors, and the maintenance of all installations, including the running of Government owned power stations.

Expansion of executive work.

44. In 1908 the total number of lights installed in Government buildings was 6,249, fans 712 and motors aggregating 108 B.H.P. In 1911 on the occasion of the visit of Their Majesties the King Emperor and Queen Empress, the illumination of all Government buildings was undertaken on a scale never previously attempted in India, 60,000 individual lights being installed, and in 1921 on the occasion of the visit of His Royal Highness The Prince of Wales 65,000 lights were installed.

The total value of the electrical installations in Government buildings has increased from 10·25 lakhs in 1913–14 to 60·62 lakhs in 1932–33.

Establishment.

45. By the year 1921 the electrical industry in the Presidency had grown to such an extent that the sanction of the Secretary of State was obtained to the electrical engineer being given the status of a superintending engineer, but it was not until 1925 the electrical engineer was relieved of the executive work, though he was vested with the powers of an electrical inspector.

46. The Electrical Branch which had been constituted as a temporary measure in 1912-13 and made permanent in 1914–15 was reorganized in 1925–26, and split up into the administrative charge of the electrical engineer as superintending engineer and the executive and inspecting charge of the executive engineer, electrical division and electrical inspector, and the eight Sub-Divisions were re-constituted into four Sub-Divisions, viz. (1) Bombay, (2) Deccan, (3) Gujarat and (4) Sind, each with an assistant engineer.

47. The offices of the electrical engineer to Government (as superintending engineer), the executive engineer, electrical division and electrical inspector, Bombay, and the Bombay Electric Sub-division, have been located in the Public Works Department Secretariat buildings and the Electrical Laboratory in the Public Works Department Store

Yard at Murzban Road and the Stores and Small Repair Shop in the Old Custom House.

48. Wherever possible, the executive and the administrative works are carried out by the same subordinate, as it is found that the work can be managed in this way with much greater economy than by having separate subordinates travelling over large areas.

The expenditure on the establishment of the Electrical Circle in 1932-33 was Rs. 2,80,717.

Progress of electrical development.

49. Up to the year 1913-14, electricity was only installed in the following places outside Bombay :—

Government House, Ganeshkhind,
Yeravda Jail and Press,
Photozinco Press, Poona,
Government House, Mahableshwar,
Government House, Karachi,
Vaccine Institute, Belgaum, and
Civil Hospital, Jalgaon.

In all these places, Government had their own generating plants, no other supply being available.

By the end of September 1933, i.e. 19½ years later, electricity has been installed in 34 centres in the Presidency and 12 others are in the process of electrification. Applications for licenses or permits for 15 other centres are at present under consideration. A list of centres where electricity is available is given in the graph appended.

Volume of inspection work.

50. *Inspection work.*—Commencing from 1st January 1927 Government decided to levy a fee for inspections made under the Indian Electricity Act. The inspections carried out and the fees earned are as follows :—

Year.	Total Inspections.	Fees Earned.
		Rs.
1927-28	10,000	43,445
1928-29	12,000	39,000
1929-30	13,000	52,370
1930-31	13,750	67,415
1931-32	11,083	67,226
1932-33	8,788*	72,860

* The decrease in the number being due to the low pressure installations not having been inspected, as no fees were charged for them, and the staff being unable to cope with the work.

After careful consideration of the recommendation made by the Reorganization Committee, Bombay, in paragraph 453 of their report, Government issued revised orders with effect from 1st August 1933 in connection with the levy of fees for the services of electric inspectors, as a result of which the revenue on account of inspections is expected to be increased by about Rs. 22,000 annually. The revenue during 1933–34 is estimated at Rs. 85,000.

An Electrical Laboratory is maintained for testing meters under section 26 of the Indian Electricity Act, as also for testing and reporting on electrical materials and accessories forwarded by the Customs and Commercial firms in Bombay. During the year 1932-33, 466 tests have been carried out.

LICENSING OF ELECTRICIANS, WIREMEN AND CONTRACTORS.

51. Owing to the defective manner in which electric installation work was carried out by incompetent persons, resulting in fires and deaths from shock, Government introduced with effect from 1st January 1925 the system of licensing electrical contractors, electricians and wiremen, thus bringing all electrical installation work into the same category as plumbing work.

Consumers, contractors, electricians and wiremen. who contravene the provisions of these rules, are liable to prosecution. 62 prosecutions were instituted up to the end of September 1933 with results as below :—

44 offenders were fined from Rs. 2 to Rs. 200,
7 prosecutions withdrawn,
2 cases pending,
2 persons sent to jail,
7 acquitted,

the total amount of the fines amounted to Rs. 1,859.

18 examinations of electricians and wiremen have been held from 1925 to the end of September 1933, the total revenue earned from this source deducting the expenditure incurred, being Rs. 47,417.

Up to the end of September 1933 there have been issued :—

667 Contractor's Licenses,
1,038 Class I Competency Certificates for Electricians, and
2,878 Class II Competency Certificates for Wiremen.

The licenses issued to the electrical contractors, electricians and wiremen are renewable annually.

Since the introduction of the system of licensing electrical contractors, electricians and wiremen, in the Bombay Presidency, other Provinces have followed suit.

Executive work.

52. Up to the year 1913 attempts were made to carry on maintenance work by private contract, but the cost was found prohibitive; it was therefore decided to carry out such work departmentally.

Quotations have been called for during the last two or three years from various contracting firms for carrying on the maintenance of the electrical installations in Government buildings, but the estimates received have been considerably higher than the percentage allowed by Government for this work.

All the power stations run by Government have been discontinued with the exception of the Vaccine Institute, Belgaum, Government House, Ganeshkhind, and the Power Station at Ambernath which was transferred to the Electrical Branch from the Development Department in October 1930.

Power is supplied at Ambernath for the Water Works at Badlapur and a small number of consumers. A new motor and pump have been installed at Badlapur, in order to reduce the running expenditure, and the large transformers which were hired from Messrs. Tata Power Company have been replaced by a small transformer which has been purchased by Government, in order to avoid the no-load losses which were considerable.

Revenue.

53. The revenue earned was as below :—

	Rs.
1926-27	38,619
1927-28	1,50,248
1928-29	1,22,540
1929-30	95,474
1930-31	1,11,612
1931-32	1,30,886
1932-33	1,28,966
1933-34 (estimate)	1,29,000

Retrenchment.

54. In consequence of the recommendations of the Reorganization Committee, Bombay, this branch was again reorganised this year and as a measure of retrenchment the services of the electrical inspector in Sind (specialist officer), one temporary assistant engineer, three upper subordinates, two clerks and one typist were dispensed with, resulting in a saving amounting to Rs. 44,712 per year.

Electricity duty.

55. The Bombay Electricity Duty was imposed by the Finance Act of 1932 and extended for a further year by the Finance Act of 1933. It imposes a duty of six pies per unit on energy consumed for lights and fans by any person other than Government, Railways, Local Authorities, Hospitals, Tramway Companies and Industrial Undertakings. Consumptions of 12 units or less per mensem by a single consumer are exempt from the levy of the duty. The Reorganization Committee considered the tax a fair form of taxation and recommended that if it was found to bring in a substantial revenue it should be extended as widely as possible, freed from as many exemptions as possible and made permanent.

The receipts from the tax amounted to Rs. 8,42,000 during 1932–33 and a similar sum is expected to be realised during the current financial year.

With regard to the recommendations of the Reorganization Committee in this respect, the Legislative Council has accepted the levy of this duty during the year 1933-34. The matter will be further considered at the time the Finance Bill for the year 1934-35 is framed.

VIII. Architectural branch.

Achievements of the branch.

56. It is now more than thirty years since Government established an architectural branch of the public works department.

Looking around Bombay, one may see evidence of the influence exercised on architecture by the introduction of the trained architect into Government service, not only in the concrete examples of the monumental buildings which have been designed by the consulting architects, but also in the very great improvement that has taken place in the draughtsmanship and technical knowledge of many of the young men engaged in architecture.

It is to this branch that the present architectural school at the Sir J. J. School of Art to a very great extent owes its present position. The officers of the branch have for the past twenty-eight years been lecturing and training Indian youths in the profession and, whereas when the branch was established it was impossible to get architectural draughtsmen, they are now fairly numerous and the improvement in their architectural technique is marked. Many of these students have become very good architectural assistants to the consulting architect; some have entered into private practice, some have left to join Government offices in Burma, Simla and elsewhere in India and others have proceeded to London to pursue further study. For the last three years a course for the Royal Institute of British Architects' examination has been opened at the school of art, and further, arrangements have been made to hold the above examination in Bombay.

History of the branch.

57. In 1901 Mr. John Begg, who may be said to be the first trained architect to be appointed by Government, was brought to Bombay. He remained consulting architect to this Government until 1907, when he was appointed consulting architect to the Government of India. In this respect Bombay was the pioneer and the example so set was followed by every other province in India.

The late Mr. George Wittet succeeded Mr. Begg in Bombay. His works are too well-known to all to require mention. So much was his work appreciated that the citizens of Bombay on his untimely death placed, with the permission of Government, a tablet to his memory in the Gateway of India (which he designed) and provided funds to found architectural scholarships in his name.

Staff.

58. The holders of the post of consulting architect have been as follows:—

1901-1907 ..	.. Mr. J. Begg, F.R.I.B.A.
1907-1919 ..	.. Mr. G. Wittet, F.R.I.B.A.
1920-1925 ..	.. Mr. S. Woods Hill, A.R.I.B.A.
1926-10th September 1926	.. Mr. G. Wittet.
11th September 1926—31st October 1926.	Mr. A. J. A. Illingworth, A.R.I.B.A. (Offg.)
1st November 1926—28th February 1928.	Mr. J. Mercer, F.R.I.B.A.
1st March 1928 and thereafter	Mr. Illingworth.

The superior gazetted staff has consisted of :—

—	Assistant architects.	Quantity surveyors.	Assistant surveyors.
1904–1912	One ..	....	....
1913	two ..	....	....
1914	three ..	....	....
1915	four ..	....	....
1916–1919	three ..	....	....
1920	three ..	one ..	two
1921–22	five ..	one ..	two
1923	four ..	one ..	two
1924–27	three ..	one ..	two
1928–1929	two ..	one ..	two
1930–1931	two ..	one ..	one
1932	....	....	....

The subordinate staff of the department was successively reduced until from 1st April 1933, this branch was closed down finally, only

One draftsman, and
One clerk typist,

having been retained who have been attached to the office of the Public Works Department Secretariat.

Government have abolished the branch altogether in accordance with the advice of the Reorganisation Committee. The decision is based on the view that there is no likelihood of any major works in the near future owing to the lack of funds and that it is wasteful to keep the department in being merely in the hope of better times.

Work done.

59. The value of the work completed to the design and under the supervision of the consulting architect has been :—

	Rs.
1901–1907	38,00,000
1907–1919	2,48,00,000
1919–1920	....
1920–1921	....

1921–1922	4,78,869
1922–1923	12,91,929
1923–1924	6,03,720
1924–1925	34,35,156
1925–1926	46,60,477
1926–1927	17,03,923
1927–1928	26,93,588
1928–1929	11,02,710
1929–1930	4,53,357
1930–1931	4,52,759
1931–1932	1,96,965
1932–1933 (estimated)	97,483

Type plans for various buildings were also prepared, but there is no record of the number of buildings constructed in accordance with them.

Use of Indian style.

60. The following works constructed during the last eight years have been designed in the Indian style :—

(1) J. J. hospital reconstruction scheme :—
Servants' quarters (3 blocks).
Sweepers' quarters (3 blocks).
Nurses' quarters.
Byramjee Jeejeebhoy hospital for children.
Ward pavillions (104 beds each).

(2) B. J. medical school, Poona.

(3) Ismail College, Andheri (all buildings).

(4) Government offices, Nasik.

(5) Out-patients' department, Sassoon Hospital, Poona.

(6) Preventive officers' quarters at Matunga, Bombay.

(7) Judicial buildings, Nadiad.

(8) New Poona College (Shikshana Prasarak Mandal).

(9) Post and telegraph office, Poona.

(10) King Edward VII Memorial Hospital, Parel, Bombay.
All buildings in connection with this scheme.

(11) Shree Shivaji Memorial, Raigarh.

(12) Post office, Parel, Bombay.

(13) Post office, Dadar.

The superior gazetted staff has consisted of :—

—	Assistant architects.	Quantity surveyors.	Assistant surveyors.
1904–1912	One ..	....	....
1913	two ..	....	....
1914	three ..	....	....
1915	four ..	....	....
1916–1919	three ..	....	....
1920	three ..	one ..	two
1921–22	five ..	one ..	two
1923	four ..	one ..	two
1924–27	three ..	one ..	two
1928–1929	two ..	one ..	two
1930–1931	two ..	one ..	one
1932	....	....	....

