

EAST INDIA (PROGRESS AND CONDITION).

STATEMENT

EXHIBITING THE

MORAL AND MATERIAL PROGRESS AND CONDITION

OF

I N D I A

DURING THE YEAR 1908-9.

FORTY-FIFTH NUMBER.

(Presented pursuant to Act 21 & 22 Vict. c. 106, s. 53.)

India Office,
19 May 1910. }

RICHMOND RITCHIE,
Under Secretary of State for India.

Ordered, by The House of Commons, to be Printed,
9 June 1910.

LONDON:
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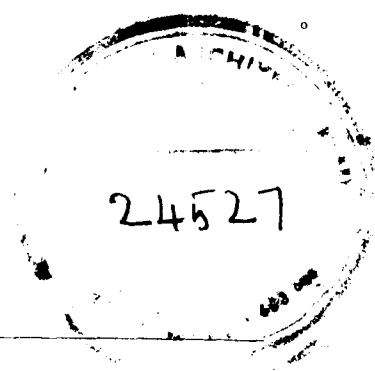
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PREFACE.

THE Statement exhibiting the Moral and Material Progress and Condition of India is presented to Parliament in each year in accordance with the requirements of the 53rd section of the Act for the better Government of India (21 and 22 Vict., cap. 106), which provides as follows:—"The Secretary of State in Council shall, within the first fourteen days during which Parliament may be sitting next after the first day of May in every year, lay before both Houses of Parliament an account for the Financial Year preceding that last completed of the Annual Produce of the Revenues of India . . . and such account shall be accompanied by a Statement prepared from detailed reports from each Presidency and District in India, in such form as shall best exhibit the Moral and Material Progress and Condition of India in each such Presidency."

The Statement is prepared in the India Office from a large number of annual reports received from India. Many of these reports are compiled from information furnished by District and Political Officers, and are submitted to the Governments of the respective Provinces and to the Government of India for consideration and review before transmission to England; and some of them, which deal with the operations of important departments and require the careful consideration of the authorities in India, are not received at the India Office till about a year after the date of the period to which they refer. It is, therefore, seldom possible to present the Statement to Parliament earlier than the date mentioned in the Statute, *i.e.*, about thirteen and a half months after the close of the official year.



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CHAPTER I.

ADMINISTRATION AND LEGISLATION.

ADMINISTRATION.

ADMINIS-
TRATION.

INDIAN CURRENCY AND WEIGHTS AND MEASURES.

Currency.—The silver rupee (containing 165 grains of fine silver and 15 grains of alloy and weighing in all 180 grains troy or 1 tola) was the sole standard of value until the 26th June 1893, when the Indian mints were closed to the unrestricted coinage of silver into rupees and it was notified that gold coin and bullion would be received at the mints in exchange for Government rupees at the rate of 7·53344 grains of fine gold for one rupee, being equivalent to a rate of exchange of 15 rupees per £1. In 1899 British gold coins were made legal tender side by side with rupees at that rate.

The Indian denominations with their British equivalents are :—

Pie	=	$\frac{1}{12}$ penny.
Pice (3 pies)	=	1 farthing.
Anna (12 pies)	=	1 penny.
Rupee (16 annas)	=	1s. 4d.

A lakh (lac) is 100,000 rupees and a crore is 100 lakhs.

Weights and Measures.—The weights adopted in Government transactions and by the railway companies are as follows :—

1 tola	=	180 grains	=	11·66 grams.
1 chittak (5 tolas)	=	900 "	=	58·32 "
1 ser (16 chittaks)	=	$2\frac{1}{2}$ troy lb. (or $2\frac{2}{3}$ lb. avoird.)	=	933·10 "
1 maund (40 sers)	=	100 " " (or $82\frac{2}{7}$ " "	=	37·32 kgms.

The following were the holders of the most important appointments connected with the administration of India at the end of the year under review :—

Secretary of State.—The Right Hon. Viscount Morley of Blackburn, O.M.

Permanent Under Secretary of State.—Sir A. Godley, G.C.B.

Parliamentary Under Secretary of State.—The Right Hon. T. R. Buchanan, M.P.

Members of the Council of India.—Sir J. L. Mackay, G.C.M.G., K.C.S.I., K.C.I.E.; Sir W. Lee-Warner, K.C.S.I.; Lieut.-Col. Sir D. W. K. Barr, K.C.S.I.; Sir H. S. Barnes, K.C.S.I., K.C.V.O.; Sir F. O. Schuster, Bart.; Sir T. Morison, K.C.I.E.; General Sir C. C. Egerton, G.C.B., D.S.O.; Sir J. D. La Touche, K.C.S.I.; Saiyid Husain Bilgrami, C.S.I.; Krishna Gobinda Gupta, C.S.I.; Sir J. Thomson, K.C.S.I.; Sir S. W. Edgerley, K.C.V.O., C.I.E.; Sir T. Raleigh, K.C.S.I.

Governor-General.—The Right Hon. the Earl of Minto, P.C., G.M.S.I., G.C.M.G., G.M.I.E.

Members of Council.—General Viscount Kitchener of Khartoum, G.C.B., O.M., G.C.M.G. (extraordinary), Commander-in-Chief; Sir H. Erle Richards, K.C., K.C.S.I.; Sir H. Adamson, C.S.I.; J. O. Miller, C.S.I.; W. L. Harvey, C.I.E.; Sir G. Fleetwood Wilson, K.C.B.

Lieutenant-Governors.—Bengal, Sir E. N. Baker, K.C.S.I.; Eastern Bengal and Assam, Sir L. Hare, K.C.S.I., C.I.E.; United Provinces of Agra and Oudh, Sir J. P. Hewett, K.C.S.I., C.I.E.; Punjab, Sir L. Dane, K.C.S.I.; Burma, Sir H. T. White, K.C.I.E.

Chief Commissioners.—Central Provinces, R. H. Craddock, C.S.I.; North-West Frontier Province, Lieut.-Col. Sir G. O. Roos-Keppel, K.C.I.E.

Governor of Madras.—Hon. Sir A. Lawley, G.C.I.E., K.C.M.G.

Members of Council.—Sir G. S. Forbes, K.C.S.I.; M. Hammick, C.S.I., C.I.E.

Governor of Bombay.—Sir G. S. Clarke, G.C.M.G., G.C.I.E.

Members of Council.—Sir J. W. P. Muir-Mackenzie, K.C.S.I.; J. L. Jenkins, C.S.I.

The year under review was a memorable one, in that the important proposals for constitutional reform which had been under discussion since 1906 bore fruit in the Indian Councils Act, 1909. A summary of the main provisions of this Act, which aims at giving to Indians a larger political representation and wider opportunities of expressing their views on administrative matters, will be found below under the head of Legislation.

The Report of the Royal Commission on Decentralization, referred to in last year's Statement, was still under the consideration of the Government of India at the end of 1908-9.

An important step was taken during the year for the amelioration of the position of Indian students in England by the establishment of a Bureau of Information and an Advisory Committee. The head of the Bureau, styled the Educational Adviser to Indian Students, is also Secretary to the Advisory Committee, which is composed of well-known Indian and Anglo-Indian gentlemen; and the Educational Adviser and the Committee work in close relation with one another. The functions of the former are to answer inquiries regarding educational facilities, to keep a list of lodgings and boarding-houses suitable for Indian students, and of private families willing to receive them, to furnish students with references, to bring special cases to the notice of the Advisory Committee, and generally to give all possible assistance to students in this country and to their parents in India. Local committees have been appointed in the various provinces in India to be in direct communication with the Educational Adviser, so as to enable him to obtain trustworthy information regarding the needs of students who have come or are about to come to this country.

ADMINIS-
TRATION.

The Advisory Committee is designed to stand, so far as possible, *in loco parentis* to students whose parents are unable themselves to supervise their education, and in particular to assist students in social matters. It will be available for consultation by students or their parents, by the Educational Adviser and by the Secretary of State, and will bring to the latter's notice any matter in which it considers that action is desirable on behalf of the students.

The Secretary of State, while not desiring to exercise any official control, is also subsidising a scheme for the establishment of a club, in which existing societies are uniting their activities for the promotion of social intercourse among Indian students and their friends and well-wishers in England.

Military
Supply
Department.

An important administrative change was effected by the abolition of the Military Supply Department of the Government of India; *vide* Chapter XVII.

Medical
profession.

With a view to promoting the growth of an independent medical profession in India, it was decided to restrict the increase of the civil side of the Indian Medical Service and to make a strong effort in the direction of gradually extending the employment of civil medical practitioners recruited in India.

LEGISLA-
TION.

LEGISLATION.

I.—In England.

The Indian Councils Act, 1909 (9 Edward 7. c. 4).—The effect of this measure, which was the subject of much discussion in India previous to its introduction and during its passage through Parliament, may be briefly summarised as follows:—(1) The principle of election of members of Legislative Councils, in partial substitution for nomination, received legal sanction; previously, all members had been nominated by the Head of the Government, although a certain number of nominations had been made on the "recommendation" of bodies defined by the rules made under the Act of 1892; (2) the number of members of the various Legislative Councils was greatly enlarged; (3) the number of members of the Executive Councils of Madras and Bombay, heretofore two, was increased to such number, not exceeding four, as the Secretary of State in Council may from time to time direct; (4) power was taken for the Governor-General in Council, with the approval of the Secretary of State in Council, to create an Executive Council, consisting of not more than four members, to assist the Lieutenant-Governor of Bengal in the Government of the province; (5) power was taken to create a similar Executive Council in any other province under a Lieutenant-Governor, provided that in the case of such a Council a draft of the proposed proclamation creating it must be laid before Parliament for not less than sixty days during the Session, and if, before the expiration of that time, an address is presented to His Majesty by either House against the draft, no further proceedings thereon can be taken; (6) authority was given to frame rules for the discussion, at any meeting of the Legislative Councils, of the Annual Financial Statement of the Empire or Province, and of any matter of general public interest; and power was taken to permit resolutions to be proposed, and the Council to be divided in respect of any such discussion; (7) power was given to the Governor-General in Council to frame, subject to the approval of the Secretary of State in Council, regulations for carrying the Act into effect; and the Act prescribed that all proclamations, regulations and rules made under it should lie before Parliament after being made. The rules and regulations were under consideration at the close of the year under review.

II.—In India.

Between the 1st April 1908 and the 31st March 1909 the following enactments received the assent of the Governor-General of India:—Eighteen Acts passed by the Council of the Governor-General for making laws and regulations, five by the Legislative Council of Madras, four by that of Bombay, eight by that of Bengal, one by that of Eastern Bengal and Assam, one by that of the United Provinces of Agra and Oudh, six by that of Burma. Four regulations were passed by the Governor-General in Council on the recommendation of the local governments of the provinces affected by them, in accordance with the provisions of 33 Vict. c. 33.

LEGISLA
TION.

The following are the measures referred to:—

Acts of the Governor-General's Council.

The Explosive Substances Act (No. VI. of 1908) is framed on the lines of the English *Explosive Substances Act, 1883*, which was enacted for the express purpose of dealing with anarchist crimes. It provides for the punishment of any person who causes an explosion likely to endanger life or property, or who attempts to cause such an explosion, or makes or has in his possession any explosive substance with intent to endanger life or property. It further makes the manufacture or possession of explosive substances for any other than a lawful object a substantive offence, and throws on the person who makes or is in possession of any explosive substance the onus of proving that the making or possession was lawful. It also provides adequately for the punishment both of principals and accessories.

The Newspapers (Incitements to Offences) Act (No. VII. of 1908) was passed to make better provision for the prevention of incitements to criminal outrages in newspapers. The scope of the Act is confined to incitements to murder, to offences under the Explosive Substances Act, 1908, and to acts of violence. It gives power in such cases to confiscate the printing press used in the production of the newspaper, and to stop the lawful issue of the newspaper. The procedure adopted in the Act follows the general lines of that provided in the Code of Criminal Procedure for dealing with public nuisances, with the important addition that the final order of the magistrate directing the forfeiture of the press is appealable to the High Court within fifteen days. It is further provided that no action can be taken against a press save on the application of a local Government. When an order of forfeiture has been made by the magistrate, but only in that case, the local Government is empowered to annul the declaration made by the printer and publisher of the newspaper under the Press and Registration of Books Act, 1867, and thereafter neither that newspaper nor any other which is the same in substance can be published without a breach of the law.

The Local Authorities Loan (Amendment) Act (No. VIII. of 1908) enables certain local authorities to whom the Local Authorities Act, 1904, applies, to give promissory notes as security for short loans.

The Indian Limitation Act (No. IX. of 1908) was designed mainly to alleviate the hardship which has been caused to the holders of mortgages of immovable property, in forms other than what is known as the English form, over a large part of India, by reason of a recent decision of the Judicial Committee of the Privy Council, which, overruling the decisions of the High Courts of Bombay, Madras, and Allahabad, advised that the period of limitation prescribed by the Indian Limitation Act, 1877, for suits to enforce payment of money secured by such mortgages, is twelve years as provided in Article 132 of the Second Schedule of that Act, and not the longer period of sixty years prescribed by Article 147. The effect of the decision of the Privy Council has been that in the territories within the jurisdiction of the above High Courts a number of suits for the enforcement of mortgages, which, before the decision of the Privy Council, would have been within time, have been and must be dismissed by the courts on the ground that they are barred by limitation, and that the claims under a still larger number of mortgages have become unenforceable owing to the construction thus put on the Statute of Limitation. The Act allows holders of such mortgages a period of two years within which to bring their suits, provided that the whole period from the date when the money secured by the mortgage became due does not exceed sixty years in all.

The Indian Salt Duties Act (No. X. of 1908) allows any local Government to adopt within its territories the credit system for the payment of duty on salt which already prevails in Madras and Bombay. By this system salt is issued to merchants without requiring them to make immediate payment of the duty; the precedent being that they execute a bond and deposit securities and that their accounts are made up and settled periodically.

The Assam Labour and Emigration (Amendment) Act (No. XI. of 1908). In view of the proposed withdrawal from the districts of the Surma Valley and from the districts of Kamrup and Goalpara of the chief provisions of the Assam Labour and Emigration Act, 1901 (VI. of 1901), relating to labour districts, the procedure prescribed by the Act for the recruitment of labourers is amended so as to dispense with contracts in the case of emigrants proceeding to these districts. Provision is at the same time made for giving a trial to the system of free recruitment by garden-sardars.

The Indian Emigration (Amendment) Act (No. XII. of 1908) defines the term "India" so as to exclude from its meaning all foreign settlements in that country, and thus exempts native subjects of foreign Powers from the provisions of the Indian Emigration Act, 1883.

The Central Provinces Financial Commissioner's Act (No. XIII. of 1908) provides for the creation of the appointment of Financial Commissioner for the Central Province and for the assignment of powers to that appointment.

The Indian Criminal Law Amendment (Act No. XIV. of 1908) was designed to provide for the more speedy trial of anarchical offences, and for the suppression of associations dangerous to the public peace. Part I. provides for the trial of certain offences by a bench of three judges of the High Court. In the procedure there is no formal commitment, but the case is prepared for trial by an *ex-parte* inquiry before a magistrate, and the trial is without jury. Two special provisions are made applicable to cases to which the Act will apply. The first is that bail shall be refused so long as there is reasonable ground for further inquiry into the guilt of the accused. The second is that the evidence of witnesses who have been examined by the magistrate may be admitted at the trial if the witness is dead or cannot be produced and the High Court has reason to believe that his death or absence was caused in the interests of the accused.

Part II. provides for the suppression of unlawful associations. Such persons as are members of or in any way assist an association which encourages or aids the commitment of acts of violence or intimidation, or of which the members habitually commit such acts, are made liable to punishment, and a severer punishment is provided for persons managing or promoting such associations. Further, the Governor-General in Council is empowered to declare certain associations to be unlawful, and the same penalties are provided for persons who after this declaration maintain their connection with them.

The Act extends in the first instance to the provinces of Bengal and Eastern Bengal and Assam, and the Governor-General in Council is empowered to extend it to other provinces.

The Indian Ports Act (No. XV. of 1908) is a consolidating Act, to incorporate in one Act the provisions of the Indian Port Act, 1889, and the five subsequent Acts by which it was amended.

The Indian Registration Act (No. XVI. of 1908) is also a consolidating measure, incorporating in one Act the provisions of seven Acts relating to the registration of documents.

The Indian Emigration Act (No. XVII. of 1908) similarly consolidates the existing law relating to emigration from India, thus taking the place of the Indian Emigration Act, 1883, and the various amending Acts which followed it.

The Indian Merchant Shipping (Amendment) Act (No. XVIII. of 1908) makes certain amendments in the Indian Merchant Shipping Act, 1880, the chief of which widens the application of the provisions of that Act to foreign vessels.

The Indian Steamship Law Amendment Act (No. I. of 1909). The object of this Act is to make provision for the survey of vessels propelled by agencies other than steam, and for the grant of certificates to engineers, to put British and foreign ships on a footing of equality in the matter of the carriage of passengers and the holding of certificates of survey under the Indian Steamships Act, 1884, to bring vessels partially surveyed in British ports into substantially the same position as those similarly surveyed in foreign ports, and to facilitate the exercise of the powers conferred by that Act in respect of the grant of certificates of survey to ships surveyed in foreign ports.

The Indian Paper Currency (Amendment) Act (No. II. of 1909) makes the universal five-rupee note legal tender throughout all British India, including Burma.

The Presidency-towns Insolvency Act (No. III. of 1909) supplies the long-needed revision of legislation on the subject of insolvency in the Presidency towns and Rangoon. The Act follows the main principles of the English law, but introduces simplifications required to meet the special conditions of India. It continues the existing protection for debtors, but, at the same time, sets up a machinery by which the whole of the assets of an insolvent should be secured for the benefit of the creditors.

The Whipping Act (No. IV. of 1909) restricts the classes of offences for which the punishment of whipping may be inflicted, and limits the number of officers who may be empowered to award it.

The Amending (Army) Act (No. V. of 1909). The principal object of this Act is to effect certain amendments in the Military Lunatics Act, 1877, the Cantonments (House Accommodation) Act, 1902, and the Indian Works of Defence Act, 1903, which are necessitated by the abolition of commands and the reorganisation of the Army in India.

ACTS OF THE PROVINCIAL LEGISLATIVE COUNCILS.

The Madras Estates Land Act (No. 1 of 1908) amends the Act of 1865 in respect to the procedure to be taken by landholders for the recovery of rent from their tenants, and definitely declares the substantive and relative rights of landholders, and their tenants or ryots; and the *Madras Estates Land Act Amendment Act (No. 4 of 1909)* clears up certain doubts that had arisen regarding the Act of 1908, and removes drafting inconsistencies.

The Madras Revenue Recovery (Amendment) Act (No. 1 of 1909), and the *Madras District Police and Towns Nuisances Acts (Amendment) Act (No. 3 of 1909)*, makes certain minor amendments in previous law; and Madras Act 2 of 1909 repeals the *Labour and Emigration Act* of 1866, which had fallen into desuetude.

The Government Occupants (Sind) Amendment Act (No. 1 of 1908) improves the Bombay system of registration of occupancies of land.

The City of Bombay Improvement (Amendment) Act (No. 2 of 1908) makes certain amendments of the provisions of the Act of 1898 regarding the acquisition of land for the Board.

The Criminal Tribes (Validation) Act (No. 1 of 1909) validates the action of the Commissioner in Sind in ordering the removal under section 14 of the Criminal Tribes Act, 1871, of certain members of the criminal tribe, known as Hurs, from the settlements to which they were originally removed under section 14 of the Act to other settlements in adjoining talukas.

The Karachi Port Trust (Amendment) Act (No. 2 of 1909) places the Karachi Port Trust on the same footing as other large Port Trusts in India in regard to the raising of loans.

The Calcutta Port (Amendment) Act (No. 1 of 1908) authorises the Vice-Chairman of the Commissioners for the Port of Calcutta to have his signature reproduced by mechanical process for the purpose of signing debenture coupons.

The Repealing Act (No. 2 of 1908) repeals the Central Provinces Laws Act, 1879, and thereby brings the Sambalpur district into line with the other districts of Bengal in regard to the recording *in extenso* of evidence in the Civil Courts.

The Puri Lodging-house (Amendment) Act (No. 3 of 1908) provides greater safeguards against the overcrowding of lodging-houses at Puri.

The Bengal Repealing Act (No. 4 of 1908) was necessitated by the orders of the Government of India relieving the Howrah Municipality of all liabilities on account of police charges.

The Bengal Local Self-government (Amendment) Act (No. 5 of 1908) makes various amendments in the Act of 1885 for the purpose of delegating certain powers to Commissioners, of legalising certain expenditure from District Funds, &c.

The Chota Nagpur Tenancy Act (No. 6 of 1908) consolidates, simplifies, and re-arranges the greater part of the statute law relating to landlord and tenant in Chota Nagpur.

The Indian Lunatic Asylums (Amendment) Act (No. 1 of 1909) extends the application of section 17 (b) of the Act of 1858 to asylums situated anywhere outside Calcutta in the province of Bengal.

The Bengal Court of Wards (Amendment) Act (No. 2 of 1909) makes a small amendment in the Act of 1879.

The Chota Nagpur Encumbered Estates Amendment Act (No. 3 of 1909). The object of this Act is so to amend the Chota Nagpur Encumbered Estates Act (VI. of 1876), as to impose further checks on the reckless expenditure prevalent among the landholders in the Chota Nagpur Division; to give increased facilities to managers appointed under the Act for the proper management of encumbered estates; and secure estates which, by the operation of the Act, have been restored to solvency from further mismanagement by the proprietors.

LEGISLA
TION.
Eastern
Bengal and
Assam.

The Eastern Bengal and Assam Tenancy (Amendment) Act (No. 1 of 1908). The chief objects of this Act are (1) to give landlords greater facilities for the collection of their rents, and at the same time to discourage their evading the provisions of the Bengal Tenancy Act, 1885, with regard to the enhancement of rent by entering into unfair, inequitable, and collusive compromises with their tenants; (2) to give power to Government to distinguish between good and bad landlords, and to take steps in the case of the latter for the reduction of rents, when they appear to have been so unduly enhanced as to be oppressive to the cultivators of the soil.

United
Provinces.

The United Provinces Waterworks (Amendment) Act (No. 1 of 1908) amends the Act of 1891 in various respects in which it has been found defective.

Burma.

The Rangoon Victoria Memorial Act (No. 1 of 1908) makes legal provision for the vesting, maintenance, and management of the Victoria Memorial Park and Zoological Gardens at Rangoon.

The Burma Municipal Act Amendment Act (No. 2 of 1908) makes various minor amendments in the Act of 1898.

The Burma Towns Act Amendment Act (No. 3 of 1908) provides for the regulation by licences of billiard saloons and similar places of public resort.

The Rangoon Port (Amendment) Act (No. 4 of 1908) places the Commissioners of the Port of Rangoon on a similar footing to the Commissioners of the Ports of Calcutta and Bombay as regards the issue of debentures.

The British Burma Pilots Act Amendment Act (No. 5 of 1908) makes various amendments in the Act of 1883.

The Burma Prohibition of Inoculation and Licensing of Vaccinators Act (No. 6 of 1908) extends the powers given to Government by the provisions of the Vaccination Act, 1880.

REGULATIONS.

Regulations

The Coorg Land and Revenue (Amendment) Regulation (No. 1 of 1908) makes a small amendment in the Regulation of 1899.

The Perim Pearl Fishery Regulation (No. 2 of 1908) provides for the proper management and protection of the pearl fisheries in the territorial waters of Perim and the safeguarding of the Government rights to them from outside fishermen.

The Sonthal Parganas Settlement (Amendment) Regulation (No. 3 of 1908). The most important section of this measure prohibits the transfer of holdings, and thereby gives legal effect to the policy which has for some time been executively enforced.

The Andaman and Nicobar Islands Regulation (No. 4 of 1908) provides for the extension of the new Code of Civil Procedure to the Andaman and Nicobar Islands.

CHAPTER II.*

JUSTICE AND POLICE.

CIVIL JUSTICE.

CRIME AND POLICE.

CRIMINAL JUSTICE.

JAILS.

(For further details see *Statistical Abstract for British India, Tables 24 to 42.*)

CIVIL JUSTICE.

CIVIL
JUSTICE.

In Bengal both the number of civil suits instituted and the number disposed of decreased, so that there was an increase in the number of cases pending at the end of the year. The most marked feature of the year was a further decline in the number of original suits instituted in the Subordinate Civil Courts. There was an improvement in the average duration of contested cases.

The rise of 4,000 cases in the pending file in Eastern Bengal and Assam was due to the very large increase in the number of suits instituted during the year; for the number of disposals showed a marked increase. Duration results were unfavourable, exhibiting an increase in nearly all classes of courts.

For legislative purposes the North-Western Provinces and Oudh are united, but inasmuch as Oudh is not subject to the High Court of the North-Western Provinces, the judicial statistics of the two are given separately.

There was a further increase in the number of suits instituted in the North-Western Provinces, the number of cases for disposal being about 6 per cent. more than in the preceding year; while the number disposed of increased in about the same ratio. The average duration of cases remained the same.

In Oudh, on the other hand, the decrease of 1907 in the number of suits continued in 1908; the number of disposals also fell off, and the pending file increased. The average duration of cases rose in both contested and uncontested cases.

Litigation increased during the year in all divisions of the Central Provinces and in both districts of Berar. The pending file increased by nearly 3,000 cases, but it represents a slightly lower percentage of the total number of suits than in 1907. In the matter of duration of cases the Central Provinces returned worse results than in 1907, while Berar showed considerable improvement.

The number of institutions of civil suits in the Punjab rose by over 25,000. The disposals of the Chief Court kept pace with them, but there was a falling off in the output of Divisional Judges; and consequently the pending file increased. There was no change in the duration of cases, contested or uncontested.

There was again a considerable fall in the total number of civil cases decided during the year in Bombay. The balance which remained pending was larger than at the end of 1907, and amounted to 21 per cent. of the total number for disposal. The average duration of contested suits fell from 175 to 167 days; that of uncontested suits remaining about the same.

The increase in litigation in the Madras Presidency led to the creation of a temporary Subordinate Judge's Court in Madura, and of five new District Munsifs' Courts—three permanent and two temporary. There was a decrease in the total number of suits instituted in all the courts of the Presidency, and this decrease also occurred in the number of suits instituted in the village courts. The figures show a very satisfactory increase in the number of cases tried before village bench courts. Suits instituted in Revenue Courts increased, but there was a regrettable falling off in the number of disposals. Though fewer original and small cause suits were instituted in District Munsifs' Courts, the pending file at the end of 1908 was considerably larger than at the end of 1907. The increasing popularity and efficiency of the City Civil Court may be contrasted with the condition of business in the High Court, where seven judges working the whole year made little impression on the arrears.

* The period covered by this chapter is the year ending 31st December 1908.

CIVIL
JUSTICE.
Burma.

In Burma the decrease in the number of suits instituted in the Courts, which was marked in 1907, continued during the year under review, and was most noticeable in Lower Burma. There was an increase in the pending file in both Upper and Lower Burma, and the average duration of cases still remained high. The latter was due to the congestion of work in the two High Courts, though a fifth judge was appointed to the Chief Court of Lower Burma, and an additional judge to the Judicial Commissioners' Court of Upper Burma for part of the year.

North-West
Frontier
Province.

There was a marked increase of litigation during the year in the North-West Frontier Province, and all previous records were passed, every district except Hazara sharing in the increase. But the increase in the number of disposals shows that the courts proved equal to the increased burden thrown upon them; the improvement in the disposal of execution work, especially in the Peshawar district, being a particularly satisfactory feature.

Coorg.

The main feature presented by the statistics of civil suits in Coorg was again the increase in the number of suits and the decrease in the total value. The state of the pending file at the close of the year compared favourably with the figures for past years.

CRIME AND
POLICE.
Madras.

CRIME AND POLICE.

The season was generally unfavourable, and scarcity prevailed almost throughout the Madras Presidency. The prices of food grains, excessive at the end of 1907, rose still higher in 1908; and, in consequence, there was a marked increase in crime. The total number of true cases of cognisable* crime rose from 47,500 to 50,047. The number of murders was 9 more than in 1907, and only 4 less than in 1906, the worst year on record. Dakaities and thefts increased by 26 and 1,166 respectively, but there was a slight falling off in the number of robberies. There were serious riots during the year at Tinnevely and Tuticorin, in the suppression of which the police worked well. The disturbances were due to the inflammatory speeches of two seditious agitators, who were brought to justice. The results of detection were inferior to those in the previous year; but this must be attributed to the stage of transition through which the Police Department was still passing. The percentage of murders and dakaities detected fell to 20.5 and 19.3 respectively; the proportion of true cases detected from 32.4 to 30.9. The percentage of convictions to cases prosecuted by the police fell from 78.4 to 77. Property lost during the year was valued at £110,533, of which 27.3 per cent. was recovered.

The total sanctioned strength of the police was 25,481. Difficulty in recruiting was experienced in some districts, and there were some complaints as to the quality of the recruits. The conduct of the force continued good, and a large number of rewards were given. The number of casualties was 1,930, as against 2,264 in 1907. The proportion of illiterate constables was 10.9 per cent. The total cost increased by £56,470 to £466,445, mainly owing to progress made in reorganisation.

Bombay.

In Bombay the total number of cognisable cases reported during the year rose to 33,646, there being increases under all heads of offences, except cattle theft. Investigation was refused by the police in 566 cases. Adding the cases pending from the previous year, and deducting cases in which investigation was refused and cases which were pending at the close of the year, orders were received on 33,229 cases, or 3,725 more than in 1907. The percentage of convictions to true cases disposed of showed a further regrettable falling off from 50.7 to 47.5. To this lack of success in detection the increase of crime during the year may, to some extent, be attributed. The value of property stolen during the year, in connection with cognisable crime, was estimated at £113,352, a large increase on the figures for 1907; but there was considerable improvement in regard to the recovery of stolen property, 45 per cent., as against 30.6 per cent. in 1907, being recovered.

The total strength of the police force in the Presidency was 22,798, an increase of 729, and the total cost £366,556, an increase of £15,147. Less difficulty was experienced in recruiting. The number of punishments rose from 2,100 to 2,480, of rewards from 3,159 to 5,180. A percentage of 54, practically the same as in the preceding year, were able to read and write. Resignations numbered 979, as against 1,139 in 1907. The health of the force was, owing to strain and exposure, not so good as in the preceding year. The year on the whole was a trying one for the police, and the unsatisfactory results indicated by the statistics given above must to

* Cognisable offences are those for which the police can arrest without a warrant.

a great extent be attributed to the special difficulties which the force had to encounter. CRIME AND POLICE.

The year under review was marked in Bengal by an outbreak of political crime of a very serious character. The police were called upon to deal with cases of murderous outrages with explosives and fire-arms and of dakaities with violence, and they were greatly hampered by the reluctance of the public to co-operate with them in the detection and prosecution of the offenders, many of whom belonged to the educated classes. A considerable measure of success was achieved by the Criminal Investigation Department, which is specially charged with the duty of dealing with organised crime, and a number of dangerous gangs were broken up. The success achieved in this direction is shown by the fact that of 405 persons prosecuted nearly 94 per cent. were convicted. As regards ordinary crime, there was an increase of 8 per cent. in the number of cognisable offences. The whole of this increase occurred under the heads of burglary and theft, and is to be attributed principally to the high price of food.

About two-thirds of the scheme for the reorganization of the police had been completed by the end of the year; and general progress was made in smartness and efficiency. For this result the appointment of European armed inspectors and the improved instruction in drill at the Police Training College were largely responsible.

The famine, which lasted during the greater part of the year under review, naturally affected the returns of crime in the United Provinces. The volume of reported offences increased by 5.5 per cent. on the corresponding figure for 1907, and amounted to 195,687 cases. The results of investigations show an improvement on those of the previous year, as the percentage of convictions in police cases in which investigations were undertaken rose from 47.6 to 51.1, and that of persons convicted to those arrested from 76.9 to 80.8. The chief feature of the year was the large number of dakaities that were reported (832). This figure is 24 per cent. higher than the number reported in 1907, and is the largest ever recorded. The number of true cases of murder (555) was the highest for six years; and there were increases in the number of robberies, burglaries, ordinary thefts, and cattle thefts. The relations between the police and the neighbouring native states continued to be excellent. There was an improvement in the way in which village headmen discharged their duties, cases reported by them increasing from 4,705 to 5,015. United Provinces.

Over 3,000 men were added to the force during the year owing to the conversion of municipal police into constabulary. The number of punishments was exceptionally heavy, the number of men punished by the courts rising from 86 to 165. Difficulties were experienced in several districts in obtaining recruits. The work of the Criminal Investigation Department was very heavy during the year, and its activities met with signal success, especially in dealing with dakaities.

There was a marked increase in the more serious classes of crime in the Punjab during the year under review. True cases of murder were 71 in excess of the totals of 1907. Dakaities numbered 74, an increase of five only on the figures for 1907, but the number is 20 in excess of the provincial average for the six years ending 1907. Burglaries increased from 12,087 to 13,700; and cases of cattle theft by 299. In the disposal of police cases, the percentage of convictions to trials (70) and of convictions to the cases investigated (33) were the same as in the previous year. The investigation work of the force showed improvement. Discipline was good, and in none of the three cases in which inquiry was held by Government were the charges of misconduct brought home to the police. Measures were taken during the year to counteract the tendency to follow the practice of securing a confession to support the theory of the prosecution. Good work was done by the Criminal Investigation Department, and the relations between the provincial force and the police of native states were most satisfactory. Punjab.

It is not proposed to give detailed figures for the province of Eastern Bengal and Assam for 1908, as ordinary crime, both cognisable and non-cognisable, remained about stationary. There was, however, an increase in the number of reported dakaities, especially on the rivers, and a deplorable feature of the year was the commission of serious crime by young men of the well-to-do classes, organised into predatory gangs for the purpose. This included one case of murder and four of dakaiti. There was a striking decrease in the number of cases of rioting in the Bakarganj district as the result of settlement operations, and settlement operations are being introduced elsewhere. There was a slight increase in the proportion of Eastern Bengal and Assam.

CRIME AND
POLICE.

convictions to cases tried. The year was a trying one to the police, owing to the prevalence of political agitation. The work of the force was good, but its numbers are still inadequate, and proposals are on foot for strengthening both the superior and the subordinate branches. Recruitment is difficult in the province, and there was an increase in the number of casualties, mainly due to resignations. A constables' training school was started at Silchar.

Central
Provinces
and Berar.

In the Central Provinces and Berar there was an increase in the total volume of crime, which may be attributed in part to the failure of crops in the north of the Provinces, and the consequent general high range of prices; while the political excitement of the year roused a spirit of lawlessness in Berar and the Malhatta districts. The increase was distributed over all classes of crime, and is greatest in the case of offences against property. The number of murders was the highest on record since the famine of 1900, and there was a considerable increase in the number of rioting cases, especially in Berar. Dakaities increased, but the gangs which were responsible for most of them were at any rate partially broken up during the year. Some progress was made in the introduction of Police Commission reforms, and there were indications of improvement in the standard of police work. Reporting was more complete, greater detective ability was shown, and there was less resort to the time-honoured practice of securing confessions from supposed culprits. Political disturbances were promptly suppressed. The Department worked short-handed during the year, and in view of the trying conditions its conduct was most satisfactory.

Burma.

The outstanding fact of the year under review in Burma was a substantial increase of crime, while the proportion of success achieved in the detection of criminals and the recovery of stolen property remained stationary. The total number of true cases of real crime dealt with increased by nearly 1,000, and the increase was mainly composed of the most serious forms of crime. Murders, robberies, dakaities, house-breaking all increased, the only compensation being a slight improvement in the number of cattle thefts. Generally speaking, the measure of success achieved in dealing with the increased volume of crime remained unchanged, the percentage of cases investigated to cases convicted being the same as in the previous year. The relations of the police with village officials continued to be thoroughly satisfactory, and the assistance rendered by headmen in the detection of crime and the arrest of offenders was of the greatest value. The actual strength of the force was 111 officers and 753 men below sanctioned strength. The conduct of the men, as evidenced by punishments and rewards, was normal. There was no alteration in the strength of the military police; their discipline was, on the whole, good, and their relations with the people satisfactory.

North-West
Frontier
Province.

The year under review in the North-West Frontier Province showed a great increase in violent crime, to be attributed to the unsettled state of the border and to the high prices which ruled throughout the year. The number of dakaities reported was more than double that of 1907. The Criminal Investigation Department was still in a state of development, but the section of it which dealt with the traffic in arms met with considerable success. The percentage of cases convicted to cases tried fell from 78 to 76, and there was a considerable falling off in the percentage of property recovered to property stolen, due to the large amount of property looted by trans-border raiders. All the reforms sanctioned in connection with police reorganisation have now been given effect to in the Province, but in spite of the increased rates of pay there was a disappointing increase of resignations. There were more punishments than in 1907, and the education of the force showed no improvement, but measures for the instruction of the men in reading and writing were introduced during the year.

Coorg.

The year was not an eventful one in Coorg. The number of cognisable offences and the percentage of convictions were normal; and two noteworthy dakaities constituted the really serious crime. The introduction of reform was practically completed. There was an increase in the proportion of literate constables, and the comparatively small number of punishments points to the maintenance of departmental discipline during the year.

CRIMINAL
JUSTICE.

Madras.

In Madras, there was an increase in the number of offences under the Indian Penal Code reported during the year, but this was more than counterbalanced by a decrease

CRIMINAL JUSTICE.

in the number reported under special and local laws. There was a marked improvement in the percentage of convictions in both classes of cases. The work in Sessions Courts increased to such an extent that three additional judges were appointed, two being appointed in the Tinnevely division, where, owing to the riot and sedition cases, the work was unusually heavy. The High Court confirmed 53 out of the 80 sentences of death passed by Sessions Courts, and dismissed 85 per cent. of the total number of appeals sent up.

The number of offences reported and brought to trial in Bombay was again less than in preceding year, considerably less than half of the offences returned as true falling under the Indian Penal Code. Exactly half of the total number of persons brought to trial were acquitted or discharged, or about the same proportion as in the preceding year. Sentences of imprisonment were more numerous, fewer fines were inflicted, and there was a decrease in the number of whippings. Proceedings in appeal resulted in a reversal of the sentence in 17 per cent. of the cases.

There was a general increase in the work of criminal justice in Bengal during the year. The most noteworthy feature was the increase in the number of offences against the State. In 1908 there were 57 persons under trial for offences of this kind, as against 13 in 1907. Of this number 7 were convicted, 9 acquitted or discharged, 2 were hanged for the murder of the approver Norendra Nath Goswami, and 39 remained under trial at the close of the year. In addition to these cases under the Indian Penal Code, 29 persons were under trial in Midnapur under the Explosive Substances Act (VI. of 1908), of whom 26 were discharged and 3 remained under trial at the close of the year.

In Calcutta one person was prosecuted under the Newspapers (Incitements to Offences) Act (VII. of 1908), and was convicted, while there were 117 prosecutions under the Printing Press Act, of which 107 resulted in conviction.

In Eastern Bengal and Assam also the number of offences against the State was one of the noticeable features of the year. Of 10 persons under trial for such offences, 2 were convicted, 1 was acquitted or discharged, and 7 remained under trial at the end of the year. Twenty persons, against 3 in 1907, were proceeded against under section 108 of the Code of Criminal Procedure for disseminating seditious matter. Generally, there was a small increase in the total number of criminal cases, and a decrease in the number of cases disposed of by the Courts of first instance. Appellate work increased in Courts of Sessions, but decreased in the High Court.

The figures for reported crime for the Punjab were the highest of any year, except 1906, since the Province was constituted within its present boundaries. Scarcity conditions may be held to account for most of the increase, but in certain favoured tracts, such as the Chenab Colony, prosperity seemed to stimulate the litigious tendencies of the people. There was an improvement in the percentage of convictions. The capital sentence was confirmed by the Chief Court in 58, and commuted in 11, cases. There was a considerable decrease in the number of whippings inflicted.

The number of offences in the North-West Frontier Province during the year was the highest on record since the formation of the Province. The main cause was undoubtedly the unsettled state of the border, but continued high prices also accounted for the increase in ordinary thefts. The percentage of convictions to offences brought to trial was greater than in previous years. A change, which promises to be successful, was made in the composition of the Council of Elders, periodical large sessions being held instead of a few men being appointed in each individual case.

In the United Provinces there was a slight decrease in criminal trials during the year, a rise in serious offences being more than counterbalanced by a general decline in offences against the person. The work in Sessions Courts, however, increased largely, as did also the number of serious punishments, including sentence of death and transportation. The duration of trials in the courts of magistrates rose slightly, both in Agra and Oudh, owing to pressure of famine work, which called magistrates away from their ordinary duties. Appellate work also showed an increase, particularly in Oudh.

The number of criminal cases brought to trial in Coorg was more than 10 per cent. less than the average of the past five years, while the percentage of convictions remained comparatively high. The number of appeals decreased proportionately, and the number successful was small.

CRIMINAL
JUSTICE.

Bombay.

Bengal.

Eastern
Bengal and
Assam.

Punjab.

North-West
Frontier
Province.

United
Provinces
of Agra
and Oudh.

Coorg.

CRIMINAL
JUSTICE.
Central
Provinces
and Berar.

In the Central Provinces there was a considerable increase in the total number of offences reported, mainly of offences under the Indian Penal Code. In four out of the five offences against the State the accused were editors of newspapers, of whom two apologised and two were acquitted, the others being convicted. The fifth political offence was the mutilation of the statue of Queen Victoria at Nagpur; the four accused persons were still under trial at the close of the year. There was general improvement in the percentage of convictions in Sessions cases. The appellate work of the Judicial Commissioners' Court increased considerably. There was an increase in the number of sentences of whipping, but the percentage of whipping to the number of cases in which it might have been inflicted fell from 40·4 to 38·9.

Burma.

There was an increase in the number of serious offences dealt with by the Courts in Burma during the year, the natural result of the increase in crime which has been noted in connection with the working of the police. There was, however, but little variation in the total volume of crime which was dealt with, and the statistics present no features worthy of special note.

JAILS.

JAILS.

The variations of the jail population in the whole of India during the last five years are shown in the following table:—

	1908.	1907.	1906.	1905.	1904.
Jail population of all classes on 1st January -	101,336	99,065	98,244	93,781	93,881
Admissions during the year -	520,377	459,288	480,098	464,660	436,569
Aggregate -	621,713	558,353	578,342	558,141	530,450
Discharged during the year from all causes -	517,930	457,012	479,280	460,202	436,668
Jail population on 31st December -	103,783	101,341	99,062	98,239	93,782
Convict population on 1st January -	89,457	89,035	88,344	85,034	85,209
Admissions during the year -	173,175	153,759	163,956	161,783	153,380
Aggregate -	262,632	242,794	252,300	246,817	238,589
Released during the year -	168,599	160,439	160,022	155,220	150,289
Casualties, &c. -	3,629	2,893	3,246	3,245	3,260
Convict population on 31st December -	90,404	89,462	89,032	88,352	85,040

An increase in the number of prisoners admitted to jail in the course of the year occurred in all provinces except Burma, Eastern Bengal and Assam, and Coorg, and was most marked in the United Provinces and Bengal. The daily average number of prisoners rose by about 8,000. The increase in the number of persons convicted and imprisoned was common to all provinces, except Burma and Coorg.

Over one half of the total number of convicts received in jails during the year came from the classes engaged in agriculture or cognate pursuits. Nearly 150,000 were illiterate. The number of previously convicted prisoners increased by about 6,000, and there was an increase of about 100 in the number of youthful offenders. The following statistics show, in round figures, the nature and length of the sentences imposed during the year:—Not exceeding one month, 50,000; above one month and not exceeding six months, 65,000; above six months and not exceeding one year, 30,000; above one year and not exceeding five years, 21,000. The remainder were major sentences, viz.:—2,828 for terms above five and not exceeding ten years; 193 for terms exceeding ten years; 1,942 to transportation beyond seas; and 645 to death.

The increase in the average daily strength was accompanied by an increase in the number of offences committed by convicts, and there was also an increase of about 5,000 in serious offences dealt with by major punishments. The figures for the different provinces are given in the following table:—

JAILS.

Province.	1908.			1907.			1906.		
	Daily average Population.	Offences dealt with by Criminal Courts.	Offences dealt with by Superintendents.	Daily average Population.	Offences dealt with by Criminal Courts.	Offences dealt with by Superintendents.	Daily average Population.	Offences dealt with by Criminal Courts.	Offences dealt with by Superintendents.
Madras	10,517	122	13,038	10,043	24	11,915	10,404	10	10,278
Bombay	7,913	33	20,296	7,538	15	15,303	7,997	16	16,199
Bengal	14,462	37	28,715	13,632	26	25,707	13,963	25	25,268
United Provinces	25,363	14	37,265	21,710	10	39,549	22,903	9	39,988
Punjab	10,766	56	56,892	10,216	38	44,105	10,768	64	36,828
Burma	13,164	22	40,878	13,009	21	38,463	12,606	17	42,092
Eastern Bengal and Assam	6,884	44	6,954	7,173	41	7,247	6,733	53	8,292
Central Provinces and Berar	3,536	16	9,975	2,945	26	9,609	3,062	23	9,405
North-West Frontier Province	1,040	2	1,371	960	—	1,401	1,091	1	1,539
Coorg	81	—	17	80	2	50	85	—	19
	93,726	346	215,401	87,306	203	193,349	86,612	218	189,928

The total number of corporal punishments showed a slight increase on the figures for the previous year. The total number of cases in which penal diet (with and without solitary confinement) was prescribed was 6,842 as compared with 4,953 in the preceding year.