The subordinate staff of the department was successively reduced until from 1st April 1933, this branch was closed down finally, only

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Work done.

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	Rs.
1901–1907	38,00,000
1907–1919	2,48,00,000
1919–1920	....
1920–1921	....

IX. Economies carried out by the Department during the last five years.

62. During the period 1928-33 this Department had been subjected to searching enquiries in the matter of retrenchment in expenditure. In 1929 Mr. P. G. Shah, an accounts officer, made recommendations regarding the establishment and other charges. The terms of his references included (1) the organization of the Public Works Department establishments, (2) their geographical distribution and (3) the possibilities of reducing them. He suggested economies to the extent of Rs. 11·47 lakhs per annum. Government after considering the several recommendations decided to effect economies to the extent of Rs. 8 lakhs per annum. Again Government in 1931 appointed a Retrenchment Committee, in accordance with the announcement of the Honourable the Finance Member in the Legislative Council made on 2nd March 1931. While recommending retrenchments in view of the paramount necessity of reducing expenditure the Committee observed as follows :—

> "It would seem logical that, as financial considerations have greatly reduced the number of new works which can be taken up, there should be a corresponding decrease in the establishment charges and in the total expenditure. We are aware that there have been heavy reductions in establishment amounting to over Rs. 8 lakhs in the last few years and that the staff now in existence is claimed by the Department to be the minimum necessary to maintain the existing works."

In their *ad interim* report the Committee suggested abandonment of the Vir Reservoir scheme, estimated to cost about a crore of rupees. This was accepted. In addition the Committee also recommended postponement of certain works and suggested other retrenchments. These were generally given effect to. In their final report retrenchments to the extent of Rs. 34 lakhs were suggested as shown below :—

	Rs.
(*a*) Stopping provision for new works next year	5 lakhs.
(*b*) 50 per cent. cut in discretionary grants with officers on current year's basis ..	3 ,,
(*c*) Repairs to buildings, residential and non-residential on the basis of current year's provision which is 18 lakhs ..	6 ,,

(*d*) Repairs to communications. This year's provision is 34 lakhs	Rs. 5 lakhs.
(*e*) Irrigation branch 15 per cent. cut on the basis of this year's provision of Rs. 21 lakhs for works and Rs. 46 lakhs for working expenses	10 ,,
(*f*) Public Works Department establishment (roads)	4 ,,
(*g*) Tools and plant cut on a basis of ·8 per cent. which is the excess over the sanctioned rate for tools and plant at 1½ per cent. saving	1 ,,

A total saving of Rs. 28 lakhs had been effected of which about Rs. 20·97 lakhs was under Civil Works and Rs. 7·21 lakhs under establishment. The limit of expenditure on tools and plant in a division was fixed, from 1st April 1930, at 1½ per cent. of the total outlay on works and repairs except in exceptional cases. The demands had previously been based on actual requirements of the division, without any relation to a fixed percentage, and they generally amounted to 3 per cent.

The grant for repairs to buildings and roads has also been considerably reduced as will be seen from the following figures :—

Year.	Grant.
	Rs.
1931–32	53,00,000
1932–33	38,99,000
1933–34	41,07,000

In 1932–33 a reduction of Rs. 14 lakhs was made in the grant for repairs. This was found to be excessively drastic and the grant for 1933–34 had accordingly to be increased by about Rs. 2 lakhs in order to prevent undue deterioration of buildings and roads. In addition a saving of about Rs. 43,000 was effected under tools and plant charges. About the same time this department also effected a saving of about Rs. 45,500 by abolition of six sub-divisions and by reduction in establishment.

Still another committee, known as the Reorganisation Committee, was appointed in 1932 and action taken by this department on the several recommendations of that committee have been dealt with in the preceding paragraphs.

X. Appointment of committee for communications.

63. In May 1930, Government appointed a Committee of Public Works Department and Railway Engineers and revenue officers to consider and report on the several problems arising

in connection with the impending construction by the Bombay Baroda and Central India Railway of the new railway bridge over the river Narbadda at Broach. The committee, after considering all possible problems involved and, making certain suggestions, recommended a new alignment for the proposed bridge ; it submitted its report to Government in January 1932. The various recommendations made therein are under the consideration of the local authorities concerned.

XI. Appointment of a part-time architect.

64. Although the architectural branch has been abolished, owing to the pressing need of economy, Government inevitably require the expert services of an architect to advise on matters which arise from time to time—quite apart from the question of the designing of new buildings which may not be of such immediate importance. During the course of preparation of leases of lands situated in important localities in Bombay city and particularly the development of Back Bay Reclamation Scheme estate, the technical advice of an architect is essential. Government have, therefore, re-engaged the part-time services of Mr. E. C. Henriques, late assistant architect, for a period of six months, in the first instance, on a salary of Rs. 300 per mensem, in a consultative and advisory capacity.

XII. Questions before Government.

65. The following are the most important questions remaining under the consideration of Government in connection with the Public Works Department, roads and buildings and specialist branches :—

(1) Reduction of one division in Gujarat ;
(2) Abolition of posts of assistant engineer in superintending engineers' offices ;
(3) The policy to be adopted with regard to transfer of roads and buildings to local boards ;
(4) Future policy with regard to electricity duty ;
(5) Abolition of tolls and all other forms of provincial and local taxation on vehicles and substitution of a tax therefor.

The consideration of proposals (1) and (2) has been deferred pending decision on the question whether the post of a superintending engineer (roads and buildings) can or cannot be abolished. The question of the future policy with regard to the electricity duty [item (4)] has already been referred to in paragraph 55 under electrical branch.

M G I Bk H 950—594

APPENDIX I.

(Please see paragraph 15 of the Review.)

Resolutions as accepted at the Road Rail Conference held at Simla on the 24th, 25th and 26th April 1933.

1. This Conference is of opinion that, in the general public interest, the time has come for increased co-operation and a more intelligent co-ordination of effort between the various authorities and interests concerned, in the matter of :—

(*a*) future Railway development,

and of

(*b*) the future development of road communications, whether used for motor transport or other purposes,

so as to secure a more comprehensive and uniform plan of general development than at present exists.

In areas where uneconomic competition between railway and road transport has been proved to exist, such increased co-operation and co-ordination may necessitate the adoption, by mutual agreement, of measures designed to reduce such uneconomic competition to the minimum compatible with the maintenance of healthy competition.

Any comprehensive or uniform plan of general development must sooner or later involve a gradual expansion of facilities for rural motor transport, complementary to the Railways and to other existing arterial forms of transport, but as internal district communications—apart from the main arteries—are largely controlled by local bodies, any intra-provincial co-ordination of effort must necessarily in the first instance be a matter for the local Governments and legislatures, who, in such matters, should consult, and to the best of their ability, co-operate with the Railway and other interests concerned.

2. In order to ensure increased co-operation and more intelligent co-ordination of effort between the various authorities concerned, this Conference considers that the following measures would be justifiable :—

(*a*) The control of public service and goods motor transport should be regulated in the interests of public safety and convenience.

(*b*) The number of vehicles licensed to ply for hire should be restricted so as to prevent such competition between all forms of transport as may be contrary to the public interest.

3. This Conference considers that the statutory provisions which at present limit the operation of motor services by certain railways should be repealed.

4. This Conference recommends that the present regulations regarding public service and goods motor transport should be reviewed with the object of amending them so as to afford every encouragement to the development of rural services even to the extent in exceptional cases of granting of monopolies for limited periods.

5. This Conference considers that, in the interests of all concerned, a co-ordinated plan should be drawn up for the taxation of motor transport by the various authorities concerned.

6. This Conference considers that—

(*a*) the present road development account should be continued for the duration of the present constitution and would urge that provision for its continuance be made in the new constitution;

(*b*) the class of roads to which the road development account should be applied, including the maintenance of roads constructed from that account, be reconsidered;

In present circumstances the most urgent need is an improvement in the efficiency, and a reduction in the cost, of the transport of agricultural produce to markets and thence to the railways; future road development programmes should be framed accordingly.

7. This Conference considers that it is necessary to study the question whether such lack of balance as at present exists in the road systems will, if the means of development are restricted to revenue resources, be susceptible of correction either at all or at a rate consistent with the economic needs of the country; and accordingly recommends that a comprehensive plan should be drawn up with a view to examining the possibility of development of both main and subsidiary roads from loan funds within the limit of the resources available for maintenance.

8. This Conference considers that suitable machinery should be established at the Centre and in the Provinces to ensure adequate co-ordination between all forms of transport and their future development.

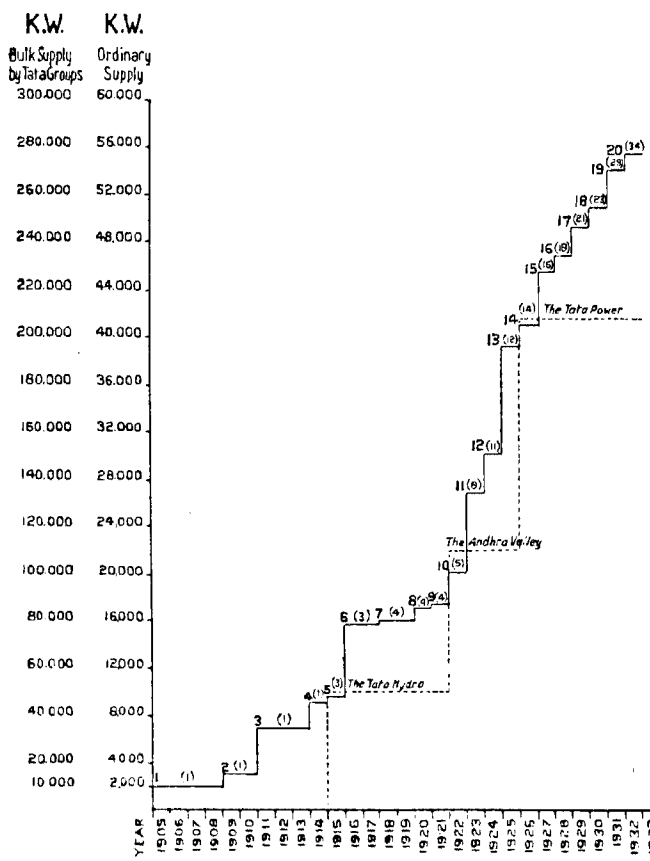
APPENDIX II

(Graph referred to in para 49 of the Review)

GRAPH

SHOWING THE PROGRESS OF ELECTRICAL DEVELOPMENT IN TERMS OF KILOWATTS INSTALLED FROM 1905 TO DATE BY VARIOUS SUPPLY COMPANIES IN THE BOMBAY PRESIDENCY

NOTE:— Dotted line shows Tata Groups Bulk Power Supply.
Full line shows total of ordinary Supply.
Figures in Brackets, thus (4) show the number of Companies, excluding the Tata Groups in operation at the end of each year.



INCREASE DUE TO		
Ref. No	Increase of load old Supply Co:	Start of new Supply Co:
1		Bombay El. S.T.
2	Bombay El. S.T.	
3	Bombay El. S.T.	
4	Bombay El. S.T.	
5		Ahmedabad Karachi
6	Bombay El. S.T.	
7	Ahmedabad	Poona
8	Ahmedabad Karachi Poona	
9	Karachi	
10	Bombay El. S.T. Poona	Surat
11	Bombay El. S.T. Ahmedabad Poona	Godhra Hyderabad Sukkur
12	Ahmedabad Karachi Poona Hyderabad Sukkur	Broach Gadag and Behigeri. Shikarpur
13	Bombay El. S.T. Ahmedabad Poona Hyderabad	Sholapur
14	Poona Sukkur Broach	Rander Aden
15	Bombay El. S.T. Poona Surat Hyderabad Sukkur	Bhiwandi Hubli
16	Karachi Surat	B'bay Suburn Thana
17	Bombay El. S.T. Surat Hyderabad Broach Shikarpur B'bay Suburn	Lonavla – Khandala Kalyan Bijapur
18	Poona Sukkur Rander B'bay Suburn	Panvel Dharwar
19	Bombay El. S.T. B'bay Suburn Bhiwandi Ahmedabad Godhra Panvel	Pandharpur Panchagani Matheran Larkhana Jalgaon Nasik-Deolali
20	B'bay Suburn Kalyan Rander Pandharpur Bijapur Matheran Sukkur (Reduction)	Dhulia Ahmednagar Amalner Nadiad Belgaum

Executive Engineer El. Dn. & Electrical Inspector, Bombay
in charge of the duties of the Electrical Engineer to Govt.
P.W.D. Bombay.