Total expenditure rose from £492,815 to £579,075, and total cash earnings from £90,051 to £91,298; there was, consequently, an increase of £84,897 in the net cost to Government. Excluding Coorg, the provinces in which the average cost of maintenance was highest were Eastern Bengal and Assam, Bengal, and the Central Provinces.

In 1908 all the conditions influencing the health of prisoners were extraordinarily unfavourable. Bad spring crops, and, in the autumn, an epidemic of malarial fever delaying the harvest, led to high prices and a consequent increase in crime. Prisons were in many cases overcrowded, and prisoners on admission were often in a bad state of health. In spite, however, of all these adverse conditions the health of the prisoners remained fairly good, and although the death-rate (24·17 per thousand as against 18·51 in 1907) represents more than a check in the steady fall that has been taking place in recent years, it would have been considered a low rate 10 years ago. The number of cases of malaria showed a still further falling-off, and considerable success attended anti-malarial measures, especially the prophylactic use of quinine. The most common causes of death were dysentery, tubercle of the lungs and pneumonia.

Penal Settlement at Port Blair.—The convict population of the Andamans at the end of the year 1908-9 was 13,305, being 930 less than at the end of the previous year; the decrease being due, among other causes, to the large number of convicts (437) released in commemoration of the 50th anniversary of the assumption of the Government of India by the Crown. The number of convicts received from India and Burma during the year was 626, as against 754 in 1907-8. There were 55 escapes, and 31 recaptures; the corresponding figures for the preceding year were 46 and 35. There was an increase in the percentage of offences, confined to male convicts, and the number of corporal punishments rose from 23 to 36. A proposal to enlarge the cellular jail was sanctioned during the year; its working during the year, under the improved procedure referred to in last year's Report, was satisfactory. The net cost of the Settlement was £116,379, and the net cost of each convict about £8, against £100,863 and about £7, respectively, in the previous year. The estimated value of jail manufactures rose from £27,354 to £32,876. The outturn of cocoanut oil was nearly doubled. Owing to the abnormal rainfall of 1907 the season's crop of paddy was largely destroyed; and no local rice was packed for issue to convicts during the year under review. The strength of the police force was increased, and was during the year 725, or 178 below sanctioned strength. Discipline was on the whole good. There were seven schools in the Settlement during the year, the same number as in the previous year.

Penal Settlement, Port Blair.

CHAPTER III.

FINANCE.

FINANCE.

FORM OF ACCOUNTS.

GROSS REVENUE AND EXPENDITURE.

NET REVENUE AND EXPENDITURE.

CASH BALANCES.

PROVINCIAL FINANCE.

HOME CHARGES.

CAPITAL OUTLAY ON PUBLIC WORKS.

DEBT.

CURRENCY AND EXCHANGE.

BANKS.

(For further details, see Statistical Abstract for British India, Tables 44 to 89 and 97.)

FORM OF ACCOUNTS.

Form of
accounts.

The accounts of the Government of India show the transactions in India in rupees : the totals of these transactions are then converted into pounds, at the rate of Rs. 15 = £1 : the sterling transactions in England are next stated : and the last two sets of figures are added together, so as to show in pounds the combined transactions in India and in England. The comparatively small sums which have to be brought to account owing to the facts that the remittances to defray the net expenditure in England are not effected at exactly sixteenpence to the rupee, and that the Government is under obligations to carry out certain transactions with railway companies at fixed rates differing from the rate of sixteenpence to the rupee, are included in a single line under the head of Exchange.

GROSS REVENUE AND EXPENDITURE.

Gross Revenue and Expenditure. The Gross Revenue and Expenditure of British India in 1907-8 and 1908-9 were as follows :—

	1907-8.	1908-9.
	£	£
Revenue -	71,003,275	69,761,535
Expenditure -	70,697,229	73,499,245
Surplus -	£306,046	Deficit - £3,737,710

In these figures all receipts are included in the total of revenue and all outlay in the total of expenditure, with the one exception that the working expenses of railways are treated not as expenditure but as a deduction from Revenue. The financial position of the Government can, however, be much better appreciated by reference to the following table of Net Revenue and Expenditure, in which the interest charges as well as the working expenses of the Railways, the interest charges and working expenses of Irrigation Works, the cost of the cultivation and manufacture of Opium, and the charges against other revenue-earning departments are treated as deductions from revenue, and the receipts of spending departments are treated as deductions from expenditure.

NET REVENUE.

	1907-8.		1908-9.		Increase (+) or Decrease (-)	Net Revenue and Ex penditu
	£	£	£	£	£	£
Land Revenue, &c. :						
Land Revenue -	17,982,592		19,005,038		+1,022,446	
Forest -	1,727,701		1,691,865		- 35,836	
Tributes from Native States -	389,366		387,557		- 1,809	
		20,099,659		21,084,460		+ 984,801
Opium : Net Receipts -		3,571,948		4,645,113		+1,073,165
Taxation :						
Salt -	3,072,378		3,008,703		- 63,675	
Stamps -	4,212,194		4,293,955		+ 81,761	
Excise -	6,163,111		6,313,779		+ 150,668	
Provincial Rates -	524,756		532,976		+ 8,220	
Customs -	4,895,771		4,725,083		- 170,688	
Income Tax -	1,495,853		1,544,576		+ 48,724	
Registration -	414,068		429,975		+ 15,906	
		20,778,131		20,849,047		+ 70,916
Commercial Undertakings :						
Post Office -	51,279		71,133		+ 122,412	
Telegraph -	77,650		49,976		- 27,674	
Railways -	1,563,002		1,242,250		- 2,805,252	
Irrigation -	646,473		608,823		- 37,652	
		2,183,106		754,536		-2,937,642
Mint -		279,017		89,475		- 368,492
Exchange -		94,511		34,437		- 128,948
Total Net Revenue -	£	47,006,372		45,700,172		-1,306,200

NET EXPENDITURE.

	1907-8.		1908-9.		Increase (+) or Decrease (-).
	£	£	£	£	£
Debt Services (excluding amounts charged under Railway Revenue Account and Irrigation).		855,087		979,507	+ 124,420
Military Services :					
Army -	17,625,054		18,314,327		+ 689,273
Marine -	397,338		351,509		- 45,829
Military Works and Special Defence Works.	1,225,962		937,152		- 288,810
		19,248,354		19,602,988	+ 354,634
Collection of Revenue -		5,729,823		6,026,572	+ 296,749
Civil Services :					
Civil Departments -	11,999,649		13,342,704		+1,343,055
Miscellaneous Civil Charges -	4,155,959		4,299,871		+ 143,912
Civil Works (including Railways charged to Provincial or Local Revenues).	4,436,577		4,208,404		- 228,173
		20,592,185		21,850,979	+1,258,794
Famine Relief and Insurance -		1,296,063		1,645,179	+ 349,116
Provincial Adjustments :					
1. Charge against Revenue of the year arising from increase of Provincial Balances.					+ 353,843
2. Diminution of the Charge against Revenue of the year, owing to Expenditure being met from Provincial Balances.		-1,021,186		- 667,343	
Total Net Expenditure charged against Revenue.		46,700,326		49,437,882	+2,737,556
Surplus (+) or Deficit (-)		+ 306,046		-3,737,710	-4,043,756

Thus there was in 1908-9, as compared with the previous year, a decrease of net revenue of £1,306,200 and an increase in net expenditure of £2,737,556. Detailed explanations of the figures of revenue and expenditure are annually laid before Parliament in the Financial Statement of the Government of India and in the Explanatory Memorandum by the Secretary of State. It will be sufficient here to refer only to the more important facts specially affecting the revenue and expenditure of 1908-9.

FINANCE.

Land Revenue.—In 1907–8 the liberal remissions of land revenue, consequent on the failure of the harvests over a large part of India, caused the net revenue of the year to be considerably below normal. Better conditions prevailed generally in 1908–9, and in the United Provinces and Central Provinces a larger proportion of arrears was recovered than had been expected. The revenue, however, was adversely affected by the failure of the winter rains in Bombay and the partial drought in Upper Burma.

Opium.—In accordance with arrangements with the Chinese Authorities, the number of chests of opium exported from India was limited by the Government of India. The export of Bengal opium was reduced from 48,900 chests in 1907–8 to 45,900 chests in 1908–9. The large increase in the revenue was due in part to the high prices realised at the sales in Calcutta, but mainly to the fact that in addition to the duty paid on 15,100 chests of Malwa opium, the permissible export for the year, duty was also received on account of nearly 20,000 additional chests from traders anxious to secure priority for the shipments of 1909 and 1910.

Railways.—For the first time since 1898–9 the railway revenue account shows a net charge amounting in the year under review to £1,242,250. The gross earnings of the railways fell below the Budget estimate by £2,414,800 in consequence of bad harvests and the general stagnation of trade. At the same time working expenses increased owing to a variety of causes, of which the chief were the revision of the pay of the staff, the high prices of coal and the grant of grain compensation allowances to employees in consideration of the prevailing high prices.

Military Services.—The additional payment of £275,000 to the War Office on account of the training of British troops employed in India and the operations against the Mohmands were chiefly responsible for the increased expenditure under this head.

Civil Services.—A special bonus given on the 50th anniversary of the Royal Proclamation of 1858 and grants to low-paid Government servants on account of the dearness of food contributed largely to the rise in expenditure during the year.

CASH BALANCES.

Cash balances.

The following statement shows the amount of the cash balances, and the extent to which they were increased or reduced by the transactions of the year :—

	On 1st April			Increase or Decrease.	
	1907.	1908.	1909.	In 1907–8.	In 1908–9.
	£	£	£	£	£
In India - - -	10,328,237	12,851,723	10,235,827	+2,523,486	—2,615,896
In England - - -	5,606,812	5,738,489	8,453,715	+131,677	+2,715,226
Total - - -	15,935,049	18,590,212	18,689,542	+2,655,163	+ 99,330

PROVINCIAL FINANCE.

Provincial finance.

Under the system of decentralisation of finance, begun by Lord Mayo in 1870 and subsequently developed by successive stages, the Government of India assigns to the Provincial Governments a fixed share of the revenue collected by them under certain heads. From the revenue so assigned the Provincial Governments are required to meet the whole of the expenditure within their respective provinces under certain heads, and a portion of the expenditure under other heads. The revenue retained by the Government of India for its own purposes and for meeting the expenditure incurred by the Secretary of State in England is described in the accounts as Imperial, and that which is assigned to the Provincial Governments is described as Provincial. The expenditure is similarly classified. The Provincial Settlements, by which the classification into Imperial and Provincial of the various items of revenue and expenditure and the ratio of division of the divided heads are governed, have been placed on a quasi-permanent basis with the object of giving to the Provincial Governments as large an interest as possible in the careful collection of revenue and in economy of expenditure. The principal heads of revenue which are wholly Imperial are Opium, Salt, Customs, Post-Office, Telegraph, Mint, Exchange, and State Railways; the principal divided heads being Land Revenue, Irrigation, Stamps, Excise, Assessed Taxes, and Forests. On the expenditure side of the accounts the charge for

FINANCE.

Military Services, Debt Services, and the charges under certain minor heads (Territorial and Political Pensions, Ecclesiastical, &c.) are entirely Imperial; "General Administration" is divided; most other important heads of expenditure are provincial. The net revenue of 1907–8 and 1908–9 and the expenditure charged against the revenue of those years were divided into Imperial and Provincial as follows :—

	1907–8.			1908–9.		
	Imperial.	Provincial.	Total.	Imperial.	Provincial.	Total.
	£	£	£	£	£	£
Net Revenue -	29,226,186	17,780,186	47,006,372	25,968,321	19,731,851	45,700,172
Net Expenditure -	28,920,140	17,780,186	46,700,326	29,706,031	19,731,851	49,437,882

The equilibrium between Provincial Revenue and Provincial Expenditure, which is shown in these figures, is due to the fact that, if the Provincial Governments spend less than their income, the saving is added to their balances and treated in the general accounts prepared by the Government of India as though it had been spent, and that similarly excess expenditure by Provincial Governments, being met from their balances, is not charged in the accounts prepared by the Government of India against the revenues of the year. The Provincial Governments spent £865,299 from their balances in 1907–8 and £667,343 in 1908–9.

The following table shows for each province separately the amount by which the total revenue collected therein (whether classified in the accounts as Imperial or Provincial) exceeds or falls short of the total expenditure incurred therein, and thus indicates the extent to which each province contributes towards the expenditure of the Government of India and the Secretary of State, or draws upon the general revenues :—

Provinces, &c.	1907–8.		1908–9.	
	Excess of Revenue.	Excess of Expenditure.	Excess of Revenue.	Excess of Expenditure.
	£	£	£	£
Bengal - - -	6,581,418	—	6,549,909	—
Eastern Bengal and Assam - - -	1,279,727	—	1,093,947	—
United Provinces - - -	1,934,968	—	2,022,349	—
Punjab - - -	1,268,804	—	1,328,853	—
Burma - - -	2,156,310	—	2,193,780	—
Central Provinces and Berar - - -	293,338	—	194,749	—
Madras - - -	4,853,138	—	4,643,458	—
Bombay - - -	4,908,548	—	5,444,397	—
North-West Frontier Province - - -	—	244,091	—	323,253
India, General - - -	—	4,957,484	—	8,562,450
England - - -	—	17,768,630	—	18,323,419
Net result - - -	Surplus £306,046		Deficit £3,737,710	

HOME CHARGES.

The net expenditure in England chargeable to revenue, as shown in the preceding table, may be classified under the following principal heads :—

	1907–8.	1908–9.
	£	£
Interest and management of debt, and payment of interest and annuities on account of railways and irrigation works.	9,811,637	10,196,960
Payments in connection with Civil Departments in India	198,273	158,556
India Office (excluding pensions)	204,154	209,284
Army and marine effective charges	850,343	1,096,688
Stores of all kinds charged against revenue	1,431,134	1,281,998
Furlough allowances	872,087	936,773
Non-effective charges (pensions and gratuities)	4,401,002	4,443,160
Total - - -	£ 17,768,630	18,323,419

FINANCE.

Capital
outlay on
public
works.

CAPITAL OUTLAY ON PUBLIC WORKS.

The total capital outlay on railways and irrigation works, during the two years, was as follows:—

	1907-8.	1908-9.
Amount supplied by State borrowing or from the Cash Balances, without being charged against the Revenue of the year:—	£	£
State Railways	10,567,045	9,488,168
Irrigation Works	845,722	988,489
Amount met by Debenture Stock issued by Companies	1,897,112	4,278,547
Amount defrayed from Revenue:		
Provincial and local Railways	— 197,975	415
Preliminary Railway expenditure not originally charged to construction	7,443	—
Protective Railways	6,561	70
Protective Irrigation Works	417,240	403,030
Other Irrigation Works*	35,067	15,924
Total Direct Outlay by the State	13,578,215	15,169,643
Outlay by companies guaranteed or subsidised by Government	— 133,183	556,903
Outlay by Local Boards	34,163	—
Total Capital Outlay on Railways and Irrigation	£ 13,479,195	15,726,546

* Excluding capital outlay on the minor works, against which interest is not charged in the accounts.

DEBT.

Debt.

Amount of Debt.—The total debt of India on the 1st April 1908 was:—

In England	£ 157,481,074
In India, Rs. 1,32,82,94,955, equivalent at 1s. 4d. the rupee to	88,552,997
Total	£246,034,071

In August 1908 a rupee loan of 2 crores (£1,333,000) was issued in India at an average price of Rs. 95·44 per cent. In England an issue of £1,000,000 Sterling Bills for 12 months was made in April 1908, at an average price of £96 15s. 10d., in replacement of bills falling due on that date; £2,500,000 were issued for 12 months in June 1908 at an average price of £97 3s. 10d. and a further £2,500,000 were issued in the following December for the same period at an average price of £97 1s. 4d. to provide funds for capital expenditure on railways in India and general purposes. In February 1909 £7,500,000 India 3½ per cent. stock was issued in England at £97 per cent. to provide in advance for a portion of the capital requirements of railways in 1909-10.

During the year under report an offer was made to holders of the 3 per cent. Rupee Loan of 1896-7 to convert their promissory notes or stock into notes or stock of the 3½ per cent. Rupee Loan of 1900-1. The terms of the conversion were such as to give the holder the necessary quantity of stock of the new denomination to yield by way of interest exactly the same income as he was entitled to on his previous holding.

The total debt outstanding on 31st March 1909 was as follows:—

In England	£ 166,973,369
In India, Rs. 1,34,56,60,505, equivalent at 1s. 4d. the rupee to	89,710,700
Total	£256,684,069

Classification of the Debt.—The total debt is classified in the accounts as (1) Public Works Debt and (2) Ordinary Debt. The amount entered as belonging to the former category is the equivalent of the total capital expenditure which has been incurred by the State on public works, together with the amount advanced to railway companies for capital expenditure; the "Ordinary Debt" consists of the remainder of the debt. In any year in which, owing to the use of surplus revenue or deposits for the construction of public works, the capital expenditure of the year exceeds the amount of debt incurred in the year, the effect of this system of classification is to cause a decrease to be shown in the amount of the Ordinary Debt.

FINANCE.

The classification of the debt outstanding on the 31st March 1908 and the 31st March 1909 was as follows:—

	1908. £	1909. £
Debt for railways	177,702,283	182,213,141
Debt for irrigation works	29,872,728	30,738,991
Total of public works debt	207,575,011	212,952,132
Balance being ordinary debt	38,459,060	43,731,937
Total debt on 31st March	£246,034,071	£256,684,069

CURRENCY AND EXCHANGE.

Currency Legislation.—Up to 1893 the standard of value in India was silver, the rupee (180 grains of silver, eleven-twelfths fine) and the half rupee being full legal tender for the payment of debts, and the mints being open to the receipt from the public of silver for coinage without limit. From 1871 to 1893 the exchange value of the rupee (i.e., the sterling rate at which bills of exchange payable in India were sold) fell almost continuously, the fall being due to the decline in the price of silver, by which the value of the rupee was necessarily governed. Apart from its effect on trade the continual fall in the rupee caused serious difficulties to the Government, because, its revenue being collected in rupees, it is compelled to provide for the greater part of its sterling payments by the sale in London for sterling of bills of exchange and telegraphic transfers payable in rupees in India, and the number of rupees required for defraying any given amount of sterling expenditure increased with each fall in the sterling rate at which bills were sold. In the period from 1871 to 1893 the rate fell from about 2s. the rupee (ten rupees to the £) to about 1s. 3d. the rupee (sixteen rupees to the £). In view of the embarrassment arising from this depreciation in the standard of value it was decided in 1893, in accordance with the recommendation of Lord Herschell's Committee, that silver should no longer be coined on presentation by the public, but the right was given to the public to demand from Government rupees in exchange for gold at the rate of 15 rupees for £1 without limit of amount. Silver thus ceased to be the standard of value in India (though it is still used as before as the chief material of currency); and the exchange value of the rupee ceased to coincide with the price of silver. In 1898 a committee was appointed, under the chairmanship of Lord Wolverhampton, then Sir Henry Fowler, to consider certain proposals made by the Government of India for the completion of the policy adopted in 1893. Sir Henry Fowler's Committee reported in 1899, and recommended that the decisions reached on the recommendations of Lord Herschell's Committee in 1893 should be maintained, and that the English sovereign should be declared legal tender in India at the rate of one sovereign to fifteen rupees (i.e., 1s. 4d. to the rupee). These recommendations were accepted by the Government. Since 1898-9 the exchange value of the rupee has remained steady at about 1s. 4d.

Gold Standard Reserve.—In accordance with a recommendation made by Sir Henry Fowler's Committee it was decided that, with effect from the 1st April 1900, the net profit from the coinage of rupees should not be treated as revenue, but should be held as a special reserve, and sent to England for investment in sterling securities. Up to 1906 practically the whole amount was remitted to England and applied to the purchase of British Government securities, the interest realised being added to the fund and invested, but in that year it was decided that a portion of the reserve should in future be held in silver in India. In 1907-8 and 1908-9 in consequence of a further decision half the profits on coinage were applied to capital expenditure on railways, but the application of this decision has now been temporarily suspended.

The annual amount of the profits on coinage, in each year from 1900-1 to 1907-8 credited to the reserve under the arrangements above described, is shown in the marginal table.

No coinage was undertaken from purchased silver in 1908-9, and the addition to the gold standard reserve during the year in respect of operations at the mints only amounted to £51.

FINANCE. The constitution of the reserve on the 31st March 1909 was as follows:—

	£
Sterling securities (at cost price) - - -	7,414,510
Silver (coined rupees in India) - - -	10,586,734
Cash in England - - -	469,818
Due from Treasury balances in India - - -	344
Total - - -	£18,471,406

Exchange and remittance.

Exchange and Remittance.—During the years 1907–8 and 1908–9 the sale by the Secretary of State of bills and telegraphic transfers on India was as follows:—

1907–8	£15,307,061	at an average rate of	1s. 4·029d. per rupee.
1908–9	£14,144,545	“ “	1s. 3·93d. “ “

The regular demand for the bills and telegraphic transfers sold by the Secretary of State is due to the fact that they enable merchants and bankers to make the payments in India which are required mainly in consequence of the normal excess of India's exports over her imports. In 1907–8 the excess of exports and the demand for the Secretary of State's bills and transfers were unusually small, being affected by several causes, amongst which may be mentioned the exceptionally large imports, the check to the growth of exports due to the partial failure of the autumn monsoon, the reduced price of jute (a very important article of export), and the stringency which prevailed during a part of the year in the London money market. The effect of these conditions made itself felt with unusual intensity towards the end of the financial year, when the normal commercial demand for remittances to India practically ceased for a time, and it became evident that special facilities for remittance in the opposite direction were for the time required in order to enable the balance of trade to be adjusted. In the special circumstances the Secretary of State authorised the Government of India to invite applications in India for sterling bills on London at a fixed rate of 1s. 3 $\frac{3}{4}$ d. the rupee. Bills were sold from week to week during the period between 25th March and 11th September 1908, the total amount sold being £8,058,000. The bills were met in London by the Secretary of State from the proceeds of the realization of a portion of the securities held on behalf of the Gold Standard Reserve, the par value in rupees received in India for the bills being at the same time paid to the silver portion of the reserve held in that country.

In September 1908, exchange strengthened, and from this date the demand for Council bills revived, and apart from a slight decline towards the end of October has continued without interruption. This improvement in exchange has enabled the Secretary of State to increase the nominal value of the securities held on account of the Gold Standard Reserve in England from £5,857,000 in February 1909 to £11,295,000 in February 1910. During this period a corresponding reduction was effected in the value of the rupees held in India in the silver branch of the reserve, which had been abnormally swollen by the operations of the previous year.

Coinage.

Coinage.—The silver coinage at the Indian Mints was:—

	1907–8. Number Coined.	1908–9. Number Coined.
Rupees - - - - -	173,269,893	25,130,598
Half-rupees - - - - -	4,641,294	1,576,198
Quarter-rupees - - - - -	11,464,000	7,083,812
Eighth-rupees - - - - -	21,600,000	6,786,912
British Dollars (for export to Hong Kong) - - -	1,945,726	6,870,741

With the practical cessation in March 1908 of the demand for Council bills the need for fresh issues of rupees in India ceased also. The rupee coinage of 1908–9 represented almost entirely the recoinage of old rupees and uncurrent coin.

The value of the copper, bronze, and nickel coinage during the two years was as follows:—

	1907–8.	1908–9.
Copper - - - - -	2,003	9,022
Bronze - - - - -	258,945	73,597
Nickel - - - - -	155,233	93,900

Paper currency.

Paper Currency.—Under the Indian Paper Currency Act, 1905 (III. of 1905), Paper Currency Notes of the following denominations, viz., Rs. 5, Rs. 10, Rs. 20, Rs. 50, Rs. 100, Rs. 500, Rs. 1,000, and Rs. 10,000 are issued to the public. By an Act

passed in 1909 the five rupee note which had previously been legal tender throughout India was declared to be legal tender in Burma. The growing popularity of the “universal” five rupee note is a prominent feature of the paper currency circulation in India, and legislation has been initiated with a view to “universalising” notes of the denominational value of 10 and 50 rupees. Notes of higher value than five rupees are at present legal tender only within the currency circle from which they are issued. There are eight currency circles having their headquarters at Calcutta, Canmpore, Lahore, Bombay, Karachi, Madras, Calicut, and Rangoon respectively. The Act requires that a reserve shall be held against the notes equal to their full value; securities of the Government of India and of the British Government may be held as part of the reserve up to a limit of £8,000,000, of which the British Government securities may not exceed £1,333,000 (Rs. 2,00,00,000); the remainder of the reserve must be held in gold or silver coin or bullion. On the 31st March 1909 the value of notes in circulation was £30,325,000, being less by £932,000 than on the corresponding date in 1908. The constitution of the paper currency reserve was as follows:—

	£
Gold - - - - -	1,523,414
Silver coin - - - - -	20,759,425
Silver bullion - - - - -	52,465
Securities of the Government of India - - -	6,667,000
Securities of the British Government - - -	1,333,000

BANKS.

The Presidency Banks.—The three Presidency Banks of Bengal, Madras, and Bombay are bodies corporate, constituted under the Presidency Banks Act of 1876. This Act has been modified by a succession of other Acts, of which the most recent was passed in 1907. It regulates the constitution and management of the banks and prescribes the kind of business that they may undertake. The most important statutory restrictions are that they may not borrow out of India, nor draw, discount, buy, or sell bills of exchange, or other negotiable securities payable outside India or Ceylon, except that, when they receive interest, or the proceeds of the sale of securities, on behalf of their principals, they may draw bills of exchange or grant letters of credit, payable out of India, for the purpose of remitting such interest or proceeds at the risk of the principals. The effect of these restrictions is to prevent the Presidency Banks from dealing in foreign exchanges or otherwise employing their capital out of India.

The Presidency Banks in accordance with the provisions of agreements into which the Government of India has entered with them, act as bankers for the Government of India, paying and receiving money on its behalf and managing the public debt; they receive in return a fixed annual payment, and a commission on the amount of the public debt which they manage. The Government also undertake to keep a minimum balance at each bank, or, failing this, to pay interest on the deficiency.

The following table shows the extent of the business of the Presidency Banks at the end of December 1909:—

	Bank of Bengal.	Bank of Madras.	Bank of Bombay.	Total.
	£	£	£	£
Paid up capital - - - - -	1,333,333	100,000	666,667	2,400,000
Reserve - - - - -	1,120,000	293,333	686,667	2,100,000
Public deposits - - - - -	997,364	328,105	806,275	2,131,744
Other deposits - - - - -	11,524,977	3,337,465	6,896,559	21,759,001

Banks registered under the Indian Companies Act.—The number of joint stock companies registered as engaged in banking or loan operations in India, on 31st March 1909, was 507. The majority of these companies consist of societies with a relatively small capital, but the number includes 49 establishments with a paid-up capital of or exceeding £10,000. The corresponding number of such companies in 1906 was 34.

CHAPTER IV.

LAND REVENUE.

LAND
REVENUE.

LAND TENURES.	REVENUE ASSESSMENTS, &c.
LAND LEGISLATION.	COLLECTION OF THE REVENUE.
REVENUE SURVEYS, SETTLEMENTS, &c.	WARDS' AND OTHER ESTATES.

(For further details see *Statistical Abstract of British India, Tables 45 to 49 and 122.*)

The present chapter deals with Land Revenue (including revenue from Capitation Tax, Fisheries, &c.) and with subjects appertaining thereto. From time immemorial a share of the produce of the land has been the chief source of public revenue in India. Land revenue is still the mainstay of the Government, constituting nearly 40 per cent. of the total net revenue that accrues to the Indian Exchequer.

LAND TENURES.

Land
Tenures.

Owing to its far-reaching social and political effects the proper administration of the land revenue has always been one of the chief problems of the Indian Government, and during the early years of British rule the best methods of assessment were keenly debated. In 1793 Lord Cornwallis introduced into Bengal a permanent settlement, by which the demand of the State was fixed and made for ever unalterable. Other systems were gradually evolved, and at length over the greater part of India a system of periodical settlements was established, under which the State demand is revised at recurring periods of 10 to 30 years, the latter period prevailing in all the larger provinces except the Punjab and the Central Provinces, where settlements are usually made for 20 years, and in Burma where the ordinary term is now 15 years. At these settlements careful surveys are made of all holdings and records of rights in the land. The policy of long term settlements is being extended. Under the system of periodical revisions of the land assessment the State secures a share in the increased rental value arising from the general progress of the community. Of late years measures have been taken to exempt improvements from assessment, and generally to make the enforcement of the rights of the State as little burdensome as is possible to the revenue-payer. Periodical revision also affords the opportunity of reducing the assessment in villages or tracts which have declined in prosperity, and of correcting inequalities arising from any cause.

When the revenue is assessed by the State, permanently or temporarily, on an individual or community owning an estate, and occupying a position identical with, or analogous to, that of a landlord, the assessment is known as *zamindari*; where the revenue is imposed on individuals who are, or who represent, the actual occupants of holdings, the assessment is known as *ryotwari*. Under either system there may be rent-paying sub-tenants. In southern India, where most of the land is held by petty occupiers direct from the State, the occupiers have the right to retain their holdings so long as they pay the revenue due from them. In both the permanently and temporarily settled districts of northern India laws have been passed to safeguard tenant rights. The permanently settled districts, in which all holdings are *zamindari*, cover most of Bengal and Eastern Bengal, and parts of Madras and the United Provinces. As regards temporarily settled districts, *zamindari* estates, held by proprietary groups or large individual proprietors, are chiefly found in the Punjab, the United Provinces, the Central Provinces, and Orissa (Bengal), while in Bombay and Sind, Burma, Assam, Berar, and most of Madras the system of *ryotwari*, or peasant proprietors, prevails.

The appended table gives the acreage of the surveyed areas in which the various tenures prevailed during 1908-9 (in thousands of acres). The figures include waste and uncultivated areas as well as cultivated lands, and are merely indicative of the extent to which the two systems respectively prevail.

LAND
REVENUE.

Province.	Ryotwari (Peasant Proprietors).	Zamindari (Individual Proprietors or Village Communities).		Total.
		Permanently settled.	Temporarily settled.	
	000 acres.	000 acres.	000 acres.	000 acres.
Burma	113,004	—	—	113,004
Assam	25,871	3,931	1,496	31,298
Eastern Bengal	—	21,712	7,004	28,716
Bengal	—	59,240	14,850	74,092
United Provinces of Agra and Oudh	—	7,841	60,575	68,416
Punjab	—	—	62,220	62,220
North-West Frontier Province	—	—	8,438	8,438
Bombay	44,827	—	3,785	48,612
Sind	29,933	—	—	29,933
Central Provinces	1,682	—	40,662	42,344
Berar	11,289	—	—	11,289
Madras	61,577	29,179	—	90,756
Minor Administrations (Ajmere, Coorg, Manipur)	1,043	959	735	2,737
Total	289,226	122,864	199,765	611,855

It will thus be seen that about 47 per cent. of the total area is held by peasant proprietors, while 20 per cent. is held by permanently settled, and 33 per cent. by temporarily settled, *zamindari* proprietors.

LAND LEGISLATION.

Throughout the major part of the province the relations between landlord and tenant are governed by the Bengal Tenancy Act, which continued to work satisfactorily. Of the districts where there has been no general survey and record of rights, the landlords and tenants of Midnapore seem to have had recourse most freely to the Act. Settlement operations in the extensive Government estates of that district appear to have educated tenants in their rights and duties, and the lesson has to some extent been conveyed also to the landlords and tenants of private estates, whose relations are somewhat strained. In South Monghyr extensive use was made of the Act to effect a reduction of rent and an amiable settlement of long-standing rent disputes between landlords and tenants. The settlement operations in Chota Nagpur have yielded much information regarding local agrarian conditions and causes of dispute between landlord and tenant, and the Chota Nagpur Tenancy Act of 1908 was passed to amend and codify the existing laws. A new tenancy law for Orissa is under consideration.

Owing to the protection afforded by the Agra Tenancy Act the area held by occupancy tenants and non-occupancy tenants of 12 years' standing, or holding on long term leases for seven years and upwards, has markedly expanded. Out of 20½ million acres held by ordinary tenants 13½ million acres are now protected.

The results of the working of the Bundelkhand Alienation of Land Act, 1903, seem to have been encouraging. During a year of scarcity in which there was every inducement to agriculturists to raise money by selling part of their property, the Act produced an increase in the acreage of land held by agricultural castes. Though the Act must tend to depreciate the selling value of land by limiting the number of purchasers, the price per acre is rising owing to reduced assessments and, in parts, the introduction of canal irrigation. Attempts to evade the Act were few.

The Punjab Land Alienation Act of 1900 for the first time underwent the severe test of a year of acute agricultural distress. There was nothing to show that it has caused any undue contraction of credit, nor has the limitation of the market reduced the prices of land. The tenant, instead of alienating his land during scarcity, now applies to Government for suspensions of land revenue and for loans. The area of land sold in the year was 9 per cent. below the average of the quinquennium 1902 to 1906, and most of it was bought by members of agricultural tribes. The Act has effected its purpose by very materially reducing transfers from the agricultural to the non-agricultural community. The average price per acre of cultivated land has risen to Rs. 97, or 108 times the land revenue assessed. But though a net area of 339,524 acres of land has been released from mortgage during the past four years, the burden of debt on land has been increased. Nevertheless, the peasant is undoubtedly less reckless in borrowing than under the system of unlimited credit. It is too early to

- LAND REVENUE.** gauge the effect of the amendments made in the Act of 1900 by the amending Act of 1907. Their general object was to remove defects which had come to light in the working of the law, and to increase the difficulty of evading its provisions.
- North-West Frontier Province.** The Punjab Alienation of Land Act, 1900, as modified by the North-West Frontier Province Regulation No. I. of 1904, and as amended in 1907, continued operative in three districts, and gave general satisfaction. Transactions in land increased considerably, but the area of land transferred to money-lenders showed a marked decrease.
- Burma.** There is a tendency in Burma for land to pass from agriculturists to non-agriculturists, partly owing to the remarkable rise in the value of land. Legislation to regulate land alienation has been under consideration, and a Burma Tenancy Bill has been introduced with the view of protecting the agricultural tenant against rack-renting and arbitrary eviction.
- Madras.** The Madras Land Encroachment Act of 1905 worked without hardship. The important measure for defining and regulating the position of tenants in the *zamindari* areas, known as the Madras Estates Land Act of 1908, has not been in force long enough for the people to understand its provisions, but certain zamindars view it with disfavour. Its immediate effect in some districts has been disturbing, and it has led to litigation.

REVENUE SURVEYS AND SETTLEMENTS AND LAND RECORDS.

- Revenue Surveys and Settlements and Land Records.** For the purpose of land revenue assessment revenue surveys are necessary. Cadastral maps showing the holdings are prepared, and corresponding field registers are made showing from whom the revenue assessment is to be realised, and also the amount of such assessment. The record also usually exhibits the existing rights in, and encumbrances on, the land. As the revenue records are carefully revised at short intervals a very extensive and complete system of registration by public entry is being built up, and transfers of land are easily attested. Settlements (or re-settlements) in new or in temporarily settled areas are always in progress. In consequence of improved methods the period occupied in the process is much shorter than formerly, and involves comparatively little harassment of the people.
- Bengal.** A scheme for an independent provincial survey department has been sanctioned. Survey and settlement work during the agricultural year to September 1908 extended over 14 districts. The total area for which a record of rights has now been completed in Bengal is 44,007 out of 115,819 square miles. Rents were settled for 257,733 tenants. The revision of the records of the last settlement in the temporarily settled districts of Orissa was continued on the improved lines sanctioned last year. It was found that out of 352,872 holdings dealt with ownership had been changed in 73 per cent. in 10 years. Revision operations are more popular with the ryots than the zamindars. There is a growing appreciation of the usefulness of the records of rights and of the village and other maps.
- United Provinces.** In the United Provinces the revision of settlements in Agra province was practically completed, and the survey branch of the Land Records Department was abolished. The reorganised Land Records Department has made progress in all directions. The village maps of Agra Province have been brought up to date. A revised Land Records Manual has been prepared.
- Punjab.** Settlement operations were completed in Mianwali district in 1907-8 and in Gurgaon district in 1908-9, and made good progress in six other districts. The assessments in these districts gave an increased land revenue of 13 and 15 per cent., respectively. In order to save trouble to the people and cost to the Government it is proposed to shorten settlement operations by curtailing the time spent on measurement work and the revision of the record. Over 835,000 changes in permanent rights were attested. The land records save landowners and cultivators from many bitter disputes and ruinous litigation. The agriculturist element in the *patwari* staff was strengthened.
- North-West Frontier Province.** Settlement operations in the Frontier Province were completed during 1906-7 after six years' work. But owing to complaints of unduly heavy enhancements of revenue imposed in the settlements an inquiry was undertaken, and it was shown that, although defensible from a purely revenue standpoint, the enhancements were too high and sudden, while insufficient consideration had been paid to the poor

LAND REVENUE. communications and to the insecurity of life and property inseparable from a border tract. Proposals for certain deductions which should secure a reasonable measure of relief have already been sanctioned for the Kurram and Tochi Agencies, and are under consideration for four districts. In the Department of Land Records the number of mutations attested was 125,795.

During 1908-9 demarcation in advance of cadastral survey by local agency was undertaken in three districts. In order to correct obsolete maps there were revision surveys in seven districts. Extensive surveys, necessitated by extensions of cultivation, were undertaken in five districts. Of the 37 districts of the province 31 are wholly or partly under settlement and one is about to be settled. The remaining districts are hilly and sparsely populated, and it has been decided that settlement is not at present necessary. The area under settlement is about 48,000 square miles, representing under one-third of the gross area, but including most of the cultivated area. In five districts second settlements have been made. In one a third settlement is in progress. During 1908-9 settlement operations were in progress in two districts of Lower, and four of Upper, Burma. The average cost of the operations was 7d. per acre. It has been decided to extend the normal period of settlement from 15 to 20 years and to graduate the increases of rates imposed in revision settlements. The rates fixed in the first settlements were very low and early revision was desirable, but now that in most districts of Lower Burma normal rates have been fixed, the need of frequent revision and considerable increases in revenue rates has largely disappeared. It has also been decided to devote at least two years to the examination on revision of any area proposed for re-settlement. New rates consequent on settlement were notified in two districts on a cultivated area of 509,943 acres, the aggregate revenue demand being increased by 21,560l., or 29 per cent. A reorganisation scheme for the Land Records Department came into operation during the year.

During the year settlement operations were carried on in five districts, but were much hampered by the employment of the staff on work connected with the scarcity. In the Land Records Department satisfactory progress was made, especially in Berar. **Central Provinces and Berar.**

In 1907-8 the Department of Land Records was separated from that of Agriculture, and the control of petty settlements was transferred to the Director of Land Records. A survey and record of rights for the entire settled area of the province are being prepared, and afterwards the village maps and records will be kept up to date. The record of rights is increasingly utilised by executive and judicial officers. Survey and settlement operations on a large scale were conducted in four districts of Eastern Bengal during 1908-9. In Assam the Nowgong and Darrang re-settlement operations were completed. **Eastern Bengal and Assam.**

Survey parties were at work during 1908-9 in six districts, but the department was again unable to work up to the forecast. Six settlement parties continued their operations. The aggregate land revenue demand of the districts either newly settled or re-settled is £3,536,680, an increase of 26.7 per cent. on the demand prior to re-settlement. The cost of the re-settlement operations up to the end of 1908-9 has been £1,089,320. The Land Records Department was, as in previous years, mainly confined to measures preliminary to maintenance. **Madras.**

The survey and settlement officers were engaged in demarcation, measurement, classification, and other work of a routine character. The Land Records Staff were occupied with the compilation and maintenance of the record of rights. The compilation was well advanced. **Bombay.**

REVENUE ASSESSMENTS AND INCIDENCE.

Land revenue is realised in the form of an annual payment for cash, the assessment rates being subject to no alteration during a prescribed term of years, though the amount leviable in any year may vary according to the area actually cultivated or to the condition of the harvest. Except in Bombay (where the assessment is not fixed in terms of produce), the land revenue is assessed so as to represent a share, not of the gross, but of the *net* produce (or net assets). In the *zamindari*, or landlord settlements, that widely prevail in Northern India, the cultivating tenant pays rent to a landlord. Of this rent the Government usually takes rather less than 50 per cent. as land revenue. **Revenue Assessment and Incidence.**

The incidence of land revenue on the fully assessed cultivated area is under 1s. 1d. per acre in the permanently settled area of Bengal, and represents, on an average, less than 25 per cent. of the rental. In the permanently settled tracts of Eastern Bengal it falls to about 11d. per acre, while in those of the United Provinces it rises to 1s. 4d. in Oudh and 1s. 10d. in Agra. In the temporarily settled tracts the

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incidence per acre is approximately 1s. 10d. in Upper Burma, 3s. 7d. in Lower Burma, 3s. 3d. in Sind, 3s. 3d. in Madras, 2s. 4d. in Agra, 2s. 6d. in Oudh, 2s. 4d. in Eastern Bengal, 1s. 11d. in Bombay, 1s. 7d. in Berar, 1s. 5d. in the Punjab, and 8d. to 9d. in the Central Provinces. A return recently presented to Parliament on land revenue assessments in the Punjab since 1855 (Cd. 3991) shows that while the rate of land revenue per cultivated acre measured in rupees has not varied much in the last 50 years, its incidence measured in gold has greatly decreased. During this period there has been a remarkable rise in the selling prices of land. Rates of revenue vary greatly with the productive power of the soil, advantages of climate and irrigation, and facilities for marketing produce. The land revenue rates for Sind and Madras given above, include charges for State irrigation; elsewhere the land revenue rates exclude these charges. In Madras and Bombay the revenue demand is not enhanced on account of increased productiveness due to private improvements, while in Northern India such improvements are not taken into account in assessing the revenue until a period varying from 20 to 45 years has elapsed. It may be added that the burden of the land revenue per head of the population of British India was under 1s. 7d. in 1908-9.

It has been calculated that in the Central Provinces the share of the gross produce represented by the land revenue is less than 4 per cent. of the average annual value; in Berar, the Deccan, and the greater part of the Punjab, about 7 per cent.; and in Gujarat, 20 per cent. It is certain that the Government now takes a very much smaller share of the gross produce than was customary in the days before British rule, while the assessments are lower than those that prevail generally in the Native States. The Government makes liberal reductions of assessments in cases of local deterioration, where such reductions cannot be claimed under the terms of settlement.

COLLECTION OF THE REVENUE.

Collection of
the Revenue.

The fluctuations in the gross land revenue receipts (exclusive of those credited to irrigation) in past years may be seen from the following table:—

Year.	Land Revenue Receipts (excluding those due to irrigation).	Variation (Average of Five Years, 1881-5=100).
1881-5 (five years' average)	£	
1886-90 " " (annexation of Upper Burma)	14,748,000	100.0
1891-5 " " " "	15,445,000	104.7
1896-1900 " " (includes two famines)	16,522,000	112.0
1900-5 " " " "	17,217,000	116.7
1905-6 (single year)	18,483,000	125.3
1906-7 " " " "	18,836,000	127.7
1907-8 " " (widespread shortage of crops)	19,794,000	134.2
1908-9 " " " "	18,719,000	126.8
	19,759,000	134.0

The general increase in land revenue is attributable to a variety of causes—to the inclusion of new territory (as Upper Burma); to the bringing of new land under cultivation as in Lower Burma, the Central Provinces, Sind, and the Punjab; to the inclusion of Berar since 1st October 1902; and to the progress of settlements and re-settlements, which, owing to the generally enhanced values of land, usually result in additions to the land revenue. Irrigation canals have enabled the cultivable area to be greatly extended, especially in Sind and the Punjab. In the five years to 1906-7 the cultivated area in the Punjab increased by no less than 1½ million acres, and the area under canal irrigation increased by over 1½ million acres to 6½ million acres. As a result the provincial assessment was increased by about £147,000. The land revenue is usually paid punctually, and it is seldom necessary to have recourse to imprisonment, sales of land, or other processes for the recovery of arrears.

The receipts for 1908-9 were seriously affected by the failure of the winter rains in Bombay and other provinces, and the partial drought in Upper Burma. On the other hand, there were large collections in the United Provinces and the Central Provinces of arrears of land revenue suspended during the famine. There was larger expenditure on account of compensation to subordinate officials for dearness of grain, and unexpectedly heavy charges for survey and settlement operations in the Punjab and Madras.

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The land revenue receipts in 1907-8 and 1908-9 were made up as follows:—

	1907-8.	1908-9.
Ordinary land revenue	£17,781,132	£18,864,010
Assessment of alienated lands, less quit-rents*	630,551	633,533
Capitation tax, or house tax levied in lieu thereof†	607,897	660,074
Recovery of survey and settlement charges‡	99,767	39,090
Sale of waste lands and redemption of land revenue	59,957	50,365
Fisheries and other receipts	578,235	581,362
Sale of proprietary right of Government in land	2,316	21,670
	£19,759,855	£20,850,104
Deduct portion of land revenue due to irrigation	1,040,533	1,091,044
Total land revenue	£18,719,322	£19,759,060

The charges in 1908-9 included £1,588,494 for district administration, £451,396 for survey and settlement charges, £945,507 for land records, and £668,071 for collection of the revenue. The total charges were £3,653,932, and the net revenue £16,105,128.

The total advances made by Government to cultivators during 1908-9 amounted to £2,261,040, and the total amount of advances outstanding at the close of the year was £3,887,283. The advances were chiefly for the relief of agriculturists, but partly for the improvement of land and for loans to co-operative credit societies. No less than £969,575 was advanced for relief in the United Provinces alone.

The progress of the land revenue will now be reviewed province by province. The figures are taken from the land revenue reports relating to the agricultural year, while those given above are from the corrected Accounts of the Government of India, and relate to the financial year.

The land revenue of Bengal remains fairly constant, as most of the province is under permanent settlement. The revenue demand for 1908-9, excluding arrears, amounted to £1,925,822, including £1,525,020 from 114,153 permanently settled estates, £206,850 from 10,466 temporarily settled estates, and £193,952 from 1,530 estates under the direct management of Government. As in 1907-8, bad harvests in certain districts and high prices of food-grains adversely affected the collections, and the percentage of collections on demands, 96.0 per cent., was the lowest, and the outstanding balance, £75,386, the highest, for five years. Money orders are increasingly used by the petty zemindars for the remittance of land revenue and cesses. The number of estates which became liable to sale for non-payment of Government revenue was 14,785, but only 656, or 4.4 per cent., were actually sold. Under the Public Demands Recovery Act, 141,013 certificates were filed for recovery of arrears of revenue, cesses, &c., compared with 139,044 in 1907-8; payment was generally secured on issue of notices or on attachment of property, but actual sale was necessary in 3,546 cases, and warrants were issued in 1,186 cases, 33 defaulters being imprisoned. Advances under the Loans Acts reached the large sum of £301,055, the greater part being under the Agriculturists' Loans Act. The increase is the result of the Government policy of using loans as a means of alleviating scarcity due to crop failures. The loans are readily taken up by the ryots, and, as a rule, promptly repaid.

In the United Provinces, as was inevitable in a famine year, the land revenue collections for the year ending 30th September 1908 fell far short of the demand. The fixed land revenue demand in 1907-8 was £4,296,309. The collections were short of the demand by about £1,022,000, the greater part of which was either suspended or remitted. The real arrears were relatively small. Other sources of revenue, not strictly classed as land revenue, are the occupiers' rate (receipts, £683,042) and the owners' rate (receipts, £14,525), which constitute payments for irrigation, besides cesses, &c. The collections on account of canal rates rose with an increase in the area irrigated. There was, owing to famine, a great increase in advances under the Land Improvement Loans Act and the Agriculturists' Loans Act, the total amounting to the large sum of £1,871,000. The loans were chiefly for the purchase of seed and plough cattle and for the repair or construction of wells. As regards coercive processes, the preference for citations over writs of demand still continued. The

* Mostly from Bombay. † Mostly from Burma. ‡ From Bengal and Eastern Bengal and Assam.

LAND REVENUE. number of warrants for arrest (4,685) showed a considerable increase. Attachment of moveable property was not abnormal, and only in 74 cases was the attached property sold. There were no sales of immoveable property.

Punjab. The year was one of short rainfall, widespread failure of both harvests, high prices, and scarcity. The area matured was only 71 per cent. of the quinquennial average. The fixed land revenue demand for the year to 30th September 1908 amounted to £1,377,000, or about £8,000 more than in 1906-7, owing to new settlements. No less than £268,962, or about one-fifth, of the fixed land revenue demand was suspended. The "fluctuating" revenue amounted to £268,579 in 1907-8. The "fluctuating" system in which the demand varies with the crop is applied for the most part to canal-irrigated and riverain tracts. Miscellaneous revenue, mostly derived from sales of Government estates, amounted to £77,500. Coercive processes for collection of revenue showed a decrease. Agricultural advances amounted to £148,700.

North-West Frontier Province. In 1907-8 the harvests were below the average, but the revenue increased and all arrears were promptly realised. The demand was increased by £8,100, owing to new assessments. Of the total demand of £122,076 on account of fixed land revenue, 99½ per cent. was realised. Fluctuating and miscellaneous land revenue, between them, contributed £23,062, compared with £27,450 in 1906-7. The system of fluctuating assessments is generally appreciated. Coercive processes were much fewer, the number of writs and warrants of demand falling from 2,535 to 1,789. The reduction was mainly in Peshawar district. In no case was imprisonment necessary. The agricultural advances made during the year amounted to £5,800.

Burma. The agricultural year to 30th June 1909 was excellent throughout the province; cultivation extended (partly owing to irrigation), and the rice crop was a record one.

	1907-8.	1908-9.	
	£	£	
Land Revenue	1,665,511	1,748,757	Upper Burma recovered after a series of bad
Capitation tax	347,337	357,987	harvests. The totals of revenue (exclusive of
Household tax	267,459	273,556	arrears demand) under the various heads for the
Fisheries	173,185	186,353	last two years are shown in the margin. The
Other sources	172,596	202,140	current land revenue demand amounted to
			£1,748,757, of which about 99 per cent. was
			collected. Under each head there were increased
			receipts, and collections were promptly made
			without undue recourse to coercive processes. The
			increase in land revenue was due to extensions of
TOTAL	2,626,088	2,768,793	

cultivation and the abundant harvest, and to enhanced rates consequent on revision settlements in Lower Burma. The number assessed for capitation tax was 1,314,495, an increase of 41,038. There was a rise of 5,195 to a total of 761,230 in the number of households assessed to the household tax, or *thathameda*. There was a satisfactory increase in receipts from the river and other fisheries, which had fallen off owing to bad seasons. The heading "other sources" includes receipts from royalties on petroleum, ruby mines, water rate, &c. The petroleum royalties largely increased. As regards coercive processes for the recovery of revenue, the number of defaulters committed to jail was only 28. Capitation tax and *thathameda*, which are levied in Lower and in Upper Burma respectively, are harder to collect without process than land revenue. Coercive processes are mostly issued not on account of contumacy, but because the assessee are not readily found. The amount of agricultural advances rose to £69,750. The sale price and the mortgage value of land both increased.

Central Provinces and Berar. The year to 30th September 1908 was unfavourable and brought widespread hardship to the agricultural classes. The land revenue demand (excluding cesses) was £566,164, but liberal revisions and suspensions reduced the net demand for collection to £426,844. Coercive processes increased, mainly in Nagpur district. The number of defaulters arrested was 106, but none was imprisoned; attachments and sales of property numbered 453 and 13 respectively. Agricultural advances to the large amount of £224,676 were made during the year for the purchase of seed and cattle. In the Central Provinces about one-sixth of the Government waste lands available for cultivation were allotted during the year.

In Berar during the year to 31st July 1908 the land revenue demand, including cesses, amounted to £594,362, a small increase over that of 1906-7; almost the whole of this amount was collected during the year. There was a substantial increase in the number of coercive processes owing to the abnormal conditions of the year, but not a single field was brought to sale. In Berar the agricultural advances amounted to £21,023.

The year 1907-8 was not very favourable agriculturally. The total land revenue demand was £1,250,835, of which 95¼ per cent. was collected. Of the total revenue 52 per cent. was contributed by permanently settled estates, 36 per cent. by temporarily settled estates, and 12 per cent. by estates under direct Government management. Owing to the extension of cultivation the revenue in Assam increased by 2¼ per cent. to £347,221. Miscellaneous land revenue amounted to £66,356. As regards coercive measures, there was a slight increase. The amount of agricultural loans granted, £13,496, was smaller than in the previous year.

The south-west monsoon in 1908 was untimely and ill-distributed, while the north-east monsoon was generally in considerable defect. The total crop area exceeded the normal by 1,348,000 acres, or nearly 4 per cent., but the outturn was in no case above normal. The total current demand in 1908-9 for land revenue, including charges for irrigation and miscellaneous receipts, was £4,263,300 (in addition to £428,000 for various cesses), of which 98 per cent. was collected. Of the above demand, £332,000 represents revenue from permanently settled estates, and £50,400 quit-rents from villages held under special tenures, these sums being fairly constant; the remainder, which showed an increase, comes mainly from peasant proprietors. Owing to expansion of cultivation there was some increase in *ryotwari* holdings, which covered 24½ million acres. Remissions amounted to £196,000, of which £86,000 was due to the state of the season. As the result of orders which were passed in 1904 to restrict the issue of demand notices to cases of real necessity, there has been a decline in the number from 6,212,162 in 1903-4 to 1,912,339 in 1908-9, while the number of sales has fallen from 9,479 to 2,600. Advances were larger than in 1907-8, amounting to £66,300 under the Improvement and Loans Acts.

The harvests in Bombay and Sind were poor during the year to 31st July 1908, and for agriculturists generally the season was a period of stress. The total land revenue demand amounted to £2,745,029. A large sum was under suspension, especially in the Central Division. The number of coercive processes in Bombay proper and in Sind showed a considerable decline. The agricultural advances made in Bombay and Sind amounted to £147,616.

WARDS' AND OTHER ESTATES.

Courts of Wards have been established in most of the larger provinces. Primarily intended for the protection of the Government revenue, they are also beneficial to the interests of the owners, and recent changes in the law have been largely made in the owners' interests. Before 1899, the Courts had power to assume the management of estates of minors, of persons physically or mentally incompetent to manage their own property, or of persons declared by the local Government, at their own request, to be disqualified for its management. Since that year, various amending Acts have been passed in the several provinces, their general effect being to increase the powers of the Court of Wards with regard to the management of the properties under its charge and the discharge of encumbrances, and to prevent the disqualified proprietors from creating new charges without the knowledge of the Court. The duty of the Courts is to manage the estates under their charge in the interests of both proprietors and tenants; to support the family of the proprietor, and to educate young wards; to pay off debts due by the estates; and to spend the surplus income on the improvement of the property in the best attainable way.

At the end of the last agricultural year for which figures were available there were 615 estates under management in the eight provinces that have Courts of Wards. The gross income of the estates was about £2,472,000.

In Bengal there were 1,530 Government estates under direct management, with a current revenue demand of £193,952. As security for a loan of £333,333 at 4 per cent. to Maharaja Sir P. C. Tagore, the Patildaha estates in Bengal, the property of the Tagore family, have been mortgaged to Government, and are to be managed by officers selected by Government until the loan is repaid. In Eastern Bengal and Assam there were 1,572 Government estates at the close of 1908-9, the number held under direct management being 1,411. In the United Provinces the number of Government estates fell from 633 to 623, most of them being properties bought in under the Bundelkhand Encumbered Estates Act. In Bombay proper there were 552 estates under the management of the Talukdari Settlement Officer and 307 encumbered estates under a special manager in Sind.

CHAPTER V.

REVENUE FROM TAXATION AND OPIUM.

SALT.
EXCISE.
PROVINCIAL RATES.
STAMPS.

CUSTOMS.
INCOME TAX.
REGISTRATION.
OPIUM.

(For further details see Statistical Abstract for British India, Tables 43, 45 to 47, 50 to 58, and 61 to 66.)

Revenue
from Taxa-
tion.

Of the eight heads of revenue dealt with in this chapter, seven comprise the tax revenue of India, and furnish about 45 per cent. of the total net revenue of the Indian Government. To this the chief contribution is made by excise, the yield of which has increased in recent years, mainly on account of higher rates of duty and stricter supervision. Next come customs and stamps, both of which have benefited by the great progress in trade and industry. The salt revenue has diminished, owing to reductions, amounting to 60 per cent., in the rate of duty since March 1903. Receipts from income tax and registration, though small, are increasing.

SALT.

SALT.

General.

From time immemorial a tax on salt has been a source of revenue in India. The salt revenue is raised by a duty on all salt imported into, or manufactured in, India. The rate of duty has in past times ranged from 3 annas (in Burma) to 3½ rupees (in Bengal) per maund of 82½ lbs. In 1882 a general duty of Rs. 2 per maund was introduced (except in Burma) and raised in 1888 to Rs. 2½. In 1903 the rate of Rs. 2 was reverted to, and in March 1905 the tax was further reduced to Re. 1½ per maund. A further reduction to one rupee (or 1s. 4d.) per maund was effected from the 20th March 1907. In Burma the rate has remained since 1888 at one rupee per maund on imported salt, and a system has been introduced by which the greater part of the salt which is locally produced pays a duty of 8 annas per maund. The Indian salt duty is now more uniform, and lower on the average, than at any former time. The reduced duty and increased facilities for transport have made salt cheaper than ever before. The successive reductions of duty have led to a large increase in consumption throughout India, as will appear from the table in the margin, the increase in the five years since the reductions began being 24 per cent. Although, however, consumption has grown, the sacrifice of annual revenue (about £2,656,000) cannot be made good by enhanced consumption within any period worth considering. Owing partly to a wider adoption of the credit system there was a decrease in the revenue receipts for 1908-9. The gross yield of the salt duty during recent years is shown in

Year.	Issues of Salt in 100,000's of Maunds.	Duty per Maund.	Gross yield of Duty.
Average, 1898-9 to 1902-3	360	Rs. 2½	000 £ 6,002
1903-4	376	2	5,250
1904-5	394	1½	5,355
1905-6	407	1½	4,376
1906-7	431	1	4,363
1907-8	444	1	3,339
1908-9	454	1	3,276

the table. The yield in 1908-9 was £3,276,159, of which nearly 29 per cent. was derived from imported salt. The charges amounted to £343,108, exclusive of £254,000 paid under treaties in the form of compensation, principally to Native chiefs who have assigned their salt sources to the Government of India.

The principal sources of salt supply are the sea coast, especially in Madras and Bombay, where salt is manufactured by the evaporation of sea water; the salt lakes and pits of Rajputana; the salt mines of the Punjab and North-West Frontier Province; and importations from abroad, which supply most of Bengal, Eastern Bengal and Assam, and Burma. The duty is levied on salt at the place of manufacture, or at the port of importation, before it passes into consumption. Some of the salt sources belong to, or are worked under the direct control of, the various Local Governments; others are owned or leased by private individuals. The salt supply of India is not, therefore, a Government monopoly, and the importation of salt is unrestricted. Manufacture is not allowed where the circumstances are such as to render proper collection of the duty impracticable, as, for instance, on the coast of Bengal.

Northern
India.

The salt sources under the control of the Northern India Salt Department comprise: (1) the Rajputana sources, including the Sambhar Lake and the brine springs at Pachbadra and Didwana in the Jodhpur State; and (2) the Punjab sources, including

SALT.

the Mayo, Warcha and Kalabagh mines, the Kohat mines, the Mandi mines, and the brine springs at Sultanpur. The most important sources are the Sambhar Lake and the Mayo mine. Since 1870, when the lake was leased by the Government of India, over 141 million maunds of salt have been taken from it, and the financial results show a total credit balance of £287,000. Owing to fears that the Sambhar salt was becoming exhausted, a long trench for obtaining subterranean brine was excavated through the bed of the lake in 1906. The trench has proved an undoubted success, and it is being extended, while combined storage and evaporating reservoirs are under construction. The Sambhar salt is sold at a uniform price of 4 annas per maund, with a charge of 3 pies for clearance; the sales in 1908-9 amounted to 5,198,000 maunds. The price of Didwana salt is 9 pies; and of Pachbadra salt 1½ annas, with a charge of 3 pies for clearance. The sales from the Mayo and other Punjab mines amounted to 3,202,456 maunds. The Mayo salt is sold for 9 pies per maund, or, at the Khewrah depôt, for one anna. Kohat salt, on the average, costs about 9 pies. The gross revenue of the Northern India Salt Department in 1908-9 was £757,265, or £7,607 more than in 1907-8, while the total charges amounted to £77,988. Rumours of a further reduction in the duty adversely affected the sales. The total quantity issued by the Department for consumption was 9,523,039 maunds, as compared with 10,002,086 maunds in 1907-8. The following table shows the provinces and states mainly supplied by the Department, with the salt consumption and the average retail price of salt in each in 1908-9:—

Province or State.	Total Consumption.	Average Retail Price per Maund.	Average Consumption per Head.*
	Maunds.	Rs. A. P.	Lbs.
North-West Frontier Province	197,436	2 0 7	7·64
Punjab	2,623,425	2 1 3	8·72
Kashmir and Jammu State	301,985	—	9·28
United Provinces	5,284,399	2 9 7	8·97
Behar (Bengal)	3,377,770	2 7 11	11·47
Central Provinces and Berar	2,695,532	2 12 4	15·16
Rajputana	1,133,040	2 5 10	9·14
Central India	1,157,880	2 7 3	11·04

* No allowance has been made for increase in population since the census of 1901.

The Department issued 44,062 licences for the manufacture of saltpetre and other saline substances in 1908-9. The refineries produced 597,392 maunds of refined saltpetre.

The number of persons arrested for offences against the salt law was 787, of whom 449 were released. Of 269 persons convicted 30 were imprisoned.

The salt consumed in Bengal is imported from abroad or from other parts of India. In the maritime tracts salt production is prohibited, owing to the difficulty of preventing illicit manufacture. The quantity of salt imported by sea in 1908-9 was 13,910,750 maunds, an increase of 4·6 per cent. upon 1907-8. About 1,180,750 maunds of Madras salt were imported into Orissa by rail. The average wholesale price of salt, including duty, at the chief marts of Bengal was about Rs. 2½ per maund, having decreased by about 1½ annas as compared with 1907-8. The net amount of salt consumed in the province rose to 8,506,450 maunds, as against 8,281,920 maunds in 1907-8. The number of persons convicted of offences against the salt law was 128, a considerable increase on the number for 1907-8. An experimental fish-curing yard was established in February 1909, and duty-free salt was issued to fishermen.

The trade in salt has received a decided impetus by being set free from the restrictions of the *rawana*, or *pass*, system. Competition has been encouraged, and there has been in some districts a notable increase in the number of retail shops.

This province, like Bengal, depends on imported salt. The total consumption in 1908-9 was 3,333,023 maunds, being an average per head of over 8 lbs. The average wholesale selling price per maund, including duty, was Rs. 2.2.5, against Rs. 2.4.11 in 1907-8. There were no offences against the salt law, this being ascribed to the cheapening of salt by the reduction of the duty and to the vigilance of the preventive staff.

Originally there was a Government monopoly of salt manufacture in the Madras Presidency, but in 1882 an attempt was made to substitute private manufacture and abolish all Government factories. This, however, did not answer, and in 1888 a certain number of Government factories were established as a check on the prices and

SALT.

quality of the privately manufactured (or "excise") salt. The system thus instituted still exists. Of the 65 factories worked during 1908-9, 44 were under private and 21 under Government management. The quantity of salt manufactured was the highest on record, namely, 11,844,846 maunds, of which 7,414,558 maunds was "excise" salt. The imports from Bombay and Goa, mostly to West Coast ports, amounted to 1,428,911 maunds. Excluding the salt used for fish-curing, or sold to the French Government, or exported, the total of salt for consumption was 10,412,849 maunds. The average consumption per head was 19.0 lbs. in the whole Presidency, including Coorg and Mysore, and other Native States (except Travancore and Cochin), as compared with 19.3 lbs. in 1907-8.

The average wholesale price of "excise" salt fell from 3 annas 6 pies to 3 annas 4 pies per maund. Government salt is sold at a fixed rate of 3 annas per maund. The retail prices, including duty, varied from Rs. 1.6.3 to Rs. 2.8.3 per maund, against Rs. 1.6.11 to Rs. 2.14.8 in 1907-8. There was a further decline in offences against the salt laws, ascribed chiefly to the low price of salt consequent on the reduction of duty.

During 1908-9 there were 136 bonded yards open for curing fish under special regulations, whereby cheap salt is sold to fish-curers. The quantity of fish brought to be cured declined to 54,982 tons, the season being less favourable for fishing, and 808,501 maunds of cured fish left the yards fit for consumption.

Bombay.

The salt supply of Bombay comes from the Pritchard salt brine works, owned by the Government (Baragra salt), from sea-salt works on the coast, and from abroad, chiefly from Goa. Of the 436 sea-salt works one, at Dharasna, is worked by the Government; the remainder are owned by, or leased to, private individuals. Owing to increased demands for salt, new works are being established. The bulk of the Baragra salt is exported to the United Provinces, the Central Provinces, and Central India; while the Madras Presidency and its States, Hyderabad, Mysore,

Calcutta, and the Central Provinces, take large amounts of sea salt. The conditions of the year were favourable. The marginal table shows the issues of salt from each source in 1908-9. The consumption per head was 12.18 lbs., as against 12.58 lbs. in 1907-8, the fall being ascribed to the high prices of other commodities.

There was a fall in the average market price per maund in the various districts. Owing to the lower duty more salt is being used for agricultural and industrial purposes and as food for cattle. There was a further diminution in offences against the salt laws, ascribed to the lower price of salt.

Thirty fish-curing yards were open at the end of the year. The quantity of fish brought to be cured in bond rose from 183,406 to 248,778 maunds, and the quantity of cheap salt issued to fish-curers from 55,641 to 73,639 maunds.

Sind.

The Sind salt supply is derived chiefly from the sea-salt works at Maurypur, and in smaller quantities from salt deposits at Saran and Dilyar on the edge of the desert, and from importation. The quantity consumed during the year was 395,059 maunds. The consumption per head fell to 10.12 lbs. from 10.23 lbs. in 1907-8. The average market price was Rs. 1.14.6. It is believed that the consumer is receiving the full benefit alike of the reduction of duty and of the abolition of licences, which has enabled many petty dealers to stock salt, while their competition has lowered prices. Only one fish-curing yard was worked. Salt offences declined.

Burma.

One rupee per maund is levied on salt imported into Burma. All salt locally manufactured formerly paid an excise duty levied by a composition rate on vessels used for boiling brine; but a system of levying duty at the rate of 8 annas per maund on actual output has now been introduced into all districts where any large quantity is produced. An inquiry into the Burma salt industry was continued during the year. Duty was paid in 1908 on 1,593,703 maunds of imported salt, on which Burma mainly depends, and on 649,090 out of 765,046 maunds manufactured locally in districts under the system of direct taxation. The estimated output of other districts was 88,083 maunds. The estimated consumption was 2,330,876 maunds, of which 32 per cent. was Burma salt. The statistics relating to local production of salt are untrustworthy, but the returns show that it tends to increase. The imports of foreign salt, especially Aden salt, have largely increased. The average prices of both foreign and local salt vary greatly in different districts. There was an increase to 295,095 maunds in imports of salted fish, on which a duty of 6 annas per maund is levied.

EXCISE.

Excise.

The excise revenue is derived from the manufacture and sale of intoxicating liquors, opium, and hemp drugs. There is no excise duty on tobacco or betel. Opium, which is a common household drug, is usually taken in the form of pills or is dissolved in water and drunk. Opium smoking is not extensively practised. The excise revenue from opium is chiefly composed of duty and vend fees, and the rate of duty varies with local conditions, being highest where smuggling is most difficult. The right of retail vend is usually sold by auction. With regard to hemp drugs, cultivation is restricted and controlled; a duty is paid before issue, and retail sale is under licences, which are usually sold by auction.

The considerable growth of the excise revenue in recent years is due mainly to higher rates of duty and stricter excise control, and does not indicate a corresponding increase in consumption, although some increase has occurred through the expansion of population and the greater prosperity of certain classes. There has been a large and continuous reduction in the number of country spirit shops in the principal provinces. The Government consider that shops should not be so few that each has a monopoly over a wide area, lest prices should be unduly raised and illicit practices encouraged. Measures are being taken both to redistribute and to reduce the number of existing shops, as well as to improve the quality of the liquors sold.

In 1905, the Government of India convened a Committee to inquire into excise administration in respect of intoxicating liquors, and to propose reforms. In a Resolution, dated September 1905, they declared, in appointing the Committee, that they had no desire to interfere with those who use alcohol in moderation; but their settled policy was to minimise temptation for those who do not drink, and to discourage excess amongst those who do. The most effective way of forwarding this policy was to make the tax upon liquor as high as possible without stimulating illicit sale and production, and without driving people to substitute deleterious drugs for alcohol, or a more for a less baneful form of liquor. The Committee's report, dated 4th July 1906, was published as a Parliamentary Paper [Cd. 3327]. The orders passed thereon by the Government of India were also published as House of Commons Papers (142 and 209 of 1907 and Cd. 3816). As a result of the Committee's recommendations, an extensive programme of reform has been adopted, which is gradually being carried into effect. Some of the principal features of the Indian excise systems, with reference to the Government of India's recent orders, were outlined in the Moral and Material Progress Report for 1907-8.

The normal excise system for liquors, which will eventually prevail over the greater part of British India, is based on the grant by contract of the right of wholesale supply and the sale by auction of the right of retail vend. By these means the dangers of unrestricted competition for the supply of liquor and the attendant difficulties of proper supervision are avoided, while the largest possible part of the monopoly profits arising from these restrictions is secured to Government.

The following table shows the excise revenue for 1908-9 and 1907-8 under the different heads, as given in the Finance and Revenue Accounts:—

Year.	Licence and Distillery Fees and Duties.					Duty on Indian Consumption of		Fines, Confiscations, Miscellaneous.	Total Revenue.	Charges.	Net Revenue.
	Foreign Liquors, &c.	Country Spirits.	Toddy.	Opium and its Preparations.	Other Drugs.	Opium.	Ganja.				
1908-9	£ 351,407	£ 3,373,062	£ 1,027,493	£ 255,370	£ 392,280	£ 734,848	£ 234,172	£ 20,996	£ 6,389,628	£ 390,552	£ 5,999,076
1907-8	£ 335,771	£ 3,315,496	£ 974,155	£ 223,417	£ 364,431	£ 757,403	£ 225,443	£ 18,094	£ 6,214,210	£ 295,628	£ 5,918,582

A sum of £692,740 was yielded by customs duties* on exciseable liquors imported into India during the year. The net revenue from liquors and drugs (i.e., total excise revenue less charges, plus Customs duties on exciseable liquors) for 1893-4, 1903-4, and the last three years is given in the margin. In 1908-9 it amounted to rather less than sevenpence per head of the population effected.

* A duty is levied on all imported spirits, wines and beer, and credited to the head of Customs. The import duties in 1908-9 were Rs. 7 per gallon on proof spirit; Rs. 10 per gallon, irrespective of strength, on liqueurs; Rs. 11 per gallon, irrespective of strength, on perfumed spirits; Rs. 2½ per gallon on sparkling wines and Re. 1 per gallon on other wines; and 2 annas per gallon on beer. Imported opium is subject to a duty of Rs. 24 per seer, while other narcotic drugs pay the general import duty of 5 per cent. *ad valorem*.

Excise.

The number of retail shops and the excise receipts, as compared with the population, are shown in the following table, province by province :—

PROVINCE.	Population of Excise Area by Census of 1901.	Number of Persons per Retail Shop licensed in 1908-9 for the Sale of				Net Excise Receipts per 10,000 of Population in Rupees.	
		Coun-try Spirit.	Coun-try Fermented Liquor.	Opium and its Prepara-tions.	Narcotic or Intoxicating Drugs, other than Opium.	In 1907-8.	In 1908-9.
Bengal - - - - -	50,722,000	16,924	3,804	37,433	17,176	3,206	3,191
United Provinces - - - -	47,671,000	9,221	15,422	40,606	12,881	1,310	1,708
Punjab - - - - -	20,408,000	21,850	497,753	21,302	29,836	2,013	2,273
North-West Frontier Province -	2,120,000	55,800	—	25,547	23,825	1,188	1,310
Burma - - - - -	9,188,000	*	7,901	72,924	—	7,499	7,280
Central Provinces and Berar -	11,366,000	2,587	20,344	10,924	10,824	5,937	5,322
Eastern Bengal and Assam -	39,298,000	41,220	4,879	34,783	24,853	2,164	2,225
Madras - - - - -	38,228,000	3,386	2,141	34,189	58,371	5,736	6,154
Bombay - - - - -	15,525,000	6,381	1,598	19,191	27,047	8,962	8,885
Sind - - - - -	3,211,000	11,468	802,728	12,163	6,247	5,346	5,275

* For distillery spirits, 191,425 ; for outstill spirits, 164,078.

Bengal.

In Bengal the total excise revenue for the last two years, according to the departmental returns, has been as shown in the margin. The decrease in 1908-9 under country spirits was only partially compensated by increases under opium and hemp drugs. The excise revenue per head is about fivepence. Among various reforms adopted during the year may be mentioned :—(1) The abolition of passes for the transport of imported liquor, (2) a further extension of distillery areas, (3) an increase of the rate of duty on country spirit in 11 districts or parts of districts, (4) the abolition of 16 country spirit shops in Calcutta, (5) the reduction of the limit of retail sale of country spirit from 12 to 6 bottles in Calcutta. The last two reforms were effected on the recommendation of a committee appointed to inquire into the number and location of spirit shops in Calcutta. In 28 large towns local committees, largely composed of non-official members, were appointed to advise collectors as to the licensing of liquor shops for the ensuing year. In some places little interest was shown in the proceedings, but it would be premature to express an opinion on the work done. One noteworthy fact was the reduction of *tari* shops in Bhagalpur from 93 to 20 on the advice of the local committee. District officers are making a survey of existing country spirit shops, in order to determine whether or not they are in excess of requirements. A new Bengal Excise Act was passed in 1909.

Calcutta again contributed more than one-fourth of the total revenue from country spirit. In Burdwan and Sambalpur there was an increase in the convictions for drunkenness.

The sale and consumption of opium increased. The smuggling of opium to Burma continues to be practised on a large scale. The supply of opium from the Treasury to licensed shops in Calcutta and the vicinity has therefore been restricted. The abnormal consumption in Orissa has been checked, but smuggling is reported. No shops are licensed for selling opium prepared for smoking, but the habit, which is confined for the most part to low-class Muhammadans, and which has become prevalent in Calcutta, and in Midnapore and Orissa, has been specially reported upon, and it has been proposed to render illegal all gatherings for the purpose of smoking. The importation and sale of cocaine have been limited to qualified and duly licensed persons ; 260 licences were issued during the year. The number of persons convicted of illicit sale and possession of cocaine was 157, of whom 123 were in Calcutta. Restrictions have also been imposed on morphia and novocain. An increased consumption of *ganja* is ascribed to a fall in the wholesale price.

There was a decrease in the number of persons convicted in Bengal for excise offences, especially for illicit distillation of country spirits.

In the United Provinces the gross excise revenue for the last two years has been as shown in the margin. The excise revenue per head is about three pence. There was a further decrease, amounting to 15 per cent., in the consumption of country spirits, ascribed to the failure of the harvest and the consequent high prices of food grains, to the abnormally high price of the raw material of distillation, to the epidemic of malarial fever, and to restrictive measures.

Owing to arrangements with Rampur for establishing the central distillery system in that State, the outstill area was contracted in adjoining districts. The receipts from opium and hemp drugs showed little variation.

There was a decrease in prosecutions, which was most marked in cases of illicit distillation. There was a number of cases of illicit trading in opium and cocaine.

The year was one of preparation for the introduction of the contract supply system, which, from 1st April 1909, was introduced into one-third of the province. The issue of proof spirit has been abolished, and spirit of 50° under proof besides spirit of 25° under proof has been issued. Local committees were appointed for advising upon the number and location of liquor shops in towns of over 20,000 inhabitants. The number of shops for the retail sale of country spirit was reduced from 5,488 to 5,170, and of *tari* shops from 3,632 to 3,091. Proposals have been made for enhancing the sale price of opium. A new Excise Bill is under consideration.

The gross excise revenue in the Punjab for the last two years has been as shown in the marginal table. In 1908-9 there was a considerable increase in receipts, due chiefly to an increase in retail vend fees for country spirit and opium, resulting from keen competition at auctions. In eight years the income has doubled, in spite of a high still-head duty (raised still higher from 1st April 1909) and a large reduction in the number of retail licences. The quantity of country spirits sold was much smaller. There is a good deal of illicit distillation, especially among the Jats of the Central Punjab, among whom drunkenness and lawlessness are said to have increased. During 1908-9 the number of retail licences for country spirit was reduced by 32. A new Excise Bill is being drafted. Local committees are being formed in the large towns to advise as to the number and location of liquor shops.

There was a further decrease in the number of licensed opium shops, and the increased revenue was due to higher prices paid for licences. The sale of opium has been separated from that of hemp drugs. Bengal or "excise" opium is being substituted for other kinds hitherto consumed ; poppy cultivation in the Punjab (except in certain small areas) being abolished and the importation of Malwa opium stopped. Licences for the retail sale of hemp drugs were again reduced. The consumption of both *charas* and *bharg* is diminishing.

The excise receipts amounted in 1908-9 to £19,103, as against £17,313 in 1907-8, the increase of 10 per cent. being mainly in opium and country spirits. The gross receipts were : Imported liquors, £2,339 ; country spirits, £6,037 ; opium, £6,092 ; other drugs, &c., £4,635. In this province, where illicit distillation is practically unknown, and drinking is confined to large towns, efficient excise control is not difficult. The number of country spirit shops has been reduced in three years from 51 to 36. Several reforms were instituted on 1st April 1909 in consequence of recommendations of the Excise Committee. Others are under consideration.

The gross excise revenue during the last two years was as shown in the marginal table. The heavy decline in opium revenue was due mainly to the policy of restricting sales at the shops to the ascertained actual consumption of buyers, and secondarily to the fall in licence fees. It is feared that the decline in licit sales was counter-balanced by supplies of contraband opium, of which considerable quantities were seized by the preventive staff. 124,000 tolas were seized. The smuggling of cocaine increased. There was a large rise in the licence fees for the vend of *tari* and for the manufacture and sale of country

the licence fees for the vend of *tari* and for the manufacture and sale of country

Burma.

the licence fees for the vend of *tari* and for the manufacture and sale of country

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Excise. fermented liquor. An investigation was made into the number and location of liquor shops, and superfluous ones were suppressed. During the year excise committees were appointed in 10 towns to advise on the number of licences and location of liquor shops, and local opinion was also consulted elsewhere, while rules were framed to secure the supply of pure liquor of guaranteed strength and quality, to improve the arrangements for the vend of liquor, and to prevent its sale to unsuitable persons. An inquiry has been instituted as to whether means can be devised to lessen the increasing consumption of liquor among Burmans by moral influences and appeal to the precepts of their religion. The contract distillery system is to be still further extended. Shops for the sale of foreign and country liquors have been separated. A new Excise Bill is under discussion. Various improvements in the methods of working of distilleries are in progress. The control over retail sales of opium was strengthened, and the prices of opium were enhanced. More effective measures for dealing with habitual traffickers in illicit opium were under consideration.

Central
Provinces
and Berar.

The excise receipts for 1908-9, as compared with those for 1907-8, were as shown in the margin. Adverse agricultural conditions at the time of the annual auctions,

Gross Receipts from	1907-8.	1908-9.
	£	£
Country spirits and toddy	365,652	314,355
Opium	118,956	120,818
Hemp drugs	28,512	29,845
Miscellaneous, including foreign liquors	4,792	5,182
Total	£517,912	£470,200

the number of outstills was reduced from 1,078 to 961, and the number of liquor shops from 4,982 to 4,569.

The contract supply system has been extended, and 16 out of 22 districts are now wholly or mainly under that system. Opium and *ganja* smuggling continues to cause much trouble to the district authorities and loss to Government. A new Excise Bill is under consideration.

Eastern
Bengal and
Assam.

The excise revenue for the last two years has been as shown in the margin. The increase in 1908-9 was mainly due to favourable settlements. The revenue results of the substitution of the contract distillery system for outstills were

Gross Receipts from	1907-8.	1908-9.
	£	£
Imported liquors and rum	8,035	9,652
Country spirits	136,796	144,811
Opium	189,121	188,964
Hemp drugs	114,355	120,862
Miscellaneous, including toddy, &c.	4,943	4,646
Total	£453,250	£468,935

shops have been put in force. During the year under report the contract distillery system was extended to six more districts. The system, where in force, has led to an improvement in the quality of the liquor and to a diminution of drunkenness.

The treasury price of opium was raised from Rs. 37 to Rs. 40 per seer in five districts, with effect from 1st April 1909. The bulk of the opium consumption is in the Assam Valley districts, but in 1908-9 there was a slight decrease in the consumption, which had been increasing during recent years.

Madras.

The gross excise revenue during the last two years was as shown in the margin. The contract distillery supply system is in force over the greater part of Madras, but

Gross Receipts from	1907-8.	1908-9.
	£	£
Country spirits	664,238	765,194
Toddy	716,719	770,534
Foreign liquors	32,561	32,987
Opium	62,478	68,522
Other intoxicating drugs	32,151	34,718
Miscellaneous, including beer, &c.	21,404	17,408
Total	£1,529,551	£1,689,363

high prices, an unfavourable year for marriages, and, in some parts, a political temperance movement aided in diminishing consumption, and the revenue fell sharply, especially in Berar and adjacent districts. The consumption of country liquor was less by 326,000 gallons. The conditions of the year prevented any general raising of duty rates or changes of system, though duty rates were enhanced in five districts, while

disappointing. Increased receipts from country spirit and opium were accompanied by diminished consumption. There was a larger consumption of *ganja*, due to the abundant crop and comparatively low prices. The number of country spirit shops has been reduced in three years from 789 to 682, of *ganja* shops from 1,165 to 983, and of opium shops from 1,203 to 776. Further reductions are contemplated. Rules for ascertaining public opinion on the licensing of

in some small tracts non-distillery systems are in force. Over nearly the whole of the Presidency a tree tax is imposed on all palm trees tapped for fermented toddy, while shops for the retail sale of toddy are separately sold by auction. Many changes were introduced into the excise administration in 1908-9 in pursuance of the policy of reform, while others are to be effected. The character of wholesale and retail licences was altered, and the fees payable for them were

Excise. enhanced. The sale of liquor and intoxicating drugs to minors and to intoxicated persons was prohibited. The number and location of liquor shops were revised. The duty on country spirits was raised in five districts, and the tree tax was increased in one district. The enhanced receipts were due to a greater consumption (9 per cent.) of country spirits, to larger collections under tree tax, and to increased rentals.

The use of opium is almost restricted to the districts in the north-east of the Presidency, and to the Madras Town Circle. The quantity consumed, excluding that issued to Native States, was 1,309 maunds, compared with 978 maunds in 1907-8.

The excise revenue from Bombay (including Sind and Aden) during the last two years was as shown in the margin. The increase in country spirits was chiefly

Gross Receipts from	1907-8.	1908-9.
	£	£
Country spirits	817,801	821,282
Toddy	122,195	121,106
Foreign and Indo-European liquors	13,957	22,595
Opium	70,968	85,891
Other intoxicating drugs	60,554	66,515
Miscellaneous items	5,290	6,728
Total Excise Revenue	£1,090,765	£1,124,116

due to the extension of the contract supply system. The revenue from toddy declined, but the consumption was larger. In Sind and Bombay City there is a growing taste for foreign liquors among the well-to-do classes. Rates of still-head duty were raised only in Bombay City and in the Konkan. In eleven districts the contract distillery and single shop auction system were introduced, making a total of 16 districts in which it now exists. The number of shops for the sale of liquors (except toddy) and drugs has been reduced. The increased receipts from opium and intoxicating drugs are ascribed to better administration.

PROVINCIAL RATES.

Since 1904-5 many cesses levied under the head of Provincial Rates have been abolished. In 1907-8 a further reform was adopted by the exclusion from the imperial accounts of the transactions of District Boards and of certain other local funds, which are raised locally, mainly for local purposes, and chiefly managed by local bodies. Where the revenues are under the orders of Government, the accounts have been absorbed in the Imperial or Provincial accounts. Where the income and expenditure are clearly under local control, the fund has been excluded, except in the case of funds specially created for local purposes and administered by Government officers in an *ex-officio* capacity. The net revenue from Provincial Rates amounted in 1908-9 to £529,200, made up chiefly of the cess on lands levied in Bengal and Eastern Bengal and Assam for roads, schools, &c., and of the appropriation by the United Provinces from local rates for the payment of rural police in the Agra province.

PROVINCIAL
RATES.

STAMPS.

The stamp revenue is derived from two great classes of stamps. Judicial or court fee stamps are provided for by the Court Fees Act (VII. of 1870), which imposes

	1907-8.	1908-9.
	£	£
Sale of court fees and stamps	2,813,783	2,906,004
Sale of commercial and other stamps	1,378,192	1,381,740
Fines and miscellaneous	67,208	56,412
Total	£4,259,183	£4,344,156

fees on plaints, petitions, and other documents, with specified exceptions, filed before civil, criminal, or revenue courts; non-judicial stamps by the Stamp Act (II. of 1899), which imposes duties on commercial transactions recorded in writing, such as conveyances, bonds, cheques, bills of exchange, receipts, and the like. The revenue from the former class increases with the growth of litigation, and that from the latter class with the development of trade and industry. The marginal table gives the gross stamp receipts for 1907-8 and 1908-9. About one-fourth of the revenue is derived from Bengal.

STAMPS.

CUSTOMS.

Special import duties are levied on malt liquors, wines, spirits, arms and ammunition, salt and salted fish, and opium. The duties levied in 1908-9 on alcoholic liquors are given in a footnote on page 33. Petroleum pays one anna per gallon, and articles of iron and steel one per cent. *ad valorem*. General import duties, which had been abolished in 1882, and were re-imposed in 1894, are levied, at the rate of 5 per cent. *ad valorem*. For as many articles as practicable tariff valuations are fixed, and these are revised from time to time, a general revision being made in December of each year. The chief articles on the free list are railway materials, machinery which is

CUSTOMS.
General.

CUSTOMS. worked by power other than manual or animal labour, grain and pulse, living animals, coal, jute, raw cotton, raw wool, books, gold and unset precious stones. On the revival of general duties in 1894 cotton goods were at first exempted, but in December 1894 a 5 per cent. *ad valorem* duty was imposed on imported cotton goods and yarns, while an excise duty of equal amount was imposed on all yarns of counts above 20 spun at power mills in British India. In February 1896 the cotton duties were revised; all cotton yarns and thread, whether imported or manufactured in India, were freed from duty, while a uniform duty of 3½ per cent. *ad valorem* was imposed on all woven cotton goods imported from abroad or manufactured in India at power mills, the products of handlooms being exempted. A duty is levied on exported rice and rice-flour at the rate of 3 annas per maund of 82½ lbs. of unhusked rice (about 4d. per cwt.). Since the Brussels Convention took effect, sugar produced in any of the countries adhering to the Convention has been subject only to the ordinary tariff rate. Sugar entering India from the Argentine Republic and Denmark remains subject to countervailing duties.

The appended table shows the amount of the customs receipts in 1894-5 and 1895-6, when the changes above-mentioned took effect, and also those for the four most recent years.

	1894-5.	1895-6.	1905-6.	1906-7.	1907-8.	1908-9.
Sea Customs, import duty :	£	£	£	£	£	£
Arms, ammunition, &c. -	10,126	11,403	10,796	10,996	13,811	10,744
Liquors -	406,355	440,669	646,286	561,401	666,721	692,767
Petroleum -	213,118	270,782	241,125	246,120	294,548	351,499
Cotton manufactures -	256,631	776,483	877,330	850,479	998,582	778,376
Silver bullion and coin -	230,557	231,859	194,685	260,637	341,658	417,121
Other metals -	135,078	168,641	202,911	226,776	299,580	309,877
Sugar -	630,450	686,725	266,216	284,936	295,431	340,051
Other articles -			845,124	870,143	1,040,381	1,008,780
Export duty on rice -	594,017	609,581	751,115	681,816	664,772	535,960
Miscellaneous -	6,694	1,770	21,169	24,871	23,612	19,581
TOTAL Sea Customs -	2,483,026	3,197,913	4,056,757	4,018,175	4,639,096	4,464,756
Land Customs -	15,884	13,397	20,059	20,351	28,113	26,932
Excise duty on cotton manufactures	6,897	40,632	178,071	190,947	223,730	233,232
Miscellaneous -	10,773	18,672	17,523	17,290	19,087	14,124
TOTAL NET CUSTOMS REVENUE	2,516,580	3,270,614	4,272,410	4,246,763	4,910,026	4,739,044

The receipts from import duties in 1908-9 show a decrease, chiefly owing to the much smaller imports of cotton manufactures. Liquors (which had fallen off in 1906-7 owing to enhanced duties), silver, petroleum, sugar, &c., produced more revenue, but the yield of the export duty on rice again fell, mainly owing to the home demand for rice. The growing receipts from the excise duty on cotton goods made in power mills are a satisfactory indication of the prosperity of the weaving industry. Excluding revenue from salt, which is not credited to customs, about two-thirds of the revenue from imports is derived from five heads—cotton manufactures, liquors, silver, sugar, and petroleum.