G.P.O. 03-POONA 1932.

XXII—DEPARTMENT OF THE CONSULTING SURVEYOR

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XXII—DEPARTMENT OF THE CONSULTING SURVEYOR TO GOVERNMENT

I. History of the Department.

1. About 1906 Government felt seriously the lack of expert advice in land acquisition cases and came to the conclusion that their interests suffered thereby. Property valuation is a subject in which proficiency cannot be obtained by means of text books. In fact there is no subject less independent of experience for its proper understanding. In all advanced countries valuation is recognised as highly specialised work and confided to a specialised profession. Not only does the employment of an expert adviser save Government large sums in compensation, but it avoids long delays and heavy expenses in references to the High Court.

Government therefore decided to obtain the services of an expert surveyor and valuer, as the expression is understood in Europe. But it was proposed to employ him not only as valuer but also in laying out land and as an adviser on improvement schemes both in Bombay and the mofussil.

In 1907 Government applied through the Government of India to the Secretary of State for sanction to the appointment of an expert surveyor and valuer, a Fellow of the Surveyors Institution and one who had practice in valuations and survey of properties in cities and also, if possible, of city improvements. He was to be a full-time officer of Government employed directly under Government and to discharge the following duties :—

(*a*) the valuation of sites and buildings standing upon them in any part of the Bombay presidency, including Sind,

(*b*) the examination of all schemes for city improvements in which the acquisition of privately owned land is concerned, whether in Bombay or the mofussil,

(*c*) the laying out of properties acquired for schemes of improvement in the mofussil, and

(*d*) the training of selected classes in land valuation and if required, the delivery of lectures on that subject in one or more of the Government colleges.

In addressing the Government of India, Government observed that :—

> In Europe the valuation of building land has been made a subject of expert knowledge and the trained surveyor and valuer has come into existence to meet a public want. In this presidency at least he is almost unknown and an officer acquiring land has none of the advantages of expert advice when called upon, as he often is in the island of Bombay where tenures are numerous to examine and make an award on claims, often preposterous, but almost equally as often based on abstruse and complicated principles of valuation which his previous training and experience have left him unprepared to deal with. The owners of land under acquisition are seldom content with the collector's valuation and the additional 15 per cent. allowed them under the Act. Almost invariably they endeavour to obtain something better by a reference to the courts, their claims, both before the collector and in the courts being based on prices alleged to have been paid in the open market for other land in the vicinity, the potential value of their own land if exploited by themselves for purposes of profit, the nature of the tenure on which it is held, and so forth.
>
> It is now the practice, in cases of acquisition on behalf of either of the two railways or of the Bombay municipal corporation, for the acquiring body to be represented before the collector by counsel who call their own evidence as to values, put in their own valuation statements and subject claimants to a critical cross-examination. To that extent, therefore, in those cases the collector receives assistance when endeavouring to arrive at a proper appreciation of a claim under investigation. But it is practically impossible for even a solicitor properly to conduct an acquisition case unless he is himself an expert by training and experience.
>
> Reviewing the transactions of the past five years the Bombay Government are unable to avoid the conclusion that for land acquired under the Act for public purposes, not only in Bombay but in the mofussil, more especially in the vicinity of towns, they have frequently had to pay prices in excess of the real value. This result may, it is believed, in a large measure be ascribed to the absence of a permanent expert adviser

in valuation whose training and experience would be available both in proceedings before the collector and in courts and the time has now come for providing as far as may be possible a remedy for a state of things which is contrary to the common interests. Every excessive award tends to become a precedent prejudicial to the interests of Government and local bodies by encouraging the making of still more exorbitant demands for land required for public purposes.

The Government of India, however, expressed the doubt whether English experience would prove suitable to India and suggested that the desired object might best be obtained by selecting an officer with some experience of land acquisition work and deputing him to England for a course of training with a firm of surveyors of standing. The Government of Bombay accepted this view, and suggested that Mr. Murphy, an assistant engineer of the public works department, should be deputed to England to learn the work. He was accordingly placed on deputation for two years to study in the offices of surveyors in England and to attend lectures and to visit Berlin, Paris, Vienna and certain places in England to see how town planning work was carried out in practice.

Mr. Murphy took charge of his office called "consulting surveyor to the Government of Bombay" on 3rd May 1912. The pay of the post was Rs. 850—50—1,350—150—1,500 *plus* Rs. 300 deputation allowance, and Rs. 300 as Government assessor on the Tribunal of Appeal.

Unfortunately Mr. Murphy died within five months of taking over his duties and the question whether a trained expert from England should be obtained or another officer should be selected and sent to England to undergo training was again considered. Government held that the latter method could not give the thorough grounding that was required. The Government of India were accordingly asked, and agreed, to move the Secretary of State to select a man of the requisite qualifications in England.

The post was accordingly advertised and Mr. Mirams was chosen to fill it. He reported for duty on 30th January 1914. His duties were laid down as :—

The valuation of sites and buildings standing upon them. Commissioners and collectors should take full

advantage of his services in all land acquisition cases, in cases involving valuation of unusual importance and difficulty, as well as in cases of town extension or new road schemes.

He was provided with the following establishment :—

6 surveyors,

4 draftsmen and tracers, and

2 clerks.

In addition Mr. W. R. Philpot-Brooks, an executive engineer of the public works department, was placed at his disposal to assist him with schemes to be undertaken in Poona and apparently also with a view to officiating when the consulting surveyor was on leave.

Mr. Philpot-Brooks reverted to the ordinary line of the public works department in 1915. In 1920 Mr. Stamper joined the department as assistant consulting surveyor and has held the post of consulting surveyor since Mr. Mirams retirement in 1930.

The Reorganisation Committee examined the work of this department and reported in favour of retaining the department without curtailment. They recommended that the post of consulting surveyor should be Indianised on Mr. Stamper's retirement and its pay placed on the same scale as that of a superintending engineer.

II. Town planning.

2. At about the time of the appointment of the consulting surveyor the attention of Government was much engaged in the improvement of towns by town planning and shortly afterwards a bill was drawn up. A select committee was appointed to consider the provisions of the bill and the consulting surveyor was appointed expert adviser of the committee. The Town Planning Act, which was passed in 1915, incorporated the principal provisions of the Town Planning Acts of England and Germany.

Until the passing of the Bombay Town Planning Act, 1915, no special legislation for carrying out town planning schemes existed and all schemes prepared by local bodies were undertaken under the very limited powers given by the Municipal Act, which, although it laid it down as the duty of every municipality to make reasonable provision for reclaiming unhealthy localities and permitted them to

lay out, whether in areas built upon or not, new public streets and to acquire land for that purpose, gave them no special powers to enable them to undertake these duties. The necessity of providing municipalities with special powers to deal with insanitary areas, the improvement of housing, the construction of new streets and the widening of existing streets, and the housing of the poor and working classes has not been overlooked by Government. In the city of Karachi Municipal Act, 1933, provisions as to the making of improvement schemes are incorporated. The powers given are by no means drastic, and in legislation in England, clauses relating to valuation and betterment have been passed which give powers very much in advance of those incorporated in the Karachi Municipal Act. The powers given will, however, greatly facilitate the solving of problems of housing and planning within the built up portions of the city, and there is no doubt that municipalities would be in a much better position to cope with such problems, if similar legislation were applied to all municipal areas.

To carry out an improvement scheme or provide scheme for town extension without any special powers is a severe tax on the resources of local bodies both financially and executively. In the past Government sanitary grants were occasionally forthcoming to assist the clearance of insanitary areas and within their resources some effort was made in a small way by municipalities to effect improvements in congested and insanitary quarters in towns. The layout of new areas for town extensions was however a problem involving considerable financial outlay, for it was generally necessary to acquire the area to be laid out, give up land for streets and generally undertake an estate development scheme. It naturally followed that such schemes were not often undertaken.

In India it is extremely rarely that an area is laid out and provided with roads for development by a private party and the consequence was that, before the passing of the Town Planning Act, unless Government or a municipality undertook the work, the expansion of a town usually followed existing roads or lanes, the frontages of which were built up, leaving very inadequate access or no access at all to the back lands. In the course of time the back lands were built over, the only access to interior buildings often being by narrow winding paths.

In Salsette special officers appointed by Government to deal with the development of residential areas found their

work greatly hampered or even nullified by the inadequacy of their powers and this must have been equally true of those engaged in similar endeavours in all towns in the presidency.

The Bombay Town Planning Act of 1915 was therefore passed with the object of securing that areas converted into building land should be developed in such a way as to secure proper sanitary conditions, amenity and convenience, assist municipal funds by enforcing contributions towards the cost of constructing roads and other works from the holders of land who benefited thereby and obviate the heavy expense of carrying out public works after development had taken place, by anticipating the needs of the community.

The provisions of the Town Planning Act enable the planner to ignore to a great extent existing plot boundaries in designing his layout, existing holdings can be reconstituted and made subservient to the plan and building plots of good shape and frontage can be allotted to owners of lands ill-shaped for building purposes and without access. The cost of a scheme can be recovered from the owners benefited to the extent of 50 per cent. of the increase in the value of the land estimated to accrue by the carrying out of the works contemplated in the scheme. The burden of expense to municipalities of carrying out town planning schemes is therefore very greatly lightened. The Act also gives extensive powers for the regulation of buildings in town planning schemes and the congestion and squalor which is so much in evidence in towns in India may be avoided in their newly developed areas.

When the draft scheme is sanctioned an arbitrator is appointed. His duties are to hear each owner individually, consider his objections or proposals and make such adjustments or amendments in his plot or the values as are justified.

The duties of the arbitrator call for considerable experience of valuation and particularly of the effects of development on the price of land. The arbitrator appointed has in every case, except those within the jurisdiction of the Bombay development department, been the consulting surveyor or one of his assistants.

III. The Act in operation.

3. The provisions of the Act which apply to the reconstitution of plots and the calculation of incremental

contributions are undoubtedly complicated, but it does not appear possible to simplify them in these respects, because it is obvious that, as the area and shape of plots are altered, compensation must be paid to or contribution paid by the owners and accurate measurements and valuations must be made. The declaration of the intention to make a scheme and the preparation of the draft scheme are matters for the local authority to undertake. But as municipalities have not available the technical staff to undertake the preparation of a draft town planning scheme, they have always had to look for outside help and the consulting surveyor has in almost all cases been called on to render assistance and has deputed an assistant who has prepared the draft scheme in consultation with the local authority and the owners. In four cases municipalities have prepared draft schemes without the assistance of the consulting surveyor, but, owing to the extravagance of the works proposed and the over-estimating of increments, the consulting surveyor had entirely to recast three of them.

The Act was in the first instance applied only to Salsette, but has since been extended to most of the towns in the presidency and Sind. The demand for schemes in towns outside Salsette began from about 1920. In the five years from 1921 to 1926 sixteen schemes covering an area of 9,318 acres were taken in hand and at the end of that period the staff was so fully engaged that it was not possible to undertake fresh schemes (see the appendix). With so much new work coming in, progress in work already in hand was retarded and much delay was experienced in completing schemes. From 1927 effort was mainly confined to disposing of schemes in hand. The completion of schemes in hand was thus much accelerated and by 1930 considerable progress had been made. In that year however the staff of the consulting surveyor was reduced and he was ordered to undertake no new schemes and to curtail his other activities to the greatest possible extent for a period of two years. Up to the middle of 1932, therefore, work was confined to schemes undertaken previously. In 1932 Government passed fresh orders under which the whole cost of the scheme except the services of the consulting surveyor himself, unless he actually prepared the scheme, were to be debited to the scheme. Since these orders were passed the embargo on new schemes has been withdrawn. The Reorganisation

Committee consider that there is room for still greater strictness in the recovery of the cost of preparing schemes from local bodies. They propose that before a scheme is undertaken, if the local body wishes to use the services of the consulting surveyor, the consulting surveyor should prepare an estimate of the cost of preparation, which estimate should be sanctioned by Government, and that the estimated cost should either be recovered from the local body before work is begun or treated as an advance to the local body.

The criticism has at times been raised that the Act is dilatory in operation. In a normal scheme, when both Government and the municipality act promptly and the scheme is not radically altered after it passes the draft stage, there is no reason why the process should be a long one. The rapid completion of a scheme then depends principally on the staff available to the various authorities through whose hands it passes. The experience of the consulting surveyor's department is that work entrusted to an inexperienced planner results in greater delay in the long run. In order to complete the preparation of a scheme in the shortest time possible it should be correctly prepared and equitable in its draft stage and the process of objection and appeal should be as easy and rapid as possible.