INCOME TAX.

INCOME
TAX.
General.

The Income Tax Act (II. of 1886), applicable to the whole of India, took the place of local Acts under which various licences were required for the exercise of trades or industries. Its principal provisions are that all incomes from salaries and pensions or from interest on securities, if amounting to Rs. 2,000 per annum, shall pay 5 pies in the rupee (equal to 6¼d. in the £); that incomes less than Rs. 2,000 shall pay 4 pies (5d. in the £); that companies shall pay 5 pies in the rupee on their net profits; and that incomes under Rs. 2,000 derived from other sources shall pay according to a graded scale from Rs. 20 on an income of Rs. 1,000 to Rs. 42 on Rs. 1,999, and 5 pies in the rupee on incomes of Rs. 2,000 and upwards. All incomes of less than Rs. 1,000 (£66⅔) a year were exempted by an amending Act (XI. of 1903), which substituted that taxable minimum for the former limit of Rs. 500. The tax is not levied on incomes from land or agriculture. Military salaries of less than Rs. 500 a month (£400 a year) are exempt.

The gross revenue from income tax in 1908-9 was £1,553,419, as compared with £1,504,113 in 1907-8. The proportion of revenue derived from the different sources (shown in the margin) varies but little. The number of persons assessed to income tax is only a small fraction of the population, the total in 1907-8 being 262,068. A large proportion of the revenue is collected in Calcutta and Bombay. Income tax receipts have increased with the increase in profits and salaries resulting from commercial and industrial activity, as well as owing to improved administration.

INCOME
TAX.

	1908-9.
Ordinary collections -	£ 1,201,624
Government salaries and pensions -	279,812
Interest on Government securities -	60,195
Other items -	8,788
Total	£1,553,419

REGISTRATION.

REGISTRA-
TION.
General.

The Registration Act (III. of 1877) was in force during 1908 throughout British India, excepting Upper Burma (for which Regulation II. of 1897 still provides a less complete procedure), and certain other tracts. A new Indian Registration Act (XVI. of 1908) came into force on 1st January 1909. For registration purposes, documents are divided into (a) those the registration of which is compulsory, or necessary to the validity of the deed, and (b) those which are registrable or not at the option of the holder, though liable, if unregistered, to be superseded by registered documents, subject to the equitable doctrine of notice. In the former class are deeds of gift of immovable property, or other documents (excluding wills), which affect rights in such property of a value more than Rs. 100, and, with certain exceptions, annual or longer leases. Optionally registrable documents include those relating to immovable property not comprised in the above-mentioned classes, deeds affecting movable property, wills, and other documents. As regards transfers of immovable property, however, the situation is affected in most provinces by the Transfer of Property Act (IV. of 1882), as amended by Acts of 1885 and 1904. Before 1904 it was in force throughout British India, excepting Burma (outside Rangoon), the Punjab, Sind, and other scheduled districts. Under its provisions all transfers by sale or mortgage of immovable property had to be registered, except that transfers of tangible immovable property of value below Rs. 100 might alternatively be effected by delivery of the property, and the registration of mortgage deeds, in which the value affected did not exceed that sum, was not compulsory. The amendment of 1904 removed the exception relating to small mortgage deeds. Offices exist in every district for the registration of documents, and a small fixed fee for searching the records. Mortgages form the largest class of instruments registered. Documents relating to the sale, mortgage or lease of immovable property, compulsorily registrable, comprise about 87 per cent. of all registrations. The number of optional registrations has steadily declined, partly owing to the operation of the amending Act of 1904.

In 1908 there was a further general increase in registration transactions as a result of the amending Act of 1904. The gross registration receipts in 1908-9 were £430,936 as compared with £415,311 in 1907-8; and the cost of the registration offices was £231,809, leaving a surplus of £199,127, against £201,647 in 1907-8. An expansion in the work of registration, especially of mortgages and sales, may be due on the one hand to plague (which affects wills and deeds of gift), high prices, bad harvests, and declining credit, or on the other to settlement operations, the development of new lands, the growth of towns, the expansion of trade, and the general effects of economic progress. The following particulars are taken from the provincial reports for the calendar year 1908.

There was an increase of 11·5 per cent. in the number of deeds registered. This is ascribed chiefly to scarcity and the dearth of food-grains and to settlement operations. In the Chota Nagpur Division there was an abnormal increase in term leases and in perpetual leases, the latter due to the extensive purchase and occupation of lands in Ranchi town by people from all parts.

There was an increase of only 3 per cent. in the number of deeds registered, a satisfactory indication of the improved condition of the people.

There was a growth in the number of compulsory registrations, but a slight decline in optional ones. There has been a great decrease during the past six years in fraudulent registrations, attributed to the system of thumb impressions.

Bengal.

Eastern
Bengal and
Assam.

United
Provinces.

REGISTRATION.	There was a large increase in the number and value of registrations of immovable property, mortgages and sales of land being probably necessitated by the scarcity and high prices of 1908. An increase occurred in optional registrations which had been tending to diminish.
Punjab.	
North West Frontier Province.	The number of registrations is comparatively small, but increases as people become acquainted with the law. More than one-half are in the Peshawar district, where an increased number was partly due to competition for land caused by the projected construction of the Upper Swat Canal. Land transfers were also numerous in Kohat.
Burma.	The number of compulsory registrations affecting immovable property showed a decided falling-off in value. There was a marked decrease in numbers and value of deeds of mortgage in Lower Burma, due chiefly to the prohibition of the sale or mortgage of lands held on lease or grant in violation of the conditions of the lease or grant, but an increase in Upper Burma, owing to the extension of irrigation and the expansion of the oil industry. Revised rules under section 8 of the Upper Burma Registration Regulations, 1897, were brought into force in 1908.
Central Provinces and Berar.	The number and value of registrations in the Central Provinces and Berar markedly increased, the percentage increase in number being 25 in the Central Provinces and 14 in Berar. Failure of crops and high prices were assigned as the chief cause, though the development of the country was an appreciable factor.
Madras.	In Madras the number of registrations of all classes of documents rose to the unprecedentedly high figure of 1,243,806, the increase being chiefly under gifts, sales, and mortgages. The average value of documents also rose.
Bombay.	The number of optional registrations in Bombay showed a decrease. There was a considerable growth in mortgages, accompanied by some decline in sales. There was a decline in the tendency to substitute sales for mortgages which had resulted from the Deccan Agriculturists' Relief Act.

OPIUM.

OPIUM.

General. The opium revenue is raised partly by a monopoly of the production of the drug in Bengal and the United Provinces, and partly by the levy of a duty on all opium exported from Native States. Poppy cultivation in British territory, excepting in certain small areas, is permitted only in parts of Bengal and of the United Provinces, where the crop is grown under the control of Government, which determines the total area to be cultivated each year. The cultivator of opium (known as Bengal opium) in these monopoly districts must receive a licence and is granted advances to enable him to prepare the land for the crop. He is required to deliver the whole of his outturn of crude opium at the fixed price of Rs. 6 per seer to Government agents, by whom it is despatched to the Government factories at Patna and Ghazipur. The relatively small supply of prepared opium required for consumption in India, "excise opium," is made over to the Excise Department, and Rs. 8½ per seer is credited to opium revenue for the amount thus consumed. The chests of "provision" opium, for export, are sold by auction at monthly sales in Calcutta; and, in order to prevent speculation and to steady prices, the quantity to be offered at each sale during each year is notified in the previous year. The chests become the property of the purchasers immediately after sale, but must be shipped under passes granted by the Board of Revenue and subject to conditions which prevent the opium from being consumed in India. The price obtained at the Calcutta sales, less the cost of production, is the revenue from Bengal "provision" opium. Opium (known as Malwa opium) is grown in Baroda and in some of the Native States of Rajputana and Central India, chiefly Indore, Gwalior, Bhopal, and Mewar. The Government of India interfere in no way with its production or local consumption; but Malwa opium may not pass into British territory, whether for export by sea or for consumption, without a pass, which is granted only on payment of a heavy duty. The duty on Malwa opium intended for export was fixed at Rs. 600 per chest with effect from May 1904, and remained at that figure during the year under report. The pass duty on Malwa opium destined for consumption in British territory is an excise receipt, and is, as a rule, Rs. 700 per chest.

Towards the end of 1906 edicts were issued by the Chinese Government ordering that within ten years the growth and the consumption of opium in China should be suppressed. Proposals were made that the Government of India should co-operate in this object by gradually restricting the amount of opium exported from India to

OPIUM.

China. By an arrangement made at the beginning of 1908 the quantity of opium (including Malwa opium) exported from India was limited to 61,900 chests in 1908, 56,800 chests in 1909, and 51,700 chests in 1910. Papers relating to the progress of the opium reforms in China, have been presented to Parliament (Cd. 4967). A report on the proceedings of the Shanghai International Opium Commission of 1909 has also been presented (Cd. 4898).

The opium revenue and expenditure during recent years have been as follows :—

	1902-3.	1903-4.	1904-5.	1905-6.	1906-7.	1907-8.	1908-9.
	£	£	£	£	£	£	£
Opium Receipts :*							
Sales of Bengal opium	3,662,600	4,678,371	5,079,541	4,703,574	4,895,505	4,401,988	4,234,444
Duty on Malwa opium	661,033	871,383	749,125	569,400	553,788	620,480	1,398,780
Cost of Excise opium, and miscellaneous	174,805	186,291	192,833	195,806	211,235	222,518	251,564
Total	4,498,438	5,736,045	6,021,499	5,468,780	5,660,528	5,244,986	5,884,788
Opium expenditure (chiefly in Bengal)	1,648,483	2,225,744	1,967,085	1,892,441	1,913,292	1,669,441	1,236,088
Net Opium Revenue	2,849,955	3,510,301	4,054,414	3,576,339	3,747,236	3,575,545	4,648,700

* Exclusive of the licence fees and duty on opium consumed in India, amounting in 1908-9 to £990,217, included under Excise.

The large increase in receipts in 1908-9 was chiefly due to payment of duty on Malwa opium in advance, with a view to securing priority of shipment in 1909-10.

The net area cultivated with the poppy in the Ganges Valley in recent years, Bengal, excluding areas on which the crop failed, is shown in the margin, together with the number of chests sold for export and the average price realised during the last five years. High prices of food-crops, increased wages of labour, and bad seasons have discouraged poppy cultivation. At the Government factories, Patna and Ghazipur, 34,084 chests of opium were manufactured during 1908-9, as against 51,608 chests in 1907-8. The number of chests issued to the Excise Department was 6,830.

The number of chests of Malwa opium passed at the scales in 1908-9 was 34,787. Bombay.

The quantity imported and lodged in the Bombay opium warehouses was 29,047 chests, as against 17,550 chests in 1907-8; while 1,189 chests were sold for consumption in the Presidency, including Native States. The exports of Malwa opium to China in recent years are stated in the margin. The rise in 1908-9 was due to the anxiety of the Bombay opium merchants to take advantage of anticipated high prices in China owing to the limitation of opium exports, and to their knowledge that in the calendar year 1909 not more than 13,000 chests would be permitted to be exported beyond seas. The average prices for opium in the Bombay market during the year under report, including export duty, were Rs. 1,186 per chest for one-year old, and Rs. 1,305 per chest for two-year old opium, against Rs. 1,271 and Rs. 1,357 respectively in 1907-8.



CHAPTER VI.

AGRICULTURE.

AGRICULTURE. SEASON AND CROP REPORTS. AGRICULTURAL PRODUCE.
Co-OPERATIVE CREDIT SOCIETIES.

The present chapter gives an account of the conditions prevailing in each province during the agricultural year 1908-9, together with some information regarding the outturn of agricultural produce and the progress of co-operative credit societies.

SEASON AND CROP REPORTS.

Bengal.

In Orissa and Chota Nagpur and most of Lower Bengal conditions were generally favourable for the autumn and winter crops, but in Bihar very unfavourable. The weather was also unfavourable for spring crops, especially in North Bihar. The outturn of the autumn crops (exclusive of special crops, such as jute, cotton, and indigo) was only 65 per cent. of the normal, while the winter paddy crop was only 72 per cent. and the sugar-cane crop only 62 per cent. The spring crops of wheat, oilseeds, barley, gram, and rice were only 67 per cent. of normal. As all the three harvests were poor, the food stocks of the province were low. The condition of the cattle was generally good. Agricultural improvements are to be undertaken in certain districts containing water-logged lands or lands subject to inundation by sea-water. The area cropped in 1908-9 was about 38 million acres. About 85 per cent. of the normal cropped area is under food crops. The three rice crops of the year covered 22½ million acres, falling short of the normal by over three million acres. There was a large decrease in the area under jute.

United Provinces.

In the west of the province the rains were at first rather too heavy in July and August and too light in September. In the east and north-east the rainfall was deficient throughout, to the detriment of rice and other crops. The winter rains were short and ill-distributed, and the ground was dry for spring sowings. The area cultivated for spring crops was curtailed through the outbreak of a severe epidemic of malaria. The total cultivated area, 35½ million acres, was about normal, large decreases in rice and sugar-cane and in most of the spring crops being compensated by increases in maize, jute, bajra, small millets, and barley. The early food crops turned out satisfactorily, but rice was disappointing, and commercial crops, sugar, cotton, and til were only moderate. Maize and millets were generally good. Wheat, barley, gram, and oilseeds were fair. The year was unfavourable for cattle in regard to disease.

Punjab.

The monsoon of 1908 reached the province in good time, giving abundant, and in some districts excessive, rain throughout. The area sown and the autumn crops reaped were above normal. The moisture favoured *rabi* sowings, but severe malarial fever hindered operations. The winter rains were short and ill-distributed, but the soil moisture was sufficient to ensure an excellent spring harvest. The total area sown was about 29½ million acres, or about 7 per cent. above normal. The proportion of the autumn to the spring harvest was as 44 to 56. Larger areas were placed under jowar, bajra, and cotton, and especially under wheat and gram. Heavy rains favoured rice, bajra, and sugar cane, and the crops were generally good, but jowar, cotton, and maize suffered. The yield of wheat was satisfactory, and the quality good. The outturn of gram was also satisfactory. The cultivation of toria, a very remunerative crop, is developing rapidly in the Central Punjab. The total area of crops sown on irrigated land was again about 10½ million acres, including nearly 6½ million acres served by Government canals. The area irrigated included about 3 million acres irrigated by 250,900 masonry wells and 33,858 non-masonry wells. Cattle suffered a good deal from disease.

Punjab Canal Colonies.

The actual work of colonisation is practically complete, as all the land available has been allotted. The work of improving communications, providing sanitation, and prices, and the absence of plague made the year a prosperous one for all the colonies. The Chenab colony, the area of which was a wilderness in 1892, was able in 1907-8 to feed itself and to export £2,000,000 of wheat, toria, and cotton, besides other products. Mule breeding is developing fast. After several bad years of drought, plague, and agricultural pests the Jhelum colony had a bumper wheat crop and a

AGRICULTURE.

prosperous year. Special conditions are imposed in the grants in this colony with regard to horse-breeding operations, which have been a marked success. The Chunian colony benefited by high prices for its crops, and the Jhang colony had a fair year.

North-West Frontier Province.

The monsoon rainfall was generally up to or above normal, and resulted in the cultivation of a large area and a bumper autumn crop. The timely and well-distributed rainfall caused a very large area to be prepared for the spring harvest, but the insufficient winter rains reduced the harvest to rather below the average. Hail did damage in two districts. The total area sown was nearly 2,851,000 acres, or 11 per cent. above the normal, while the area harvested was 2,373,000 acres. Wheat, the most important crop, occupied 36 per cent. of the total cropped area, and the area was 129,130 acres above normal. The outturn was above normal. Fodder was generally sufficient, but the deaths of cattle from contagious diseases were twice as numerous as in 1907-8.

Central Provinces and Berar.

Up to September the rainfall was ill-distributed and was, on the whole, in excess. Subsequently there was a general shortage of rain. The total cropped area was 28,513,000 acres, an increase of 514,000 acres in the Central Provinces being due to favourable conditions at the time of sowing. Cotton, jute, and til suffered from heavy rain, which did much damage to crops on the ground, especially cotton, the outturn of which was unsatisfactory. There was a large increase in the area under linseed, which did fairly well. The outturn of rice was above normal, and the wheat outturn was much better than in the previous year. Heavy rain and disease caused great mortality among cattle.

Eastern Bengal and Assam.

Throughout the year the rainfall was generally in defect, and almost all the province suffered from drought. The consequences were bad for the high lands, on which the bulk of the crops are grown. The total cropped area was 25½ million acres, including 16 million under rice. The jute area was 2,286,000 acres, or less than in 1907-8, owing partly to bad weather and partly to low prices of jute. The outturn of rice was 17 per cent. less than in the previous year, while the jute crop was about the average.

Burma.

In the greater part of Burma the rainfall was sufficient and evenly distributed, though the generally favourable year was marred at first by partial drought, which especially affected the Mandalay district. Heavy rains in November somewhat injured the rice crop in Lower Burma, and cotton and oilseeds in Upper Burma. There was a large increase in the area cropped, the outturn of crops was good, and the area on which crops failed to mature was much less than in 1907-8. The area of crops rose by 6 per cent. to over 13½ million acres. The area under rice, the principal crop, was 9½ million acres. The outturn of rice in Lower Burma was 98 per cent. of the normal, and exports increased. The areas devoted to sesamum, jowar, and ground-nuts were considerably larger. The area under rubber rose to 11,844 acres. The new irrigation systems of Mandalay and Shwebo proved very valuable. The year was a very good one for cattle owners.

Madras.

The south-west monsoon was untimely and not well distributed, and the north-east monsoon was in considerable defect in most of the districts. The dry weather and hot weather rains, however, were much above the average. The total crop area was 38 million acres, which was about 4 per cent. above normal. The rice crop was above normal, and covered over 10½ million acres; other food grains were grown on 20 million acres. The area under cotton was nearly 2 million acres. The area under ground-nuts again showed an increase, due to the commercial importance of the crop. Castorseed and indigo fell away. The outturn of crops was in no case at or above normal. There was a considerable increase in the mortality of cattle from disease.

Bombay

The autumn rains were on the whole about normal, but the spring rains were in serious defect. The season was poor only in the East Deccan and the Karnatak, where the early rains were in defect and the late rains failed to retrieve the situation. The area under food-grains, particularly jowari, rice, and gram, increased, but non-food crops, especially cotton, diminished. It is satisfactory that preference was everywhere given to food-crops. Sind enjoyed favourable inundation, and the good rainfall caused a large extension in the area cultivated, and a good harvest. The area in Sind under food and non-food crops was much larger. The area under crops in the whole Presidency was 29 millions of acres, of which 4½ millions were in Sind. About 48 per cent. of the acreage consisted of millets; while cotton occupied 12 per cent. The outturn of crops was generally better than in 1907-8. The area irrigated in Sind rose to nearly 3½ million acres.

AGRICUL-
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PRODUCE.

AGRICULTURAL PRODUCE.

(For further details see Statistical Abstract for British India, Tables 119 to 123.)

The following table shows the area under the principal crops, in British India, and their territorial distribution, for 1908-9. The crop area is always greater than the area of cultivated land, owing to double cropping. The figures represent thousands of acres (omitting 000).

Administrations.	Rice.	Wheat.	Millets (Jawar, Bajra and Ragi).	Gram (Pulse).	Other Food- Grains and Pulses.	Total Food- Grains and Pulses.	Oilseeds.	Sugar.	Cotton.	Jute and other Fibres.	Total area cropped.	Net Area cropped, (after deducting area cropped more than once).
Bengal	22,519	1,252	989	856	7,217	32,833	1,723	416	67	625	38,303	32,532
Eastern Bengal and Assam.	16,139	77	11	59	1,253	17,514	1,887	179	47	2,328	21,939	20,194
United Provinces	5,892	5,759	5,908	3,926	15,055	36,510	690	1,120	1,377	150	42,269	35,888
Punjab	720	8,397	4,883	4,227	4,101	22,628	1,434	369	1,448	55	29,298	25,821
North West Frontier Province.	45	1,030	282	175	880	2,412	233	28	54	1	2,851	2,439
Burma	9,798	37	1,220	53	623	11,736	1,293	26	211	1	14,007	13,653
Central Provinces and Berar.	4,544	2,773	5,124	1,133	5,093	18,577	2,218	21	4,176	156	25,699	24,017
Madras	10,305	19	11,726	136	8,051	30,237	2,567	182	1,989	114	34,036	33,755
Bombay and Sind	2,756	1,823	14,960	653	3,616	23,808	2,020	67	3,550	128	30,118	29,168
Minor Areas	82	32	149	41	217	521	40	—	40	—	669	573
Total 1908-9	72,800	21,199	45,252	11,264	46,321	196,836	14,105	2,408	12,959	3,558	246,189	218,040
" 1907-8	75,981	18,424	41,636	6,815	43,514	186,370	12,486	2,877	13,909	4,689	237,635	210,884

* This total represents the area sown, but details of each crop are conventional harvested areas of normal productiveness, the sum of which falls short of this total.

Among "other food grains and pulses" may be mentioned barley, 8,003,000 acres, of which 5,151,000 are in the United Provinces, 1,181,000 in the Punjab, and 1,119,000 in Bengal, and maize, 6,784,000 acres, of which 2,544,000 acres are in the United Provinces, 1,229,000 in the Punjab, and 1,815,000 in Bengal. Out of 520,000 acres under tea, 433,000 are in Eastern Bengal and Assam, and 54,000 in Bengal, while out of 954,000 acres under tobacco, 347,000 are in Eastern Bengal and Assam, 144,000 in Bengal, and 174,000 in Madras.

Particulars for 1908-9 regarding some of the more important staples of Indian agriculture are given below. The figures are derived from returns of crop forecasts, and they include Native States as well as British India.

Rice.

Nearly one-third of the cropped area in British India is under rice. The provinces for which statistics are given in the margin ordinarily include 78 per cent. of the Indian

Province.	Area in Acres.			Yield in Tons of Cleaned Rice.		
	Average of five years to 1906-7.	1907-8.	1908-9.	Average of five years to 1906-7.	1907-8.	1908-9.
Bengal	24,543	24,452	22,454	10,976	7,016	8,244
Eastern Bengal and Assam.	16,294	15,758	15,323	6,366	6,312	6,085
Madras	7,238	7,215	7,104	2,883	2,475	2,274
Burma	6,780	7,252	7,546	2,980	3,157	3,342
Total	54,855	51,677	52,427	22,905	18,960	19,945

the subsequent early cessation of rain. Although Bengal is the principal producer of rice, Burma is the largest exporter. The foreign exports of rice, which are subject to an export duty of three annas per maund (about 6s. 10d. per ton), amounted in 1908-9 to 1,513,000 tons, valued at £10,592,000, or less than the average. About 75 per cent. of the total was shipped from Burma. The price of white rice in Burma, which has been steadily rising in recent years, fell considerably in 1908-9. The salient features of the Burma trade in 1908-9 were a strong internal demand, large shipments from Burma to India proper, and a considerable restriction of exports to foreign countries. The coastwise shipments of rice from Burma to India proper, where there was scarcity, amounted to the extremely high figure of 1,022,000 tons, most of it being sent to Bengal and Eastern Bengal and Assam.

Wheat occupies usually about 10 per cent. of the whole cultivated area. The bulk of it is sown in autumn and reaped in spring. The area under wheat has greatly expanded with the extension of irrigation. More than half of it is in the Punjab and the United Provinces, and the greater part in each of these provinces is irrigated. The marginal table shows the area and yield of wheat, the figures being in thousands (omitting 000). The year was unfavourable in most of the wheat-growing provinces, principally on account of insufficient rainfall. Damage was also caused by cold high winds, and by frost in some parts. Both area and yield were therefore below normal.

AGRICUL-
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PRODUCE.
Wheat.

Province.	Average of five years to 1906-7.		1907-8.		1908-9.	
	Area.	Yield.	Area.	Yield.	Area.	Yield.
Punjab	8,029	3,339	8,272	2,489	8,884	3,057
United Provinces	7,186	2,539	4,406	1,675	5,675	2,132
Central Provinces and Berar.	3,306	820	2,715	489	2,781	694
Bombay and Sind	2,385	570	2,125	450	2,133	488
Central India	1,933	488	1,676	269	2,025	393
Bengal	1,311	419	1,003	299	1,255	320
North-West Fron- tier Province.	974	283	978	213	1,020	213
Hyderabad	970	79	933	67	1,098	72
Rajputana	895	180	604	133	888	198
Elsewhere	183	49	94	20	77	14
Total	27,172	8,776	22,806	6,104	25,836	7,581

The exports of wheat and wheat-flour are subject to great fluctuations, as the marginal figures show. The export demand for wheat has led to an extension of cultivation. This is very beneficial to India, partly because the crop is a profitable one; and partly because in years of scarcity the rise in prices renders the grain available for home consumption. In a famine year, like 1900-1, the export falls to a trifling quantity. The quality of grain shipped has recently improved through a reduction in the proportion of dirt, seeds, &c. intermixed with the grain. The wheat exported in one financial year is drawn mainly from the crop of the previous year.

The marginal table furnishes an estimate of the cultivation and the production of tea in India during the years 1906 to 1908; for Southern India and Travancore the figures are not reliable. Since 1885 the area under cultivation has in-creased by 93 per cent., and the production by 245 per cent. The production of green tea was 3,134,500 lbs. in 1908, as against 3,529,300 lbs. in 1907. During 1908 the tea gardens employed 509,500 persons permanently and 74,700 temporarily. The capital invested by joint stock companies in tea production is returned at £15,728,000, and, in addition, a large but unknown quantity of private capital is invested. The prices of most

Province.	Area in thousands of Acres.			Production in thousands of Lbs.		
	1906.	1907.	1908.	1906.	1907.	1908.
Eastern Bengal and Assam.	423	428	433	207,071	214,259	211,547
Bengal	54	54	54	16,085	13,503	14,994
Madras	10	11	15	3,094	3,471	4,436
United Provinces	8	8	8	2,290	2,295	2,010
Punjab	9	9	9	1,238	1,238	1,438
Travancore and Cochin.	27	26	27	11,186	12,749	12,594
Burma	1	2	2	439	505	458
Total	532	538	548	241,403	248,020	247,477

of the principal grades of tea showed a substantial decrease in 1908. Consignments of tea to London on optional bills of lading tend to be more and more replaced by direct shipments. A marked feature of the Indian tea trade in recent years has been the large increase in sales to Russia, which took, in 1908, 18 million lbs. direct, 3 million lbs. via the United Kingdom, and a large but unknown quantity via China. The direct ex-ports of Indian tea by sea during the last three years are returned as shown in the margin.

Countries.	1906.	1907.	1908.
To United Kingdom	176.6	173.9	173.2
" Russia	12.6	15.4	18.1
" Australia	9.6	10.4	8.3
" Canada	15.6	5.4	6.9
" Ceylon	3.3	9.3	5.0
" China, Hong Kong	1.6	1.0	1.0
" China, Treaty Ports	3.2	6.6	5.8
" Germany	1.2	0.9	1.3
" Persia	0.7	1.8	0.9
" Turkey in Asia	3.2	3.7	3.3
" United States	2.2	2.2	2.1
" Other Countries by Sea	4.0	2.8	3.6
Total	233.8	233.4	229.5

over 56 per cent., and of China less than 3 per cent.

The area under sugar was reported to be 2,184,000 acres in 1908-9, and the yield was estimated at 1,841,800 cwt. Both area and yield were considerably smaller than

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in 1907-8 owing to the unfavourable season. Of the total area, 1,119,400 acres were in the United Provinces, where the acreage has considerably increased. Bengal contained 375,100 and the Punjab 365,600 acres. These figures, however, are not very reliable, as in many large sugar-growing areas no accurate records are available, and sugar cane is often grown in small and irregular clumps whose extent is not easily estimated.

Countries.	1906-7.	1907-8.	1908-9.
	Tons.	Tons.	Tons.
Java - - -	206,762	357,750	358,035
Mauritius - -	139,861	151,965	139,818
Austria-Hungary -	80,859	34,759	93,904
Germany - - -	100,070	3,943	2,990
Other Countries -	27,650	10,571	9,165
Total - - -	555,202	558,988	603,912

To the sugar-cane cultivated in British India must be added the extensive crops grown in Native States. In estimating the total output account must also be taken of the large production of palm sugar, chiefly in Bengal, Madras, and Burma. By no means all of the sugar produced is converted into "refined" sugar; for a considerable quantity both of cane in the raw state and of the unrefined sugar or *gur* is consumed as food. For this sugar high prices can be secured in spite of the increasing competition of cheap sugar imported from abroad. The imports of sugar, including confectionery and molasses, during recent years are given in the margin, the figures representing for the most part refined sugar. The imports from Austria-Hungary and Germany are of beet sugar, and those from Mauritius and Java, of cane sugar. The large increase in the imports from Java is remarkable. The counter-vailing duties imposed in 1899 and subsequent years have not been levied since 1903 on the produce of countries which adhered to the Brussels Sugar Convention and abolished sugar bounties.

Cotton.

One of the most important crops for the grower, the Indian manufacturer, and the exporter, is cotton. The estimated area and yield of cotton in India are returned as

Province.	1906-7.		1907-8.		1908-9.	
	Area (Acres).	Yield in Bales (of 400 lbs. each).	Area (Acres).	Yield in Bales (of 400 lbs. each).	Area (Acres).	Yield in Bales (of 400 lbs. each).
Madras - - -	1,703	157	1,855	198	1,607	165
Bombay, with Native States, Sind, and Baroda. -	7,633	1,917	7,360	1,174	6,269	1,354
United Provinces - -	1,489	639	1,461	268	1,363	419
Punjab and North-West Frontier Province. -	1,474	370	1,523	366	1,616	336
Central Provinces and Berar -	4,678	881	4,432	595	4,175	768
Hyderabad - - -	3,480	449	3,100	293	2,902	295
Burma - - -	187	36	195	29	193	31
Central India - - -	1,136	221	993	55	957	144
Rajputana - - -	428	176	438	91	407	86
Bengal - - -	75	16	70	14	67	14
Eastern Bengal and Assam -	76	17	79	24	80	19
Mysore - - -	89	10	84	6	63	3
Ajmere-Merwara - -	40	19	40	9	40	9
Total - - -	22,488	4,908	21,630	3,122	19,739	3,643

4,290,000 bales respectively.

The exports of raw cotton from India in recent years have been as shown in the margin. The exports of 1908-9 were mainly furnished from the crop of 1907-8, when the season was very unfavourable. Prices were considerably lower than in the preceding year. The bulk of Indian cotton is exported to Japan and Western Europe. Very little goes to England, as Lancashire requires a finer class of cotton than India can as yet readily supply.

Jute.

India has a virtual monopoly of the production of jute, which is chiefly grown in Northern and Central Bengal and the eastern districts of Eastern Bengal. There was a decline in the cultivated area in 1909, as the season was very unfavourable and the price of jute had fallen. The estimated acreage and outturn in the Bengal provinces in recent years are as shown in the margin. These figures do not include statistics for Nepal, Madras, and Upper India, the outturn of which was reported to be 88,800 bales.

The years 1907-8 and 1908-9 were less prosperous than 1906-7, which was one of extraordinary activity and unprecedented profits. For the three years ended 1905-6, the average prices per bale at

	Cwts.	£
1906-7 -	7,400,800	valued at 14,652,300
1907-8 -	8,562,000	" 17,135,000
1908-9 -	6,798,400	" 13,179,000

Year.	Acreage.	Outturn in Bales (of 400 lbs. each).
1907	3,942,200	9,736,200
1908	2,856,700	6,310,800
1909	2,732,700	7,206,600

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Calcutta were Rs. 31.12.0, Rs. 36.8.5, and Rs. 44.11.7 per bale respectively. In 1906 the price rose to Rs. 60.4.4, but fell in 1907-8 to Rs. 44.12.0, and in 1908-9 to Rs. 38.12.0.

The total Indian consumption of raw jute in 1908-9 was estimated at 14½ million cwts.

Year.	Raw Jute.		Jute Manufactures.	Total Exports.
	Quantity.	Value.	Value.	Value.
1906-7	Cwts.	£	£	£
1907-8	15,970	17,892	10,477	28,369
1908-9	14,192	11,982	12,198	24,180
	17,880	13,223	10,491	23,714

The exports were very large, being 26 per cent. greater in quantity than in 1907-8, though prices were lower. In addition there was a large export of jute manufactures, as the marginal table shows (figures in thousands omitting 000). Of the raw jute exports in 1908-9, over 37 per cent. went to the United Kingdom, nearly 21 per cent. to Germany, 19 per cent. to the United States, and 10 per cent. to France. The fluctuations in exports of raw jute are more noteworthy than those in exports of jute manufactures.

The area under, and the yield of, the main oil-seed crops for all India are given approximately in the margin. The figures are in thousands (omitting 000).

Seed.	Average of five years to 1906-7.		1907-8.		1908-9.	
	Area.	Yield.	Area.	Yield.	Area.	Yield.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Rape and mustard	6,069	1,019	5,200	688	6,025	988
Sesamum - - -	4,954	*335	4,917	*286	5,097	*475
Linseed - - -	3,766	436	2,099	164	2,912	239
Groundnut - - -	507	*159	869	353	989	442

* Incomplete figure.

The rape and mustard-seed crop is grown chiefly in the United Provinces, the Punjab, Eastern Bengal and Assam, and Bengal; linseed in the United Provinces, the Central Provinces, Bengal, and Hyderabad; sesamum (til or jinjili) in the United Provinces, the Central Provinces, Bombay, Madras, and Hyderabad; while the groundnut area lies chiefly in Madras, Bombay, and Burma.

The general seasonal conditions were on the whole favourable, except in Bengal.

Exports of seeds have been as shown in the margin for the last three years (in 000 cwts.).

Seed.	1906-7.	1907-8.	1908-9.
	Cwts.	Cwts.	Cwts.
Linseed - -	4,379	6,198	3,210
Rape - - -	3,729	5,343	2,766
Cotton - -	4,388	4,250	3,683
Sesamum - -	2,741	1,553	1,657
Groundnuts -	1,725	1,524	1,782
Castor - -	1,505	1,994	1,650
Poppy - - -	803	1,257	790
Other sorts -	466	1,066	705
Total - -	19,736	23,185	16,243

CO-OPERATIVE CREDIT SOCIETIES.

(For further details see Statistical Abstract for British India, Table 117.)

The latest reports on societies formed under the Co-operative Credit Societies Act of 1904 refer to the year 1908-9. These societies have been started by Government as an experiment, in order that the poorer classes, and more particularly the cultivators, may be enabled to borrow money at reasonable rates, and may at the same time learn self-help and self-dependence. The registrars are Government officials, and Government aid is given in various ways, but aid is also enlisted from educated non-official gentlemen with local influence.

The societies are divided into central, rural, and urban societies. A Central Society, or "Co-operative Union," is an institution the members of which are representatives of a number of small affiliated societies standing to it in the same relation as individual members stand to their village society. A Co-operative Union is empowered to raise loans or accept deposits, as may be advisable in the interest of the affiliated societies, the profits being credited to a reserve fund upon which each society has a claim in the case of bad debts caused not by mismanagement but by misfortune or calamity. A union of this kind may be in a position to deal with capitalists or with joint stock banks, and to raise money on more favourable terms than is possible for the smaller societies. There are three Central Societies in the United Provinces (all of them district banks), three in Madras, two in Bengal, one in the Punjab, one in Burma and four in the Central Provinces and Berar, all with limited liability, besides one in the last province with unlimited liability. No fewer than eight of these were formed in 1908-9. District Banks, which are of the nature of joint stock lending societies, exist as a regular part of the system in the United

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Provinces only, where they number 16, and are classed as urban societies. Of these three deal with their own shareholders and with independent societies, while 13 deal with affiliated societies. Of the other societies, a large majority are rural, but the urban societies have the larger average membership. Not quite all the societies are engaged in the business of co-operative credit. Some are societies of clerks, while others are formed among weavers and other artisans. The general rule of rural credit societies is to work with unlimited liability and without share capital; the majority of urban societies, on the other hand, have limited liability. The Indian Act does not permit rural societies to pay dividends. The principle of unlimited liability, when it is understood, has no terror for the ryot; he has been long accustomed to it in his family relationships, while the principle of limited liability is relatively unfamiliar. But the former system must naturally be accompanied by the power to exclude all in whom the majority have no confidence. Except in the Central Provinces, where all loans have been issued for productive purposes, loans are granted without restriction on their employment. In Bengal, Madras, and Eastern Bengal and Assam a considerable part of the loans are for repayment of old debts bearing exorbitant rates of interest, but an increasing number are for productive purposes, such as cultivation and purchase of cattle.

There is a considerable variety in the rates of interest charged in different provinces, but the rates are in nearly all cases considerably lower than those charged

Province.	Village Moneylenders.	Co-operative Credit Societies.	
	Rates per Cent. per Annum charged.	Rate per Cent. charged on Loans to Members.	Average Rate per Cent. paid on Members' Deposits.
Madras - - - - -	9 to 18	6½ to 12½	5 to 7½
Bombay - - - - -	15 to 55	9½	6½
Central Provinces and Berar. - - - - -	18 to 25	9½ to 12	7
Bengal - - - - -	12 to 75	15½ to 18½	8 to 10
Eastern Bengal and Assam. - - - - -	24 to 75	9 to 18½	6½
Punjab - - - - -	18 to 24	9 to 12½	5
United Provinces: Oudh and Meerut. - - - - -	12 to 18	12½	6½
United Provinces: other Divisions. - - - - -	37½		
Burma - - - - -	36 to 60	15	9

by local moneylenders (as the marginal table shows). Too much reliance must not be placed on the figures given, but they will serve for the purpose of a rough comparison. The rates attributed to village moneylenders are those charged on agricultural loans to ordinary cultivators; in individual cases very much higher rates are charged. In many cases the moneylenders have not unnaturally disliked the movement. In some cases they have given active help.

A system by which the money-lender dealt with village societies instead of with individuals might ultimately prove much to his advantage. At present the societies derive their resources from members' deposits, Government loans, loans from other co-operative societies, and loans from non-members.

The table in the margin shows the main statistics of the societies for the year to 30th June 1909 and for the preceding year. It will be seen that membership and capital both largely increased. The great advance which has been made becomes evident when it is remembered that in March 1905 there were altogether only 35 rural and 6 urban societies. The movement has almost everywhere passed out of the experimental stage; a large number of the societies are firmly established

No. of Societies.		June 1908.	June 1909.
Central	-	7	15
Urban	-	149	227
Rural	-	1,201	1,766
		1,357	2,008
No. of Members	-	149,160	184,889
Capital.		£	£
Loans from private persons	-	82,900	166,254
" " other societies	-	38,984	106,441
Share capital	-	62,395	98,484
Deposits by members	-	61,302	107,868
Loans from Government	-	43,454	45,743
Reserve	-	5,237	12,885
Total	-	294,272	537,675
Expenditure.		£	£
Loans repaid to private persons	-	26,798	94,022
Loans issued to members	-	246,201	399,995
Purchase of raw material and stores	-	26,044	44,959
Profits	-	12,061	21,751
Total	-	311,104	560,727

on a self-supporting basis, and they are winning more and more the appreciation and confidence of the people. Loans are well and punctually repaid. It is noteworthy that in spite of the large increase in working capital the amount lent by the State is but little larger than in the previous year. Except in Ajmer progress in 1908-9 was satisfactory in all provinces.

In Bengal the movement is essentially a rural one, and much success has been achieved with small and humble societies of the Raiffeisen type. Many new rural Raiffeisen Societies have been formed, and the policy is to group these societies with the object of gradually combining them into unions on a joint stock basis. In 1908-9 the chief work was the successful establishment of two Central Banking Unions, embracing 45 societies.

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Development in Bengal has been largely due to the aid of honorary organisers, there being no district banks to encourage the growth of societies. Evidence of popular interest is rather lacking. In Eastern Bengal and Assam progress was steady, and the number of societies rose from 135 to 231, of which 88 per cent. were rural. A promising feature was an increase in the loans granted by urban to rural societies. Officials of all grades are taking interest in co-operation. In the United Provinces there was a great increase in working capital, the chief need of the movement, and less than 5 per cent. was provided by Government. Joint stock banks lent money more readily and in larger amounts to societies. Small urban societies for the industrial and professional classes rapidly increased. Loan societies alone showed a decline. The number of independent rural societies nearly doubled, and the policy has been deliberately adopted of restricting their membership and area of operations. With the extension of the share system the number of Raiffeisen societies continue to decrease. Small compact societies are found to give the best results. The richer classes have changed their attitude and appear less apathetic towards co-operation. In the Punjab the movement is mainly confined to eight districts. The societies, though working well on the whole, still need careful supervision and frequent inspection. During the year 88 new societies were formed, half of them by the aid of funds supplied by the new Jullundur Bank. Two more district banks were established. Unions are being started on the Bengal model. In the Central Provinces the formation of new societies was not very actively encouraged because the Central Banks wanted time to secure their own position before expanding their operations, and societies have only been established where they could be financed as part of a real live scheme. Twenty new societies, however, were registered, including a Central Bank and an urban society. The existence of a Central Bank is necessary to ensure the growth of successful village societies. In Burma expansion was remarkable, the number of societies increasing from 80 to 174. The average membership, however, was smaller. Only seven Schultze societies now survive, and many of the Raiffeisen societies are likely to be converted into Luzzatti societies. Two co-operative unions were started. An important advance was made by an arrangement that the Bank of Rangoon should finance the movement with two lakhs of rupees as a beginning. Private capital has been freely invested by natives, and the movement is now independent of Government financial aid. Great interest is shown by the public, and there is no lack of funds. The chief difficulty is organisation. In Madras the volume of transactions and deposits (a largely increased). The Madras Central Bank prospered and a district branch (a central society) was successfully established at Salem. Some of the older societies have been voluntarily converted from a limited to an unlimited liability basis. In Bombay the banks are steadily progressing, and last year the total membership increased by 34 per cent. A scheme, undertaken by leading local capitalists, for starting a Bombay Central Bank was matured.

In most provinces the question of financing the societies is in the way of being solved, but the best methods of providing audit, inspection, and control are not yet settled, though experience points to the organisation of societies into local unions as the best solution. Experience has also shown, among other things, the necessity for great care in selecting members; the need of obtaining sufficient capital to supply the wants of members; the necessity of considering current local rates of interest in fixing the rates at which members should borrow from the society; the need of closer supervision of small societies and improved methods of financing them; and the need of amending the Act in several respects.

The Fourth Annual Conference of Registrars of Co-operative Credit Societies, held in November 1909, discussed a great variety of subjects, the most important being a proposal to amend the Co-operative Credit Societies Act. Provincial conferences were also held in some of the provinces.

CHAPTER VII.

FORESTS.

FORESTS.

(For further details see Statistical Abstract of British India, Tables 59, 60, and 125.)

General.

Systematic conservancy of the Indian forests is based on the Forest Act of 1878, which gave the Government powers of dealing with private rights in the forests of which the chief proprietary right is vested in the State. Special forest laws have also been enacted for each province, and a staff of trained forest officers has been organised. Forest administration is based upon the principle that State forests should be administered for the public benefit; they are worked, therefore, with a view to combining all reasonable facilities for their use by the public with the protection necessary for their preservation as sources of fuel and timber and as retainers of moisture in the soil. The forests are classified as "reserved," "protected," or "unclassified." In the reserved areas the control of the Forest Department is more complete than in the protected or unclassified forests. In the latter, the area of which cannot be precisely stated, are included large tracts of uncultivated land, especially in Burma, much of which will probably become agricultural land. Among the most important measures of conservancy are the prevention, so far as possible, of the fires which are liable to devastate the forests, the plantation and reproduction of timber and firewood, the maintenance of a supply of seed-bearing trees, and the regular reproduction of timber of the more valuable kinds. At present the reserved (including leased) forests cover an area of about 94,000 square miles; and there is scope for further reservation in Madras and Burma. Outside the reserves there are about 146,000 square miles of State forests, including 9,000 square miles of protected forests. Some part of this area will eventually be brought within the "reserve" area, and all of it is, with more or less completeness, managed and worked for the benefit of the people, of their cattle, and of the public revenue. The forests dealt with in this chapter are, almost exclusively, State forests. The limited areas of private forest, except where they have been leased to the Government, are being gradually exhausted; and few private communal or village forests have been successfully brought under conservancy. In every province a very few of the most valuable timber trees are declared to be reserved trees, and can only be felled under special licence. Outside the reserves, the country folk are generally allowed to obtain from the State forests timber, bamboos, firewood, and grass for their own use without charge; inside the reserves, persons specially licensed are allowed to extract timber or other produce, on payment of fees, though all rights recognised by the forest settlements are preserved to the public. Forest revenue is raised by royalties on, or by the sale of, timber or other produce and by the issue at specified fees of permits to graze cattle, or to extract for sale timber, firewood, charcoal, bamboos, canes, and minor forest produce. The gross revenue derived from forests in 1908-9 was £1,700,900, including £466,400 and £1,133,600 received for timber and other produce removed from the forests by Government agency and by consumers (or purchasers) respectively. The charges amounted to £994,200, leaving a net revenue of £706,700. Some of the Native States, such as Kashmir, Mysore, Travancore and Baroda, have also organised a systematic forest administration, from which they derive a considerable revenue. The following paragraphs treat of forest administration in each province:

Bengal.

At the end of 1908-9 the areas of reserved and protected forests were respectively 4,240 and 3,380 square miles, representing over 6 per cent. of the area of the province. Steps are to be taken for the more effective management of protected forests, which in many places, owing to excessive grazing and demands for forest produce, are tending to disappear. Working plans have been provided for 5,712 square miles. With regard to fire protection, the year was very favourable. Attempts were made to exclude fire from 1,888 square miles, and only 16,066 acres were burnt. The rubber (*ficus elastica*) plantation in the Tista division has so far been very successful. The yield of timber was nearly $5\frac{1}{2}$ million cubic feet, an increase on that of 1907-8, and the out-turn of fuel, $31\frac{1}{4}$ million cubic feet, was also larger. The number of bamboos taken from the forests was over eleven millions. Owing to the increased expense of planting, closer

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attention has been paid in recent years to natural regeneration. Practically the whole of the protected forests are open to grazing. The most difficult question at present is the supply of adequate facilities for grazing and for gathering fodder. From a commercial standpoint the year's working was very satisfactory, the surplus revenue being £41,363. The number of recorded offences against the Forest Laws was much below the average. There was a decline in the number of workmen killed by tigers in the Sunderbans and Singbhum forests from 151 to 116.

United Provinces.

The areas of reserved and protected forests at the end of 1907-8 were 3,935 and 9,099 square miles respectively, in addition to 157 square miles of leased forests and 55 square miles of unclassified forests. The damage resulting from the severe drought of 1907-8 was not so great as was at first feared, and was mainly confined to forests in the plains. The year was more prosperous than the preceding one, although depression at the time of the auction sales, consequent on the recent famine, caused a decreased output of timber. Fire protection was much more successful than in the previous year. The yield of the forests was $5\frac{1}{2}$ million cubic feet of timber, $11\frac{1}{2}$ million cubic feet of fuel, and $15\frac{1}{2}$ million bamboos, besides minor produce. The removal of forest produce is almost entirely carried on by outside agency. The resin and turpentine industry in the Naini Tal and Jaunsar divisions continued to give good results. The surplus revenue for the year was £78,000. Breaches of the forest rules, which were more numerous than usual, consisted mostly of illicit grazing and unauthorised fellings. The year was a good one for natural reproduction.

Punjab.

The reserved forest area at the end of 1908-9 comprised 1,953 square miles, including 110 square miles under military or other control. The protected forests aggregated 5,223 square miles, while there are 1,580 square miles of unclassified forest and 369 square miles of leased forests. The area was reduced during the year, mainly by the transfer of 101 square miles of unclassified forests to the Civil Department. For various reasons little progress was made with working plans, which are still required for 4,640 square miles. The season, being wet, was very favourable as regards forest fires, a marked decrease occurring in the number of fires and the area burned. The policy of exploiting the forests through non-departmental agency has been still further extended, as its expediency is undoubted. The out-turn of timber was about $2\frac{1}{2}$ million cubic feet, a heavy decline from 1907-8, while the fuel out-turn was nearly 23 million cubic feet. The surplus of the year, £23,900, was considerably below the average of the preceding quinquennium. About 82 per cent. of the forest area was open to cattle for grazing. The difficulty of protecting forests from damage by excessive grazing has become greater as cattle and pastoral animals have largely increased, and it is not easy to strike a fair balance between the immediate interests of the people on the one hand and those of forest conservancy on the other. Experiments were made with the cultivation of several species of eucalyptus. The number of forest offences, chiefly under the heads of illicit felling and grazing, was larger than in 1907-8.

North-West Frontier Province.

At the end of 1908-9 the area of the reserves under the direct control of the Department was 250 square miles, besides 121 square miles of civil protected forests. Working plans have now been framed for all forests. There was a decrease in the out-turn of produce, the quantities being 415,000 cubic feet of timber and 395,000 cubic feet of fuel. The net revenue was £6,238, or considerably more than in any year except 1907-8. There was an increase in the number of forest offences. The protection from fire was much better than in 1907-8.

Burma.

The reserved forest area in Burma was increased during 1908-9 by 723 square miles to 23,581 square miles; the unclassified forests, much of which will ultimately be brought under cultivation, covered 110,868 square miles, an increase of 3,270 square miles. Satisfactory progress was made in the settlement of tracts to be maintained as reserves. Proposals were prepared for the reservation of areas in the Magwe Division in order to prevent the destruction of forests at the head-waters of streams. Working plans for 1,344 square miles were sanctioned. The area of reserved forests not under working plans at the end of the year was 14,760 square miles. The majority of the teak-bearing forests are now being managed under working-plans or girdling schemes. The area in which fire protection was attempted covered 7,457 square miles, and the results were very successful. Only 758 square miles of reserved forests were open to animals for grazing. Rubber, teak, and other plantations were maintained, and experiments were made with the cultivation of camphor. No satisfactory offer having been received for the lease of the rubber plantation at Mergui, its management by the Forest Department was continued. There was a large increase in the number of trees girdled and in the quantity of

FORESTS. timber extracted. The number of teak trees girdled was 122,600 and the quantity of teak extracted was 270,140 cubic tons, including 219,000 by purchase contractors, an increase of 55,600 cubic tons, due to a favourable floating season. Of other timbers, 317,400 cubic tons were extracted, besides 276,600 cubic tons of fuel. The area under teak worked by the Department is being strictly curtailed in favour of the system of extraction by firms under purchase contracts, which is expected to yield more satisfactory financial results. The surplus revenue amounted to £360,000. There was an increase in the number of forest offences, which are mostly petty cases of illicit felling.

Central
Provinces
and Berar.

The total area of forests at the end of 1908-9 was 21,921 square miles, including permanent reserves of 20,248 square miles. The forest area shows a decrease of 81 square miles, due chiefly to disforestation for the extension of agriculture. The total length of forest boundaries is nearly 37,000 miles, of which 92 per cent. has been artificially marked. Special attention has been given to the making of roads which will facilitate the utilisation of forest resources. Further working plans were sanctioned or in progress; new plans are still required for 4,664 square miles, or 27 per cent. of the whole area. In future a revenue officer is to be deputed to consult with the working-plans officer with the view of securing due attention to agricultural interests. Owing to well distributed rainfall and more systematic protection fire-conservancy measures were very successful. The area under fire protection is now 66 per cent. of the area of permanent reserves. The number of forest offences increased by 20 per cent., chiefly under the heads, theft of wood and cattle-trespass, which form the great majority of offences. There was a large decline in the out-turn of forest produce. The amount of timber removed from the forests during the year, chiefly by private persons, was about $4\frac{1}{2}$ million cubic feet, that of fuel nearly 17 million cubic feet. The lac industry proved disappointing. The surplus revenue was only £29,000, a decrease of £5,000 on 1907-8, mainly due to smaller sales of produce, consequent on the recent scarcity and the poor demand during a *singhast* year. As usual, a large part (50 per cent.) of the revenue was yielded by grazing and fodder-grass, while 23 per cent. was derived from timber and fuel, and 27 per cent. from minor produce. Proposals for extending the Indian Forest Act to Berar were submitted during the year.

Eastern
Bengal and
Assam.

The forest area at the end of 1908-9 included 6,321 square miles of reserved or protected forests, or about $6\frac{1}{2}$ per cent. of the total area of the province, and 22,703 square miles of unclassed forests. The unclassed forests consist largely of grass or treeless waste in Assam; they are all open to grazing, and part of their area is more or less regularly under cultivation. Working plans are still required for 4,650 square miles of reserved forests. Special fire protective measures extended over 1,518 square miles, but on account of the unusual dryness of the year there were numerous fires and 354 square miles were burnt. There was a decrease in the number of forest offences, which consist chiefly of unauthorised fellings. The Charduar and Kulsi plantations of rubber (*ficus elastica*) produced only moderately satisfactory results. Successful efforts have been made to introduce rubber cultivation in the Lushai Hills and elsewhere. Experiments in the propagation of lac have not met with success. The gross yield of the forests is given as $6\frac{1}{2}$ million cubic feet of timber and $11\frac{1}{4}$ million cubic feet of fuel. The surplus revenue amounted to £38,644. It is found more profitable to sell standing timber to contractors than to exploit it by Government agency. A partial re-organisation of the forest staff was effected.

Madras.

The total area of forests on 30th June 1909 was 19,570 square miles, of which 18,694 square miles were classed as reserved forests. The settled and systematically protected forests cover nearly one-seventh of the area of the Presidency. Detailed working plans were sanctioned or in preparation for 979 square miles. Protection from fire was satisfactorily undertaken over 7,240 square miles. There were 25,470 forest offences, but 18,054 were compounded. Natural reproduction was generally good. The regular plantations consist chiefly of teak in Malabar, and of casuarina in many districts. The plantation of rubber, mahogany, camphor, and other valuable trees is being extended. The area of reserves open to cattle for grazing was about 88 per cent. of the total. The yield of the forests was about $3\frac{1}{2}$ million cubic feet of timber and 21 million cubic feet of fuel, besides 32 millions of bamboos, and minor produce. The out-turn was smaller than in 1907-8, and the surplus revenue amounted to about £60,000. Departmental depôts for supplying the people with fuel and bamboos worked satisfactorily.

Bombay.

The area of the reserved forests was 13,063 square miles at the end of 1908-9, while that of the protected forests was 1,037 square miles. The area for which

working plans have been sanctioned is 6,018 square miles, or about 45 per cent. of the total area. Special works for the reproduction of rubber were undertaken in the three Thana Divisions. Forest offences were less numerous. The year was very unfavourable to fire protection, owing to drought, and the area damaged by fire increased by 10 per cent. The yield of timber was $5\frac{1}{4}$ million cubic feet, of fuel $30\frac{1}{2}$ million cubic feet, and of bamboos, 7 million cubic feet. The surplus revenue amounted to £99,656.

The area of reserved and protected forests at the end of 1908-9, was 520 square miles. Measures were taken for the artificial reproduction of sandal and teak. Sandal trees affected with "spike" disease were uprooted. Protection against fire was less successful, largely owing to incendiarism. The out-turn of the forests was 301,630 cubic feet of timber and fuel. The surplus revenue was £8,000.

FORESTS.

CHAPTER VIII.

MINERAL PRODUCTION AND MINING.

(For further details see Statistical Abstract for British India, Table 216.)

MINERAL PRODUCTION.

General.

During recent years much has been done to develop the mineral resources of India. The minerals that have been chiefly worked are those which can be consumed by direct process on the spot, or which, owing to their abundance and cheapness, are suitable for export in the raw state.

The output of minerals in India (including Native States) has shown a marked increase in the last six years, the estimated value of that for 1908 being £7,824,000, as against £4,550,000 for 1902, an increase of 70 per cent. By far the most important minerals are coal and gold, the production of which in 1908 was valued at £3,356,000 and £2,178,000 respectively, followed by petroleum, £702,000, salt, £523,000, and manganese ore, £466,000. These estimates of values relate to all production for which returns are available, but as they are based in many cases on local consumption values, or on values at the sea-ports, they cannot serve for comparison with the production of other countries, but only for the comparison of one year with another in India itself.

Coal.

Coal is the most valuable mineral product worked, and is by far the largest supporter of labour. The production has risen in 21 years from 1½ to 12¾ million tons.

Province or State.	Coal produced in		
	1903.	1907.	1908.
	000 Tons.	000 Tons.	000 Tons.
Bengal - - - - -	6,361	9,993	11,560
Hyderabad (Singareni) - - -	363	414	444
Eastern Bengal and Assam - -	239	296	275
Central Provinces - - - - -	159	134	214
Central India - - - - -	193	179	155
Other provinces or states - -	123	131	122
Total - - - - -	7,438	11,147	12,770

over 90 per cent. of the coal won in India in 1908, the Jherria coal-field (opened in 1893) providing 6,459,000 tons, more than half the total output, the Raniganj 4,222,000 tons, and the Giridih 783,000 tons. In the Central Provinces the output of the Pench Valley Collieries, opened in 1905, rose to 120,250 tons in 1908.

The exports of Indian coal, 660,000 tons, were slightly larger than in 1907. Ceylon and the Straits Settlements are the two principal markets. About 94 per cent. of the Indian production was consumed at home, nearly 30 per cent. of the output (3,684,000 tons) being absorbed by the railways, whose coal consumption is now Indian to the extent of nearly 98 per cent. It is roughly estimated that 1,600,000 tons were used for bunker coal for ocean-going and inland steamers, and 2,000,000 tons for jute and cotton mills and iron and brass foundries.

Prices in 1908 were the highest so far recorded. The average estimated wholesale price of coal at the pit's mouth rose steadily from the abnormally low value of 3s. 4d. per ton in 1905 to 5s. 3d. in 1908. The coal now being worked is near the surface, and labour is cheap; as a consequence Indian coal has a lower value at the pit's mouth than that of any other country. The amount of capital invested in coal mines cannot be given, but most of the Bengal output comes from mines owned by joint-stock companies. The dividends declared by the chief companies show that the trade was exceedingly profitable during the year.

The average number of persons daily employed in coal mines during 1908 was nearly 129,200, two-thirds of whom were men. The number of employees has increased, and, as the result of improved mining methods, their output per head has grown from 89 tons in 1904 to 99 tons in 1908, but even this is a somewhat low degree of efficiency if tested by European standards. The labourers include chiefly landless day labourers, though some are agriculturists. In some old established centres a mining caste is being evolved, and allotments of land are made to miners.

The production of gold amounted to 567,780 ounces, valued at £2,177,847, in 1908, compared with 557,686 ounces, valued at £2,126,756, in 1907. By far the greatest part of the gold (535,653 ounces) came from the Mysore gold-fields. The Hutti mine in Hyderabad produced 16,437 ounces in 1908.

Since the introduction of European drills into the Burma oil-fields the production of petroleum has rapidly risen. Increased activity in the Twingon Reserves of the Yenangyaung oil-field, where rich oil-sands were struck at greater depths, led to a marked rise in the output during 1908. The production of crude petroleum rose to the record figure of 177 million gallons, as compared with 152 million gallons in 1907. About 3¼ million gallons of oil were extracted in Eastern Bengal and Assam; and the rest of the product, excepting a trifling amount from the Punjab, came from Burma, the principal oil-fields being at Yenangyaung, the oldest field, in Magwe district, and at Singu, in Myingyan district. The former of these yielded 124 million gallons. Oil refineries have been erected and the various constituents of the crude oil are put on the market in the form of petrol, illuminating oil, lubricating oil, coke, and paraffin wax. A pipe-line for conveying crude petroleum from the oil-fields to Rangoon has been constructed. The production and export of paraffin wax have steadily and largely increased. There was an increase in the imports of kerosene into India, in spite of the larger home production of mineral oil.

The greater portion of the output of manganese ore is now obtained from an extensive series of deposits in the Central Provinces, Madras, and Mysore. Owing to over-production, slacker demand, and foreign competition, prices declined considerably in 1908, when the production was only 674,315 tons as against the record figure of 899,055 tons in 1907. In 1907 production had been

	1907.	1908.
	Tons.	Tons.
Central Provinces - - -	565,017	431,055
Madras - - - - -	159,219	118,089
Mysore - - - - -	113,307	68,624
Central India - - - - -	35,743	13,315
Bombay - - - - -	22,821	23,232
Bengal - - - - -	2,933	20,000
Total - - - - -	899,055	674,315

stimulated by the high prices prevailing in the steel market. The ores worked are for the most part exceedingly rich, as the high cost of transport renders the working of the lower-grade ores unprofitable, and India now probably turns out a larger quantity of high-grade ore than any other country. There is at present no smelting plant in the chief producing centres, and the ore is shipped in bulk exactly as mined, to be smelted in the United Kingdom, Germany, or the United States.

The exports in 1908 were 427,500 tons.

The production of salt in India (excluding Aden) in 1908 was 1,279,937 tons. About 63 per cent. is evaporated from sea-water, chiefly in Bombay and Madras. About 28 per cent. is derived from sub-soil water and lakes, and only 9 per cent. is obtained by mining and quarrying. The production of rock-salt amounted to 114,000 tons, most of which came from the Punjab Salt Range.

The value of the saltpetre industry is gauged most uniformly by the figures for exports, which increased to 386,199 cwt. in 1908, valued at £292,758, a slight advance on 1907. The local importance of the saltpetre industry appears from the returns of labour, which show that about 50,000 workers are employed in Behar, whence most of the saltpetre is obtained.

India has for many years been the leading producer of mica, turning out more than half the world's supply. The returns of the mica output, which are now in fair agreement with the more accurate figures obtainable for exports, show a further decline in 1908, the total being 27,572 cwt., valued at £139,500 as against 39,055 cwt. valued at £226,400, in 1907. Small mica, which formerly was thrown away, is now saved, the result being that a greater output is produced by a smaller number of workers. The mines are situated in Bengal, Madras, and Rajputana.

The ruby industry in Burma has been productive during recent years. Owing to the depression in the general gem market the value of rubies exported, including small quantities of sapphire and spinel, amounted to only £47,954 in 1908, compared with £98,258 in 1907. The output is mainly derived from the Mogok mines of the Burma Ruby Mines Company. Rubies are also obtained by native miners working under licence from the Company.

Of minerals not above referred to may be mentioned jadeite, which was produced to the value of £73,400. The output of iron ore was only 59,224 tons. But in 1907 the Tata Iron and Steel Company was formed with a large capital to exploit iron ore lands in Orissa and the Central Provinces, and large developments in the production of iron ore are anticipated. There is a small output of tin, graphite, and chromite.

MINERAL
PRODUCTION
AND MINING.
Gold.
Petroleum.
Manganese.

Mica.

Rubies.

Other
Minerals.

MINERAL
PRODUCTION
AND MINING
Mining
Concessions.

MINING CONCESSIONS.

Since Rules were issued in 1899 to govern the grant of exploring and prospecting licences and of mining leases, the number of concessions in lands in which the mineral rights have been retained by Government (exclusive of Native States) has rapidly increased, mainly owing to the enhanced interest in manganese in Bombay and the Central Provinces. The concessions granted in Government lands amounted in 1899 to 60 only, but in 1908 the number had risen to 816, including 508 prospecting licences, 237 exploring licences, and 71 mining leases. In some areas, including nearly all the coal-bearing land in Bengal, mineral rights have been conceded permanently with the surface ownership.

By the Rules exploring licences can be obtained for one year, but they give no exclusive or preferential rights, and there is no prohibition against free exploration in unoccupied and unreserved land. Prospecting licences are granted over restricted areas for a period of one year, renewable with the consent of the Local Government for a second and third term. Such licences carry an indefeasible claim for a subsequent mining lease for any mineral other than precious stones over the same or a restricted area.

In practically all Native States the mineral rights belong to the respective rulers, and concessions are granted for mining and prospecting under rules that involve a certain amount of supervision by the Government of India.

INSPECTION OF MINES.

Inspection
of Mines.

The Indian Mines Act, 1901, applies to the whole of British India, and regulates all mineral workings which are either true mines worked underground, or open pits, quarries, or excavations more than 20 feet deep and any part of which extends beneath the superjacent ground.

The number of mines of all kinds coming under the Act in 1908 was 1,062, of which 510 were coal mines, including 458 in Bengal, 399 mica mines, including 290 in Bengal, and 72 manganese mines. They gave employment to an average daily number of 164,301 persons (an increase of 8 per cent. in the year), of whom 103,322 were men, 54,518 women, and 6,461 children under twelve years old; 102,451 persons worked underground. The labour material is very unformed, possesses little skill, and requires constant supervision.

There were 135 fatal accidents, causing 194 deaths, during the year 1908, an increase of 72 over the deaths in 1907. The increase is chiefly due to the expansion and activity of the coal industry and to the increasingly difficult and dangerous conditions of mining work. Of the fatal accidents, 165 occurred in coal mines. Accidents in coal mining would probably be more numerous than now (1.37 per 1,000 workers) but for the fact that the workings are generally free from gas, very shallow, and not elaborate. Dangers must increase as the works become deeper.

MINING EDUCATION, &c.

Mining Edu-
cation, &c.

The number of students taking the Mining Course at Sibpur College during the session 1908-9 was 18. The demand for passed students exceeds the supply. The new practical mining laboratory, designed specially with a view to coal mining, is now in working order. Lectures were delivered at four centres in the Bengal coal-fields in 1908-9, and 417 students were registered. The only Mining Board at work under the Mines Act of 1901 during 1908 was that for Lower Bengal, which is by far the most important mining centre in India. The Mining and Geological Institute of India, which was inaugurated at the end of 1905, made good progress during the year.

CHAPTER IX.

MANUFACTURES.

INDUSTRIAL DEVELOPMENT.
LARGE INDUSTRIES.
FACTORY LEGISLATION.

FACTORY INSPECTION.
PATENTS AND DESIGNS.

MANUFAC-
TURES.

(For further details see Statistical Abstract for British India, Tables 212 to 215.)

INDUSTRIAL DEVELOPMENT.

INDUSTRIAL
DEVELOP-
MENT.

In recent years there has been much discussion in India regarding the advantages of encouraging manufactures for the purpose of securing greater diversity of occupation in a country that so largely depends on agriculture. The movement for promoting home industries, known as the *swadeshi* movement, has, in its legitimate forms, received official support. There are standing orders that stores required by Government shall, as far as practicable, be purchased in India. In March 1909 it was ordered that purchasing officers shall in all cases give preference to articles manufactured in India from Indian materials (or from imported materials), provided that the quality is sufficiently good and the price not unfavourable. From time to time monographs are issued dealing with the position in each province of some leading industry. In some provinces the local governments have instituted special inquiries to ascertain the prevailing industrial conditions, with a view to promoting those industries that appear, when properly organised, to give promise of success. A "Review of the Industrial Position and Prospects in Bengal in 1908" has been prepared by Mr. J. G. Cuming, I.C.S., a "Survey of the Industries and Resources of Eastern Bengal and Assam" by Mr. G. N. Gupta, I.C.S., and "Notes on the Industries of the United Provinces" by Mr. A. C. Chatterjee, I.C.S. Industrial conferences and exhibitions have been held, and a knowledge of Indian manufactures has become more widely diffused. A Director of Industrial and Technical Inquiries has been appointed in Madras. In September 1908 an official Madras Industrial Conference was held at Ootacamund, and it was decided to open a special department under the Director of Industrial Inquiries for pioneering new industries and for organising and improving the hand-weaving and other existing industries. In December 1908 a successful Industrial and Agricultural Exhibition was held at Nagpur. In March 1909 an Industrial Conference, convened by the Local Government, was held at Dacca. The annual Indian Industrial Conference, held in connection with the National Congress, took place at Madras in December 1908. Endeavours are being made in all provinces to improve the important and widespread domestic cotton industry by introducing better types of hand-looms and superior methods, in order that their products may compete more successfully with goods manufactured by power looms in India or imported from abroad. In Bombay the Government instructed Mr. P. N. Mehta to undertake a survey of the hand-weaving industry. He pointed out the many defects in the present methods of manufacture, and the hopeless indebtedness of the weavers to the yarn merchants. In consequence of his report, co-operative societies are being organised to enable weavers to utilise their joint credit for the purchase of yarn and improved looms. In Bengal improved methods are taught at the Serampur Weaving School and at six outlying centres. In the United Provinces schools have been established at five weaving centres under Government auspices to popularise the use of improved looms and simple warping processes. In Madras progress has been made with experiments in the process of chrome-tanning, and the operations for the first time yielded a profit. Scholarships for the higher commercial and technical training of Indians abroad are offered by the Government and by private associations.

LARGE INDUSTRIES.

LARGE
INDUSTRIES.

In this chapter attention must be mainly confined to the larger industries, concerning which alone statistical information is available. By far the most important of these are the cotton and jute manufacturing industries, which have made rapid progress in recent years, as the following figures show:—

LARGE INDUSTRIES.

Year.	Cotton Mills.				Jute Mills.			
	No.	Capital.	Looms.	Spindles.	No.	Capital.	Looms.	Spindles.
		£				£		
1883-4	74	5,525,000	16,251	1,895,284	23	2,124,000	6,139	112,650
1888-9	109	6,747,000	22,156	2,670,022	25	2,599,000	7,419	151,207
1893-4	138	8,121,000	29,392	3,539,681	27	2,701,000	9,186	191,228
1898-9	174	10,182,000	37,288	4,463,342	33	3,821,000	13,421	279,482
1903-4	206	11,392,000	45,281	5,167,608	38	4,954,000	18,400	376,718
1906-7	217	12,601,000	59,599	5,546,288	44	6,330,000	25,284	520,504
1907-8	227	13,160,000	66,718	5,763,710	50	7,019,000	27,244	562,274
1908-9	232	13,682,000	74,084	5,945,122	52	7,393,000	29,483	607,189

Cotton mills.

The 232 cotton mills at work in India (including Native States and Pondicherry) in 1908-9 included 97 exclusively spinning, 14 exclusively weaving, and 121 both spinning and weaving mills. The majority of the mills, viz., 166, are in Bombay Presidency, and they contain 71 per cent. of the spindles and 80 per cent. of the looms. Bombay City contains 83 mills and Ahmedabad 52. The industry is to a large extent in the hands of Indians. In spite of some unfavourable years, the industry, as the above table shows, has continued steadily to develop.

The outturn of yarn in recent years in British India only is shown in the margin. The mills of the Bombay Presidency produced nearly 74 per cent. of the total, Bengal

Year.	Counts Nos. 1 to 25.	Above No. 25.	Total.
	Million Lbs.	Million Lbs.	Million Lbs.
Average : 1896-7 to 1900-1	423.9	20.1	444.0
1901-2 to 1905-6	537.4	39.9	577.3
Year 1906-7	581.4	49.2	630.6
" 1907-8	556.6	57.2	613.8
" 1908-9	572.0	57.9	629.9

6 per cent., Madras 6 per cent., the United Provinces 6 per cent., and the Central Provinces and Berar 5 per cent. It will be observed that yarns of counts above No. 25, constitute over 9 per cent. of the total production. They are chiefly spun in the Bombay mills. Imports of yarn amount to only about 6 per cent. of the Indian production, but a very small proportion is of counts under 25. The phenomenal activity of the cotton industry in 1905-6 was followed by a

decline in prosperity during 1906-7, which became accentuated in 1907-8. In 1908-9 the Indian market was depressed owing to shortage of crops, high prices of food, and the fewness of marriages, but the situation was relieved by a timely demand from China, which is the principal market for Indian yarn. In China stocks were at a low ebb, while crop prospects were good, and exchange on the whole was favourable. Shipments to European markets declined. There was a good demand for yarn for weaving in Indian mills.

Owing to the vicissitudes of the spinning business increased attention has been devoted to weaving, which has greatly extended. This movement has been favoured by a strong internal demand for indigenous manufactures. Looms are increasing at a more rapid rate than spindles, and goods of finer quality are being produced. The production of woven goods in recent years in British India only is given in the margin. Weaving is concentrated to an even greater degree than spinning in the Bombay mills, which in 1908-9 produced about 84 per cent. of the total output of cloth; the United Provinces and Madras

Year.	Grey and Bleached.	Other kinds.	Total.
	Million Lbs.	Million Lbs.	Million Lbs.
Average : 1896-7 to 1900-1	80.6	11.3	91.9
1901-2 to 1905-6	109.9	25.0	134.9
Year 1906-7	129.6	29.4	159.0
" 1907-8	147.6	33.7	181.3
" 1908-9	147.2	37.0	184.2

each contributed about 5 per cent.; and Madras about 4 per cent. These fabrics are mainly grey and bleached piece-goods. As the marginal table shows, however, there is a decided tendency to increase the output of other and finer fabrics, this tendency being specially marked in Madras.

While the cotton mills are largely owned by Indians and are mainly situated in Western India, jute mills are nearly all concentrated in Bengal in the vicinity of Calcutta, and are mostly in the hands of Englishmen. As will be seen from the statistical table above, the jute industry is of smaller dimensions than the cotton industry, but it has enjoyed almost uninterrupted and increasingly rapid progress, the number of looms and spindles having doubled in the last decade. The

Jute mills.

LARGE INDUSTRIES.

number of jute mills in 1908-9 was 52, containing 29,483 looms and 607,189 spindles, and employing a daily average of 191,796 persons. The paid-up capital employed by 49 of these mills was £9,700,000, including debentures; of this total about £3,260,000 was sterling capital. In 1908-9 the number of spindles increased by 8 per cent., and the number of looms by 8 per cent. In 1908-9 there was a heavy fall in the prices of jute goods, owing to the slackness of the home demand resulting from bad harvests, and to widespread depression in trade abroad.

There were six woollen mills at work at the end of 1908, containing 786 looms and 29,221 spindles, and producing goods valued at about £293,000 for the year. The industry shows little sign of expansion. The fabrics consist chiefly of cloth for the army and the police. The produce of Indian mills represents only a small share of the total trade in woollen goods, for, although the demand for woollen goods in India is not very large, certain varieties can be produced much more easily and cheaply by European mills. There are many small hand-loom factories for weaving carpets and rugs, whose production is in the aggregate extensive.

Woollen mills.

There were nine paper mills at work at the end of 1908, producing during the year about 57 million lbs. of paper, valued at £506,000, the largest production yet recorded. Most of the official foolscap, blotting paper, notepaper, and envelopes is now obtained locally; but the development of paper-making in India has been checked by the competition of cheap wood-pulp paper from Europe, imports of which have increased much faster than the home production.

Paper mills.

At the end of 1908 there were 24 breweries, which produced during the year about 5½ million gallons of beer. The Army Commissariat Department bought 38 per cent. of the production in 1907, under contract, for the use of European soldiers, but in 1908 each regiment was left to make its own arrangements. The largest brewery is at Murree in the Punjab Himalayas, and its output was 928,000 gallons. About 40 per cent. of the whole Indian production was brewed in the Punjab. The quantity of beer imported in 1908 was 4,287,000 gallons.

Breweries.

In 1908 there were 117 factories belonging to the State and to local bodies. Among these were 21 printing presses, 22 railway workshops, 8 canal foundries and

Other large industries.

	No. of Works.	No. of Operatives.
Cotton presses	1,090	75,722
Cotton mills	242	236,709
Jute presses	128	27,160
Jute mills	57	195,276
Silk filatures	44	5,666
Rice mills	200	21,253
Flour mills	35	2,821
Sugar factories	23	5,625
Saw mills	105	8,477
Iron and brass foundries	83	24,592
Indigo factories	31	18,925
Tile factories	42	6,517
Oil mills	30	2,724
Printing presses	82	16,542
Dockyards	18	11,788

engineering workshops, and 19 military arsenals and factories. Factories worked by mechanical power, and owned by companies or private persons, numbered 2,473 compared with 2,352 in 1907. In these the average daily number employed was 789,683. A classified list is given in the margin. There were also 522 factories not worked by mechanical power, employing 86,279 persons. Of the 1,090 factories for the ginning, cleaning and pressing of cotton there were 374 in the Central Provinces and Berar, 280 in Bombay, 182 in the Punjab, and 127 in the United Provinces. In Bombay about 190,000 operatives are employed in different branches of the cotton industry. In Madras and the Central Provinces and Berar, as in Bombay,

cotton weaving and spinning are the principal industries. In Eastern Bengal and Assam there are many jute presses. Silk filatures and indigo factories are found chiefly in Bengal. Flour mills are most numerous in the Punjab and sugar factories in Bengal. Rice mills and saw mills are most numerous in Burma, rice and teak being the two principal products of the province. They are mainly in European hands and are the only large industries in Burma organised and worked by western methods. Printing presses are numerous in Bengal and Madras. The new factories established in the United Provinces included two sugar mills and an up-to-date flour mill. In the same province some small weaving and knitting factories have been started, and also a factory for dyeing yarn for hand-weavers. Of 16 new factories in Bengal may be mentioned factories for bobbin-making, shoe-making, and cigarette making. Iron and brass foundries (including engineering workshops) number 29 in Bengal and 19 in Bombay. Only one company manufactures iron on European lines in Bengal, and its production is confined to pig-iron. Another firm has arranged to erect blast furnaces and steel rolling mills in the Singhbhum district.

FACTORY LEGISLATION.

The law respecting factories in India is Act XV. of 1881, as amended by Act XI. of 1891. The changes introduced by the latter were, briefly: (1) The law could be

FACTORY
LEGISLA-
TION.

applied to establishments employing 20 hands or over, instead of only to those with 50 hands or over, factories of the latter description being brought in all cases under the Act; (2) the minimum age for child labourers was raised from seven to nine years, and the maximum age from 12 to 14 years; (3) the maximum hours for child labour in any one day were reduced from nine hours to seven hours, and night-work was forbidden; (4) the hours of actual labour for women workers, which were unrestricted under the Act of 1881, were limited to 11 hours a day, with intervals amounting to 1½ hours; (5) a rest period during work was prescribed for all labourers.

In December 1906 the Government of India appointed a small Committee, with Commander Sir H. P. Freer-Smith, R.N., late Superintending Inspector for Dangerous Trades in England, as chairman, to conduct a preliminary inquiry into the conditions of factory labour in textile factories in India. The Committee recommended that the working hours of adult males should be limited to 12 hours a day; that before children or adults are allowed to work in factories certificates of age and physical fitness should be required; that night-work of women should be prohibited; and that Medical Inspectors should be appointed. The Committee's report was presented to Parliament in 1907 (Cd. 3617).

The conclusions of this Committee formed the basis of an investigation by a representative Commission, whose report was presented to Parliament in 1908 (Cd. 4292). This report disclosed the existence of abuses, particularly in connection with the employment of children and the excessive hours of operatives generally in textile factories. The majority of the Commission deprecated a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons," between 14 and 17 years of age, whose hours should be limited to 12, and considered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those of "young persons," night-work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

The recommendations of the Committee and of the Commission having been considered by the Government of India and the Local Governments, a bill was introduced in July 1909 to amend and consolidate the law relating to factories. The new bill provides, subject to certain exceptions, that in textile factories: (1) No person shall be actually employed for more than 12 hours in any one day; (2) no person shall be employed before 5.30 in the morning or after 7 in the evening; (3) the period for which mechanical power is used shall not in any one day exceed 12 hours; (4) no child shall be employed for more than 6 hours in any one day. Further provision is made for securing the health and safety of the operatives and for making inspection more effective.

The bill has been published and opinions of Local Governments, Chambers of Commerce, and other associations regarding it have been invited, and will be considered before it is proceeded with in the Legislative Council.

FACTORY
INSPECTION.

FACTORY INSPECTION.

The statistics of the factories inspected during 1908 are as follows:—

PROVINCE.	Number of Factories working, and liable to be inspected.	Average Number of Hands employed daily.				Number of Factories.				Number of Persons convicted of breach of Act.	Number of Accidents reported.			
		Men.	Women.	Children.	Total.	With Sunday Holiday.	With other Weekly Holiday.	Exempted or worked otherwise.			Fatal.	Serious.	Minor.	Total.
Bengal	219	•	•	•	301,727	•	—	•	—	—	65	•	•	881
United Provinces	157	42,569	5,091	2,282	49,942	132	23	•	3	13	44	47	104	184
Punjab	219	21,467	3,073	1,149	25,689	159	51	•	3	6	26	254	285	285
North West Frontier Province	2	•	•	•	118	•	•	•	•	•	•	•	•	•
Burma	255	39,427	889	271	40,587	211	37	7	3	11	150	139	300	300
Central Provinces and Berar	323	23,357	12,495	1,767	37,619	153	169	1	21	5	76	81	163	163
Madras	153	36,486	4,250	5,415	46,151	•	•	•	•	10	25	307	342	342
Bombay	509	174,826	43,548	11,818	230,192	353	149	4	27	29	199	1,253	1,472	1,472
Eastern Bengal and Assam	101	17,545	902	547	18,995	28	—	63	1	—	3	13	16	16
Ajmere-Merwara†	5	9,394	113	138	9,645	4	1	—	—	—	4	62	70	70
Total, 1908	1,943	•	•	•	780,865	•	•	•	37	143	•	•	•	8,582
Total, 1907	1,866	576,652	103,764	49,347	729,663	1,294	437	135	36	120	832	2,797	3,750	3,750

* Information not yet available.

† Figures for 1907.

In 1908 the law was generally well observed as regards sanitation and water supply. In Bombay City and in the Punjab, however, constant attention had to be paid to the condition of the latrine accommodation in some of the factories. Measures

FACTORY
INSPECTION.

have been taken in Bombay to secure better ventilation in factories. The humidity in weaving sheds was often excessive, especially in Ahmedabad. In some places, particularly in Ahmedabad, in Howrah (Calcutta), Berar, and the Punjab, there were breaches of the law regarding child labour. In the Bengal jute mills there were general efforts to improve ventilation and to provide well-built houses for operatives, and septic tanks were installed in many of the mills. There were some complaints in Bombay and Rangoon of imperfect fencing of machinery. Accidents in mills are said to be largely due to the carelessness of the operatives. Out of 162 accidents in the Central Provinces 67 occurred in the Gun Carriage Factory at Jubbulpore, mainly ascribed to carelessness. Proposals are under discussion for increasing the inspecting staff in the several provinces.

PATENTS AND DESIGNS.

PATENTS
AND
DESIGNS.

The laws for granting exclusive privileges to inventors and for protecting patents and designs were amended and consolidated by the passing of the Inventions and Designs Act (V. of 1888). Proposals for amending this Act are under consideration.

The total number of applications for leave to file a specification under the Act in 1909 was 615, or 64 more than in 1908. Of these, 47 were refused or abandoned, and 117 were undecided at the end of the year. Only 63 of the applications were made by natives of India, 135 were made by Europeans and others resident in India, while 417 came from outside India, of which 217 were from the United Kingdom. The range of inventions for which protection was sought was, as usual, very wide, and, as in previous years, those relating to railways, electrical contrivances, chemical appliances and preparations, and textile industries predominated. Exclusive privileges were kept alive by payment of prescribed fees in 678 cases, while 449 ceased. Applications for the registration of designs numbered 51, of which 37 were allowed.

CHAPTER X.

TRADE.

TRADE.

(Detailed information regarding the Trade of British India is annually furnished in three Parliamentary Bluebooks: *Tables of the Trade of British India, Review of the Trade of India, and the Statistical Abstract for British India, Tables 136 to 176.*)

FOREIGN SEABORNE TRADE.

Foreign
seaborne
trade.

The foreign seaborne trade of India has greatly increased during the last 26 years, as the marginal figures relating to private merchandise show (values in thousands of pounds at 15 rupees to the pound). It will be observed that the percentage growth has been greater in imports, though the absolute increase has been larger in exports, until the serious fall in 1908-9.

The foreign seaborne trade of British India during the five years to 31st March 1909 was as follows:—

	1904-5.	1905-6.	1906-7.	1907-8.	1908-9.
Imports:					
Private Merchandise	£ 64,452,192	£ 68,722,713	£ 72,205,055	£ 86,596,729	£ 80,843,818
Government Stores	5,156,305	6,019,781	5,956,410	4,428,635	5,008,301
Total Merchandise	69,608,497	74,742,494	78,161,465	91,025,364	85,852,119
Treasure, Private	22,018,353	13,947,526	18,133,990	21,880,286	15,087,902
Government	4,320,430	7,153,150	11,585,884	6,309,379	74,876
Total Treasure	26,338,783	21,100,676	29,719,874	28,189,665	15,162,778
Total Imports	95,947,280	95,843,170	107,881,339	119,215,029	101,014,897
Exports:					
Private Merchandise:					
Indian Produce and Manufactures	102,760,848	105,459,482	115,388,009	115,652,151	99,882,633
Foreign ditto	2,248,715	2,352,540	2,322,693	2,511,557	2,113,820
Government Stores: Indian	138,472	78,392	71,940	84,921	76,800
Total Merchandise	105,148,035	107,890,414	117,782,642	118,248,629	102,073,253
Treasure, Private	5,392,377	4,299,838	3,808,672	3,630,819	3,971,116
Government	5,634,834	6,013,499	3,497	1,514	242,382
Total Treasure	11,027,211	10,313,337	3,812,169	3,632,333	4,213,498
Total Exports	116,175,246	118,203,751	121,594,811	121,880,962	106,286,751
Total Sea-borne Trade	212,122,526	214,046,921	229,476,150	241,095,991	207,301,648
Net Exports of Merchandise	35,539,538	33,147,920	39,621,177	27,223,265	16,221,134
Net Imports of Treasure	15,311,572	10,787,339	25,907,705	24,557,332	10,949,280
Net excess of Exports (balance of trade)	20,227,966	22,360,581	13,713,472	2,665,933	5,271,854

The marked decline in imports and exports in 1908-9 was due principally to the widespread failure of crops, especially in Northern India, and to the high range of prices of food-grains. The net excess of exports was small.

The following table shows the values of the chief articles of merchandise imported and exported during the last three years (in thousands of pounds):—

TRADE.
Principal
imports and
exports.

Principal Imports.				Principal Exports (Indian Merchandise).			
Articles.	1906-7.	1907-8.	1908-9.	Articles.	1906-7.	1907-8.	1908-9.
	000£	000£	000£		000£	000£	000£
Cotton manufactures	25,130	29,566	22,911	Jute, raw	17,892	11,982	13,223
Wool yarn	2,149	2,462	2,433	Cotton, raw	14,652	17,135	13,179
Metals	6,693	8,794	8,669	Rice	12,353	13,559	10,592
Sugar	5,825	6,151	7,271	Jute manufactures	10,477	12,198	10,491
Railway material	2,772	4,801	4,947	Hides and skins	10,230	7,301	8,312
Machinery and millwork	3,860	4,390	4,411	Seeds	8,681	11,210	7,785
Mineral oils	1,618	2,129	2,606	Tea	6,572	6,867	6,929
Hardware and cutlery	1,769	2,110	1,951	Cotton yarn	6,931	5,982	6,454
Woollen goods	1,368	1,845	1,941	Opium	6,205	5,782	6,233
Provisions	1,616	1,827	1,875	Lac	2,333	2,722	1,863
Apparel	1,408	1,722	1,612	Wool, raw	1,618	1,402	1,389
Silk manufactures	1,217	1,423	1,521	Wheat and wheat-flour	5,227	6,097	1,241
Liquors	1,238	1,337	1,323	Cotton manufactures	1,181	1,196	1,238
Spices	960	1,041	916	Coffee	664	743	927

The restriction in the purchasing power of the people, resulting from bad harvests, led to a great decline in imports of cotton goods after three years of active trade. There was a further increase in the imports of sugar, which is mostly cane sugar from Java and Mauritius. Java, which obtained a footing in the Indian markets when the imposition of countervailing duties restricted supplies of beet sugar, provided in 1908-9 about 53 per cent. of the imports of refined sugar, besides sending large quantities of molasses and unrefined sugar. The progress in imports of metals, chiefly iron, steel, and copper, and of machinery and millwork, is evidence of activity in indigenous mining and manufacturing enterprise. Among articles the increasing imports of which point to the growing prosperity of the people may be mentioned silk and woollen goods, sugar, mineral oils, hardware and cutlery, provisions, cigarettes, and glass and glassware. As there is a large number of State railways, the Government imports of railway material should be added to the figures given above, thus bringing the total value of railway material imported to £7,960,000. Railway material constitutes more than one half of the Government imports of stores.

Imports of
merchandise.

The table brings out clearly the immense preponderance amongst Indian exports of raw agricultural produce, and the figures fluctuate widely according to the character of the season. The unfavourable season of 1907-8 caused a decline in the exports during 1908-9 of raw cotton, rice, seeds, and especially wheat. The strong internal demand for rice and wheat curtailed the exports still further. The exports of raw jute were much greater, in spite of a decrease in prices. But in jute manufactures there was a smaller business, due to the inactive demand. Hides and skins rose in quantity and value. The tea trade showed further growth, but prices were lower than in 1907-8. The coffee trade was less active. Opium yielded better results. The improved state of the China market mainly explains the increase in exports of cotton yarn and cloth. The trade in lac was less prosperous.

Exports of
Indian
merchandise.

Further details with regard to the trade in some of the principal agricultural products are given in Chapter V.

The value of foreign merchandise re-exported from India is relatively small, and the trade is not progressive. Of the total in 1908-9, £2,113,820, cotton goods shipped to the Persian Gulf, Arabia, East Africa, &c. formed about 35 per cent. of the total.

Re-exports.