The Act has been in operation now for sixteen years and the results achieved under it would point to the conclusion that in its main principles it is sound and that in its operation its principles have been equitably applied. Minor defects in the working of the Act have been disclosed and an amending bill is in preparation which will simplify procedure, limit delays in completing schemes, and facilitate the making of alterations in, or variations of sanctioned schemes. Clauses are also proposed by which the increment and arbitration clauses of the Act may be applied to the reclamation of unhealthy localities and the laying out of new public streets in the built up parts of towns.

The Madras Town Planning Act provides for the collection of increments over a period of years on the basis of a periodically revised estimate of values. This of course involves the estimation of increments and the holding of arbitration proceedings periodically over a number of years and much prolongs the process in comparison to the method under the Bombay Act, under which valuations are made once for all. By the Madras method the owner is able

to see and appreciate the improvement to his plot by the carrying out of the scheme and the estimates of value can be made with greater accuracy from actual experience of values realised after the scheme is carried out. On the other hand values are affected by market conditions irrespective of the works contemplated in the scheme and the Bombay Act is sounder in this respect, since the values of both the original and the final plots are estimated as on the same date, namely, the date of declaration to prepare the scheme. But the Madras Act has been in operation for some years now and during a period of fluctuating values, and it would be interesting to ascertain how it has worked out in the light of experience.

The Bombay Act, unlike the Madras Act under which municipalities with a population of 40,000 or over are compelled to undertake town planning, is entirely voluntary. Excluding schemes carried out by the Bombay development department, the Act has been applied to 24 towns in the presidency and Sind, 38 schemes covering an area of over 14,000 acres have been undertaken and 22 final schemes have been sanctioned and are now in the course of execution. A visit to any of these schemes will disclose a town extension in progress on an orderly plan, public health safeguarded and overcrowding forbidden by building regulations controlling the development within the area, the whole in strong contrast to the unregulated extensions of other towns, where the Act has not been availed of.

IV. Town improvement.

4. The Bombay Town Planning Act can only be applied by a local body for an area which is in the course of development or likely to be used for building purposes, not to the built up portions of towns. The clearance and improvement of insanitary areas, replanning and widening of old and construction of new traffic ways in towns continue to be subject to the very limited provisions and powers of the Municipal Acts.

Wider powers of acquisition are required. Municipalities have to pay, for property acquired, 15 per cent. in addition to the market value. There is no justification for requiring a public body to pay anything more than market value for the acquisition of insanitary property in order to render an area sanitary. Properties

are improved by the carrying out of public works at the expense of the community but no betterment charges can be levied and the principle of excess condemnation (that is the acquisition of more land than is required for the bare necessity of a project in order to obtain something towards the cost of the project by its resale) cannot be applied. There are no provisions for rehousing those of the poorer classes who are dishoused by the making of a scheme and no powers of control and action in case of default by local authorities in undertaking improvement schemes.

Before the reforms considerable pressure could be brought by revenue officers as presidents in persuading municipalities to clear insanitary areas or carry out improvement schemes, but since the reforms revenue officers are less intimately concerned with municipal affairs. In 1921 Government included in the duties of the consulting surveyor that of advising municipalities desirous of undertaking road widening and sanitary schemes, on receipt of a formal request through the collector, as regards the correct way of tackling the problem and the form in which the scheme should be drawn up. No advice however was to be formally tendered by him and no formal applications for advice or assistance were to be entertained by him without the approval of the commissioner of the division in each case, though this restriction does not apply to the informal preliminary discussion of the broad lines of any scheme which may be in contemplation.

The consulting surveyor's activities are therefore greatly limited. Municipalities as a rule have no executive staff with experience of this work. Collectors from time to time submit proposals for town improvement for advice as to the method of carrying it out and its financial aspects to the consulting surveyor. The consulting surveyor also when visiting towns is able to discuss such problems with municipal presidents and to suggest improvements which may result in the fructifying of an improvement scheme or the clearing of an insanitary area. The consulting surveyor prepared, for instance, two extensive schemes for relief roads to provide new traffic ways through the hearts of the cities of Poona and Ahmedabad. The former is well under weigh and four sections of it out of six have been completed. The

Ahmedabad scheme, however, has recently been passed by the Standing Committee of the municipality. The scheme which is an important one from which the city will derive greatest benefit, both by the easement of cross city traffic, and the opening out of, and provision of lungs in, areas of great congestion, is one of considerable magnitude involving much acquisition of property. The Consulting Surveyor has been asked to supply an officer on deputation as special land acquisition officer for the scheme.

No powers of supervision or control in respect of improving insanitary areas such as are given in the English Housing Acts are vested in Government. Those municipal presidents who take a sympathetic view of proposals to improve their towns are handicapped by lack of experienced executive staff, by the very inadequate powers in the Municipal Acts and sometimes by local feeling among the inhabitants. Improvement in insanitary areas in towns would be much facilitated and expedited by the incorporation of powers similar to those in the English Housing Acts. The comments of the Whitley Commission on Labour on the housing conditions in towns in the presidency may be quoted :—

> "In Bengal and Bombay Town Planning Acts are urgently required to provide for the acquisition and layout of suitable areas for working class populations, and for the opening up and reconstruction of congested and insanitary areas."

The responsibility of Municipal Councils cannot be discharged in the industrial cities unless a vigorous attempt is made to improve housing. Municipalities are ill equipped on the executive side for attacking such large and complex problems.

Quite apart from the failure to formulate and execute a constructive housing policy, municipalities have failed to use their existing machinery to control the layout and erection of new buildings. Whilst the primary responsibility rests with the municipalities they are entitled to look for expert advice and stimulus from Government.

So far, the Consulting Surveyor's activities have been mainly confined to the towns, and the assistance rendered in village improvement has been mainly by demonstration, by models

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and diagrams exhibited at agricultural shows, or other exhibitions where large numbers of agriculturists are brought together, and in a few instances he has prepared plans for siting or resiting villages. It is intended, however, to utilise his services in village improvement, and he will form part of the organisation of Government in the promotion of village betterment.

V. Co-operative housing.

5. The layout of areas for co-operative housing societies, when they apply for loans from Government, is one of the duties of the consulting surveyor. Housing by co-operative means has made great strides in recent years and many societies have been formed, particularly in the suburban areas of Poona, Karachi, Ahmedabad and Bombay.

The consulting surveyor's advice has been sought in nearly every case and large areas have been laid out for co-operative housing. In the eastern suburbs of Karachi and also in the suburbs of Ahmedabad areas almost of the size of small towns have been laid out for co-operative housing societies by the consulting surveyor and are fast being built over. The layouts are on open lines and the buildings regulated by special conditions. They are often grouped about central recreation grounds and as pleasing an effect as is possible within financial limitations is aimed at. By this means large numbers of the middle classes, who previously lived in the congested areas of cities, have been provided with houses in pleasant suburban areas, where they are able to live in congenial surroundings with neighbours of their own community or class.

VI. Other methods of development.

6. In addition to schemes undertaken in the circumstances above stated the consulting surveyor is consulted by Government on the development of lands belonging to Government and on schemes involving the acquisition of land for development or town extension. Such schemes usually involve a careful consideration of their financial aspects, the value of the land, the cost of development and the probable period of disposal. Schemes for several large areas, including the Artillery Maidan and Baluchi Maidan and Commissariat Lines in Karachi and Koregaon Park in Poona, have been drawn up by the consulting surveyor. He was also

called upon to prepare layouts of the Back Bay Reclamation for the consideration of the Kay Committee and later was called on to report on the financial aspect of developing and selling Block Eight of Back Bay as an alternative to disposing of it to the Government of India. The consulting surveyor was also required to make proposals for the layout and disposal of the area occupied by Colaba railway station and goods yard.

There are certain areas which are in course of development, but no local authority or notified area committee exists and for one reason or another it is not desirable to appoint one. A typical case is that in the vicinity of Nasik Road station. Scattered buildings are being erected over a wide area of land, there are numerous owners of individual survey numbers and unless development is regulated the area will be built over without plan, frontages will be built in leaving no access to back lands and eventually a haphazard and most unsatisfactory type of development will ensue. It is not possible to appoint a notified area committee at the present time and the Town Planning Act, which gives the required powers for reconstituting plots, cannot be applied. The only possibility of controlling development is therefore by the use of the collector's authority when issuing building permissions. If a proper plan of layout is prepared and suitable regulations are laid down, much can be done by the collector to ensure that development is carried out in an orderly manner. The consulting surveyor has been called on to prepare schemes of this nature, and his advice is frequently sought by collectors.

There are many occasions therefore, apart from those in which schemes are undertaken with the aid of the Town Planning Act, in which the consulting surveyor is called in. One of his duties is to keep an oversight on municipalities as regards the amount of energy and money they spend on their town improvement schemes.

The department is also expected to do what it can to instruct public opinion. Senior assistants of the department have from time to time given lectures on town planning and valuation both to the public and to classes of the Local Self-Government Institute.

VII. Rating.

7. Property belonging to the Crown is exempt from local taxation without the express consent of the Crown and up to the year 1925 local rates were not levied on Government properties. In the Municipal Act of 1925, however, although Government property used solely for public purposes and not used or intended to be used for purposes of profit continues to be exempt from assessment to local rates, there was enacted a new section which provided that Government should pay annually, in lieu of rates on buildings from which buildings vesting in His Majesty are exempted, a sum equal to 8/10ths of the amount which, but for the exemption, would have been payable. The rateable value is to be fixed by a person appointed by Government. The consulting surveyor is the person appointed by Government to carry out this duty. There is a large amount of Government property which comes within this section, its total annual value amounting to over Rs. 22 lakhs. In the case of Bombay city the Act states that the rateable value shall be fixed by a person from time to time appointed in this behalf by the Governor in Council with the concurrence of the corporation. The person so appointed last time was a local engineer, but there seems no reason why the consulting surveyor should not take up this work also and save the payment of fees to private engineers.

VIII. Valuation.

8. When the consulting surveyor was appointed, his duties as a valuer were stated to involve "the valuation of sites and buildings standing on them in any part of the presidency including Sind". These instructions are very comprehensive and have been defined in greater detail from time to time in various orders of Government.

In orders dated 13th October 1914 commissioners and collectors were informed that Government desired that the services of the consulting surveyor should be more fully utilised with regard to land acquisition matters than they hitherto been and directed that the consulting surveyor should be consulted in all cases involving an expenditure of Rs. 10,000 and over. In December 1915 Government issued orders that the consulting surveyor should give assistance in all cases in which the solicitor to Government asked for it, regardless of whether the

department concerned was central or provincial. In orders dated 23rd May, 1924, Government prescribed that the officer who had himself made an award under the Land Acquisition Act should not take part in defending it, but the consulting surveyor should give expert evidence in support of the award in all cases in which his advice had been followed.

In Government orders dated 18th January 1921 the duties of the consulting surveyor under valuation were declared to be :—

(*a*) To examine, scrutinise and express his opinion, or give detailed valuations where necessary, in respect of all valuations of vacant sites or sites covered with buildings which are referred to him by the acquiring officer. In all such cases the acquiring officer must supply the consulting surveyor with all the evidence recorded by him, his opinion thereon, his own valuation and the reasons for it.

(*b*) When the claimants appeal from the award of an acquiring officer, the consulting surveyor if he has advised the acquiring officer should, whenever his advice has been followed, give expert evidence in support of the award and the acquiring officer should supply him with all the necessary papers and information and instruct him and the Government pleader and take an active part in defending the award.

(*c*) To render assistance as far as possible in respect of valuations to all the public bodies acquiring land, e.g., railway companies, and municipalities (except to the Bombay City Municipality and the Bombay Improvement Trust) whenever sought, as also to all the departments of Government.

(*d*) To advise Government or the heads of districts or departments as regards the estimated cost of acquisition of properties whenever required before such properties have been actually notified for acquisition.

(*e*) To act as Government assessor on judicial bodies when appointed by Government.

Statistics have not been kept of the volume of valuations for acquisition made by this department, but that it must amount to a very large sum will be evident from the fact that the consulting surveyor has given evidence in court

in over 500 cases, in which the claims of the claimants were over 2 crores of rupees and the valuations of the consulting surveyor Rs. 44 lakhs, while the awards of the courts amounted to Rs. 48 lakhs. Only a small proportion of appeals against land acquisition awards are referred to court and these have been growing fewer in recent years. This is to an appreciable extent due to the realisation by the public that awards of the land acquisition officers when defended by the consulting surveyor are usually upheld and so the expectation of Government that the employment of an expert valuer would save Government not only large sums in compensation, but also avoid long delays and heavy expenses in references to the courts, is realised. Very large sums of public money are involved in land acquisition and there are great possibilities of leakage if the valuations are not accurately made.