In comparing the magnitude of the trade of different countries with India great care is necessary. In the returns imports are classified according to the countries whence they were shipped direct to India and not according to the countries of production, while exports are ordinarily credited to the countries containing the ports at which the goods are discharged, whether destined for those countries or not. Much of the trade shown as to or from Holland and Belgium is really trade with Germany, and Switzerland does a large trade with India through other countries. The figures as they stand show that the share of the United Kingdom in the total trade in private merchandise in 1908-9 was 41.1 per cent.; while that of Germany was 7.3; of China, 7.5; of the United States, 6.0; of Belgium, 4.1; and of France, 4.2 per cent. Taking imports and exports separately, about 63 per cent. of the import trade

Trade by
countries.

TRADE. (exclusive of Government stores) and 24 per cent. of the export trade was conducted with the United Kingdom. In consequence, however, of the re-exports of Indian produce, the proportion retained in England is considerably lower. The proportion of the trade assignable to other parts of the British Empire cannot be stated accurately, since the large transactions with Aden, Ceylon, the Straits Settlements, and Hong Kong, which are chiefly distributing centres, are really for the most part trade with foreign countries. As regards the self-governing colonies, the largest trade was done with Australia (£2,258,000).

The value of India's trade in private merchandise with the chief countries, for the last three years, has been as follows (in thousands of pounds):—

Countries.	Imports from			Exports (Indian Merchandise) to		
	1906-7.	1907-8.	1908-9.	1906-7.	1907-8.	1908-9.
	000£	000£	000£	000£	000£	000£
United Kingdom - - -	48,199	57,758	50,618	31,290	29,936	24,048
Germany - - - - -	3,861	3,443	3,286	13,150	13,494	10,199
China (including Hong Kong)	995	1,466	1,550	12,568	9,989	11,975
United States - - -	1,698	2,158	2,176	10,416	9,012	8,807
Belgium - - - - -	2,904	3,538	3,447	4,799	6,097	4,120
France - - - - -	975	1,355	1,207	7,470	7,670	6,402
Japan - - - - -	1,073	1,445	1,411	4,730	5,914	4,782
Straits Settlements - -	1,846	2,097	2,334	4,353	4,547	3,504
Austria-Hungary - - -	2,046	1,770	2,578	4,012	4,234	3,220
Ceylon - - - - -	566	630	469	4,254	4,167	3,877
Italy - - - - -	721	795	756	3,804	3,695	3,357
Mauritius - - - - -	1,445	1,643	1,715	833	735	787
Turkey - - - - -	343	334	381	790	1,295	1,168
Russia - - - - -	72	268	186	494	648	678

A return has been prepared showing imports according to countries of consignment and exports according to countries of final destination in 1907-8. It appears from this return that the distribution of trade as given above is substantially accurate, except in the case of Germany and Belgium, imports from which were £5,125,789 and £1,388,023, and exports thereto £13,883,169 and £5,771,212 respectively, in that year.

The trade with China consists mainly in the exportation thereto of opium and cotton yarn, while silk and silk goods and tea are imported.

Germany sends chiefly woollen goods, cotton goods, musical instruments, liquors, paper, steel, iron, copper and other metals, hardware and cutlery, machinery, dyes, apparel, &c. in exchange for raw cotton and jute, raw hides and skins, rice, lac, oilseeds, &c. She buys far more than she sells to India. Belgium takes raw cotton, oilseeds, manganese ore, hemp, jute and jute goods, wheat, rice, &c. in exchange for iron, steel, dyes, glass, hardware and cutlery, cotton goods, &c. France buys large quantities of raw jute and cotton, lac, coffee, raw silk, hides and skins, and oilseeds, and sells apparel, silk goods, and liquors. The United States buys large quantities of jute, raw and manufactured, hides and skins, and lac, and sells mineral oil, tobacco, cotton goods, and iron and steel.

Trade of chief ports. The following figures show the proportionate share of the six chief ports in the private trade with foreign countries in merchandise only:—

Port.	Imports (percentages).				Exports (percentages).			
	1905-6.	1906-7.	1907-8.	1908-9.	1905-6.	1906-7.	1907-8.	1908-9.
Calcutta - - - - -	40.4	38.9	40.5	36.5	41.9	44.4	39.5	43.3
Bombay - - - - -	35.4	35.1	34.5	33.3	30.0	25.7	27.5	27.5
Karachi (Sind) - - -	8.4	8.7	8.1	9.3	7.1	8.9	10.2	5.6
Madras - - - - -	6.1	7.1	6.6	8.0	3.6	3.8	3.5	3.7
Rangoon - - - - -	7.8	8.4	8.4	10.6	8.1	6.9	8.0	6.1
Chittagong - - - - -	0.3	0.3	0.4	0.5	1.8	2.2	2.1	3.1

The value of the exports from Calcutta was reduced by a decline in the trade in jute manufactures, lac, oilseeds, &c., while imports were lower owing mainly to reduced imports of cotton goods. The decrease in exports from Bombay was due to the smaller shipments of seeds, cotton, &c., while imports declined chiefly because of diminished purchases of cotton goods.

The net import of gold, which had been exceptionally large in 1906-7 and 1907-8, fell from £13,835,000 to £5,603,000. The net import of silver, which had also been unusually great in the two previous years, decreased from £14,355,000 to £9,560,000. The balance of trade rose from the unprecedentedly low sum of £2,666,000, in 1907-8 to £5,272,000.

The figures relate only to the trade of British Indian ports, and exclude land frontier trade, the trade of certain Native States on the west coast, the trade of French and Portuguese possessions, private remittances to and from India, and precious stones and pearls re-exported by post.

LAND FRONTIER TRADE.

The statistics of land frontier trade shown in the margin include a great deal of trade that is not strictly foreign. Owing to difficulties of registration accurate returns are impossible, but there is a large and increasing trade with Afghanistan, Nepal, Western China, and Siam. The principal exports from India are cotton yarn and manufactures (chiefly foreign), sugar, metals, salt, spices, and fish; and the chief imports into India, rice and other grains, provisions, wood, fruits, living animals, wool, hides and skins, oilseeds, drugs, and raw silk.

	Imports.	Exports.	Total.
	000£	000£	000£
1906-7	5,151	4,275	9,426
1907-8	5,670	4,643	10,313
1908-9	5,526	4,640	10,166

COASTING TRADE.

The combined import and export trade in merchandise carried by coasting vessels amounted to £38,433,000 during 1908-9, or 2 per cent. less than in 1907-8. This amount is arrived at by adding to the value of the imports into British ports from other British ports the sum of the imports and exports in the trade between British and non-British ports in India. The chief increase was in rice, a large quantity of which was exported from Burma to Bengal, Madras, and Bombay. Coal shipments from Bengal were larger. Burma sent slightly smaller supplies of mineral oil, and Bombay smaller quantities of cotton piece goods to Indian ports.

SHIPPING.

During 1908-9 the number of steamers and sailing vessels with cargoes and in ballast which entered from and cleared to all countries was 8,001, with a tonnage of 12,910,823, a decrease of 6.4 per cent., as compared with 1907-8. Of the total, 98 per cent. was steam tonnage.

The entries from and clearances to the United Kingdom were 2,871,129 tons, as against 3,119,233 tons in 1907-8.

The number of vessels under the principal flags is given below:—

Nationality.	1904-5.	1905-6.	1906-7.	1907-8.	1908-9.
British - - - - -	5,633	4,838	4,918	4,785	4,238
German - - - - -	339	387	371	375	437
Austro-Hungarian - -	156	162	159	157	156
Norwegian - - - - -	141	174	195	188	106
Japanese - - - - -	—	2	83	123	79
Italian - - - - -	74	85	77	79	76
French - - - - -	94	105	67	61	55

FREIGHTS.

The freight market in 1908-9 was extraordinarily dull throughout the world, and with the contraction in India's exports, rates to England were generally low. The following statement gives minimum quotations for typical rates of freight from the chief Indian ports to London in March of each of the last five years:—

	1905.	1906.	1907.	1908.	1909.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Calcutta—Rice - - -	1 0 0	0 15 0	0 17 6	0 15 0	0 15 0
Wheat - - - - -	1 0 0	0 15 0	0 17 6	0 15 0	0 15 0
Jute - - - - -	1 2 6	0 17 6	1 0 0	0 17 6	0 17 6
Linseed - - - - -	1 2 6	0 17 6	1 0 0	0 17 6	0 17 6
Tea - - - - -	1 16 3	1 13 9	1 15 0	1 12 6	1 12 6
Bombay—Wheat and seeds	0 15 0	0 13 6	0 15 0	0 13 0	0 12 0
Cotton (to Liverpool) -	0 15 6	0 14 6	0 15 0	0 12 0	0 11 0
Karachi—Wheat (to Liverpool) -	0 15 6	0 14 0	0 15 0	0 10 0	0 13 0

TRADE.

WORKING OF THE MERCHANDISE MARKS ACT.

(For further details, see *Statistical Abstract for British India*, Table 179.)

Working of
the Mer-
chandise
Act.

The Indian Merchandise Marks Act (IV. of 1889) was passed to prevent the fraudulent sale of goods bearing false trade marks or false trade descriptions (as of origin, quality, weight, or quantity). The Act also requires that all piece-goods must be stamped with their length in yards. The following statistics for 1908-9 are preliminary only. Out of 1,326 detentions under the Act, 308 were on account of counterfeit trade marks or false trade descriptions, 767 (an exceptionally large number) for non-description or false description of origin and 250 for unstamped or insufficiently stamped piece-goods. Detention is rarely followed by confiscation. Goods were released with a fine in 615, and without a fine in 710, cases. A "Merchandise Marks Manual" was published in 1908.

JOINT STOCK COMPANIES.

(For further details, see *Statistical Abstract for British India*, Tables 210-11.)

Joint Stock
Companies.

During the year 1907-8 there were 289 new companies registered in India under the Companies Act (VI. of 1882), with a paid-up capital of about £462,000, while 151, with a capital of £509,000, ceased to work. The aggregate paid-up capital of 695 companies was increased by £4,625,000, while 86 companies reduced their paid-up capital by £73,000. The net result was that at the end of the year there were in operation 2,061 companies, with a paid-up capital of £33,876,000. There has been an increase of 57 per cent. in the paid-up capital in the last 10 years. The companies are most important in the provinces of Bengal and Bombay, which possess 40 and 38 per cent. respectively of all the paid-up capital, while the share of Madras, which comes next, was less than 9 per cent. of the whole. The average of paid-up capital is highest in Bengal, where it amounts to £26,600, while in Bombay it is £25,800. In Madras 311 money-lenders, mostly carrying on a small business, are registered under the Companies Act. The distribution of paid-up capital among registered companies of the different classes was as follows:—

	£		£
Banking loan and insurance	4,595,000	Mills and presses	15,667,000
Trading and shipping	6,694,000	Tea and planting	2,404,000
Mining and quarrying	2,826,000	Other industries	1,690,000

(The capital stated above represents in all cases share capital only; the total value of the debentures issued amounted to £4,567,000.)

As will be seen, the largest aggregate paid-up capital, £15,667,000, constituting nearly half the total, was invested in cotton, jute, and other mills and presses; and about 52 per cent. of the capital of such undertakings was invested (mostly in cotton mills and presses) in Bombay Presidency. Nearly a third of the capital of trading companies is invested in railways and tramways. The capital invested in coal companies (more than 97 per cent. of which is in Bengal) has more than doubled in the last 10 years.

There are, so far as is known, 227 companies which carry on work with sterling capital exclusively, or almost exclusively, in India, but which are registered elsewhere, and their paid-up capital amounts to £73,872,404, besides £37,862,898 debentures. The railways represent £42,657,510 paid-up capital and £34,040,600 debentures. Of the rest the sterling share capital invested in the tea industry is £13,495,600, in jute mills £2,308,900, in cotton mills £798,500, in rice mills £852,000, and in gold fields £2,744,000. Thus, while the railway, gold, and tea concerns are mainly financed from abroad, the great bulk of the mill and press companies are registered in India.



CHAPTER XI.

PUBLIC WORKS.

PUBLIC
WORKS.

GENERAL.
RAILWAYS.

IRRIGATION.
BUILDINGS AND ROADS (CIVIL).

GENERAL.

General.

The operations included under the head of "Public Works" are of three kinds, viz., Railways, Irrigation, and Buildings and Roads. The Railway Department is an Imperial service under the control of the Government of India, or of the Railway Board, in so far as the powers of the Government of India have been delegated to it. The establishment employed on irrigation and on buildings and roads is subdivided into different Provincial services, controlled by the local administrations subordinate to the Supreme Government. Under the head of "Buildings and Roads" are included many miscellaneous works, such as improvements in towns, paving, water supply and drainage, harbours, lighthouses, &c.

The annual expenditure on public works is met partly from money raised by loan and partly from the ordinary revenues of the year. The class of works on which borrowed money is expended comprises the railways and large irrigation works, which are expected to yield sufficient net revenue to cover the interest on the capital expended on them. For the railways and more important irrigation systems, distinct capital and revenue accounts are kept, but for the smaller works of irrigation and most of the works included in the class of buildings and roads, such accounts are not kept, though a distinction is made in the accounts between expenditure on new works and expenditure on repairs to existing works.

The following statement of the total receipts and expenditure under the head of "Public Works" for 1908-9 is compiled from the Finance and Revenue Accounts:—

—	Receipts.	Expenditure.		
		—	Charged to Revenue.	Not charged to Revenue.
	£		£	£
Railways - - -	26,871,130	Construction - - -	415	9,488,168
		On Revenue Account - - -	28,113,380	—
Irrigation - - -	3,558,002	Construction - - -	—	983,489
		from Famine Relief Grant - - -	403,030	—
		On Revenue Account - - -	2,949,179	—
Buildings and roads - -	287,938	Civil Works - - -	4,495,927	—
TOTAL - - -	30,717,070		35,961,931	10,471,657

The expenditure charged against revenue includes the following items of "Interest on Debt":—Railways, £5,535,946; Irrigation, £1,017,327.

Of the permanent public debt on the 31st of March 1909, £182,213,141 is classed as incurred for railways and £30,738,991 for irrigation.

The amount paid under the head of "Annuities in purchase of railways," which is included in the Railway Revenue Account, is £3,268,132.

The engineer establishments of the Department are divided into (a) the Public Works Department and (b) the Public Works Department (Railway Branch). These establishments, including those of Bombay and Madras, but excluding that of the now separate Military Works Department, were considerably increased during the year. The upper subordinate engineering staff is largely composed of Indians.

PUBLIC
WORKS.

The following statement shows the strength of the superior engineer and upper subordinate establishments as they stood on the 30th June in 1908 and 1907 :—

	Public Works Department.			Public Works Department (Railway Branch).	Total.
	India.	Madras.	Bombay.		
Civil Engineers (including 1908	479	87	94	176	836
Military Officers) - 1907	479	83	91	176	829
Upper Subordinates - 1908	553	178	224	69	1,024
1907	517	177	215	72	981

RAILWAYS.

RAILWAYS.

For further details see Statistical Abstract for British India Tables 44 to 47, 74-5, and 126 to 134.

In the financial year 1908-9 there was a net loss of £1,242,250 as shown in the following table :—

	Imperial.	Provincial.	England. (Sterling converted at £1 = Rs. 15.)	TOTAL.
REVENUE.				
Railways—	£	£	£	£
State railways—(Gross traffic receipts) -	26,790,955	6,640	2,293	26,799,888
Guaranteed companies—(Net traffic receipts) -	— 961	—	—	— 961
Subsidised companies—(Repayment of advances of interest).	15,972	—	56,231	72,203
TOTAL - - - - £	26,805,966	6,640	58,524	26,871,130
EXPENDITURE.				
Railway Revenue Account—				
State Railways—				
Working expenses - - -	16,586,803	5,397	—	16,592,200
Share of surplus profits, &c. - -	320,889	—	—	320,889
Interest on debt - - -	2,502,107	—	3,033,839	5,535,946
Annuities in the purchase of railways -	—	—	3,268,132	3,268,132
Sinking funds - - -	—	—	159,491	159,491
Interest chargeable against companies on advances.	259,589	—	219,213	478,802
Interest on capital deposited by companies -	80,025	—	1,569,171	1,649,196
Guaranteed companies—				
Surplus profits, land and supervision -	12,743	—	—	12,743
Subsidised companies—				
Land, &c. - - -	67,937	2,928	—	70,865
Miscellaneous railway expenditure - -	19,598	5,518	—	25,116
TOTAL - - - - £	19,849,691	13,843	8,249,846	28,113,380
Net loss - - - - £				1,242,250

In the figures of expenditure are included all charges falling on the Government for the management and working expenses of railways, for interest on capital outlay, as well as for the gradual redemption (by charge to the revenue account) of the commuted capital of the East Indian, Eastern Bengal, Sind Punjab and Delhi, and Great Indian Peninsula railways, through the agency of sinking funds and annuities, and of that portion of the Oudh and Rohilkhand railway debt incurred in excess of the money raised through the agency of the "Discount" Sinking Fund. The figures also include charges for control, for land required by the companies, and for miscellaneous items, such as headquarters establishment and surveys.

The statistical results of working the various railways during 1909 are given in the following table. The aggregate net earnings of all Indian railways, including steamboat service and suspense items, but excluding indirect charges, produced a return of 4·74 per cent. on the total capital outlay on open lines, against 4·33 per cent. in the previous year.

Statistical
results of
working.

RAILWAYS.

Class.	Length of Line open on the 31st December 1909.	Total Capital Outlay on Open Lines to the 31st December 1909, including Steamboat and Suspense.	Total Number of Passengers carried.	Total Weight of Goods carried.	Gross Earnings, including Steamboat Service.	Working Expenses, including Steamboat Service.	Net Earnings, including Steamboat Service.	Percentage of Net Earnings on Capital Outlay on Open Lines.
<i>All Gauges.</i>	Miles.	£	No.	Tons.	£	£	£	
State lines worked by the State -	6,571·20	73,961,533	73,514,800	16,553,000	7,394,333	5,098,133	2,296,200	—
State lines worked by companies* -	17,839·46	180,224,933	200,315,200	40,768,000	20,577,934	10,962,067	9,615,867	—
Companies' lines guaranteed under modern contracts.	32·04	197,734	319,400	74,000	24,266	12,133	12,133	—
District Boards' lines - -	155·16	462,400	2,874,000	225,000	67,267	37,200	30,067	—
Assisted companies' lines - -	3,092·51	13,918,400	37,049,200	5,381,000	1,573,200	750,200	823,000	—
Unassisted companies' lines -	33·27	72,933	537,200	46,000	8,333	5,800	2,533	—
Lines owned by Native States and worked by companies.	2,000·81	9,916,400	13,247,500	2,194,000	809,734	403,267	406,467	—
Lines owned by Native States and worked by State railway agency.	235·28	921,533	3,860,700	676,000	141,200	73,733	67,467	—
Lines owned and worked by Native States.	1,452·02	3,447,467	5,405,900	916,000	427,400	233,867	193,533	—
Lines in foreign territory - -	73·60	1,224,267	969,000	367,000	47,733	29,133	18,600	—
TOTAL OF ALL RAILWAYS, 1909	31,485·35	284,347,600	338,092,900	67,200,000	31,071,400	17,605,533	13,465,867	4·74
Ditto 1908†	30,570·23	274,611,600	321,169,000	62,398,000	29,884,600	18,001,667	11,882,933	4·33

* The Birur-Shimoga, Hindupur, and Mysore-Nanjangud railways are included with the Mysore State railway under this classification, as separate figures for these lines are not available.
† As corrected from later information.

It will be observed that, with an increase of 915·12 miles, or 2·99 per cent., in the open mileage, as compared with 1908, the gross earnings increased by £1,186,800, or 3·97 per cent., while the working expenses decreased by £396,134, or 2·20 per cent., resulting in an improvement of £1,582,934 in the net earnings.

The total railway mileage opened, under construction, and sanctioned for construction during the year was as follows :—

Gauge.	Miles opened.	Miles sanctioned for construction.	Total Mileage under construction or sanctioned at the close of the Year.
5' 6" gauge - - -	356·84	204·04	1,484·07
3' 3" " - - -	461·00	355·52	761·16
2' 6" " - - -	96·28	494·13	712·30
2' 0" " - - -	—	11·02	
Total - - -	914·12	1,064·71	2,957·53
Add correction of mileage -	1·00		
Net total addition to open mileage -	915·12		

The northern section of the Nagda Muttra railway, from Kotah to Muttra, 202·72 miles, was completed and opened through for traffic from 1st October 1909. This railway connection, which traverses 12 Native States in Central India and Rajputana, provides the shortest through route on the standard gauge between the port of Bombay and the United Provinces and the Punjab, and is expected to develop trade through a rich grain-producing country. Its protective value is also great as a feeder and distributory line in the event of the recurrence of famine in that part of the country. The other lines opened during the year included the Katihar-Godagari railway, 107·39 miles; the Gauhati extension of the Eastern Bengal State railway, 111·92 miles; the Degana-Marwar Frontier railway, 61·32 miles; the Lodhran-Khanewal and Chichoki-Jaranwala branches of the North-Western railway, 56·59 and 48 miles respectively, and 18 other lines of shorter length.

Among the lines sanctioned for construction during the year, the most important were the Phaphamau-Unao branch of the Oudh and Rohilkund railway, 114·58 miles; the Nagpur-Chindwara railway, 94·39 miles; the Kalabagh-Bannu branch of the North-Western railway, 83·21 miles; the Pilibhit-Shahjahanpur extension of the Rohilkund and Kumaon railway, 56·82 miles; and the Purna-Hingoli branch of the Hyderabad Godavery Valley railway, 50·26 miles.

Miles
opened
under
construct

RAILWAYS.
Important
works com-
pleted and
in progress.

Full particulars in regard to the works completed and in progress during 1909, and projects for new lines under consideration during the year, will be given in the Administration Report on Indian Railways for 1909, which will be published as a Parliamentary Paper. A few details of the more important works of the year are, however, given below.

Important works in progress during the year included the Sutlej Valley (Kasur-Lodhran) railway, 209·26 miles; the Allahabad-Rae Bareilly-Cawnpore extension, Oudh and Rohilkund railway, 153·31 miles; the Shorkot Road-Chichoki railway, 135·8 miles; the Balamau Sitapur and Rosa Sitapur branches of the Oudh and Rohilkund railway, 88·48 miles; the Benares Allahabad and Balamau Sitapur extensions of the Bengal and North-Western railway, 75·96 miles, and 59·79 miles respectively; and the Dharmapuri Hosur extension of the Morappur Dharmapuri railway, 60·50 miles. A new bridge on the 5' 6" gauge over the Ganges at Cawnpore was under construction; other bridges in hand during the year included the Sutlej and Beas bridges on the North-Western railway, the Sagaing bridge on the Burma railways, bridges by the Bengal and North-Western railway over the Gundak at Bagaha, the Gogra at Manjhi Ghat and the Ganges at Jhoosi, and by the Tirhoot railway over the Bagmati and Korai rivers. An open viaduct across the Pamban Channel, with a swing bridge, was also under construction by the South Indian Railway Company, with a view to effecting through railway communication between the mainland and the island of Rameswaram. The site of the Sara bridge was definitely fixed at three miles below Sara, and preliminary operations have been commenced. The conversion of the Cooch Behar railway from the 2' 6" gauge to the metre gauge was in progress and is shortly expected to be completed.

Projects for
new lines.

Among the projects for new lines which were under consideration during the year, the most important were the Bombay Sind connection, which it was decided should be held in abeyance for the present; the Rangiya Tangla branch of the Eastern Bengal State railway, and the Samastipur-Roserha extension of the Tirkoot State railway which were sanctioned; the Murtazapur Pilsaon line for which the concession lapsed owing to the promoters failing to comply with its conditions within the stipulated period; and the Thawe-Tewaripatti-Captainganj extension of the Bengal and North-Western railway which is still under consideration. Proposals were received from private promoters for the construction of lines from Agra to Hathras, Dholka to Dholera via Gamph, Murtazapur to Ellichpur (Central Provinces), Bodeli (on the Gaekwar's Mehsana railway) to Barwaha (on the Rajputana-Malwa railway), Broach to Jambusar, Dabhoda to Ambaji Mata, and Nabiad to Kapadvanj. The Madras and Southern Mahratta, Southern Punjab, South Indian, Darjeeling-Himalayan and Sind Light Railways Companies are also negotiating for extensions of their respective systems. The Government of India have also received proposals for various light railways and tramways in Aden and India which were still under consideration at the close of the year under review.

Rolling
stock and
safety ap-
pliances.

For the year 1909-10, a provision of Rs. 650 lakhs was made for additional rolling-stock for open lines of railway. This provision is Rs. 102½ lakhs in excess of that made for the same purpose for the previous year 1908-9. The additions made during the year 1909 to the rolling stock of the principal lines consisted of 364 engines, 756 coaching vehicles and 8,931 goods vehicles, the number under supply at the end of the year being 135 engines, 1,447 coaching vehicles and 5,714 goods vehicles.

Good progress is being made in the provision of automatic brakes, communication gear between passengers and the train staff, electric lighting in upper class carriages and gas lighting in all other carriages, and in the removal of continuous foot boards and horizontal hand-rails.

Interlocking
and block
working.

The question has been under consideration of improving the rules for the design and inspection of signalling and interlocking in the direction of relaxing to a certain extent the conditions which have hitherto been in operation and of allowing more economical schemes of interlocking to be installed without any sacrifice of safety in traffic working, and a small committee has been appointed to investigate the question and make recommendations.

Damages by
flood and
rainfall.

Owing to heavy rains throughout the year, breaches occurred on the Bengal Nagpur, Ahmedabad Dholka, Eastern Bengal, Mymensingh Jagannathganj, East Indian, Gwalior, Madras and Southern Mahratta, Nizam's, North Western, South Indian, Bengal and North Western and Burma railway systems. The interruptions to traffic were very considerable; on certain sections of the North Western the damages were

so severe that it was more than a week before through communication was restored. Breaches by the sea occurred in several places on the South Indian railway between Rameswaram and Danishkodi, and traffic was stopped for three days.

Serious accidents occurred during the year on the Burma railways, resulting in the death of nine persons and injuries to fourteen others, on the Hardwar Dehra railway when eight persons were killed and eleven injured, and on the Madras and Southern Mahratta railway when fifteen persons were killed and fifteen injured. The damages to rolling stock were considerable, estimated in the first two cases at Rs. 77,000 and Rs. 100,261 respectively.

The concessions granted by the North Western and Oudh and Rohilkund railways to Afghan trade passing through Nushki, which were referred to in last year's report, were extended for a further period of three years from 1st April 1909.

With a view to the closer control over the revenue and expenditure of railways, the Railway Board issued orders in June 1909, requiring the careful monthly examination by Railway Administrations of the progress of expenditure as compared with the budget grant and the submission to the Board of a monthly return showing results of this comparison. For the same purpose orders were issued requiring the Establishment Rolls and Working Estimates to be prepared for the official year, showing expenditure on special works and renewals separately from ordinary recurring charges, so that a proper control may be exercised from year to year over each class of expenditure.

This subject has been under correspondence between the Secretary of State and the Government of India, as a result of which the Home Treasury Estimates are now prepared on the basis of the amounts appearing in the Railway Construction Programme submitted annually to the Secretary of State. The main features of the new system are (1) that separate grants for Indian and English outlay are now allotted to all railways, the power to re-appropriate between these grants being entirely in the hands of the Railway Board and the Secretary of State, and (2) that indents on England for stores to be supplied in a coming year are to be restricted within a prescribed limit and covered by a specific allotment of funds.

A strike of goods drivers commenced on May 23rd, 1909, at Arkonam station on the Madras and Southern Mahratta railway, which rapidly developed into a general strike of all drivers on the broad gauge section of the line. The train service was disorganised for a few days, but the administration, by engaging new hands and transferring men from the metre gauge section, succeeded in restoring complete regularity in both passenger and goods services by June 12th. The strike finally collapsed on July 2nd, after a public meeting in Madras had adversely criticised the methods of the strikers. The men formulated no grievances until after the commencement of the strike, claims for better pay and allowances and leave rules being definitely put forward only on May 27th.

A dispute occurred between the Port Trust and the Great Indian Peninsula railway and Bombay, Baroda and Central India railway regarding terminal arrangements for working goods traffic at Bombay, but as the outcome of discussion between the interested parties proposals were formulated reconciling the various issues and arranging for arbitration in case of any further minor difficulties arising.

The Indian Railway Conference Association at their meeting in October 1908 approved of a draft revised general classification of goods, and directed that it should be circulated to all railways for remarks. The details of the tariff were further revised and considered at the conference meeting of September and October 1909, when it was decided that the general classification, and general rules framed in this connection, should be adopted from 1st April 1910.

A proposal for an amendment of the Indian Tramways Act XI. of 1886, making it applicable to mono-rail concerns and to electric tramways, has been submitted to the Secretary of State for approval.

The branch line terms Resolution No. 514 R. C. of 1896 was revised during the past year, so as to offer Government assistance on a more liberal scale to private companies formed to provide capital for feeder lines of railway.

Use of local manufactures for railway purposes.—During the year under review revised rules for the purchase of stores were promulgated by the Government of India, the effect of which is to remove many of the limitations which restricted purchase in the local market. It is yet too early to say what will be the result of these rules, but

Accidents.

Rebate on
Afghan
trade.

Control over
revenue and
expenditure.

More accu-
rate fore-
casting and
better con-
trol of ex-
penditure in
England.

Strikes.

Dispute
between
Port Trust
and railways
at Bombay.

Classifica-
tion of goods.

RAILWAYS. there is no doubt that they will give a decided impetus to the purchase for State railways of articles of local manufacture.

Working of motor road trains to serve as feeders to railway lines.—Motor trains suitable for road traction on the Renard system have met with a certain amount of success in England and on the Continent; and, with a view to giving a practical trial to this system of road traction, the Railway Board arranged to carry out certain experiments—

- (a) on a mountain road,—for which the Gauhati-Shillong route was selected, and
- (b) in the plains,—for which the Moradabad-Sambhal Road in Oudh was chosen.

The latter experiment was inconclusive, as it was abandoned after a short time owing to the breakdown of the engine.

The experiments, however, proved that the Renard system is, after certain minor defects have been remedied, a practical one. But it seems unlikely that such mechanical road traction can compete at present with the ordinary carts and tongas of the country, except where labour is scarce and animal traction difficult to provide. The road between Gauhati and Shillong seems to offer fair chances of success for a mechanical road transport service.

Nomenclature and classification of State Railway Stores.—The Board have taken up the revision of this publication to bring it up to date and to make it suitable for use by other Government Departments using stores. As the final issue will take some time to accomplish, the Board in the beginning of the year 1909 published a provisional issue to meet urgent demands for this publication.

IRRIGATION.

IRRIGATION.

(For further details see *Statistical Abstract for British India*, Tables 44 to 47, 68–9, 71, 74 to 76, 119, 121, and 135.)

The class of works dealt with by the Public Works Department under the head of Irrigation may be roughly divided into canals and tanks, though these two kinds of works are frequently used in combination.

The works under the former head take off, in most cases, from the larger rivers, which, drawing their water from lofty mountain ranges, can, even in times of drought, be depended upon for an unfailing supply. They have been utilised on the largest scale and with the most successful results in the United Provinces of Agra and Oudh, the Punjab and Sind, and the deltas of the large rivers in the Madras Presidency. In tank irrigation, on the other hand, the supply of water is more or less dependent on the local rainfall, either directly or through the medium of the smaller rivers, which dry up in hot seasons. This is the common system of irrigation in Southern India, where irrigation is largely dependent on storage works. In the Madras Presidency alone there are some 60,000 tanks. These works are for the most part of native origin; but much has been done under the British Government in improving old tanks, and in constructing new works in Madras, the Bombay Deccan, and Ajmere-Merwara.

In parts of Baluchistan, where the rainfall is scanty and very capricious, a method is practised of drawing the water from underground springs by means of tunnels driven into the hill sides. There remains the method of irrigation more extensively used in India than any other, viz., that by wells, which, however, does not come directly within the scope of operations of the Public Works Department.

Financially considered, the irrigation works are classed as “major” or “minor.” The former class includes all the works which have been undertaken from loan funds, in the expectation that they would be sufficiently productive to cover the interest charges on the sums spent on their construction. It also includes the works classed as famine protective, which are constructed not from borrowed funds, but out of the annual grant from revenue for famine relief and insurance. The cost of constructing the “minor” works, as well as the sums annually required for their working and maintenance, are met from the ordinary revenues, and for the greater part of this class of works distinct capital and revenue accounts are not kept.

Speaking generally, the “major” class includes the works of the greatest engineering importance, which have been constructed, or, as in a few cases of old Native works, almost entirely reconstructed by British officers.

The following statement gives a general view of results obtained from working the canals for which full accounts are kept for 1906–7, 1907–8, and 1908–9:—

	Capital Outlay (Direct and Indirect) to End of Year.	Gross Receipts.	Working Expenses.	Net Receipts.	Percentage of Net Receipts on Capital Outlay.	Area irrigated.
	£	£	£	£		Acres.
Major Works - - - - -	32,143,278	3,376,852	1,140,188	2,236,664	6·96	14,468,107
Minor Works - - - - -	4,028,294	315,631	117,430	198,201	4·92	1,967,420
Total for 1908–9 - - - - -	36,171,572	3,692,483	1,257,618	2,434,865	6·73	16,435,527
Total for 1907–8 - - - - -	34,543,031	3,565,722	1,235,577	2,330,145	6·74	16,076,888
Total for 1906–7 - - - - -	33,329,664	3,761,726	1,192,152	2,569,574	7·71	15,799,558

There are great differences in the financial success of the irrigation works in the various provinces. These are due to the various physical conditions of the country in regard to surface, soil, climate, and the absence or presence of large rivers with a permanent supply of water, as well as to the differences in the character and habits of the people in different districts. There are also considerable differences in the manner in which the irrigation revenue is assessed and collected, which have an important bearing on the financial success of the works. In Madras the bulk of the irrigation revenue is collected with, and on most of the works is consolidated with, the land revenue. In Bengal and Bombay the receipts of the Irrigation Department consist to a great extent of “occupiers’” rates, and are not supplemented by “owners’” rates, as in the United Provinces of Agra and Oudh, nor, with a few exceptions, by a share of the land revenue. In Sind the revenue of the canals consists almost entirely of the share of the land revenue allotted to irrigation. Cultivation in Sind is dependent on the artificial supply of water, and the consolidated revenue from the irrigated lands is divided in the proportion of 90 per cent. to irrigation and 10 per cent. to land. In the United Provinces of Agra and Oudh and in the Punjab, the direct water rates are assessed partly on the occupier and partly on the owner of the land, the bulk of the rates falling on the former, and the irrigation receipts are further increased by a not unimportant contribution from the land revenue. The contribution from the land revenue is the amount considered due to irrigation when an enhancement of land revenue is levied at the periodical revision of the land settlement. Like the owner’s rate, which is directly levied, it falls upon the owner of the land.

The immense systems of large artificial water channels with which some parts of India are covered would appear at first sight to offer unrivalled opportunities for water carriage. But though efforts have been made to organise navigation services on some of the larger irrigation canals, it cannot be said that, on the whole, they have met with a large measure of success. In many cases the receipts from the traffic have failed to cover the working expenses. It is, indeed, obvious that the canals, being designed primarily for irrigation purposes, must often be unsuitable from their alignment and level for navigation.

The following more detailed account of the irrigation operations of the year is given under the heads of the different provinces in which the works are situated.

The general results for 1908–9 of working all the irrigation and navigation systems for which full accounts are kept are compared with the results of the five previous years in the following statement:—

Year.	Capital Outlay to end of Year.	Receipts.	Expenditure.	Net Receipts.	Percentage of Net Receipts on Capital Outlay.	Area irrigated.
	£	£	£	£		Acres.
1903–4 - - -	5,229,813	163,191	95,648	67,543	1·29	809,331
1904–5 - - -	5,281,000	173,319	95,953	77,366	1·46	800,227
1905–6 - - -	5,353,895	176,597	102,382	74,215	1·38	813,405
1906–7 - - -	5,432,579	188,927	124,472	64,455	1·19	904,087
1907–8 - - -	5,456,751	194,066	141,297	52,769	0·97	1,013,290
1908–9 - - -	5,596,502	207,410	127,600	79,810	1·42	1,015,325

During the year under review there were in Bengal six major irrigation works, two of which were classed as protective. Of the productive works, three combine

IRRIGATION. irrigation with navigation, and the fourth (Hijili tidal canal) is purely a navigation work. The two protective works, the Dhaka and the Tribeni canals, were sanctioned in 1900-1, and are still in course of construction, the capital expenditure at the end of the year amounting to £34,594 and £256,892 respectively.

The financial results obtained from the working of the major and minor works, excluding the Tribeni canal, during the year under review are shown in the following statement :—

Canal.		Capital Outlay to end of Year.	Net Receipts.	Percentage of Net Receipts on Capital Outlay.	Area irrigated.
		£	£		Acres.
Major Works	Orissa Canals - - - -	1,780,705	4,050	0.23	284,692
	Midnapur - - - -	566,242	—3,019	—	63,824
	Sone Canals - - - -	1,782,174	74,097	4.16	653,296
	Hijili Tidal Canal - - -	174,344	—183	—	—
	Dhaka Canal - - - -	34,594	359	1.04	13,513
Total Major Works - - -		4,338,059	75,304	1.73	1,015,325
Minor Works	Calcutta and Eastern Canals - -	538,502	9,209	1.71	—
	Orissa Coast Canal - - -	298,605	—5,618	—	—
	Saran Project - - - -	47,654	—99	—	—
	Madaripur Bheel Route - - -	116,791	1,014	0.87	—
Total Minor Works - - -		1,001,552	4,506	0.45	—

Besides the minor works mentioned above, there are four works of this class for which capital accounts are not kept, viz., the Nadia river system, the Gaighatta and Buxi Khals, and the Eden and Madhuban Canals. The first-named, comprising about 472 miles of channel, is used for navigation purposes only.

In the United Provinces of Agra and Oudh, the capital outlay on canals was considerably smaller than in 1907-8 and was mainly devoted to protective works on the Betwa, Ken, Dassan, and Belan canals. A large number of projects were prepared for embankments which will facilitate irrigation in the southern districts, and attention was given to the restoration of tanks in Bundelkhand. Among productive works the Fatehpur-Sikri distributary extension was nearly completed, and some existing canals were extended or remodelled. The gross revenue fell slightly to £760,000, more than half of which was absorbed by working expenses and interest charges. The irrigated area declined considerably as compared with that of 1907-8, owing to the favourable monsoon and the curtailment of spring-crop sowings by the epidemic of malaria, but was slightly above the average of the previous nine years. The total value of the crops irrigated by canal water during the year was estimated at £9,330,000.

The general results for 1908-9 of working all the irrigation systems in operation, for which full accounts are kept, are shown in the following statement, as compared with the results for the previous year :—

Canals.		Length of		Capital Outlay to End of the Year.	Net Earnings.	Percentage of Net Revenue on Capital Outlay.	Area irrigated
		Main and Branch Channels.	Distributaries.				
		Miles.	Miles.	£	£		Acres.
Major Works	Western Jumna (including Sirsa Branch).	336	1,827	1,157,479	90,447	7.81	602,199
	Upper Bari Doab - - -	370	1,580	1,382,540	161,054	11.64	1,039,477
	Sirhind (British portion) - -	319	1,790	1,666,066	136,920	8.22	559,527
	Lower Chenab - - - -	427	2,295	1,887,951	426,087	22.56	1,992,219
	Upper Sutlej - - - -	331	393	116,631	13,404	11.49	348,094
	Sidhnai - - - -	68	131	87,603	3,404	3.88	190,227
	Lower Jhelum - - - -	150	1,097	1,065,744	95,552	8.96	617,696
	Indus Inundation - - -	660	115	156,140	—4,982	—	198,091
	Shahpur (Imperial) - - -	66	72	14,394	2,182	15.15	34,707
	Ghaggar (Imperial) - - -	44	24	22,888	—1,616	—	12,831
Total for 1908-9 - - -		2,771	9,324	7,557,436	922,452	12.20	5,595,068
Total for 1907-8 - - -		2,718	9,268	7,529,493	872,890	11.59	5,073,276

The increase in the net profit for the year was due to the favourable river supply generally and a sufficient monsoon rainfall. The results would have been even better but for a severe epidemic of malaria, which prostrated many of the able-bodied men and retarded cultivation. The decrease in the areas irrigated by the Western Jumna and Sirhind canals was due to the scanty supply of water in the Western Jumna in the early part of the year, and to the favourable rainfall in the districts served by the Sirhind canal, enabling cultivators to dispense largely with canal water.

Work was continued on the large projects for the Upper Chenab and Lower Jhelum canals. The operations were, however, considerably hampered by the scarcity of labour consequent on a severe epidemic of malaria in these districts.

The navigation operations on the Western Jumna canal resulted in a profit of £3,046. Those on the Sirhind canal showed a profit of £52.

In Lower Burma there are no large irrigation works. The expenditure recorded under the head of "Irrigation and Navigation" has reference to the river embankment and drainage works and navigation canals.

In Upper Burmah there was again a substantial expansion in the area irrigated from the Shwebo and Mandalay canals, the net revenues from which yielded satisfactory returns on the capital expended on their construction. The work of construction on the Mon canals, in the Minbu district, was continued throughout the year, and considerable progress made towards completion. A new survey and project for the Ye-u canal were prepared and approved, and part of the line of the Main canal was demarcated. Minor irrigation works were kept in order, and improved where necessary, and the area irrigated by them was greater than in the previous year.

Irrigation from works constructed by the State is still a novelty to the people of the Central Provinces and Berar, and it is still necessary to offer its benefits on the most liberal terms in order to encourage their acceptance. Though the monsoon of 1908 was far more favourable to cultivators than that of the previous year, the decline in the area irrigated was not great, a fact which shows that cultivators are beginning to realise that irrigation pays even in normal years. A crop rate of Rs. 2 per acre for water on demand has now been established, and is paid freely in most parts of the province. Work on the Ramtek reservoir in Nagpur was pushed on rapidly, and the nine protective works in the Mahanadi Irrigation Division were completed. Almost all the protective irrigation works are now capable of providing irrigation. Good progress was made with minor irrigation works.

From an irrigation point of view the Madras Presidency is distinguished by the variety and extent of its works, ranging from the great deltaic systems of the Godavari, Kistna, and Cauvery to the small tanks and channels maintained by the Revenue Department.

The number of tanks directly or indirectly dependent on the local rainfall is very large, and, speaking generally, the success of the irrigation operations is more affected by local climatic conditions than in Northern India, where the irrigation works draw their supply from large rivers fed by the melting of the snow on distant mountain ranges.

The total outlay on irrigation works during the year 1908-9 amounted to £433,667, against £439,800 in the previous year. The area irrigated by all classes of works, including first and second crops, was 7,057,000 acres, exclusive of that under the Kurnool-Cuddapah canal. The total revenue realised was £1,665,733, an increase of £38,400 as compared with 1907-8.

The expenditure under capital account on major productive works was £83,400, incurred chiefly on the Nagavalli River project, the Kistna delta, the Divi pumping project, the Periyar system, the Shatiatope anicut and the Lower Coleroon anicut systems. The area irrigated by works of this class was 3,277,000 acres, against 3,236,000 acres in the previous year. Gross receipts increased by £13,800, due to improvements, and working expenses by £14,800. The profit after paying interest charges gave a return of 6.36 per cent. on the capital outlay; excluding the Kurnool-Cuddapah canal, this return amounted to 9.84 per cent.

Under major protective works, the receipts to capital account exceed the outlay by £2,200, due to large credits realised from the sale proceeds of lands under the Surada reservoir of the Rushikulya system. The area irrigated on the Rushikulya system was 104,000 acres, against 102,000 acres in 1907-8. There was a slight increase both in the revenue and the working expenses.

IRRIGATION.

The capital outlay on minor works and navigation amounted to £11,930. The area irrigated and the revenue derived were 348,000 acres and £41,600; the working expenses were £19,267.

Up to the end of the year about 43·27 per cent. of the area to be investigated under the Tank Restoration scheme had been examined, and the expenditure during the year amounted to £30,070.

Of the three large projects which were submitted to the Government of India, it was decided to postpone indefinitely the Tungabhadra project; the other two—the Kistna and Cauvery reservoir projects—were being reinvestigated during the year.

Bombay,
including
Sind.

In the Bombay Presidency, excluding Sind, the water system does not as a rule admit of the construction of large irrigation works. The rivers or streams are mostly small and more or less dependent on the rainfall, and a constant supply cannot be obtained from them without the aid of large reservoirs or tanks. In Sind the success of the irrigation operations is dependent on the regular rise of the River Indus.

During the year the total expenditure upon irrigation works throughout the Presidency and Sind amounted to £435,000, as compared with £393,330 in 1907-8. Of this total, £153,330 was spent on works, £165,000 on repairs, and nearly £109,000 on establishment. The expenditure was divided between the Presidency and Sind in the proportion of £200,000 to £235,000. There was no famine relief outlay on irrigation works.