IX. Special land acquisition officers.

9. In 1920 the collector of Poona informed Government that the amount of acquisition work was a great deal more than the assistant collector could manage and that owing to the complicated nature of the work there would be ample occupation for a whole time acquisition officer. An assistant of the consulting surveyor was therefore put on special duty with a staff of one surveyor, one clerk and two peons. In addition to his work as special land acquisition officer he continued to be employed as an assistant in the department. In Ahmedabad and Karachi conditions are similar to those in Poona and for similar reasons assistants of the consulting surveyor were appointed special land acquisition officers in addition to their own departmental duties in those towns in 1921 and 1923 respectively. The appointment and staff of these three special land acquisition officers are continued by orders of Government issued biennially.

The value of lands acquired by these officers since their appointment amounts to nearly Rs. 51 lakhs. The whole of the cost of the establishment and pay (including the cost of the leave and pension) of these officers are recovered from acquiring bodies in proportion to the time spent on each case.

The statement hereunder gives the expenditure on establishment and the recoveries in each year since the appointments were made :—

Year.	Cost of establishment.				Recoveries.
	Poona.	Karachi.	Ahmedabad.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.
1921-22	4,450	..	..	4,450	2,250
1922-23	4,500	135	1,700	6,335	6,750
1923-24	4,400	2,185	2,495	9,080	4,900
1924-25	4,700	2,860	2,700	10,260	11,184
1925-26	4,375	3,185	3,800	11,360	15,948
1926-27	3,335	3,200	3,850	10,385	12,933
1927-28	2,640	2,145	2,875	7,660	16,746
1928-29	2,700	2,225	2,990	7,915	9,594
1929-30	2,755	1,740	3,150	7,645	13,292
1930-31	2,755	2,380	3,160	8,295	7,047
1931-32	2,755	2,030	3,210	7,995	12,060
1932-33	2,633	2,036	3,125	7,794	13,093
Total ..	41,998	24,121	33,055	99,174	1,25,797

X. Non-agricultural assessment.

10. In addition to valuations for land acquisition cases, the consulting surveyor's duties as defined when the appointment was first made included "cases involving valuations of unusual importance and difficulty". There has been a perennial flow of such cases to the consulting surveyor from Government and collectors. Since 1923 the consulting surveyor has been called on to make proposals for the fixing of rates and zones in certain towns for the purpose of non-agricultural assessment.

A joint report of the revenue commissioners dated 31st May, 1917, discusses and criticises the methods of assessment of non-agricultural lands previously adopted and recommends that building assessment should be levied uniformly over the whole plot devoted to the building and its compound and that the assessment should be based

directly on the value of land. In 1919 this Government reported to the Government of India that :—

> . . . As regards the principles of assessments, the Governor in Council is of opinion that when agricultural land is used for building, Government should entirely abandon the agricultural assessment and substitute in its place a building assessment based on the full market value of the land for building purposes. This has indeed long been recognised and the crude method originally adopted of fixing non-agricultural assessments at fixed multiples of the agricultural assessment has for some time been relegated to areas where there is little development, and few applications for permission to build are received. Having decided on the full market value of a building site, which in the case of ordinary unalienated land will be the market value of the land, *plus* an amount representing the capitalised assessment in force or expected to be in force at the time of the sale, the Governor in Council considers that the State is fully entitled to impose an assessment which when capitalised will amount to 50 per cent. of this value. The above principles will, of course, be applied to the taxation of private agricultural land appropriated to non-agricultural purposes. In the case of a new grant of unoccupied land which is the property of the State, the new occupant should, of course, pay an assessment representing one-half of the value and the remaining half will be recoverable from him in the shape of a premium or occupancy price. Further the Governor in Council considers that whereas the rate of interest has hitherto been assumed to be 4 per cent. in fixing the existing standard rates, this rate which was fixed many years ago is now too low. Henceforth the Governor in Council proposes to take 6 per cent. as the normal rate, and consequently the annual State demand will be calculated at 3 per cent. on the full market value.'

It is necessary in view of the above to revise all standard rates hitherto fixed for areas where development has been rapid. It is therefore now proposed to issue orders to schedule all such localities in every district where development has been brisk and data are available to make it possible to form reasonable estimates of rent-free values. Rates will then be fixed and guaranteed up to a fixed date, after which they will be liable to revision. Next, it is proposed to schedule such

second class localities where full data are not available and rates must obviously be fixed at a lower level and lastly there will remain all remaining lands, excluded from the two schedules referred to above, for which a still lower rate will be sanctioned, probably with a fixed minimum rate sufficient to repay the cost of collection. I am to explain that, while recommending a broad general classification into first, second and third class localities, it is not the intention of this Government to aim at any uniformity of assessment within such locality or group. Over rural tracts large areas may come under the same rates, but in cities and towns and their suburbs rates will vary within quite short distances.

In March 1920 Government decided that the State demand might equitably be fixed at 6 per cent. of half the full market value (later changed to 5 per cent.) and that steps should be taken to revise rates on this basis. In 1929 the rules under the Land Revenue Code were revised to conform with this principle.

Before the consulting surveyor was called in to assist in making non-agricultural assessments, they were all made by the collectors under the supervision of the settlement commissioner. Collectors still make the majority of assessments, but the consulting surveyor is called upon in the case of important urban areas. The first large town to be valued for the revision of rates by the consulting surveyor's department was Ahmedabad. In 1924 work was undertaken by the department at Dhulia and Jalgaon and in Kolaba district. Since then work has been undertaken in the following towns :—

Sind.	Northern division.	Central division.	Southern division.
Hyderabad (Sind)	Viramgam.	Poona city and surrounding villages.	Belgaum.
	Godhra.	Talegaon.	Nipani.
		Sholapur.	Bail Hongal.
		Nasik.	Hubli.
			Dharwar.
	Thana.		Gadag.

Proposals were submitted by the consulting surveyor to the collector who, after he has expressed his opinion forwarded them on through the commissioner and the settlement commissioner to Government.

The retrenchment officer in 1926 apprehended that the responsibility for these assessments might be shifted from collectors, who should be familiar with the problems of non-agricultural assessment, and proposed that the work done by the consulting surveyor should be transferred entirely to the settlement commissioner and that the services of the assistant consulting surveyor and such other of the consulting surveyor's staff as the settlement commissioner thought necessary to develop this branch of the work should be transferred to the settlement commissioner's office. The settlement commissioner, however, reported strongly against this proposal and stated that it would be wiser to utilise the agency of the consulting surveyor even more in this direction. The retrenchment officer's proposal was not accepted. Since then the post of settlement commissioner has been held in abeyance and his duties have been distributed over various offices.

XI. Bombay and Bombay Suburbs.

11. After the creation of the development directorate Government directed in 1920 that Bombay city and the Bombay suburban district should be excluded from the sphere of the consulting surveyor's duties, as the directorate had its own advisers. These orders were modified in 1922 when the collector of Bombay was authorised to consult the consulting surveyor in matters beyond the scope of the directorate. In the suburban district, however, the orders of 1920 still hold good and, though the development department has now ceased to exist, there is a separate agency which, amidst other duties, performs the functions assigned in the rest of the presidency to the consulting surveyor. This agency consists of a land manager assisted by the following staff :—

Land acquisition section

	Pay. Rs.	
2 surveyors	130—10—160	*plus* 20 conveyance allowance.
1 clerk	50—5/2—90—5—140	
1 clerk to the Government pleader, Thana.	50—5/2—90—5—140	
1 aval karkun for Ambernath.	130—5—160	*plus* Rs. 25 permanent travelling allowance.
1 circle inspector ..	85—5/2—100	*plus* Rs. 15 conveyance allowance.
1 peon for Ambernath ..	24	
1 peon	21	
1 watchman ..	5	

The land manager and his staff are temporary and their employment is continued year after year. In addition to doing arbitration work under the Town Planning Act and appearing as witness to defend awards under the Land Acquisition Act, the land manager deals also with sales of land in the suburban schemes. The question of making his post permanent is under the consideration of Government.

XII. Cost of the department.

12. Expenditure and receipts since the beginning of the department are given hereunder. Recoveries before 1920 were made in respect of schemes in Salsette by the Salsette development officer. These figures include the expenditure and recoveries on account of the special land acquisition officers at Poona, Karachi and Ahmedabad, and their staff.

Year.	Actual expenditure.	Recoveries on account of special land acquisition officers.	Recoveries from local bodies and private parties for town planning schemes, etc.	Total.
	Rs.	Rs.	Rs.	Rs.
1915-16	40,100			
1916-17	41,350			
1917-18	41,150			
1918-19	41,100	*Vide* remarks made above.		
1919-20	46,600			
1920-21	88,000			
1921-22	1,13,304	2,250	6,000	8,250
1922-23	1,19,000	6,750	8,708	15,458
1923-24	1,24,100	4,900	9,515	14,415
1924-25	1,28,600	11,184	4,060	15,244
1925-26	1,31,587	15,948	18,396	34,344
1926-27	1,45,000	12,933	4,824	17,757
1927-28	1,40,123	16,746	11,922	28,668
1928-29	1,52,000	9,594	12,637	22,231
1929-30	1,41,000	13,292	10,214	23,506
1930-31	1,27,000	7,047	5,658	12,705
1931-32	1,11,000	12,060	38,938	50,998
1932-33	1,06,114	13,093	25,013	38,106

The rise in expenditure in 1920–21 was due to the appointment of an assistant consulting surveyor and to the general revision of the pre-war scales of pay on a post-war basis. The further rise in 1921–22 was due principally to the creation of the following posts :—

one senior assistant (temporary),
two junior assistants,
one stenographer,
one head draftsman in head office,
one draftsman for Karachi branch office.

The temporary staff grant was also increased from Rs. 12,500 to Rs. 15,000 per annum. In 1930–31 a total cut of Rs. 17,500 was made in expenditure and the services of the following temporary establishment were dispensed with :—

one senior surveyor,
two junior surveyors,
three clerks,
one junior draftsman,
three tracers.

The present pay and appointments in the department are as follows :—

Gazetted appointments.

	Pay. Rs.
Consulting surveyor ..	1,500—50—2,250 *plus* £13-6-8 o.s.p.
Assistant consulting surveyor ..	750—50—1,250
Deputy assistant consulting surveyor	500—25—800
Two senior assistants ..	300—20—600

Non-gazetted appointments.

Two senior surveyors ..	220—15—400
Four junior surveyors ..	75—5—100—10—250
Head clerk	125—5—200
Stenographer and personal clerk	100—5—150
Second clerk	85—5/2—100
Three clerks	30—5/2—80
Head draftsman	200—10—300
Two draftsmen	105—5/2—160
Three junior draftsmen ..	60—5/2—100
Five tracers	30—5/2— 80
Fourteen peons including two naiks	..

Temporary establishment.

One senior surveyor ..	295 *plus* 15 conveyance allowance.
Two clerks	85
One clerk	75
One junior draftsman ..	75

Establishment under special land acquisition officers.

Two surveyors.
Three clerks.
One tracer.
One measurer.

XIII. Matters under consideration.

13. The following are the principal matters under the consideration of Government in this department :—

(*i*) Amendment of the Town Planning Act,

(*ii*) Appointment of the consulting surveyor as rating expert in Bombay city on the next occasion,

(*iii*) Future of the post of land manager in the Bombay Suburban district,

(*iv*) Possibility of utilising the services of the department in connection with the scheme for village uplift.

APPENDIX.

Schemes referred to the consulting surveyor for arbitration.

Year.		Area in acres.	Name of Scheme.
1917	..	5·68	1 Bandra No. 1.
		36·71	2 Santa Cruz No. 1.
		36·49	3 Vile Parle No. 1.
		10·39	4 Andheri No. 1.
		44·73	5 Malad No. 1.
		76·06	6 Borivli No. 1.
		210	
1918	..	21·82	1 Bandra No. 2.
		145·15	2 Santa Cruz No. 2.
		52·64	3 Andheri No. 2.
		320	
1920	..	227	1 Ahmedabad No. 1.
		1,364	2 Poona No. 1.
		73	3 Poona Suburban No. 1.
		67	4 Panchgani No. 1.
		758	5 Bagalkot No. 1.
		2,489	
1922	..	140	1 Amalner No. 1.
		731	2 Shikarpur No. 1.
		871	
1923	..	75	1 Panchgani No. 2.
		2	2 Tatta No. 1.
		77	
1924	..	738	1 Poona Suburban No. 2.
		18	2 Schemes in Nagar.
		146	3 Dharwar No. 1.
		902	
1925	..	540	1 Ahmedabad No. 4.
		749	2 Panchgani No. 3.
		1,289	

Year.		Area in acres.	Name of Scheme.
1927	..	431	1 Ahmedabad No. 2.
		1,075	2 Sholapur No. 1.
		1,506	
1928	..	11	1 Karachi No. 1.
1929	..	1,250	1 Karachi No. 2.
1930	..	900	1 Sholapur No. 2.
1931	..	24	1 Godhra No. 1.

XXIII—FOREST DEPARTMENT

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XXIII—FOREST DEPARTMENT

I. General.

GENERAL.

1. The subject "forests" which is transferred and is administered in the revenue department of the secretariat, is in the portfolio of the honourable minister for local self-government.

The functions of the forest department are :—

(*a*) The protection, conservation and development of forests.

(*b*) The exploitation and utilization of the forests so as to obtain the maximum yield consistent with their permanent maintenance and the supply of the people's needs in the matter of forest produce. This function includes the construction of roads for the opening up of inaccessible forest areas.

(*c*) The conduct of research into silviculture and other problems affecting the regeneration and development of forests.

On 1st April 1933 the forest area of this Presidency was 14,869 square miles. In consequence of the transfer of the administration of the Dangs to the control of the Government of India with effect from 1st July 1933, the forest area has been reduced to 14,209 square miles. Of this 2,304 square miles are in charge of the revenue department to which most of the areas classed as pasture have been transferred for management. Of the area in charge of the revenue department about 1,900 square miles consist of scrub forest and grass land. Of the remaining 400 square miles, 200 are the gurcharans in Thana district and 200 the bettas in Kanara. For the management of the gurcharans a forest officer has been placed under the immediate control of the collector of Thana. During the ten years 1921-22 to 1930-31 the average annual expenditure of the forest department was Rs. 45 lakhs and the average annual receipts were Rs. 72 lakhs, yielding an

average net revenue of Rs. 27 lakhs a year. Of the receipts about Rs. 50 lakhs were realised annually from the sale of timber, bamboos and sandalwood, about Rs. 10 lakhs a year from firewood and charcoal, and about Rs. 8 lakhs a year from grazing fees and sale of grass. A statement showing the receipts and expenditure from the year 1904-05 with remarks is appended : *vide* appendix A.

Relations with the people.

2. In the administration of forest rights and privileges and in the work of forest protection and exploitation, the officials of the forest department come into direct contact with the people. In the predominantly forest tracts of the Akrani and in parts of Kanara, where forest mahals have been constituted, the forest department is the sole guardian of the people's interests, while in Peint the divisional forest officer is the assistant collector but has no magisterial powers. In the more important forest districts a direct link between the people and the department has been established by the appointment of forest advisory committees consisting of non-officials and Government nominees, who discuss forest matters with a view to remedying grievances and securing harmonious working. In suitable localities the administration of grazing and village forests has been entrusted to village panchayats, while in certain places the village officers have been authorised to issue passes and permits and collect grazing fees. In the heavier forest areas officials of the forest department come into more direct touch with the villagers than the representatives of other departments. They have dealings with the aboriginal tribes, woodcutters and charcoal makers and are in constant business relationship with carting and timber contractors and dealers in forest produce.

Relations with the central Government.

3. The forest department has direct contact with the central Government in various ways. Topographical surveys of forest areas whenever they are required are carried out by the Survey of India and maps are supplied by the Forest Map Office, Dehra Dun, which is a part of the Survey of India. To this office the Bombay Government contribute Rs. 7,000 a year, a sum based on the extent of forests surveyed in this presidency in comparison with that surveyed in other provinces. Maps obtained from the office are also paid for. The Railway Board have a timber advisory officer to act as a liaison officer

between the railways and the forest department in the matter of sleeper and timber supplies, while in England the timber adviser to the High Commissioner assists the development of the export of Indian timbers to English, European and Colonial markets. The timber advisory officer is doing work of great value to this presidency in the securing of contracts. He is appointed on loan for a definite period and contact is maintained with him largely by demi-official correspondence initiated by the chief conservator. He is at present an officer of the Imperial Service lent by one of the provinces. Owing to the shortage of officers in this presidency it has not been possible to lend an officer for this appointment, though the importance to Bombay of being able to do so cannot be questioned.

"Central agencies and institutions for research and for professional or technical training or promotion of special studies" is a central subject: *vide* item 33 in part I of schedule I to the devolution rules. The Forest Research Institute and College at Dehra Dun is one of such central institutions. Close touch was formerly maintained with the institute by the deputation of an officer from this presidency to the staff of the institute. The strength of the cadre does not at present permit of an officer being so deputed, though Bombay officers are permitted to pay short visits to Dehra Dun, and the chief conservator attends all-India forest conferences there and serves on the periodical meetings of the Board of Forestry, which are held in Dehra Dun.

Advisory committees.

4. The subject "forests" is reserved in all provinces except Bombay and Burma. A forest advisory committee consisting of members of the legislative council has been constituted for the life time of each council in Madras. Their advice has been sought on most forestry questions affecting the agriculturists. In the United Provinces there is a forest advisory board consisting of four officials and five non-officials and a similar board exists in the Punjab to advise Government on forest policy affecting the public and large projects involving new expenditure. In the Central Provinces there is a standing committee for the department, to which all items of new expenditure are referred by Government.

In 1925 grievances against the forest department were discussed in the legislative council and Government on the recommendation of the council appointed a committee to

enquire into the grievances of the ryots with regard to forest matters and to make suggestions for their removal. This committee was unable to produce a unanimous report and therefore submitted two reports. In their final orders Government granted increased concessions and removed many restrictions on the exercise of forest rights and privileges. They also suspended as an experimental measure the system of communal punishment in three districts, substituting a system of rewards for forest protection. The results achieved so far proved disappointing. Government came to the conclusion that the system of communal punishment should be retained for use in exceptional cases. The system has accordingly been reintroduced in the three districts where it was suspended and brought into operation in cases where serious neglect by a village of its responsibilities is proved to the satisfaction of the divisional forest officer and the collector.

II. Co-ordination with other departments.

5. The main departments of Government with which the forest department comes in contact in the course of its work are the following :—

Revenue department.—The work of the revenue and forest departments is closely interconnected at a number of points. Afforestation and disafforestation are practically functions of the revenue department owing to the fact that the public rights in land proposed for afforestation have to be settled by that department. Working plans for the development of forests are prepared solely by the forest department. In so far only as their prescriptions affect local supply and the rights and privileges of the inhabitants of the tracts concerned the approval of the collectors and commissioners in charge is obtained before they are submitted to Government by the chief conservator for sanction. The forest department alone is responsible for the translation into practice of the prescriptions laid down in sanctioned working plans.

The commissioners of divisions and the commissioner in Sind are the heads of the forest administration in their respective charges and all forest officers from conservators downwards as well as revenue officers concerned in the management of forest are subject to the commissioner in all matters relating to forest administration except departmental finance, technical forest operations, appointments, leave and transfer of establishment and other matters with which the chief conservator is empowered to deal.

Commissioners issue orders to collectors, conservators and others, advise on any doubtful questions and settle all matters in which any difference of opinion arises between the forest and any other department. Although divisional forest officers are responsible for forest administration in all matters relating to technical forest operations, they are assistants to the collectors and subject to their orders in questions where forestry practice affects popular interests. Communications on all matters in which the forest department comes in contact with the people, such as forest settlements, rights and privileges, including grazing, afforestation and disafforestation, pass through the collector and the commissioner. The initial forest settlements and their revisions have in most cases been carried out by revenue officers.

In the more remote forest localities the work of the revenue department has been entrusted to the forest department by the creation of forest mahals, while, on the other hand, in some districts reserved and protected forests consisting of pasture areas are entirely under the control of and are managed by the revenue department.

Though the Thana gurcharans are under the revenue department the gurcharan officer is a forest officer now engaged principally in classifying and making working plans. When this valuable work is finished the question whether the appointment should continue or the gurcharans should be placed in charge of the divisional forest officers in whose territorial charge they lie will arise for consideration.

Public works department.—Most of the engineering works for the forest department are carried out by the department itself and technical assistance is now afforded by forest engineers and their technical staff. Buildings required by the department at headquarter towns are usually constructed through the agency of the public works department and the discretionary grant for minor works for the forest department under 41, Civil Works carried out by the public works department is controlled by the chief conservator of forests. The technical examination of plans and estimates for major forest works to be carried out by the forest department and requiring the sanction of Government has been recently entrusted to the public works department. In remote localities, such as the Akrani, the construction and maintenance of buildings for all departments are carried out by the forest department on behalf of the public works department. In Sind, where inland forests are dependent

on irrigation water, the forest department has direct dealings with the irrigation branch of the public works department. Hitherto the position in this regard has not been satisfactory as water has been given to inland forests only when available so that, when there has been a shortage of water, forest areas have been liable to suffer. The necessity for a permanently assured supply has however now been recognised and arrangements have been made for an assured supply to be given in five annually increasing instalments, the full supply being reached in the fifth year and continued thereafter.

Industries department.—There are frequent consultations between this department and the forest department in matters connected with industries depending on forest products such as match manufacture, distillation of rosha oil, sizing materials obtained from kaolin deposits, marketing of timber, etc.

Agricultural department.—The needs of agriculturists are met in accordance with sanctioned working plan prescriptions which themselves embody the recognition of all statutory and executive enactments of Government. But whenever agricultural problems in relation to forest matters need expert examination, e.g. the manurial value of green leaves and the improvement of grass lands, the assistance of the agricultural department is taken. Greater co-ordination has been secured by the nomination of officers of the agricultural department on district forest advisory committees.

The Royal Commission on Agriculture in India suggested that a distinction should be drawn between forest areas which are suitable for the growth of good timber trees or for fuel plantations and forest areas which are unsuitable for these purposes but may possess possibilities for development as fodder reserves and grazing grounds. Following this suggestion they indicated that Government should aim at establishing two divisions within the forest department. The officers in one division would be responsible for the charge of forests, the preservation of which is desirable on climatic or physical grounds, and of commercial forests managed with a view to direct profits from the sale of timber and other forest products. The other division of the forest department would be in charge of minor forests, fuel plantations and waste lands now chiefly used for grazing. Officers of the second division, in addition to the conservation of the areas, would be definitely charged with the responsibility of developing them, and with this object in view would be encouraged to make experiments in

silviculture and in the improvement of grazing areas. Such officers would undergo a course of instruction at an agricultural college and would work with the co-operation and advice of the agricultural department. It is considered that before such a scheme is accepted, a forest officer should be deputed to undertake research work and experiments in selected areas with the advice and help of the agricultural department, in order to determine whether such areas can be appreciably improved from a fodder producing point of view and whether such improvement can be carried out at a reasonable cost. If the formation of special minor forest charges should prove a practical proposition, an increase in personnel and expenditure will be necessary and for this reason Government have decided that they are unable to consider it for the present.

There is certainly a great deal of experimental work to be done in inferior forest areas requiring the guidance and advice of trained forest officers.

Excise and police departments.—In remote localities, such as the Surat Dangs, the Akrani and Peint, the functions of these departments are carried out by the forest department. The Indian Forest Act has given powers to police officers in the detection and prevention of forest offences and arrest of offenders, and the assistance of police officers is taken by the forest officers in these matters when necessary, especially when the offences are attended by violence.

III. Organisation.

PRESENT STAFF.

6. *General control*—		
		1 Chief conservator.
		1 Personal assistant to chief conservator.
Administration—		
Circles	..	4 Conservators in charge of circles* similar to but not the same as the revenue divisions.
Divisions	..	3 Deputy conservators for working plans in the presidency excluding Sind.
		29 Deputy or assistant conservators in charge of divisions or attached to them as assistants to the divisional forest officers.

* See appendices "B" and "C".

Ranges .. 163 Range forest officers. Of these six posts are vacant. Below and under the control of the range forest officers are round officers and guards in charge of forest beats.

Specialists .. 1 Forest engineer. } With head-
1 Assistant forest engineer. } quarters at Dharwar.
1 Exploitation officer, Nagzhari.
1 Gurcharan officer.

The scheme for the reorganisation of the forest department sanctioned by the Secretary of State in 1921 provided in addition for the posts of :—

(1) Conservator of working plans,
(2) Conservator, utilization circle,
(3) Forest research officer, and
(4) Forest economist.