The total area irrigated from the Deccan and Gujerat works for which capital and revenue accounts are kept was 142,928 acres, against 130,808 acres in the previous year. The gross assessed revenue rose from £72,504 to £73,268.

In Bombay the season was on the whole a good one, the kharif rainfall being considerably above the normal. The rabi rains were, however, a failure in all divisions, thus increasing the demand for irrigation. As a result, in the northern division the Hathmati and Khari Cut canals irrigated record areas; in the central division there was an increase of 17,666 acres in the area irrigated, and of nearly £10,000 in the gross assessed revenue, compared with the average for the last ten years. In the southern division there was an increase of 7 per cent. in the total area irrigated, and of 1 per cent. in the revenue assessed, as compared with the preceding year, due to increased demand for water in consequence of a want of timely rain. Substantial progress was made with the dam at Chankapur, the Girna Left Bank canal, and the Waghad tank; on the Godaveri canal project, the most important irrigation work now in hand, nearly £70,450 was expended, during the year out of a total estimated expenditure of £636,700.

In Sind the existence of cultivation depends upon irrigation, and there is constant demand for water from the canals. This fact, and the comparatively inexpensive nature of inundation canals, account for the favourable results generally obtained from the working of irrigation canals in the province. In the year 1908-9 the rainfall was good, and inundation, on the whole, was unusually satisfactory. The area irrigated by all classes of works was 3,354,738 acres, against 2,785,738 acres in the previous year. The gross assessed revenue amounted to £550,281, the corresponding figure for 1907-8 being £461,685. The exceptionally heavy July rains in Lower Sind, followed by a great flood in the Indus, severely tested the protective embankments and caused considerable damage in certain places.

North-West
Frontier
Province.

At the end of the year under review three major works were in operation in the North-West Frontier Province. A fourth—the Upper Swat River canal—is in course of construction, the capital outlay to the end of the year amounting to £108,304. The results of working of the three canals in operation are shown in the following table:—

Canal.	Capital Outlay to End of Year.	Gross Receipts.	Working Expenses.	Net Revenue.	Percentage of Net Revenue on Capital Outlay.	Area irrigated.
	£	£	£	£		Acres.
Lower Swat river - -	283,075	39,604	9,969	29,635	10·47	159,627
Kabul river - - -	69,494	13,071	4,238	8,833	12·79	39,783
Paharpur - - -	59,732	1,334	1,054	280	0·47	16,636
Total - - -	412,301	54,009	15,261	38,748	9·40	216,046

Baluchistan.

The two chief irrigation works in the province are the Shebo canal and the Khushdil Khan reservoir, the working of which resulted in a loss for the year of £254

and £921 respectively. A third work, the Anambar Flood channel, is in working order, but as no colonists have so far settled near the canal, cultivation has not yet been begun. A new project, the Nar Nullah reservoir, is in progress, and will be completed in 1910.

During the year the investigation of the Harangi irrigation project in Coorg was completed. Major works in progress were the improvements to the Abyatimangala dam and channel and the construction of a channel on the left bank of the Balaji river. Expenditure was also incurred upon minor improvements to certain tanks.

BUILDINGS AND ROADS (CIVIL).

BUILDINGS
AND ROADS
(CIVIL).

The Buildings and Roads branch of the Public Works Department embraces all the operations of the Department which are not classed under the special heads of Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of all the buildings required for the proper discharge of the functions of government in all its branches, and a large miscellaneous class of works of public improvement, including lighthouses, harbours, embankments, boat bridges, and ferries, and the water supply and sanitation of towns.

The operations of this branch of the Department are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The classification of this expenditure for 1908-9 under the various heads is shown in the following table:—

	Central Provinces and Berar.	Burma.	Eastern Bengal and Assam.	Bengal.	United Provinces of Agra and Oudh.	Punjab.	North-West Frontier Province.	Madras.	Bombay.	India General.	Total.
	£	£	£	£	£	£	£	£	£	£	£
Imperial - - -	4,642	37,342	12,013	86,947	26,464	28,656	137,482	10,518	69,186	265,760	679,010
Provincial* - -	450,754	609,791	472,065	534,892	370,366	336,249	—	416,584	524,979	—	3,715,680
Total - - -	455,396	647,133	484,078	621,839	396,830	364,905	137,482	427,102	594,165	265,760	4,394,690
* Includes expenditure by the Civil Department in addition to that by the Public Works Department.											£ 21,132
Expenditure by Civil Officers from Imperial Funds											£ 80,105
Expenditure in England											£ 4,495,927
Grand Total											

The extension of local government in India has thrown a large portion of the smaller class of public works into the hands of the local boards. Speaking generally, the boards maintain their own establishments, but in the case of any works of unusual difficulty they have recourse to the professional skill of the Public Works officers. The following short account of Civil Works for the year under review is given under the heads of the different provinces in which the expenditure was incurred:—

The principal Imperial works which were in progress during the year were improvements in the Paper Currency office, and the construction of the new Commerce and Industry Secretariat building in Calcutta. Among Provincial works, the extension to the High Court, Calcutta, and most of the buildings of the new Presidency Jail, Alipore, were completed. For the Police Department, the Duff College premises in Calcutta were purchased as headquarters for the Northern Division, and, for the Education Department, land was acquired for the extension of the Presidency and Bethune colleges at Calcutta. A large amount of work, including improvements and extensions to the Presidency General Hospital and the Medical College Hospital, Calcutta, the Howrah General Hospital and the Campbell Hospital, Sealdah, was in hand for the Medical Department.

Under Communications, the new high level Tista Valley road was practically completed, and considerable progress was made in opening out new roads and improving existing lines of communication in the Sambalpur district.

The expenditure on buildings on the Imperial list was greater than in the previous year. Sites for a new telegraph office in Rangoon and a new general post office in Mandalay were purchased under the provisions of the Land Acquisition Act. The new Currency buildings in Rangoon were brought into occupation. The

**BUILDINGS
AND ROADS
(CIVIL).**

expenditure on roads and buildings from Provincial funds was much less than in 1907-8. The new General Hospital and the New Chief Court building in Rangoon were approaching completion at the close of the year. Work on the new Government Press building was stopped on account of want of funds after the foundations were laid. The new Police Training School and the new jail at Moulmein were occupied during the year. The amount expended on Communications was less than in the previous year. Existing roads were maintained in a condition of efficiency, but the funds available were not sufficient for the construction of the same length of new roads. The discovery of granite quarries in the Thatôn district has opened out a prospect of obtaining abundant supplies of metal for roads in the stoneless tracts of the Delta, where formerly burnt clay was the only material available for the surface. Progress was made in the replacement of existing old wooden bridges on roads by permanent structures of reinforced concrete or steel girders.

**United Pro-
vinces of
Agra and
Oudh.**

In the United Provinces of Agra and Oudh nearly £920,000 was spent in 1908-9 by the Public Works Department on buildings and roads, of which considerably more than one-third was absorbed by famine relief. The most important buildings undertaken were the Agricultural College at Cawnpore and the Civil Hospital at Allahabad. The building of several industrial schools designed to promote weaving, carpentry and other useful trades was commenced and other important new schools were in course of construction. A site for the medical college and hospital at Lucknow was prepared. The expenditure on the upkeep of roads was very large, and 215 miles of new metalled road were constructed.

Punjab.

Imperial works in progress during the year included the preparation of a site for the proposed Government of India Civil Secretariat Office at Simla, the construction of new post offices at Dharmasala, Rawalpindi, Sangla, Shahipur, and Palampur, and of a Monotype Press building at Simla.

Under Provincial civil works, the following buildings, among others, were completed or in progress, viz., additions and improvements to the District Court at Rohtak, a new Treasury strong room at Multan, a District Kutchery at Dharmasala, Tahsil buildings at Kangra, and a court and residence for the Assistant Commissioner at Fazilka. The reconstruction of Bishop Cotton's School at Simla, which was destroyed by fire in 1905, was also completed.

The expenditure on roads increased, amounting during the year to £95,355. Many new roads were undertaken and large repairs to existing roads were carried out.

**Central Pro-
vinces and
Berar.**

The year was a busy one in the Public Works Department of the Central Provinces and Berar. More than half the outlay was on Communications, and the dominant feature of the year's operations was the provision of employment on a large scale especially in the Nerbudda, Jubbulpore, and Chattisgarh divisions by the expansion of road works on the ordinary contract system. During the scarcity period a sum of £123,500 was spent on these works. A large sum was also spent on buildings, a considerable amount of work being done on behalf of the Civil Judiciary and Police Departments, and on school buildings and hostels, while a number of bonded warehouses were built for the Excise Department. Work on the new Secretariat and other Government Offices and residences was pushed on with vigour. A considerable sum was spent on arboriculture, and many additions and alterations were made to the buildings of the experimental farms.

**Eastern
Bengal and
Assam.**

Many important projects were dealt with during the year by the Public Works Department. Considerable progress was made with the construction of the new Government Houses at Dacca and Chittagong. For the new Civil Station at Dacca additional land was acquired, the grounds were cleared and laid out, new roads were made and drained, eleven houses were finished, and thirteen were under construction. In various parts of the Province many new residences, offices, circuit-houses, dak and inspection bungalows, barrack and other buildings were completed or under construction.

Under the head of communications, roads were constructed, widened, and metalled, and several bridges built. The total expenditure on Public Works increased by more than £67,000.

Madras.

There were no Imperial works of importance in progress, and the year's expenditure came almost entirely under the heads of Provincial and Local civil works.

**BUILDINGS
AND ROADS
(CIVIL)**

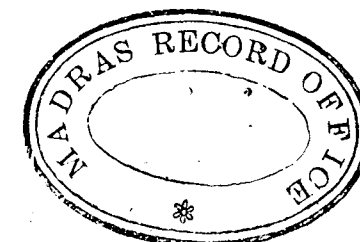
The number of buildings completed or in progress was 279. Taluk offices at Bellary, Coimbatore, Udipi and Nannilam, and a Central Record Office at Madras, were completed. A bridge over the Muriat river in Malabar was finished, and good progress was made with the Napier bridge over the Cooum, and the bridges over the Kolab and Malattar rivers.

Under the head of Communications a few important roads are in the hands of the Provincial Public Works Department. Existing roads were improved or maintained in good order, an outlay of over £23,000 being incurred on improvements to the Tellicherry-Coorg road.

The total expenditure incurred by the Buildings and Roads Branch during the year amounted to £573,300. Under Imperial works, the principal scheme undertaken was that for the location of the Coast Guard Fleet at Sivri. Good progress was also made with the construction of the new General Post Office at Bombay, and of the Consulate Building at Bundar Abbas. Under Provincial works, £56,670 was spent on medical buildings, £50,000 on educational colleges and schools, £41,700 on land revenue buildings, £40,000 on police buildings, and £30,000 on law buildings and jails. A total sum of £153 was spent on communications. During the year no famine relief works were carried on by the Department.

The expenditure on Public works amounted to £18,863, including the cost of the maintenance of existing communications. The chief original work on hand was the construction of an iron bridge over the Harangi river at Kudige; this was nearly completed during the year and is now open to traffic. The Wynaad road was completed, and improvements costing £2,000 were carried out in connection with the Mercara schools.

The principal buildings completed and in progress during the year were new Militia posts at Wuchadarra and Jandola, offices for the Political Agent at Parachinar, and for the Superintendent of the Archaeological Survey at Peshawar, a new Court for the Deputy Commissioner at Peshawar, Treasury buildings at Peshawar and Kohat, police stations at Mirian, Abbottabad, and Paharpur, and a civil hospital at Mochi Dhara. Under Communications a roadway over the railway bridge at Khushalgarh was constructed, and in consequence the boat bridge hitherto maintained at that place has been removed to Jehangira. Various additions and improvements to existing roads were carried out, and the construction of bunds for the protection of Dera Ismail Khan city and cantonment was taken in hand.



CHAPTER XII.

POST OFFICE AND TELEGRAPHS.

(For further details, see Statistical Abstract for British India, Tables 90 to 96 and 98 to 100.)

POST OFFICE.

Financial Results.—The receipts and charges of the Post Office for the last three years, as shown in the Finance and Revenue Accounts, have been as follows:—

YEAR.	Receipts.	Expenditure.	Net Revenue (+) or Deficit (—).
	£	£	£
1906-7	1,751,146	1,602,933	+ 148,213
1907-8	1,823,999	1,772,720	+ 51,279
1908-9	1,825,620	1,896,753	- 71,133

Extent of Postal Operations.—The extent of the operations of the Post Office, and their development during the last three years, are shown in the tables in the margin.

YEAR.	Post Offices.	Letter Boxes.	Village Postmen.	Length* of Postal Lines.
	No.	No.	No.	Miles.
1906-7	17,180	39,523	8,383	153,606
1907-8	17,777	41,648	8,335	154,338
1908-9	18,399	43,577	8,299	156,633
Increase or decrease in 1908-9 as compared with 1907-8	+622	+1,929	- 36	+2,295

* Including the Bombay-Aden line.

YEAR.	Letters and Postcards.	Newspapers.	Book and Pattern Packets.	Parcels.	TOTAL.
	No.	No.	No.	No.	No.
1906-7	683,707,568	44,045,566	46,521,568	5,281,884	779,556,586
1907-8	723,519,579	48,294,479	48,941,096	5,884,169	826,639,323
1908-9	767,922,728	50,107,799	51,084,486	6,140,819	875,255,832
Increase in 1908-9 over 1907-8	44,403,149	1,813,320	2,143,390	256,650	48,616,509

The rules relating to the use of postcards and the procedure of the value-payable post were simplified.

(2) *Foreign Post.*—The foreign money order system was extended, among other places, to the Argentine Republic, Costa Rica, Curaçoa, German New Guinea, and North-Western Rhodesia.

A system was introduced by which remitters of money orders between India and the United Kingdom, as well as certain foreign countries and colonies, can obtain advices of the payment of their money orders from the post offices of payment, by the payment of a fee of two annas in addition to the usual commission.

Amount of Postal Matter dealt with.—The total number of articles received for delivery, including money orders, was nearly 899 millions, of which, it is estimated, 99.69 per cent. were actually delivered or paid, as compared with 95.1 per cent. in the preceding year.

The work of the dead-letter offices increased somewhat during the year, though the increase was less than that recorded for 1907-8. In 1908-9 the receipts of postal articles (excluding money orders) at the dead-letter offices were 9,199,633; of this number 6,604,869 articles were either delivered to addressees or returned to senders, and 2,594,764 could not be disposed of. This last figure is only 0.29 per cent. of the total number of articles given out for delivery, and takes into account a large number of articles which, for various reasons, such as the absence of an address, could not possibly be delivered.

The following table gives an estimate of the amount of postal matter exchanged with the United Kingdom and with other countries in 1907-8 and 1908-9:—

Correspondence exchanged.	With United Kingdom.			With other Countries.			Total.		
	1907-8.	1908-9.	Increase.	1907-8.	1908-9.	Increase.	1907-8.	1908-9.	Increase.
Letters and Postcards	16,792,000	20,333,000	3,541,000	8,682,000	9,000,000	318,000	25,474,000	29,333,000	3,859,000
Newspapers, Book packets, and Samples.	11,130,000	13,000,000	1,870,000	6,586,000	7,000,000	414,000	17,716,000	20,000,000	2,284,000
Total	27,922,000	33,333,000	5,411,000	15,268,000	16,000,000	732,000	43,190,000	49,333,000	6,143,000

Insurance, Value Payable Post, Money Orders, Savings Bank, &c.—Information regarding these branches of the work of the Post Office can be most conveniently given in a tabular form:—

	1907-8.	1908-9.	Increase or Decrease.
INSURANCE OF LETTERS AND PARCELS:—			
Number of articles insured	856,386	956,189	99,803
Number of claims admitted	39	53	14
Net payment in respect of claims	£547	£529	—£18
Receipts from Insurance Fees	£20,562	£20,670	£108
VALUE PAYABLE POST:—			
Number of articles sent	6,165,600	6,393,575	226,975
Value specified for recovery	£5,000,000	£5,166,000	£166,000
MONEY ORDERS:—			
Value of Ordinary Inland Orders issued in India	£23,510,012	£24,270,266	£760,254
„ Telegraphic Money Orders	£1,803,879	£1,858,141	£54,262
Average value of an Inland Money Order	Rs. 16 a. 15 p. 11	Rs. 16 a. 15 p. 1	— 10 pies.
„ „ a Telegraphic Money Order	Rs. 89 a. 9 p. 2	Rs. 93 a. 8 p. 8	Rs. 3 a. 15 p. 6
Value of Foreign Orders issued in India	£517,201	£587,468	£70,267
„ „ „ paid	£1,637,217	£1,465,932	—£171,285
SAVINGS BANK:—			
Number of Post Offices transacting Savings Bank business at end of year.	8,328	8,501	173
Number of accounts in Post Office Savings Banks	1,262,763	1,318,632	55,869
Amount of Deposits at beginning of year	£9,844,652	£10,120,956	£276,304
„ New Deposits during year	£3,677,695	£3,487,732	—£189,963
„ Interest credited	£287,868	£289,399	£1,531
„ Withdrawals	£3,689,260	£3,741,985	£271,289
Amount of Deposits at end of year	£10,120,955	£10,156,101	£35,146
Securities held on behalf of Depositors at end of year	£343,450	£383,950	£40,500
Number of Accounts classified according to class of Depositor—			
I. Professional	409,224	425,376	16,152
II. Domestic	214,431	222,925	8,494
III. Commercial	50,394	53,785	3,391
IV. Agricultural	27,386	29,262	1,876
V. Industrial	45,956	49,110	3,154
VI. Indefinite (including persons whose incomes are derived from others).	515,372	538,174	22,802
LIFE INSURANCE AND ANNUITIES:—			
Number of policies in existence at end of year	15,458	17,621	2,807
Sum insured	£1,447,409	£1,625,851	£178,442

Offences.—During the year under review there were 35 cases in which the mails were plundered by highway robbers, of which 27 were in British territory and 8 in Native States. The figures for the preceding year were 29 and 3 respectively.

The number of cases in which the servants of the Post Office were found guilty of offences punishable by the law was 553. The defalcations and losses amounted to £4,346, as compared with £2,457 in 1907-8. A sum of £1,971 was recovered from

POST
OFFICE.

the offenders or their sureties; £1,303 was charged against the Post Office Guarantee Fund, and the remainder was written off as irrecoverable or remained unadjusted at the close of the year.

Staff.—The total staff of the department numbered 91,187 on 31st March 1909, as compared with 88,400 on the corresponding date in 1908.

Sale of Quinine.—Quinine is sold at Post Offices throughout India. The supplies issued to Post Offices in 1908-9 slightly exceeded those issued in 1907-8. The sales in Upper India in 1908-9 were considerably greater than those of the previous year owing chiefly to a serious outbreak of malaria in the period under review. The sales in the Bengal Circle, however, exhibited a decline, which is to be traced to the establishment of new agencies for the sale of the drug and to its free distribution by charitable institutions.

TELEGRAPHS.

TELE-
GRAPHS.

The following statement refers to the whole of the telegraph system under the direct control of the Government of India, but excludes the Indo-European Department, extending from Karachi to Teheran and Fao, for which, as usual, a separate account is given. The system now consists of 69,708 miles of line, 277,731 miles of wire, and 357 miles of cable.

Events of importance during the year were the adoption by the Indo-European Telegraph Department from 1st April 1908 of the Indian inland telegraph rules and rates for messages exchanged between India and their offices in the south of Baluchistan and on the Mekran coast in order to assimilate their rates to those in force in the offices of the Indian Telegraph Department in the north of Baluchistan, the opening of a new cable for international telegraph traffic between Batavia and Cocos Island on 13th April 1908, the application from the same date of reduced rates for telegrams to places in East and South Africa from India and Burma via Bombay and Aden, and the introduction on the 1st January 1909 of a revised tariff for inland messages in India whereby the classifications of Urgent, Ordinary, and Deferred were abolished and new classifications of Express and Ordinary introduced, the charges being at the same time considerably modified.

As a result of a recommendation of the Telegraph Committee appointed by the Government of India in 1906, a scheme for the reorganisation of the Signalling Establishment was sanctioned with effect from 1st July 1908, whereby the pay and prospects of the staff were materially improved.

Mr. J. Newlands, C.I.E., the telegraph traffic expert deputed to India to advise and assist in the reforms contemplated by the Committee, completed his duties in the year under review. In consequence of the improvements initiated under his supervision, the department finds itself in possession of a traffic organisation which will enable it to deal confidently with any future expansion of traffic that may develop.

Disaffection amongst the Signalling Staff continued to express itself in the early part of the year, and eventually culminated in a partial strike. The dislocation to traffic was necessarily considerable, but the prompt and efficient co-operation of the postal department enabled matters to be quickly remedied.

Field telegraph operations were carried out in conjunction with a military expeditionary force sent into the Mohmand territory early in the year and necessitated the erection of 44 miles of new lines and 17 miles of extra wire on existing supports, and the opening and closing of 17 field offices.

The following statement shows, for a period of five years, the progress that has been made in extending public telegraphic communication:—

Year.	Capital Expenditure.	Miles of Line.	Miles of Wire.	Miles of Cable.	Offices open to the Public.		
					Departmental, Ordinary and Postal combined.	Railway and Canal.	Total.
Up to beginning of 1904-5	£ 5,549,211	59,692	212,038	224	2,127	3,469	5,596
During 1904-5	274,820	1,992	15,398	21	62	328	390
" 1905-6	380,474	2,699	15,776	34	120	122	242
" 1906-7	379,798	2,814	15,648	42	129	142	271
" 1907-8	272,745	1,371	10,529	50	106	179	285
" 1908-9	239,671	1,140	8,342	14	114	75	189
To end of 1908-9	7,096,719	69,708	277,731	357	2,658	4,315	6,973

* Excludes £6,861 cost of cable lines transferred to Military Works Department on the 1st April 1899.

TELE-
GRAPHS.

A general view of the operations of the Department in 1908-9, in comparison with those of the four previous years, will be gained from the following statement:—

Year.	Number of Messages during Year.	Gross Receipts, including State but excluding <i>pro forma</i> Revenue.	Charges.	Net Receipts.	Percentage of Net to Gross Receipts.	Return on Capital.
		£	£	£		
1904-5	9,098,345	765,274	546,914	218,360	28.53	3.75
1905-6	10,461,117	805,748	599,052	206,696	25.65	3.33
1906-7	11,385,166	827,744	644,205	183,539	22.17	2.79
1907-8	12,749,923	875,778	752,411	123,367	14.08	1.80
1908-9	13,006,778	874,795	783,022	91,773	10.49	0.70

The whole of the annual expenses connected with the telegraphs in India, whether incurred on capital account for the construction of new lines, or on revenue account for the maintenance and working of the system, are defrayed from the revenues of the Government of India. In 1908-9 the receipts of the Department were not sufficient to cover both the working expenses and the amount expended on capital account, and there was a charge on Government revenues of £147,898.

The gross receipts of 1908-9 show a reduction, as compared with those of 1907-8, of £983, attributed to the diversion of far east traffic to the newly-opened Batavia-Cocos cable, to the reduction of rates between India and Africa, and to the fall in value of Indian inland messages under the revised tariff introduced on 1st January 1909. Working expenses, on the other hand, increased by £30,611, due almost entirely to the improvement in the pay of the Signalling Establishment consequent on the reorganisation of that branch. As a result, the net receipts were £31,594 less in the year under review, while the percentage of net revenue on capital outlay fell to 0.70.

The number of paid telegrams increased during the year by 2.01 per cent., but their value decreased by 2.92 per cent. The decrease in value is due to the falling off of foreign traffic in consequence of the opening of alternative routes.

The following figures show, for the last two years, the division of the traffic between State and Private, and between Inland and Foreign, messages respectively:—

Class of Telegram.	1907-8.		1908-9.	
	No.	Value.	No.	Value.
Inland State	968,418	£ 110,973	976,208	£ 106,720
Foreign State	16,361	4,005	15,820	3,433
Total State	984,779	114,978	992,028	110,153
Inland Private	10,537,969	404,766	10,861,923	406,608
Foreign Private	1,227,175	149,143	1,152,827	132,560
Total Private	11,765,144	553,909	12,014,750	539,168
Total State and Private	12,749,923	668,887	13,006,778	649,321

The subscriptions to the Telegraph Department for telephone and similar services rendered during the calendar year 1908 amounted to £27,130, being an increase of £5,416 over the figures of the previous year. The average annual subscriptions for the past five years amounted to £19,154.

Interruptions during the year on the lines to foreign countries were more numerous than in 1907-8, notably on the Teheran route to Europe and on the Moulmein-Bangkok and Raheng lines to Siam.

Wireless telegraphic communication between Diamond Island and Port Blair, Diamond Island and Bassein, and Calcutta and the Pilot Vessels at the Sandheads was maintained throughout the year. New radio-telegraph stations were also opened at Mergui and Victoria Point, and communication between these places is satisfactory except at times of severe atmospheric disturbance. There are now nine radio-telegraph stations installed in India.

INDO-EUROPEAN TELEGRAPH DEPARTMENT.

INDO-
EUROPEAN
TELEGRAPH
DEPART-
MENT.

The system of telegraph lines and cables connecting the terminus of the Indo-European Company's telegraphs at Teheran and of the Turkish telegraph lines at Fao with the Indian telegraph system at Karachi is controlled by the Indo-European Government Telegraph Department, and consists of 1,945 knots of cable, 2,575 miles of line, and 6,547 miles of wire. This also includes a cable from Jask to Muscat, 218 knots in length.

The Department also maintains a line from Teheran to Meshed, 568 miles, which is the property of the Persian Government.

The financial results of working the Department, as compared with the four preceding years, were as follows:—

Year.	Total Capital Outlay.	Gross Receipts.*	Expenditure.	Net Receipts.	Percentage of	
					Net Receipts to Capital.	Expenditure to Gross Receipts.
1904-5 - - -	£ 931,438	£ 112,907	£ 71,845	£ 41,062	4.40	63.63
1905-6 - - -	957,491	111,082	59,457	51,625	5.39	53.52
1906-7 - - -	988,204	102,674	72,104	30,570	3.09	70.22
1907-8 - - -	997,094	109,002	75,690	33,312	3.34	69.44
1908-9 - - -	998,142	103,689	75,287	28,402	2.84	72.60

* This represents the revenue of the Department after adjustments made in accordance with the provisions of the Joint Purse arrangement.

The gross earnings of the year decreased by £5,313, largely due to a falling-off in Indian trade with other countries during the year, and a consequent reduction in telegraphic traffic. Working expenses also decreased by £403, due to a saving in cable maintenance, and notwithstanding an increase in general charges on account of the rental of the Central Persia line and of the Robat-Nok Kondi extension of that line. The capital expenditure of £1,048 incurred during the year was used mainly on the re-construction work on the line from Teheran to Ardistan.

The number of messages transmitted during the year amounted to 229,908, being a decrease of 15.21 per cent. as compared with 1907-8, due, as explained above, to a falling-off in traffic.

A system of direct telegraph working between London and Karachi via the Central Persia line was established on the 20th January 1909, by which much time and labour are saved in the transmission of messages.

Under the Joint Purse Agreement, the share of the Department was £5,485 less than last year, being £107,051, as against £112,536 in 1907-8. This was principally due to the decrease of traffic mentioned above. The amount paid into the Joint Purse for the year under review was £53,865.

The Departmental receipts from the Australasian Message Fund for 1908-9 amounted to £5,936, being £48 less than in 1907-8, and a decrease of £299 on the receipts for 1899, on which the original Australasian Message Fund was based.

Interruptions between Karachi and Teheran were not serious, but between Teheran and London they aggregated 34 days 6½ hours, due mainly to the disturbances in Persia between Teheran and the Russian frontier. Acts of wilful damage again increased, numbering 1,212, or 117 more than in the preceding year. These were largely due to the state of unrest and disorder which prevailed throughout the country generally.

CHAPTER XIII.

SCIENTIFIC DEPARTMENTS.

GENERAL.
BOARD OF SCIENTIFIC ADVICE.
SURVEY OF INDIA.
OTHER SURVEYS.
METEOROLOGICAL DEPARTMENT.

AGRICULTURAL DEPARTMENTS.
CIVIL VETERINARY DEPARTMENT.
FOREST RESEARCH INSTITUTE.
ARCHÆOLOGICAL DEPARTMENT.
MEDICAL RESEARCH INSTITUTES.

SCIENTIFIC
DEPART-
MENTS.

GENERAL.

Owing to the progress made in recent years in the application of science to various branches of the work of Government, it is proposed in this chapter to deal not only with surveys, but also with other scientific departments that have been established by the Imperial or Provincial Governments for the conservation and development of the natural resources of the country. In 1908-9 expenditure on Scientific Departments amounted to about £660,000, against which must be set about £78,000 for receipts. More than half the expenditure was for agricultural and veterinary work and the bulk of the remainder for survey work.

THE BOARD OF SCIENTIFIC ADVICE.

This Board includes the heads of the Meteorological, Geological, Botanical, Forest, Survey, Agricultural, and Civil Veterinary Departments, and other scientific authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry, to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The programmes of investigation of the various departments are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done, as well as a general programme of research for the ensuing year. The reports and the programmes formulated are communicated for consideration to an Advisory Committee of the Royal Society, who from time to time furnish valuable suggestions and advice.

SURVEY OF INDIA.

The work of the Survey of India Department falls under various heads, namely, the trigonometrical survey, topographical surveys, forest and cadastral surveys, special surveys and explorations, and map production. The latest available information on most of these matters relates to the year ending 30th September 1908. The total cost of the Department for that year was about £221,000. The Department has been materially expanded during the last few years, and the work has improved owing to closer supervision and the better instruction of field surveyors and draughtsmen.

In 1904 attention was drawn to the defective state of the topographical survey maps, and a Committee was appointed to report on the subject. To overtake the arrears of revisional survey and to secure that the map of India should be brought up to date and revised at proper intervals, they recommended a considerable increase of establishment and an increased expenditure of £210,000 a year for the next 25 years. They also made recommendations for altering the size and improving the quality of the maps. After further inquiry the Government of India decided that a scale of 1 inch to the mile would ordinarily be sufficient, reserved forests and special areas being surveyed on the scale of 2 inches to the mile, and the ½ inch scale employed for waste and barren tracts. This decision will somewhat reduce the standard of establishments and expenditure proposed by the Committee.

During 1907-8 field operations were carried on by 22 survey parties and three detachments. Of the parties, 13 were employed on topographical surveys; one on principal triangulation; one on traverse and cadastral surveys; one on traverse surveys for cadastral purposes; two parties on traverse and topographical surveys; four on purely scientific operations; and the three detachments on town and cantonment surveys.

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MENTS.
Trigono-
metrical
survey.

The triangulation party, working in three detachments, continued the series of principal triangulation in Baluchistan and Burma, and 27 triangles, covering 4,175 square miles, were completed. Of these, 13 triangles, covering 2,375 square miles, were in Western Baluchistan, and 14 triangles, covering 1,800 square miles, in Burma.

Topo-
graphical
and forest
surveys.

The total area of detail topographical and forest surveys on all scales during the year was 35,968 square miles. Of the total area 7,856 square miles were covered in Burma, where a five years' programme of topographical survey was arranged in 1905, embracing a large portion of the more important tracts of country. All reserved forests are now surveyed, principally on a scale of 2 inches to the mile, in the course of the general programme. During the year forest surveys were carried out in five provinces.

Cadastral
and traverse
surveys.

One cadastral party was engaged in Burma, and three parties were employed on the traversing of areas in Bengal and Eastern Bengal and Assam, which are now cadastrally surveyed by the provincial Settlement Department. In future revenue operations in Burma will devolve on the Land Records Department. The total area of cadastral surveys was 970 square miles and of the area traversed for this purpose 6,631 square miles.

Special
operations.

The gravimetric survey was continued. Observations were taken for latitude to determine the deflection of the plumb-line, near Deesa, with the object of investigating variations in the density of the earth's crust that have been discovered in this region.

Tidal and
levelling
operations.

The recording of tidal curves by self-registering tide gauges, their reduction, and the publication of tide tables were continued during the year at the eight permanent stations. Three detachments were engaged on levelling operations.

Magnetic
survey.

The preliminary magnetic survey was completed with the exception of the coast of Burma, the wild country north of Burma, and the Himalayan Karakoram regions. The detailed magnetic survey is about to be commenced.

Head-
quarters
offices.

The re-organisation of all the offices connected with mapping, map printing, and issue was continued under Major Hedley, R.E.

It is hoped to publish in 1910 maps for the whole of India on the $\frac{1}{\text{million}}$ scale.

The general maps are still far from completion, but satisfactory progress is being made. The number of maps issued during the year was 130,960.

OTHER SURVEYS.

Marine.

Two new marine survey vessels, the "Investigator" and the "Palinurus," thoroughly equipped for modern requirements, have been placed on the service. Surveys were made of the approaches to the Government dockyard at Bombay, of Bombay Harbour, of the west coast of India, and of the Burma coast.

Geological.

The first object of the Geological Survey Department is the preparation of a geological map of India, and this work was continued during 1908 by surveys in Baluchistan, Burma, Rajputana, Central India, Kashmir, and the Central Provinces. Various economic investigations, which form an increasingly important part of the Department's work, were conducted. These included studies of alum manufacture in the Punjab, of china-clay, chromite, iron-ore, and copper in Bengal, and of petroleum ore deposits of India, which he had been investigating for four years.

Owing to the extraordinary increase in the activity of prospectors for minerals, especially manganese ore and coal, demands for information were again numerous.

Botanical.

Plant collections were made by or on behalf of the Botanical Survey in different parts of India. The study of economic problems forms no part of the work of the Botanical Survey as such, but much work of this kind was done by the officers of the Survey who serve as Economic Botanists to the local Governments. Researches were made regarding cotton, sunn hemp, flax, sugar-cane, jute, wheat, &c.

Zoological.

The work of the Zoological Survey in 1908 included surveys of the fauna of stagnant water, studies in marine zoology, Indian rats, &c.

METEOROLOGICAL DEPARTMENT.

Meteor-
ological
Department.

The work of the Meteorological Department falls into two parts, the directly useful and the purely scientific, which aims at ascertaining facts which shall be of practical utility in future. The scientific work includes the experimental and theoretical

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examination of the physical processes, on the earth or in the sun, which determine the weather. The practical work consists chiefly in the collection and distribution of current weather information. The area under observation by the Department embraces not only India but the whole of the Arabian Sea and Indian Ocean, the Persian Gulf, Persia, Arabia, Chinese Turkestan, and Tibet. There were 280 observation stations (of which 50 were non-departmental) at the close of 1908-9, ranging from the well-equipped observatories at Kodaikanal, Madras, Bombay, Alipore (Calcutta), Allahabad, and Lahore, to small stations at which observations of temperature, rainfall, and snowfall only are recorded. The Department inspects their working and collects the results; it also studies the meteorology of the Indian Ocean by means of the logs of vessels arriving at Indian and other ports, and conducts seismographic observations. Experimental work for determining the conditions of the upper air by means of kites and small free balloons was continued during the year. Special investigations comprised wind observations, solar and terrestrial radiation observations, sunshine observations, seismological observations, barometric observations, and observations of atmospheric electricity. Great attention is now paid to the correct registration of rainfall. The actual rainfall of the last ten years compared with the normal will be found in the *Statistical Abstract of British India* (Table 118). Daily, weekly, and monthly weather reports, as well as seasonal forecasts and storm warnings, are issued. Warnings of approaching storms are sent to ports on the Bay of Bengal from Calcutta, and to ports on the Arabian Sea coast from Simla. The system of flood warnings to canal, civil, and railway officers, to military officers, and to private firms continued to be useful, and 1,199 such warnings were issued during 1908-9. The publication of the meteorological atlas of the Indian seas has placed a large amount of valuable information at the convenient disposal of ship captains.

AGRICULTURAL DEPARTMENTS.

The greater part of the scheme for the development of agricultural experiment and instruction formulated in 1905 has now been realised. It is based on the generally accepted principle that effective improvement in Indian agriculture depends largely, or mainly, on the application of European science to Indian conditions. Although India is a land of skilled agriculturists, the outturn per acre of many crops is comparatively small, and the quality of some kinds of produce is inferior. Much can be done to improve and develop Indian agriculture by energetic research and by the application of more scientific methods and greater scientific knowledge than were formerly available. The necessary scientific knowledge must inevitably be obtained in the first instance by the recruitment of trained specialists from the United Kingdom; but it is an essential part of the scheme that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in the scientific development of agricultural methods on lines suited to local conditions.

India now possesses an Imperial Department of Agriculture, under an Inspector-General and an Assistant Inspector-General, while there are nine provincial Departments of Agriculture under Directors and Deputy-Directors. To the Imperial Department is attached the Pusa Central Research Institute and Agricultural College, which has been provided with a Director and European experts in agriculture, entomology, botany, mycology, chemistry, and bacteriology, together with a cotton specialist. Further, there have been established in seven provinces an agricultural college and a research station, equipped with laboratories and class-rooms, and connected with a farm of suitable size. The principals of the colleges have a staff of chemists and botanists. In Eastern Bengal and Assam there is a special fibre expert. In the various provinces there is a number of agricultural stations and of botanical, horticultural, and agricultural gardens. The provincial departments distribute selected seeds and manures, and furnish advice as to implements and crops.

There is a Board of Agriculture of 38 members which suggests and reviews programmes of work and discusses current questions. Agricultural memoirs and an agricultural journal are published.

The Phipps Laboratory at Pusa is now fully equipped, and practically the whole of the Institute estate is under grass or arable cultivation. Pusa will be chiefly a higher teaching institution for post-graduate studies in one branch of research. Last year there were 19 students, drawn from provincial agricultural colleges or other colleges. Experiments were undertaken in connection with manures and permanent pasture, while the crops under trial included wheat, rice and other food grains,

Agricultural
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pulses, oil-seeds, cotton, jute, sugar-cane, flax, and tobacco. Perhaps the most important line of work is the breeding and rearing of farm live stock. Poultry breeding is undertaken. A monograph on Indian wheats has been published. Fruit cultivation has been successfully established. An inquiry is proceeding on the prevention of injury by weevils to wheat and other grains. A general study of the oil-seeds of India is to be undertaken. Information as to Indian fungi has been made accessible, and the plant diseases (*e.g.*, in sugar-cane and palms) due to particular parasites have been studied. Heavy losses from these diseases have already been prevented by the mycologists. A book on Indian plant diseases is nearly completed. The entomologists have done good work in studying the habits of injurious insects and in conducting experiments in *eri* silk, while practical instruction has been given in lac cultivation. The text-book on Indian insect pests increases in popularity. The habits of biting flies, fruit flies, &c., are under investigation.

A brief sketch will be given of the work carried out during 1908-9 in connection with agricultural development.

Bengal.

The organisation of the department is still incomplete. The provincial agricultural college at Sabaur is expected to be in working order before the end of 1910. Progress has been made in the establishment of agricultural stations, which are designed to be representative of the six agricultural tracts of the province. There are six Government stations and two private ones. Stations are to be started at Kharagpur (Midnapur) and Ranchi when funds are available. There is a demonstration farm at Kalimpong. The Bengal Provincial Agricultural Association meets quarterly to discuss agricultural problems. The 23 agricultural shows and fairs held during the year received grants-in-aid from Government.

Samples of manures and soils were analysed, and special research in connection with sugar-cane was begun. Experiments were made in connection with rice, cotton, jute and flax. The Government decided to grant Rs. 32,500 a year for five years in aid of the indigo research work at Sirsiah. Investigations were made regarding insect pests that attack jute, cotton, paddy, and other crops. Experiments with agricultural implements were continued.

The Director, aided by a committee of four silk experts, is inquiring into the improvement of the Bengal silk industry. A central nursery with mulberry farm and rearing houses at Berhampore and 14 small subsidiary nurseries have been established for the supply of pure seed, *i.e.*, live cocoons, to rearers of silk-worms. A sericultural superintendent has been appointed. Experiments were continued at the *tasar* silk-rearing station at Chaibassa.

Seven students of the agricultural classes at Sibpur obtained diplomas in November 1908. Two students who had been sent to America for further training returned.

The Department prepared leaflets and notes on maize, jute, fodder crops, cattle diseases, and other subjects, and vernacular translations of some of these were widely circulated. A quarterly journal of agriculture is published. Large quantities of seeds, manures, and agricultural implements were issued from the Government seed store.

United
Provinces.

During the year existing organisations were developed, but funds did not suffice for the initiation of new schemes. There was a remarkable growth of public interest in the improvement of agriculture and stock-breeding, and in labour-saving appliances, especially water-lifts, improved ploughs and sugar machinery. This general increase of interest has tended to make the subordinate agricultural service more popular, and has led to many requests for advice. The seed depôts, which issued cotton, ground-nut, and other seeds to cultivators on credit, were much appreciated. These depôts are being managed with a view to their transfer to co-operative societies. A trained staff of 50 borers has been placed under the control of district officers to help the people in well-sinking. A post of agricultural engineer has been created temporarily. Demonstrations were continued of the Hadi process of sugar manufacture, and the number of factories using it has increased. Investigations of cotton, wheat, maize, jute, ground-nut, rice, maize, hemp, manures, &c., were in progress at the four agricultural stations. Pamphlets were issued on sugar-cane, ground-nuts, American cotton, and the prevention of smut. The Urdu agricultural journal increased its circulation. There were several shows and fairs, besides an exhibition at Agra. The Cawnpore Agricultural College was brought to its full strength, and 33 students obtained diplomas.

Punjab.

The Agricultural Department is already making its influence felt, especially in the canal colonies, in which the only existing agricultural station and seed farm are

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situated. The Department has been chiefly occupied in experiments with new and important varieties of crops, the introduction of agricultural machinery, and the plans for the Lyallpur Agricultural College, which, however, could not be opened till September 1909. No fewer than 574 applications for admission were received, although room was available for 16 students only. Agricultural machinery is, owing to scarcity of labour, growing in popularity, and a commercial firm have deemed it worth while to relieve the Department of the work of distributing mechanical reapers and some other implements. Enquiries into the milling and baking qualities of Punjab wheats have shown that the red wheats, which are most suited for cultivation, are also superior for milling and baking to the soft white wheats which have hitherto been most in demand for export. This information has been widely circulated in a bulletin. The classification of Punjab cottons is in progress. Considerable advance has been made in selecting cotton seed suited to the province. Experiments have been made in jute cultivation and in the use of castor cake for manure, as well as in bee-keeping and poultry farming. Attempts to revive sericulture in the province have met with fair success. Progress is being made in scientific well-boring.

The experimental seed farm in Dera Ismail Khan district has proved a great success. About half the area is under wheat cultivation. Experiments were also made with maize, rice and cotton.

North-West
Frontier
Province.

The superior staff of the Agricultural Department during 1908-9 worked for the first time at its full strength. A larger subordinate staff is needed for the important work of demonstration, which is being extended in co-operation with the Irrigation Department. The agricultural section of the Nagpur Exhibition was very successful. The Agricultural College at Nagpur made good progress. There were 43 students, who were more promising than their predecessors. The "Agricultural Gazette" increases in popularity and its circulation has risen to 4,653 copies. There are four agricultural stations as well as eight seed farms which distributed selected wheat, cotton, and other seeds. Progress was made in experiments with cotton, jute, wheat, sugar-cane and fodders. Analyses of wheat, manurial experiments, and the study of insect pests were undertaken. Demonstration work to show the advantages of transplanting rice was carried out at Labhandih farm. Much attention has been paid to the demonstration of improved implements, and certain simpler descriptions, especially turnwrest ploughs, corn-shellers, winnowers, and chain pumps, are gradually obtaining a sale. Leaflets were issued on the use of turnwrest ploughs, on the cultivation of cotton and ground-nuts, and on cattle diseases. The District Agricultural Associations, consisting of representative landowners, made good progress in the introduction of new varieties of crops and of improved methods of manuring recommended by the department.

Central
Provinces
and Berar.

The complete organisation and the operations of the new Agricultural Department were curtailed through lack of funds. The agricultural station at Mandalay was fully worked, but the formation of two other stations was postponed. It was decided that the time was not ripe for the establishment of an agricultural college. The growing interest taken in the work of the Department by the public is very gratifying. Experiments were made with paddy, jute, wheat, and cotton. The moisture-resisting varieties of Moulmein rice, which were introduced last year in the Akyab district, have become very popular. A survey of the Burma wheats is in progress. Efforts to develop the cultivation of wheat in the Chin Hills were continued, and the outturn was nearly treble that of the previous year. The popularity of ground-nuts as a crop in the dry zone district was fully maintained. The soil and climate of Lower Burma were again found unsuitable for the growth of exotic cottons. Experiments with tea, coffee, and tobacco were disappointing. A number of cultivators' leaflets were distributed on the cultivation of maize, tobacco, cotton, jute, vegetables, &c.

Burma.