Experience has shown that the posts of conservator, utilization circle, and forest economist are not urgently required and, since good progress has been made in recent years in forest research work and the control of working plans, it has also not been necessary to fill the remaining two posts.

Prior to 1st July 1933 the sanctioned cadre of the Forest Service consisted of 50 officers, 32 of whom were in class I and 18 in class II. In consequence of the abolition of the Kanara Western Division the cadre has been reduced to 49. There are, including three working plans divisions, 25 forest divisions, of which there are in some cases more than one in a revenue district and some of which themselves cover parts of more than one such district.

There are, excluding the posts of chief conservator, conservators (four in number), personal assistant to the chief conservator, exploitation officer, Nagzhari, assistant forest engineer and gurcharan officer, at present 36 officers either in charge of these divisions or attached to them as assistant divisional forest officers. It will be seen that, excluding the posts for the India list and the leave reserve of 7, there are 41 officers for duty. For the present a temporary post of divisional forest officer, working plans, Sind circle, has been created for a period of five years with effect from 16th December 1931, the post of divisional forest officer, working plans, northern circle, being held in abeyance during this period.

STAFF PROPOSED BY THE REORGANISATION COMMITTEE.

7. The Reorganization Committee recommended the constitution of a Provincial Board of Forestry, consisting of the chief conservator and two conservators who would jointly direct operations in the presidency proper and also deal direct with much of the work now disposed of in the Secretariat. This change, they suggested, would allow one appointment of conservator to be dispensed with. They proposed that when the new arrangement was in force Sind should no longer be subject to the control of the chief conservator or the Board but be administered by the conservator in Sind working direct under the commissioner in Sind. The chief conservator would then act in an advisory capacity only in regard to Sind forest matters. After careful consideration Government have come to the conclusion that the proposal of the Committee for the creation of a Board of Forestry will involve enhanced cost without corresponding administrative convenience. They have not accepted the proposal.

The Reorganization Committee recommended the reduction of the forest divisions from 27 to 25 by the abolition of the Kanara Western Division and the redistribution of the forests comprised in the Shikarpur, Larkana and Sukkur divisions so as to replace these three divisions by two. Government have carefully considered this recommendation and have sanctioned the abolition of the Kanara Western Division with effect from 1st July 1933. As regards the redistribution of the Shikarpur, Larkana and Sukkur divisions into two, Government are of opinion that the abolition of any one of them is neither feasible nor economical. Even if it were practical from the point of view of administration, the relaxation of supervision which must follow any combination of two extensive divisions would be likely to produce inefficiency and result in loss of revenue in the long run. In these circumstances Government have come to the conclusion that it will not be advisable to redistribute the three divisions into two.

The Committee proposed the abolition of class II appointments and the constitution of a new time-scale of pay with senior and junior scales. They suggested the conversion of the post of personal assistant to the chief conservator into a senior post and the retention of ten posts on the junior scale. The staff proposed by the Committee would thus be—

1 chief conservator,
3 conservators.

28 senior posts consisting of—
- 25 divisional forest officers,
- 1 personal assistant,
- 1 gurcharan officer, and
- 1 India List post.

10 junior posts.

The Committee held that a leave reserve should be unnecessary, especially if the restricted leave rules proposed by them are introduced. This question is still under the consideration of Government.

Duties of officers.

8. The *chief conservator* is the head of the forest department and the technical adviser of Government in forest matters. His duties include the supervision of working plans and new schemes for the development and working of forests and control of the working of sanctioned plans and schemes. He supervises and controls the system of fire conservancy and methods of silvicultural improvement with a view to securing continuity of policy throughout the presidency. He supervises the conduct of sales and arranges for the collection of economic products and the conduct of forest research. In his general duties are included the consolidation of the budget and appropriation proposals for the consideration of Government, the compilation of the annual administration report of the department and the control of establishment and finance. He also makes frequent tours of inspection in the forests.

This appointment was made in 1917. It is claimed on behalf of the forest department that the appointment has resulted in the introduction of more advanced methods of silviculture which will result in the present forest being replaced with forest containing a much larger proportion of teak. Co-ordination has resulted in much better financial and general control of the department and an improvement in the subordinate staff. The post also to some extent fills the gap caused by the absence of a research officer and of a conservator in charge of working plans.

The chief conservator has a personal assistant who besides relieving the chief conservator supplies the technical knowledge required in dealing with urgent matters while the chief conservator is on tour.

Conservators are in administrative charge of circles. They are responsible, within their respective areas, for the preparation of working plans, for the supervision of all forests works, for the control of establishment, of expenditure, of advances for works and of contracts, sales and supplies and for the general management of forests within their charge. Conservators are immediately subordinate to the chief conservator in all professional matters and in other matters are subject to the orders of the revenue commissioners, who have the option of consulting the chief conservator.

Divisional forest officers are responsible for the administration of each forest division and the execution of works in their charge. They arrange for the exploitation, regeneration and protection of forests according to sanctioned working plans and other orders. They conduct sales, enter into contracts, supply material to departments and the public, realise revenue and control expenditure. They deal finally with forest offence cases. There are five or six rangers in a division.

The ultimate responsibility for the administration of the forest department of his district lies with the collector and the divisional forest officer is his assistant for the purpose of that administration.

A working plan divisional forest officer's work consists of the survey of growing stock, enumeration of trees and analysis of stems to determine the rate of growth of the principal species with special reference to the soil and climatic conditions of each locality and, on the basis of data so collected, preparation of working plans for felling, regeneration, silvicultural treatment and protection of forests, while providing for the due exercise of the rights and privileges of the people including grazing of cattle. These officers are also required to scrutinize control forms kept in connection with working plans in the divisions of each circle and to conduct research in subjects specially allotted to them.

Sub-divisional forest officers assist the divisional forest officers in the work of inspection and supervision, in the marking of trees for felling and in other silvicultural works which require technical knowledge. They are often employed on special works such as collection of data for working plans, carrying out of important surveys, construction of the more important roads and buildings, etc. When entrusted with the management of particular parts of the division, they relieve the divisional forest officer in his touring and inspection duties

connected with those parts, control establishments and deal finally with forest offence cases.

There are nominally 11 such posts but all are not normally filled owing to leave vacancies. The posts of assistants to the divisional forest officers in Poona, Kolaba and West Khandesh are only filled when officers are available from the leave reserve.

Range forest officers are in executive charge of ranges. They are responsible for carrying out, with the help of their round officers and beat guards and according to the orders of the divisional forest officers, all works in their charge, viz. the marking, reservation, girdling and felling of trees ; the transport of timber and fuel, etc., to the sale depôts ; sowing, planting and other silvicultural works ; construction of roads, buildings and wells ; protection of forests and investigation of important offences ; supervision of removal of forest produce by purchasers and by right and privilege holders ; disbursement of pay of subordinates and expenditure on departmental works ; submission of accounts to the divisional office and issue of passes and permits. A range comprises three or four rounds.

Round officers' duties include protection of forests, investigation of offences, issue of transit and other passes, collection of grazing fees and compensation for offences, reservation of standards in coupes and inspection of forests. A round guard covers three beats.

Beat guards patrol forests and protect them against fire, grazing and other offences, detect offences, protect and repair boundary marks and carry out silvicultural works allotted to them such as sowing, planting, creeper cutting, etc. A beat consists of seven or eight square miles.

Forest engineers.—There are at present one forest engineer and one assistant forest engineer. They are employed on the designing and construction of all important engineering works such as forest railways, tramways, roads, etc., and on the exploitation of forests, particularly the less accessible ones. They are also required to make experiments and give their advice regarding the most suitable forms of mechanical transport and mechanical appliances for the extraction of timber and fuel and to assist in their introduction and successful working. The technical supervision of saw mills and the organisation of stores supply are included in their duties.

Recruitment.

9. In accordance with the recommendations of the Lee Commission, 1924, the forest department has been completely provincialised though the existing all-India officers have been retained and are still in a controlling position.

The service is divided into two branches :—

Class I, and
Class II.

Appointments to class I are made by nomination from amongst graduates who have gained an honour's degree in science or similar distinction of a recognised university, or by promotion of members of class II of approved merit and efficiency. A forest officer has to pass departmental and language examinations within three years of his appointment. He is then considered fit to hold a divisional charge. But it has been laid down that officers of the Indian Forest Service should not ordinarily be placed in charge of a division until they have completed four years' service, and the same would hold good of class I officers.

Appointments to class II are made by the promotion of rangers of approved merit and efficiency, who have completed a course of training at the Poona science college or the Dharwar forest college or obtained a ranger's higher standard certificate at the forest college at Dehra Dun or at Coimbatore.

Candidates for posts of ranger are selected by the chief conservator and sent by him to be trained in the ranger course at the Madras forest college, Coimbatore. The course lasts for two years. Government formerly bore the cost of training at Rs. 1,500 a year and the students' travelling expenses while under training. From the course for 1933–35 the student will pay Rs. 250 towards the cost of his training in addition to bearing all other expenses, Government contributing Rs. 1,250 a year towards the cost of the training only.

The Indian Statutory Commission, 1930, viewed with some apprehension the provincialisation of this department and were of opinion that the authorities in India should have an opportunity of considering it further in the light of a general scheme of constitutional reform about to be formulated. In the provincialised services it is no doubt desirable that the different provinces should aim at some degree of uniformity as regards the rules of recruitment and the rates of pay adopted. The

lonely and sometimes dangerous conditions under which forest officers work have to be borne in mind and it is not always easy to obtain recruits of the most suitable temperament who have a love of forests. Centralised recruitment would also lead to a regular demand for forest officers which would produce a regular supply.

IV. Forest produce and its disposal.

10. Forest produce may be classified broadly under two heads, viz. :—

(*a*) Major forest produce ; and

(*b*) Minor forest produce.

Major forest produce includes timber in logs, poles, sleepers, and sawn sizes ; firewood and charcoal, sandalwood and bamboos. The annual outturn in the case of timber, fuel and charcoal and sandalwood is prescribed under the regular forest working plans either by an area limit or by determining the number of trees to be extracted, or by a combination of these methods. In practice, however, the outturn is affected considerably by labour and transport conditions, as extraction is often difficult and expensive. The demand in any given locality is an important factor in the disposal of timber. In many cases it would not be a commercial proposition to fell valuable trees in an obscure and difficult area owing to the expense of extracting the timber from the forest and transporting it to a market. In the greater part of the presidency competition among buyers is keen and this feature justifies the sale by auction or tender of standing trees. Bamboos are also sold standing, but on permits issued at fixed rates which are readjusted periodically. In areas where there is no competition for standing timber the department brings the timber to fixed depôts and there sells it by auction. A considerable proportion of timber is also handled by the department's saw mills and in the southern circle it is sold in the form of teak sleepers of special sizes to the Madras and Southern Maratha Railway. Considerable sleeper supplies have also recently been made to the South Indian and the Mysore State Railways.

Sandalwood is prepared in accordance with elaborate trade specifications and is extracted by the department owing to the fact that there is serious smuggling and theft of this valuable product.

Minor forest produce includes the following :—

Myrabolams,
Lac,
Bark (tarwad and babul),
Leaves,
Grass and grazing,
Cinnamon,
Honey,
Rosha grass,
Fruits and pods (babul, shigekai, tamarind, nux vomica, karanj),
Mhowra seed.

Minor forest produce is mainly marketed by auctioning the right to collect it in the forest and dispose of it. Grazing is subject to the payment of fees fixed by Government, except in the case where it is conceded free of charge to privilege holders. Grass is sold on permit at fixed rates for cutting in forest areas under temporary closure to cattle grazing, and by auction in a number of other reserves which have been specially set aside for hay production.

A good and steady market exists within the presidency for teak and the local market for hardwoods is very fair. Further development within the presidency with the object of utilizing other species is not financially advantageous, since teak is plentiful, of good quality and better than any other timber for general purposes.

The possibilities of export markets in the Near East and the Persian Gulf have been brought to the notice of timber merchants with a view to the development of external trade in surplus hardwoods, but without visible results hitherto. Endeavours to secure orders from railways for hardwoods have had little success, owing to the fact that the cost of extraction from the Kanara forests together with the cost of transport to the railway centres in other parts of India do not permit of competition with imported timbers.

V. Matters and changes of importance carried out in the past five years.

11. Government have sanctioned the formation of forest advisory committees in districts where forests play an important part, namely, Thana, Panch Mahals, Nasik, East Khandesh, West Khandesh, Kolaba, Kanara and Dharwar. These committees are intended to afford the non-official

representatives an opportunity of bringing to notice the grievances or complaints of the public in regard to forest administration and also to afford the officials an opportunity both of consulting these representatives on questions affecting the policy of the Forest Department and of explaining to them the reasons for decisions already taken.

The Forest Grievances Enquiry Committee considered it a hardship that owners of land inside the demarcation line in the Poona and Satara districts should not be allowed the full use of their lands on account of there being a possibility of some of the lands being required for forest. The Committee recommended that Government should fix a time limit of, say, five years within which period lands required for forest may, if possible, be acquired for exchange ; after which the demarcation line should be abolished, royalty trees standing on malki lands cut as soon as convenient and their after-growth ceded to the occupants. As a result of this recommendation the lands were carefully inspected and classified from the point of view of their utility for forest purposes. Government have decided to retain within the demarcation only the land included in class I (viz., 21,367 acres) and to release the remaining area (viz., 2,57,232 acres) in favour of the cultivators. They have accordingly issued orders directing that the demarcation line should be redrawn so as to include the area (viz., 21,367 acres) at present included in class I and that the remaining area of 2,57,232 acres, i.e., 93 per cent. of the whole, should be released in favour of the occupants.

The chief developments in the forest administration in the past five years under the head of working plans and silviculture, are the systematic exploitation of sandalwood under special working plans whereby the revenue from this source has been nearly doubled, the progress made in methods of teak regeneration and the tending of young plantations, the attention given to the question of improving the quality of grass in forest areas by rotational grazing and other means, reduction in the periods of closure from 10 or more years to 5 years and attention paid to the introduction of species other than teak suitable to the soil in each locality.

In the sphere of utilization of forest produce the outstanding feature of the quinquennium has been the progress made in mechanical extraction of timber from the Nagzheri valley in the Kanara Northern Division and the extension of this method to two other localities in the same division. Under this

system areas formerly considered inexploitable have been yielding an average annual net revenue of over Rs. 1½ lakhs.

Among the forest industries to which special attention was paid is the match industry. Wide facilities have been given for the extraction of *simul* and mango to meet the needs of this industry and experiments have been carried out with a view to extending the growth of the above species. A pamphlet was issued to enlighten *hirda* farmers on the correct methods of collection, preparation and propagation of *hirda* with a view to improving its quality and increasing its quantity.

During the past five years every attempt has been made to effect economies in the working of the department. Items of retrenchment effected since the introduction of the Reforms in 1920 are shewn at the end of Appendix A. The most important retrenchments carried out during the past five years are as follows :—

	Approximate annual saving.
	Rs.
(1) Reduction in the strength of permanent establishment	23,350
(2) Reduction in the strength of temporary establishment	44,900
(3) Saving by the abolition of the Sub-divisional charge comprising Nasik and Dindori ranges	6,700
(4) Reduction in the rate of P. T. A. of gazetted officers	20,500
(5) Reduction in the rate of P. T. A. of non-gazetted officers	33,500
(6) Saving by the abolition of one division in Kanara	10,000

Government have now decided that important matters affecting both the Forests and other departments should be considered in the Commissioners' Conference. When questions affecting the Forest Department are considered in that Conference, the Chief Conservator sits as an additional member of the Conference.

Matters under consideration.

12. The principal matters under the consideration of Government at present in this department are :—

(*i*) The reduction of sub-divisional charges.

(*ii*) The reorganization of the cadre of the provincial forest service.

(*iii*) The scheme for the creation of 10,000 acres of forest plantation in Sind with a regulated and assured supply of water from the Sukkur Barrage canals.

MATTERS POSTPONED.

13. *Nil.*

QUESTIONS FOR THE FUTURE.

14. Management by the revenue department involves at present the absence of any technical control. The suggestion is sometimes made that pasture lands should be managed by the revenue department, the forest department supplying merely technical advice. The matter is one which awaits the formulation of a general policy.

APPENDIX A.

Statement showing the receipts and expenditure of the forest department from the year 1904-05.

Year.	Receipts.	Expenditure (under the heads S. Forest and S-A. Capital Outlay charged to Revenue).
	Rs.	Rs.
1904–05	30,21,000	19,04,000
1905–06	34,85,000	21,26,000
1906–07	34,22,000	19,91,000
1907–08	36,46,000	19,55,000
1908–09	35,87,000	20,44,000
1909–10	37,58,000	20,63,000
1910–11	37,18,000	20,70,000
1911–12	43,31,000	26,64,000
1912–13	49,93,000	26,92,000
1913–14	51,03,000	25,90,000
1914–15	46,80,000	24,88,000
1915–16	47,01,000	26,42,000
1916–17	55,19,000	25,65,000
1917–18	63,12,000	33,54,000
1918–19	1,04,94,000	78,72,000
1919–20	84,94,000	59,19,000
1920–21 ..	68,66,000	53,05,000
1921–22	74,94,000	51,33,000
1922–23	70,37,000	42,34,000
1923–24	71,50,000	47,24,000
1924–25	73,08,000	44,02,000
1925–26	75,28,000	43,34,000
1926–27	76,56,000	43,62,000
1927–28	72,94,000	43,01,000
1928–29	73,43,000	43,58,000
1929–30	79,75,000	45,50,000
1930–31	52,24,000	42,42,000
1931–32	56,74,000	40,65,000
1932–33	59,71,000	36,23,000
1933–34 (estimates) ..	58,00,000	38,36,000

Remarks.—In the year 1918–19, the receipts swelled in consequence of the supply of timber and other forest produce to the Munitions Board and the high prices prevailing in the market. The increased demand necessitated enhancement of the cost of exploitation. The main reasons for the fall of receipts in the year 1930–31 were acute depression in the timber trade, the Congress campaign of boycott and picketing, and the

natural unwillingness of the usual purchasers to take risks in so uncertain a political situation as had been brought about by the civil disobedience movement.

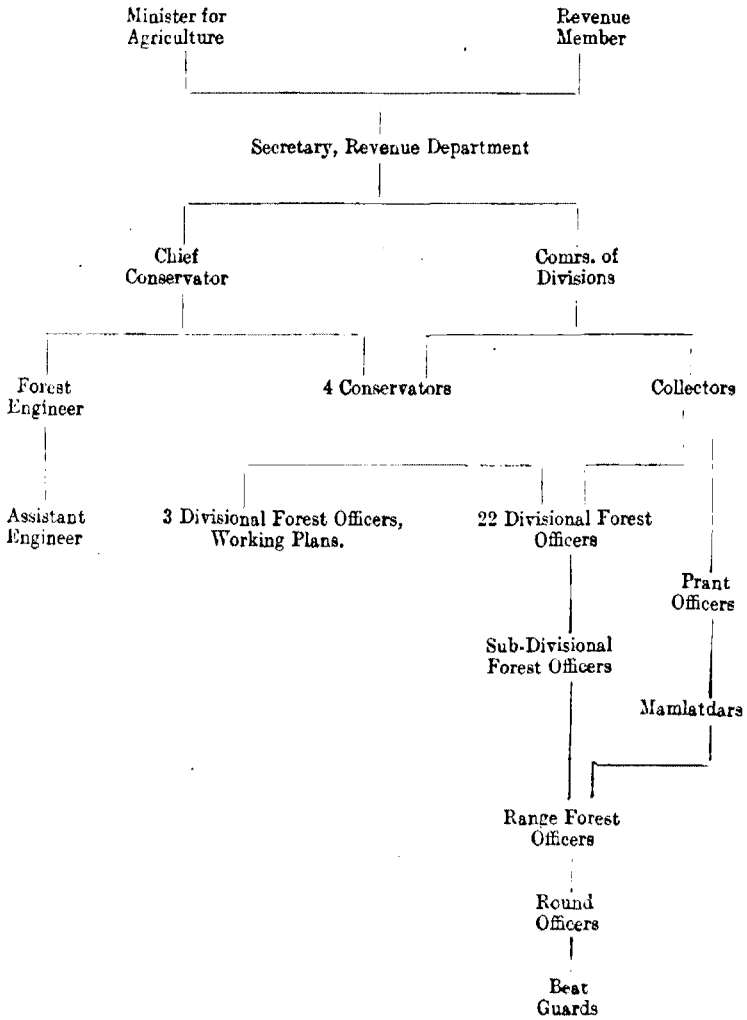
The decrease of expenditure from Rs. 53,05,000 in 1920-21 to Rs. 36,23,000 in 1932-33 is the result of the vigour and determination with which economy and retrenchment have been practised in the department and of greater initiative in the actual administration which has led to more judicious expenditure. The principal items of retrenchment effected or being effected since 1920-21 are as follows :—

Item of retrenchment.	Approximate annual saving.
	Rs.
(*a*) Reduction in the strength and pay of permanent and temporary subordinate establishments	5,24,000
(*b*) Saving by the abolition of the sub-divisional charge comprising Nasik and Dindori ranges	6,700
(*c*) Reduction in the rates of permanent travelling allowance of gazetted and non-gazetted officers	54,000
(*d*) Saving by the abolition of one division in Kanara	10,000

APPENDIX B.

Diagram of present organisation.

PRESENT ORGANISATION.



APPENDIX C.

Statement showing territorial charges in the Bombay forest department.

Names of Circles.	Names of divisions.	Total forest area.	Number of sub-divisions.	Number of ranges.	Number of rounds.	Number of beats.
1	2	3	4	5	6	7
		Square miles.				
Northern Circle.	1. Panch Mahals ..	322	..	5	28	85
	2. West Nasik ..	414	..	5	24	58
	3. East Nasik ..	758	..	4	25	85
	4. North Thana ..	347	1	7	48	85
	5. West Thana ..	350	..	7	48	108
	6. East Thana ..	415	..	7	51	94
	7. Working Plans, N. C.	..	..	..	..	..
		2,606	1	35	224	515
Central Circle	1. Poona ..	577	1	8	32	121
	2. Satara ..	515	..	5	20	65
	3. Kolaba ..	485	1	8	51	122
	4. North Khandesh ..	884	..	4	19	51
	5. West Khandesh ..	688	2	7	29	97
	6. East Khandesh ..	761	..	8	32	56
	7. Working Plans, C. C.	..	..	..	..	..
		3,910	4	40	183	512
Southern Circle.	1. Kanara, N. D. ..	909	2	7	18	52
	2. Kanara, E. D. ..	1,083	1	5	15	49
	3. Kanara, W. D. ..	1,048	1	7	24	65
	4. Belgaum ..	698	..	4	21	96
	5. Dharwar-Bijapur.	492	1	6	22	86
	6. Working Plans, S. C.	..	..	..	..	..
		4,230	5	29	100	348
Sind Circle ..	1. Karachi ..	221	..	4	14	54
	2. Sukkur ..	277	..	4	9	50
	3. Hyderabad ..	231	1	4	9	50
	4. Larkana ..	175	..	3	9	42
	5. Shikarpur ..	255	..	3	10	40
		1,159	1	18	51	236
4	25 ..	11,905	11	122	558	1,611
Special charges.	Forest Engineering Division. Gurcharan Officer, Thana.	..	1	..	..	..

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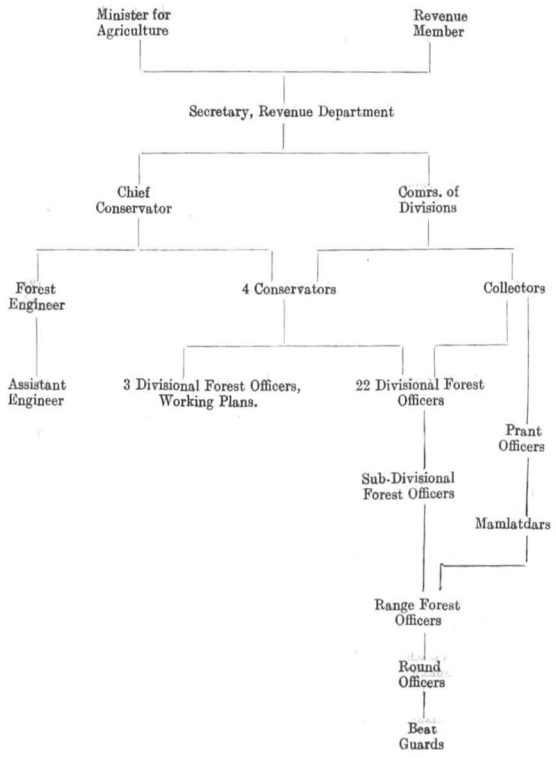

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Special charges.	Forest Engineering Division.	..	1	..	..	..
	Gurcharan Officer, Thana.					

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