The College of Agriculture and Research Institute at Coimbatore was opened in 1909. Much useful experimental and demonstration work was done at the ten agricultural stations. Efforts were made to improve cotton cultivation and obtain a superior strain of cotton by careful seed selection with promising results. Experiments were also made with paddy, sugar-cane, jute, &c. The introduction of ground-nut in some districts has been attended with success, but jute has been a failure. There was a satisfactory increase in the number of oil-engines and pumps used for irrigation. There is a great demand for these boring appliances. Entomological assistants were engaged in the study of various agricultural pests, and operations for the eradication of the palmyra palm disease in Godavari were prosecuted with considerable success. Good work was done by many Agricultural

Madras.

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MENTS.
Bombay.

associations to popularise new crops and methods in their districts, and to organise exhibitions and cattle shows.

The year was one of varied activity and substantial progress. At the 10 agricultural stations and farms experiments were made with jowari, bajri, tur and other pulses, til, tapioca, castor, ground-nuts, sugar-cane, tobacco, potatoes, and wheat. Experiments were directed to deciding between the merits of different varieties of the same crop, and to determining the conditions most suited to each, as well as to improving the yield by careful selection of seed. Cultural experiments were undertaken at Surat to elucidate the comparative advantages of deep and shallow cultivation. The value of the American method of "dry farming" as applied to *rabi* cultivation was demonstrated. The best cotton hybrids continue to give a lint more valuable than the local variety. Seed of the best hybrid cottons is being distributed. The cultivation of Broach cotton in the Dharwar district on a commercial scale has proved successful and is being extended. The possibility of growing Egyptian cotton in Sind has been proved, and demonstrations are to take place on a large scale. Certain foreign varieties of ground-nut have proved superior to the indigenous kind and are being widely distributed. The success of sulphate of ammonia as a manure for sugar-cane having been proved, it is now being distributed among cultivators. There was a keen public demand for selected seeds, concentrated manures, and improved implements. Analyses of soils, manures, &c., were conducted by the agricultural chemist. Demonstration work was extended and agricultural shows were more numerous. A large number of bulletins and leaflets was issued. The mechanical and engineering branch, established during the year, began operations with well-boring in Gujarat and with trials of oil engines for water-lifting and cane crushing in the Deccan. Agricultural associations increased in number. The new buildings of the Poona Agricultural College steadily progressed. The students numbered 106, of whom 26 graduated and passed out of the College.

Eastern
Bengal and
Assam.

Much good work was done in the face of adverse conditions. An increase of staff is required for supervision. Experiments were made at the seven agricultural stations with paddy, sugar-cane, jute, tobacco, potatoes, cotton, fruit trees, and manures. The Fibre Expert was engaged in studying the races of jute with the view of improving the crop by raising and distributing improved seed. He also investigated the cause and possible prevention of "heart damage" in baled jute. The prospects of flax cultivation in Behar are regarded as hopeful. The Department took over from the Bengal Silk Committee the sericultural operations in three districts. The aim is to produce and sell seed guaranteed pure. Several agricultural shows were held and bulletins and leaflets were issued. The laboratory and officers' quarters at Dacca were nearly completed.

CIVIL VETERINARY DEPARTMENT.

CIVIL
VETERINARY
DEPART-
MENT.

The Department has made substantial progress, and the work is increasing out of all proportion to the staff available to cope with it. Pathologists are needed to deal with the growing demands of the College laboratories for teaching and diagnostic work. A larger European staff, as well as a larger and more highly trained native subordinate staff, are greatly required.

Horse, mule,
and donkey
breeding.

In those districts of the Punjab, Baluchistan, the United Provinces, and Bombay, in which the breeding of equines specially flourishes, the entire control of horse, mule, and donkey breeding has been transferred from the Civil Veterinary Department to the Army Remount Department, the work of the former being confined to cattle. Outside these districts the Civil Department controls breeding operations of every sort. Government stallions are allotted only to selected districts, but the and partly from provincial revenues, aided by grants from the Government of India, are controlled by the Department. Of these there were on the register, at the end of 1908-9, 64 horses, 102 ponies, and 99 donkeys, mostly located in the United Provinces and the Punjab. The district stallions covered 11,410 mares in 1908-9. Now that the supply of donkey stallions has been placed on a satisfactory footing, it is hoped that mule breeding will improve.

Cattle-
breeding.

Owing on the one hand to the decrease in grazing available and on the other to an increase in the more profitable occupation of cultivating crops, there has been a decline in cattle-breeding in most provinces. As regards bovines, veterinary operations

SCIENTIFIC
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MENTS.

are directed towards improvement of the breeds, investigation of diseases, inoculation, and maintenance of veterinary dispensaries. There were during the year 38 Government bulls and 536 bulls owned by district boards, the great majority of them being in the Punjab. There were six provincial cattle farms, viz., three in Bengal, one in Bombay, and two in the Central Provinces. The most important centre of cattle breeding is the Hissar Government Cattle Farm, in the Punjab. This farm contained 20 herd bulls and 1,199 cows, besides a large number of young stock and cultivation bullocks, and some mules, donkeys, and sheep. The aim is to maintain a herd of 1,200 cows, so as to meet present demands for ordnance bullocks and for bulls required by the districts and at the farm. A large number of cattle fairs and shows were inspected. Prizes are offered out of both Imperial and local funds. Attempts are being made at Hissar and in other parts of India to improve the breed of sheep for both mutton and wool. Grazing areas for breeding camels are being sought for in the Punjab. Reports on breeds of cattle are being published in Madras and the Central Provinces.

More than half the reported cases of glanders were in Bengal. Several provinces, and particularly Bombay and the Punjab, suffered losses from surra. The areas in which surra is enzootic are being mapped out. Only 68 cases of anthrax amongst equines were reported in the whole of India; and of these 36 occurred in Eastern Bengal and Assam.

Horse and
cattle
disease.

Owing to the difficulty of collection, statistics of mortality from contagious diseases among cattle are defective. The number of reported deaths was 401,139, of which 238,374 were from rinderpest. About 64 per cent. of these were in Madras. Eastern Bengal and Assam also suffered severely. The available staff in Madras was insufficient to cope with the outbreak. Considerable progress has been made in breaking down the opposition of the people to inoculation, which was performed in 291,960 cases. The reported cases of anthrax numbered 17,790, of which Madras contributed 12,311. Inoculation was performed in 7,450 cases. There were 34,124 deaths from hæmorrhagic septicæmia, chiefly in the Punjab (20,820 deaths), and 26,470 deaths from foot and mouth disease, which was widely prevalent. The preparation "Blacklegoids" was used with success against black quarter, of which there were 10,300 cases. Considerable progress has been made in the study of camel diseases. The sera for inoculation (592,000 doses) were prepared at the Bacteriological Laboratory, Muktesar. The serum method has been found very satisfactory, and is growing in favour. Research work has been undertaken in connection with anthrax, hæmorrhagic septicæmia, rinderpest, surra, and other diseases. A great advance has been made in the drug treatment of surra, which is now curable. A collection of biting flies and ticks is being formed.

The subordinate staff has been reorganised, but the establishment is below the sanctioned strength, as trained men cannot be obtained. Fifty-two veterinary inspectors and 620 veterinary assistants were employed in 1908-9. Of these 472 assistants visited on tour 64,380 villages and dealt with 342,250 cases. The veterinary hospitals and dispensaries, at which 428,400 animals were treated during the year, numbered 380, an increase of 44 over 1907-8.

Subordinate
Staff.

The number of students who graduated in 1908-9 at the four veterinary colleges, viz., the Punjab, Bengal, Bombay, and Madras, and the Burma Veterinary School was 160, compared with 148 in 1907-8. There were 505 students under training at the four colleges and 24 at the Burma school at the close of the year. The Punjab College has the strongest teaching staff and the greatest facilities for teaching, and it turns out a majority of the graduates. At present it is overcrowded. The Bengal College trains men for Bengal, Eastern Bengal, and Assam and Burma. A new and well-equipped college building has been opened in Bombay. The demand for admission is very great in the Punjab and considerable in Bengal and Madras, but not so good in Bombay. The demand for vernacular trained men is enormous, and the establishment of a new vernacular college is under consideration.

Veterinary
instruction.

The Government of India have taken over the "Journal of Tropical Veterinary Science" as a departmental publication.

The total cost of the Department, both Imperial and Provincial, amounted to about £87,000.

FOREST RESEARCH INSTITUTE.

The work of the Imperial Forest Research Institute comprises tuition and research in silviculture, forest zoology, forest botany, forest economy, and forest chemistry.

Forest
Research
Institute.

SCIENTIFIC
DEPART-
MENTS.

During 1908-9 investigations were undertaken in connection with working plans, teak reproduction, and forest grasses, while the Forest Economist was engaged in inquiring into lac preparation and into the utilisation of many kinds of forest produce, such as woods for matches, lead pencils, and tea boxes, and gum-resins. At the Imperial Forest College 57 students attended the Rangers' class in 1908.

ARCHAEOLOGICAL DEPARTMENT.

Archaeo-
logical
Department.

The primary function of the Department is the conservation of ancient monuments, but exploration is undertaken so far as means and opportunity permit.

In the United Provinces over £7,000 was spent in the conservation of Muhammadan monuments at Fatehpur-Sikri, Agra, and Allahabad. Repairs were also carried out at Benares, Lucknow, and elsewhere. A number of Buddhist and Hindu monuments in the Cawnpore, Benares, and Fatehpur districts were declared protected by notification. Excavations at Sahet Mahet were continued. In the Punjab the Delhi Museum of Archaeology was opened in January 1909. In the North-West Frontier Province excavations at Shahji-ki Dheri brought to light the great stupa (286 feet in diameter) of King Kanishka, which was found to enshrine a reliquary containing what are probably the first authentic relics of the Buddha discovered in India. In Burma action was taken to conserve nine more buildings, including the Nanpaya Temple at Pagan, under the Ancient Monuments Preservation Act for the protection of monuments of historic and architectural interest. Those now maintained at Government expense have been notified as "protected," and others will be added to the list. Among the monuments in other parts of British India that were the subject of special attention, the most prominent were the following:—In the Bombay Presidency, the great cornice of the Gol Gumbaz at Bijapur, the missing and damaged columns in the Elephanta Caves, and the Sarkhej palace; in Madras, the Buddhist monastic remains at Sankaram and Ramatirtham; in Bengal, the Black Pagoda at Kanarak, the gateway of the fort at Palamau, and the ancient buildings at Pandua and Tribeni; and in the Central Provinces, the fort at Chanda.

MEDICAL RESEARCH INSTITUTES.

Medical
Research
Institutes.

In 1907 the bacteriological laboratories in India were placed on a definite footing, and the Bacteriological Department now comprises 12 appointments distributed among the institutions named below. At the Central Research Institute, Kasauli, the staff during 1908 completed an enquiry regarding the etiology and mode of spread of enteric fever and published the results. Conclusions were published regarding the preparation and keeping properties of bacterial vaccines, and investigations of dysentery and lathyrism were begun. The Bombay Bacteriological Laboratory was, as usual, utilised for the work of the Plague Research Commission. Much work was done in connection with plague vaccines, which are prepared here for the whole of India, with disinfectants for killing fleas, and with poisons and other methods for destroying rats. About 110,500 rats were examined for the Bombay Health Officer, and 13,489 were found to be infected with plague. Practical instruction in plague inoculation was given, and booklets were issued on the preparation and use of anti-plague vaccine and on the cause and prevention of plague. Investigations of snake-bite and malarial fevers were undertaken. A great deal of bacteriological work was done. At the King Institute of Preventive Medicine, Madras, much chemical and bacteriological work was carried out. Enquiries were instituted regarding the town water supplies of Madras Presidency. Mr. W. M. Haffkine, C.I.E., has been entrusted with scientific research at the laboratory attached to the office of the Sanitary Commissioner of the Government of India in Calcutta. Three memoirs or pamphlets bearing on medical research were issued in 1908.

CHAPTER XIV.

EDUCATION, LITERATURE AND THE PRESS.

(For further details see Statistical Abstract for British India, Tables 105 to 116.)

EDUCATION.

EDUCATION.

General.

Educational institutions in India are of two classes:—

- (1) Those in which the course of study conforms to the standards prescribed by the Department of Public Instruction or by the University, and which either undergo inspection by the Department, or else regularly present pupils at the public examinations held by the Department or by the University. These institutions are called "public," but may be under either public or private management. To the latter class, for example, belong those "aided schools," receiving grants from Government or from local or municipal boards, which occupy so important a place in the system of Madras, Bengal, and other provinces.

- (2) Those which do not fulfil the above conditions, and are called "private."

The system of education operates, generally speaking, through three grades of institutions, viz.:—

- (i) Primary schools, which aim at the teaching of reading, writing, and such elementary knowledge as will enable a peasant to look after his own interests.
- (ii) Secondary schools, which are divided into English and Vernacular. Those in which English forms part of the regular course of study of all the scholars, or at least of all the scholars in the higher classes, are counted as English schools; if English is not taught, or is an optional subject only, they are reckoned as Vernacular.
- (iii) Colleges, the students in which, having passed the matriculation examination of a University, are reading for the examinations required for a degree.

In addition to these there are various institutions of a special character, such as technical schools teaching arts and industries, engineering, and other branches of applied science; law schools; medical schools and colleges; and normal schools for the training of teachers.

The general educational policy of the Government of India was declared at length in a Resolution published in March 1904, of which some account was given in the issue of this Statement for 1903-4.

The year 1908-9 was one of steady progress in Madras. The total expenditure, Madras, direct and indirect, on education amounted to £782,730, the highest figure that has yet been attained in any one year. There was a further advance in the total number both of schools and of scholars. There were 1,099,615 scholars in all, or 42,445 more than in the previous year, an increase of over 4 per cent. The percentage of boys and girls under instruction to those of school-going age rose, in proportion, to 32.4 and 6.3 respectively. All classes of schools under public management and aided institutions contributed to the increase. 129,866 boys and 15,900 girls were studying English at the close of the year. Arabic and Sanskrit maintained their position as the most popular of the classical languages, and all the vernaculars were more largely represented than in the previous year. A scheme for the establishment of training schools for higher elementary teachers and for the general reorganisation of the training institutions in the Presidency was approved. A novel feature of the year's work was the number of educational excursions made by the students and staff of several of the Government training schools at their own expense, each of the excursions having a definite object in connection with the course of training and furnishing topics for composition. Important changes in the arrangements for inspection were carried into effect, the staff having been strengthened by the addition of two inspectors in the Indian Educational Service and of nine district assistant inspectors. Public elementary schools for boys rose in number by 546 and in attendance by 44,294. An improvement both in the number and the qualifications of the teachers is reported; there were

EDUCATION. 27,351 certificated teachers, or 1,725 more than last year. A new scheme of studies has been introduced, and suitable books on several subjects, such as nature study, kindergarten occupations, hygiene, botany, &c., have been written. The staff of supervisors has been reorganised, and their pay accepted as a charge upon Provincial revenues. Relieved of this expenditure local and municipal bodies will be able to spend more on elementary education, either by giving grants in aid or by opening fresh schools; in the latter respect some progress is already reported. Judged by statistics, elementary education may be considered to have made an advance during the year, but it is to be noted that the increase in the number of schools is due, in part, to the transfer to the "higher elementary" grade of certain institutions hitherto reckoned as "secondary." The same process of re-classification accounts for a decline in the number of secondary schools, but the figures of attendance in them rose from 94,603 to 95,765. Much attention was paid during the year to the question of instituting a "school final examination," such as is held in Bombay on completion of the secondary school course. A scheme was published for general information, and the opinions and suggestions of public bodies and individuals likely to be interested in the matter were specially invited. These were under the consideration of the Government at the close of the year, and the scheme has now been approved. The hostel system has made but slow progress in secondary schools. In the Arts Colleges, now numbering 33, considerable improvement was effected with the help of a University grant, but much remains to be done to meet the full requirements of the new University Regulations. Twenty colleges had hostels attached to them; these were all filled, and the supervision thus exercised, together with the tutorial system introduced in some of them, worked satisfactorily. There were no serious cases of breach of discipline in these colleges. The University received a special grant (£3,330) from Government funds towards the cost of University vacation lectures. What may be called the professional institutions, viz., the Law, Medical, and Engineering Colleges, well maintained their efficiency. Female education is still confined almost wholly to the elementary stage, but with this limitation a further advance was made, the number of girls under instruction being 178,867; more than half of these were at mixed schools. European education calls for no special comment; the numbers remained practically stationary. The total expenditure on education, which was the highest on record for the Presidency, was provided as follows:—from Provincial funds (in round figures) £266,300; local funds, £63,000; municipal funds, £19,400; fees, £218,200; other sources, £215,700.

Bombay.

In the Bombay Presidency the year was marked by progress in nearly all directions. Especially satisfactory is the extension of facilities for primary education. The total number of institutions has increased from 14,114 to 14,589, and the total number of scholars from 749,391 to 792,559. This represents 34·1 per cent. of the boys and 7 per cent. of the girls of school-going age. As regards university examinations, the most noteworthy fact is the disproportion between the number of those appearing for the Arts degrees and that of candidates for the Science degree; while 524 candidates were examined for the degree of B.A., only 20 sought the degree of B.Sc.; out of these 350 and 16, respectively, were successful. When the plans at present under consideration for the application of the large sum (£120,000) now available for the improvement of Science teaching have been matured, more students will no doubt present themselves for examination in Science subjects. The total number of Arts Colleges remained the same, viz., 11, but the number of students continued to rise; there are now 3,788 in all. As regards special instruction, good work is being done at all the training colleges; the equipment of the Victoria Jubilee Technical Institute at Bombay was further improved, and the increase in the number of candidates for the London Chamber of Commerce examination shows a growing interest in commercial education. In secondary schools, also, the figures show an increase, the number of such institutions at work being 527, with 66,000 scholars, including 6,000 girls. There have been regrettable cases of disregard of discipline and disorderly conduct on the part of certain pupils in schools of this class, and Government found it necessary to publish a Resolution on the subject (30th September 1908) and to direct the attention of headmasters, managers, and parents to it.

The great event of the year was the raising of the minimum pay of assistant teachers in primary schools to Rs. 9. This was carried out for the last six months by means of an extra grant of £3,330 from provincial revenues. Further funds are being yearly provided for the development of primary education, so that within a short time it is expected that new schools will be established in no less than 1,650 villages which

EDUCATION. the Director of Public Instruction mentions as requiring them. In the year under report 262 new public primary schools were opened. As the number of schools rises, the question of the cost of buildings becomes more pressing. In the northern division of the Presidency, when a village is given a new school, the people are required to provide a rent-free building for one, two, or three years. But the period is seldom extended by them, and the reluctance of the people to provide buildings is significant of their general attitude towards education. On the important question of fees, it is reported that, if full effect is given to the existing rules as to remission, the probability of any boys being prevented from attending school by inability to pay fees becomes very slight. Even of those who pay, a large proportion pay only from one half to one anna. The figures for 1908-9 show the substantial increase of 9,170 in the attendance of girls in primary schools, the total for the Presidency being now well over 100,000. The total expenditure on education during the year was £786,870.

United Provinces. In spite of the after-effects of the famine of 1907-8 which led to retrenchment in every branch of the administration, education in the United Provinces has shown a steady advance in many directions during 1908-9. The higher inspection staff was recently reorganised, and there are now 9 inspectors of schools, one for each revenue division, as well as a special inspector for training institutions. The reorganisation has proved beneficial. Conduct and discipline in the schools and colleges have been generally satisfactory. The total number of scholars varied but slightly from the preceding year, there being an increase of less than 4,000. The increase in expenditure, on the other hand, amounted to £71,772, and the benefit of this will be felt next year. The number of Arts Colleges remains the same, but in several important institutions, including the Muir Central College, St. John's College, Agra, the Reid Christian College, and the Central Hindu College, the staff has been considerably strengthened. The expansion of the Roorkee College, begun in 1906, is now practically complete. The hostel system continues to extend, and 47 per cent. of the 2,763 college students are now residing in boarding-houses. There has been an extraordinary demand for English education in the last few years, with the result that many of the schools are overcrowded. The declared policy of Government in this matter is that the State cannot provide the means of secondary education for the whole population; it can only set a standard by maintaining at a high state of efficiency model schools under Government management, leaving the rest to private enterprise, assisted by such grants as may be earned, and as the provincial finances may be able to provide. A notable feature of the year's record, and one full of promise for the future, is the munificence of private benefactors, who have either founded and endowed high schools themselves, or have joined with others in subscribing largely for the purpose. The Kshatriya High School at Benares, built and endowed by Raja Udai Partab Singh, C.S.I., of Bhinga, is worthy of special mention. In addition, Government secondary schools have been established at Ghazipur, Lucknow (2) and Meerut, and much has been done to improve existing institutions by liberal grants, and to equip them for the new school-leaving certificate examination. This will be held for the first time in 1910, and is designed to provide a better preparation for the practical business of life than the existing matriculation test; in particular, greater facilities have been provided for the thorough and practical teaching of science. In primary schools there are now 461,600 pupils, a slight increase on the figures for 1907-8, but the number of such schools decreased by 880. This result is attributed to the disappearance of schools in which proper instruction was not given, and from which Government aid has, in consequence, been withdrawn; to want of funds for new schools; and to the effects of famine and malarial fever. On the other hand, more schools were maintained by District and Municipal Boards. Gradual progress in the supply of trained teachers is reported. The Government Training College at Allahabad, which was not in accordance with modern requirements, has been replaced by a higher-grade college at Allahabad, and a lower-grade college at Lucknow: the curriculum and methods in normal schools have been improved, and the classes for primary school teachers continue to give satisfaction. The numbers of girls' schools and of girl scholars have risen, the former by 10 per cent. to 1,254, and the latter by nearly 4 per cent. to 49,478, of whom over four-fifths are in the lower primary stage. In pursuance of the recommendations of the Industrial Conference a beginning was made with the scheme for an industrial school at Gorakhpur, and the Bareilly carpentry school and the Lucknow school of design were nearly completed. The total expenditure on education rose from £491,723 to £563,495.

EDUCATION.
Punjab.

Educational progress, as measured by statistics showing the increase in schools and scholars, has now come to be regarded as so much a matter of course in the Punjab that the Report on Public Instruction concerns itself mainly with the rate of increase. This rate has not been so high in 1908-9 as in the previous year, but an increase of 91 in institutions and of 9,513 in scholars constitutes a fair record for the year. The number of scholars now stands at 302,576, representing 16 per cent. of the boys and not quite 3 per cent. of the girls of school-going age. As compared with six years ago, the number of boys and girls attending public institutions shows an increase of 31 per cent., and during the same period expenditure by Government and local bodies has increased 72 per cent. Only 21 per cent. of the cost of education is now met by fees. Primary education is already free for sons of agriculturists and for a proportion of other boys of the poorer classes, and exemption was extended during the year under review to the sons of schoolmasters in receipt of salaries of Rs. 30 or less. On the general question it is held that the pressing need of the time is for more and better schools rather than for cheaper schools. Collegiate education in the province is on a high level, and there has been more activity in this branch of education than in any other during 1908-9, each institution striving to put its house in order so as to fulfil the University requirements. There are 10 Arts colleges in all, as last year; the number of students has risen by 7 per cent. to 1860. The number of secondary schools remains practically unchanged, but the attendance rose by 4,382. In the University Entrance Examination only 1,222 out of 2,697 candidates passed, but in the Vernacular Middle School Examination the percentage of success was much higher, many schools securing cent. per cent. The number of primary schools rose from 3,343 to 3,408, and the number of pupils from 146,290 to 149,806. The slackening of the rate of progress is attributed by inspectors chiefly to the prevalence of malaria, but the lack of competent teachers is also a serious difficulty. The new rural schools, with a curriculum not leading up to the secondary stage, have not become popular. Many agriculturist parents have ambitions for their sons, and modified courses are being devised to admit of the pupils proceeding from the rural schools to secondary schools if they so desire. The number of training institutions remained unchanged; the province is comparatively well supplied in this respect, though an expansion of the Normal schools is needed to meet the growing demand for village teachers. The institutions and special classes imparting scientific and technical education continued as before, but in the Law College a whole-time staff of one principal and two professors has been appointed. Three professorships have been added to the Medical College at Lahore, the Veterinary College is full, and the establishment of another veterinary college to meet the demand for veterinary assistants has been suggested. There were signs of progress in female education, the total number of girls' schools having risen from 607 to 625, and of scholars from 23,588 to 24,916. The advance is more marked than the figures of attendance indicate; old prejudices, it is reported, are breaking down; people are becoming more ready to send their girls to school, to keep them there to a later stage, to pay fees for their education, and even to send them to live in boarding houses. The opening of the Victoria May Purdah School has given a much-needed stimulus to secondary education for girls of the better classes. There was a further increase in the number of Muhammadan boys in public institutions from 87,168 to 89,564, and of Muhammadan girls from 6,892 to 7,380. Education is still backward in Native States, and there was no marked progress during the year. The proportion of scholars to children of school-going age is 1 in 26 in Native States, as compared with 1 in 10 in British territory. The total expenditure on education in the Province was £370,618.

Central
Provinces
and Berar.

The general conditions of the year in the Central Provinces and Berar were not favourable to the progress of education, but in spite of the effects of plague and scarcity, the educational results show an all-round improvement over those of the previous year. Much of the activity in educational matters cannot, however, be accurately gauged at present, as it was devoted to a considerable extent to the discussion and formulation of schemes of far-reaching reforms, such as the improvement of secondary education, the prospects of the provincial service, the training of primary school teachers, the institution of a school final examination and the introduction of free primary education. The last-named important question was under the consideration of the Government of India; but the Chief Commissioner reports that the requirements of existing schools in respect of a more efficient and better paid teaching staff and improved accommodation and equipment are in them-

EDUCATION.

selves enough to absorb all the available resources of Government and local bodies, and should take precedence of further multiplication of schools. The amount of money required for buildings and equipment is enormous, and the supply of it cannot be hoped for at once. During the year the number of institutions and pupils rose by 4.6 and 7.1 per cent. respectively. There are now 3,651 schools and colleges, with 276,700 students. The percentage of scholars and children of school-going age has risen, for boys from 23.7 to 25.3 and for girls from 2.2 to 2.5; in Feudatory States the proportion is a trifle smaller. The number of students in arts colleges rose from 381 to 457. A feature of the year is the success of the Victoria College of Science (now established as a separate institution) at the B.Sc. examination, 7 out of 12 candidates having passed. It is also noteworthy that discipline improved among college students, some of whom have declared themselves to be "sick of politics." The number of secondary schools in British districts rose from 370 to 387 for boys, and from 35 to 38 for girls, with 47,885 and 2,363 pupils respectively. The University matriculation results were unsatisfactory, only 169 passing out of 603 candidates. The percentage of failures is particularly noticeable in schools at Divisional Headquarters; thus in the case of two high schools at Jubbulpore only 3 out of 31 and 8 out of 53 candidates passed; this poor result is attributed to the diversion of the boys' minds from their studies by the morbid attraction of politics. There is a marked increase in the fervour with which primary education is received in rural tracts, a circumstance which is the outcome partly of the recent lowering of the fees and partly of a general advance in public opinion. Steady progress was made in this stage; the number of pupils increased by over 13,000; in particular the rise in the number of scholars of backward communities, such as Gonds and other aborigines, was phenomenal, amounting during the year to 50 per cent. Much attention has been paid to the improvement of the training of teachers. The magnitude and urgency of this problem is indicated by the fact that out of 2,928 secondary teachers only 703 were certificated, and out of 6,649 primary teachers there are 3,821 entirely untrained; moreover, the yearly out-turn of trained teachers is only 336, whereas the annual requirements amount to 864. To remedy this deficiency a scheme for the establishment of a training college at Jubbulpore, and for the erection of two new normal schools and the extension of an existing one is under consideration. The condition of technical and industrial education was good, and a State technical scholarship for study in England has been granted to a student from these provinces. Female education showed a satisfactory advance, a noticeable feature being the increased number of girls at boys' schools. In all, the number of girls' schools rose from 275 to 303, and of girl scholars from 14,818 to 16,576; nine of these schools have been provided with buildings during the year, but there are 66 still without them. Statistics of Muhammadan education show a satisfactory increase of 1,967 boys and 704 girls. The total expenditure on education was £193,047.

The year, though not marked by any striking reforms, has been one of steady growth, except in the collegiate and high school branches. Burma is still very backward in respect of the higher education. There are only two arts colleges, attended by 155 students. The idea of a separate university for Burma is again being considered, but in the meantime arrangements are being made with the Calcutta University, which, it is hoped, will enable more Burmese students to graduate. Much has been done during the year to render the Rangoon College more efficient; it has been affiliated to the University in five subjects; four new teaching posts have been created, and a Governing Body has been appointed on which both the teaching staff and the general public are represented. Secondary education remains practically stationary. In primary education there has been an advance, the number of pupils in public institutions having risen from 183,290 to 192,293. As regards Anglo-vernacular schools, the syllabus for the new High School final examination has been settled, and the test was to be held for the first time in 1909. In vernacular education the chief feature of the year has been the classification of aided schools into those that follow the courses prescribed by the Department and those that do not; schools of the latter class, which are doing good work on their own lines, will receive assistance, provided they comply with certain not very stringent conditions as to giving instruction in reading, writing, and arithmetic, maintain an average daily attendance of 10 pupils, and are open to Government inspection. Special measures have been taken to promote education in the Arakan Division, where it was in a backward state; vernacular schools are to be established at the cost of district cess

EDUCATION. funds; already a commencement has been made with seven schools in the Akyab district. Female education in Burma is not complicated by religious difficulties, and the increase in the number of girl pupils in public institutions, by 4,138, is satisfactory; no less than 75 per cent. of the girls were being taught in boys' schools. The number of European schools has increased from 18 to 24, and the attendance in them from 2,334 to 3,135. The number of Muhammadans under instruction has also risen by no less than 2,245, and now stands at 11,783. Schools for "special classes"—the Karens, Shans, and Talaings—number 105 more than last year, and the attendance rose by over 1,000. Private institutions, mainly monastic, play an important part in Burma; the total number of such schools in 1908-9 was 16,236, with over 170,000 pupils, nearly all of whom are Buddhist. The total expenditure on education during the year was £262,120.

Missionary bodies continue to render inestimable service to the cause of education in Burma, not only in large centres of population, but by steady work in distant parts of the province, among the Shans, Karens, Taungthus, Kachins, Chins, and Inthas.

North-West
Frontier
Province.

In the North-West Frontier Province the year has been one of fair progress. Though the number of primary schools fell by three, that of secondary schools rose by one, and the number of scholars shows a satisfactory increase in all institutions for general education. The figures are 19,235, as compared with 18,871 last year. Private schools have again shown a tendency to decline, there being 716 fewer pupils this year. The total number under instruction, in public and private institutions combined, was 28,891. There is an increasing desire among Pathans to give their children the benefit of secondary and collegiate education, and those who can afford it send their sons to the Muhammadan Anglo-Oriental College at Aligarh. At present there is only one Arts College in the Province, the second-grade Mission College at Peshawar, with 22 pupils, but steps are being taken for the establishment of a new Provincial College. Examination results were, on the whole, favourable, especially those of the Normal School at Peshawar, which succeeded in passing 27 out of 28 candidates for the Vernacular certificate. Female education is progressing among Hindus and Sikhs, and the Muhammadans are also becoming alive to its advantages. The number of trained and better qualified teachers is increasing, and every year Frontier young men proceed from the Normal School, Peshawar, to become teachers in the primary schools of the Province and of Baluchistan. The total expenditure of the year amounted to £21,275.

Coorg.

The year under review brought no material change to the educational arrangements in Coorg, but the numbers attending public schools rose from 4,543 to 5,316. There was a very satisfactory increase in the upper and lower primary classes. The percentage of pupils under instruction to those of school-going age was 12·95, as compared with 11·19 in the previous year. The educational institutions in the Province were one training school, one upper secondary school (High School), at Mercara, one lower secondary school at Virajendrapet, and 87 primary schools. An officer of the Indian Educational Service has been appointed as headmaster of the High School. Additional boarding-house accommodation is being provided at this and the other secondary schools. In private schools the number of pupils rose slightly to 476. The system of village school committees, or panchayats, was on trial during the year, and was found to be useful in some cases.

Bengal.

The year has been marked by considerable activity in educational matters. The total expenditure from all sources rose from £830,415 to £963,330 in 1908-9. Since 1905-6 the expenditure from provincial revenues has increased from £226,660 to £331,660. The number of boys under instruction was approximately 1,200,000 representing 26·5 per cent. of the total male population of school-going age. Primary schools for boys numbered 34,472, or 518 more than in the previous year. Special attention was paid to the training of teachers and to improving the agency for inspection; as regards the latter point, the aim hitherto has been to increase the number of sub-inspectors so that they might have units of reasonable size to control; a sufficient advance having been made in this direction, efforts are now being directed towards improvement of the teaching staff. The system of *guru*-training schools has been extended throughout the province; out of 191 such schools to be constructed, 54 have now been completed, 87 are under construction, and 50 have still to be commenced; it is reported that many *gurus*, after being trained, do not return to their duties as teachers, and this adds to the difficulties of the Department; in any case, the advance can only be slow, as much leeway has to be made up. Expenditure on secondary education increased by £9,530, and the number of pupils in high schools by over 2,000. The inspection

EDUCATION. of these schools by officers of the Education Department on behalf of the University is reported to have had a stimulating effect. Much attention was paid to the institution of a school-leaving examination, and a syllabus with five alternative groups of subjects has been devised; it now remains to construct the machinery for holding the examination. In collegiate education there was a steady advance in all directions to conform with the requirements of the new University regulations. Eight additional appointments have been sanctioned in the Indian Educational Service, and improvements took place in buildings, science equipment, libraries, and hostels. Governing bodies for Government colleges were reconstituted at the instance of the University and invested with independent, though limited, powers in respect of the responsible management of these institutions. An increase of nearly 27,000 in the number of Muhammadans under instruction is reported; arrangements were made for the detailed inspection of all the private Madrasas in the Province, and it has been decided that in each inspector's division a Muhammadan inspecting officer should be appointed to supervise Muhammadan education exclusively. As regards female education there were 139,245 girls under instruction in primary schools, 163 at the collegiate school, and 31 at the Bethune College, the one Female Arts College in the province. The Training College at Patna for female teachers was opened in January 1909 under a lady principal from England, and it is reported that the earnestness of the women students and their eagerness to learn were remarkable; but the absence of fit material for training, the unwillingness of many parents to pay for the education of their daughters, and the early age at which girls are taken away from the schools stand in the way of real advance in female education. On European education £22,220 more was spent than in 1907-8. The code for European schools was revised, after prolonged discussion, and was to have come into force on 1st January 1910, but it was found necessary, on account of representations made to Government, to defer bringing it into operation. Meanwhile the re-grading of the schools has been proceeding. As regards professional education, the schemes for the University Law College in Calcutta and the Patna Law College have been brought into full working order, and pleadership classes have been revived in other colleges. The hostel system is gradually being developed in Bengal; the engineering institutions at Sibpur and Bankipore are now entirely residential, but the same success was not achieved in schools as in the case of colleges, and it is reported that the state of discipline still leaves much to be desired.

In Eastern Bengal and Assam the year was one of record progress in almost every department of educational activity. The total number of public institutions has increased from 22,520 to 23,933, and the number of pupils to 903,773, an increase of 81,797, surpassing even the increase reported last year, which itself had never previously been equalled. The proportion of scholars to children of school-going age now stands as follows:—Boys, 35·35 per cent.; girls, 5·36 per cent. Taking Muhammadans and Hindus together the total number of male pupils increased by 7·8 per cent., and that of the female pupils by no less than 27·4 per cent. This advance is a direct measure of the success that is attending the distribution through boards of the Imperial grant for primary education. The total expenditure on public education rose from £388,569 to £442,290, of which sum £147,320 was received in fees. With regard to collegiate education, the number of institutions remains at 11, of which five are now of the first grade. Both the Dacca Colleges were equipped with up-to-date laboratories, and Dacca can now challenge comparison with any collegiate town in India in this respect. To meet the demands of the new University regulations nine additional professors have been appointed in Government colleges. The inspecting staff was also strengthened, 34 additional officers being added to the cadre of the various services, while 23 new posts were created in Government high schools. Secondary schools have increased from 1,172 to 1,205, and the number of pupils in them from 122,981 to 132,151. The inspection of high schools on behalf of the University was completed during the year, and since the inspection an improvement in the tone and management of these schools is reported. The total number of pupils in the high schools, including those for girls, was 51,904, an increase of 4 per cent. on the previous year. The establishment of lower primary board schools has been commenced in the transferred districts, where aided institutions have hitherto been the mainstay of primary education. The number of pupils has risen by 8·4 per cent. A revised curriculum is being framed, more suited to the requirements of an agricultural population. At present, however, the quality of the instruction given in primary schools is described as nothing short of deplorable. Seeing that out of 27,814

Eastern
Bengal and
Assam.

EDUCATION. teachers in boys' schools in the province, only 3,793 are known to have received any kind of training, it will appear that the task before the Department in training them is colossal. A scheme has been approved for imparting a more reasonable and thorough training, and for ensuring, ultimately, that none but trained teachers shall find places in any school receiving Government aid. Steps are being taken to set up institutions of an improved type in place of the existing unsatisfactory *guru*-training schools, and a new training college for English teachers will shortly be opened; 1,181 persons were being trained at the close of the year. All records, as regards female education, were easily broken in 1908-9; the increase in the number of girls at school was almost as great in the single year as in the entire quinquennium of 1902-7 (24,493, as compared with 30,037). Musulmani girls accounted for 71·6 per cent. of the total increase. Co-education met with considerable success in backward localities, but is regarded with disfavour by the better-educated of the population. The increase of 56,132 in the number of Muhammadans at public schools surpassed even last year's record, and a large number of Muhammadan students may be expected in colleges in the near future, as more of them passed the University Entrance Examination. Technical and industrial education remains in an embryonic state, and must so continue until a separate Department of Commerce and Industry has been constituted to control and direct it. Proposals for the formation of such a department have now been sanctioned. The political agitation continued to have a harmful effect on the discipline of schools. Towards the end of the year, however, disorderly demonstrations ceased. Among remedial measures the establishment of properly-managed hostels, or boarding-houses, is considered of great importance; large grants-in-aid have been made for the purpose, and the number of hostels increased steadily. The fact that the expenditure of the Education Department has risen from a little more than £73,330 in the year immediately succeeding the formation of the Province, to nearly £143,330 during the year now under review, not only testifies to the progress that has been made, but also shows, when taken in conjunction with the enormous possibilities of further progress, that the want of educational facilities was not the least important respect in which the administration of the area now comprised in the Province required early and comprehensive reform.

LITERATURE AND THE PRESS.

LITERATURE.

Bombay.

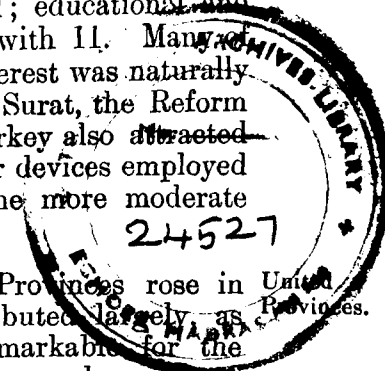
In Bombay 1,676 publications were registered, as compared with 1,138 in the previous year. The total increase is made up chiefly of an increase of 238 under the heading Miscellaneous and 127 under Religion. In Arts the number has risen from 34 to 66; in History from 11 to 37; in Medicine from 12 to 60; in Poetry from 179 to 223; in Politics from 6 to 20; and in Philosophy from 15 to 46. Works of Biography show a slight increase, while the numbers under Drama, Fiction, Law, Science, and Travels have fallen. Books published in English numbered 79; noteworthy among them were a translation of the *Letters of Aurungzebe*, by J. H. Bilimoria, a scholarly essay on *The Philosophers and the French Revolution*, by P. A. Wadia, and *India of to-day*, by Syed Sirdar Ali Khan, a collection of essays, frank but sober and discerning. Among books in Gujarati may be mentioned a biography of Garibaldi, translated from the Urdu work of Lala Lajpatrai, and a translation, from Bengali, of a life of Krishna, in which the age and authenticity of the Mahabharata and cognate works are discussed; the author finds three strata in the poem, of which the earliest and most authentic represents Krishna as an ideal man, without divine attributes. Gujarat is prolific of fiction and of miscellaneous books. Among the latter, the *Stri Pokara* of Pandita Jannabai, published by the Gujarat Vernacular Society, is an able plea for female education and liberty. The same society has published an excellent translation of Mill's *Subjection of Women*, by J. R. Patel. In Marathi 198 books were published, including some interesting biographies and a series of *Lives of the Poets of Mahārāshtra*, by J. R. Ajgaonkar, somewhat after the manner of Johnson's *Lives*; the writer contrasts the morality and piety of his subjects with the private lives of some English poets, and attacks the social reformers of to-day. Marathi drama is represented by eight works; one, entitled *The Culmination of Love*, is a translation of *Romeo and Juliet*, which does not always catch the meaning of the original; whilst *The Bower of Love*, by G. C. Deo, is a fairly successful adaptation of *As you like it*. *The Battle in the Bharat*, by A. V. Barwe, is an excellent adaptation of the Sanskrit

play, *Venisamhara*. Political treatises in Marathi include a translation of seven speeches of Arabindo Ghose; another of Lala Lajpatrai's *Story of My Deportation*; and an account of the proceedings against the editor of the *Kal* for sedition; and a volume of select articles from the *Kal*. Marathi poetry also was mainly of a political type, and contained numerous allusions to the conviction of B. G. Tilak. Among books in English and Marathi may be mentioned a series of selections from the diaries of the Peshwas and others, published by the Deccan Vernacular Translation Society.

As regards newspapers, the most remarkable increases of circulation occurred in the case of two extremist organs, the *Kal* and the *Hindu Punch*. The number of newspapers and periodicals treating of current political topics remained practically unchanged, and at the close of the year stood at 178. Of these 81 were conducted by Brahmins, 50 by other Hindus, 21 by Parsis, 17 by Muhammadans, and 9 by Christians. English was the language of 10 per cent. of the newspapers, and Marathi of 35 per cent. The tone of a certain section of the press underwent a change for the worse; discussion of the extremist programme led to an increased amount of vilification of Government and a more or less disguised sympathy with the methods of anarchy, which involved its leading exponents in a series of prosecutions. During the year the editors of the *Kesari*, the *Swarajya*, the *Arunodaya*, and the *Rashtramukh*, and two successive editors of both the *Kal* and the *Hind Swarajya* were convicted and sentenced for sedition. On the other hand, the loyal and moderate sections of the press warmly welcomed the Royal Message of November 1908 and the announcement of the reforms, and personal references to Sir George Clarke and his administration were almost uniformly marked by friendliness and sympathy; in particular His Excellency's efforts to enlist the Native Press on the side of inoculation against plague met with a cordial response.

In Madras the literary activity of the previous year was fully maintained. The number of books and periodicals published was 2,207, as compared with 1,574 in 1907-8; the increase is thus very marked, though it may be due to some extent to a more strict enforcement of the rules regarding registration. Religion continues to be the dominating force in indigenous literature; it was the subject of 685 works. Of the rest, 231 related to law, and 193 to languages, while 132 works were classed as poetry and 91 as drama. On politics there were only 18 publications, and on history 15. Among individual works may be mentioned *The Universe and Man*, by Swami Ramakrishnananda; a critical review in Sanskrit of Kalidasa's epic poem *Raghuvamsa*; and a work in Tamil entitled *Government and Patriotism*, designed to show the fairness and benevolence of the British Government. Two dramatic publications in vernacular, entitled *Yayati* and *Vasanthikai*, are also worthy of notice. Krishnamachari's *Indian Phonography*, a manual of short-hand adapted for the classical and vernacular languages of India, supplies a long-felt want. As regards newspapers, there were at the close of the year 65 published in English and 191 in the vernacular. Ninety-six papers were started, and 103 discontinued publication in the course of the year. Among the subjects dealt with by the Vernacular and Anglo-Vernacular Press were religion, to which 64 papers were devoted; educational and literary matters with 44 publications, politics with 39, and law with 11. Many of the remaining papers were of a miscellaneous character. Much interest was naturally excited in political circles by the breaking up of the Congress at Surat, the Reform Scheme, and the Royal Proclamation; the course of events in Turkey also attracted attention, especially among Muhammadans. The boycott and other devices employed by the extremists in Bengal were not viewed with favour by the more moderate native papers.

The total number of publications registered in the United Provinces rose in number from 1,384 to 1,433. Religious works and poetry contributed largely, as usual, to the total. The Islamic literature of the year was remarkable for the bitterness with which the Sunni-Shia controversy was carried on, and numerous polemical books and pamphlets were issued by Arya Samajists. Among books on history may be mentioned the *Kanz-ut-Tarikh*, by Maulvi Muhammad Razi-ud-din, an interesting account of Budaun; and among biographies, a translation of the *Life of Mazzini*, by Lala Lajpat Rai, has found its way into the vernacular of the province. Books in verse rose in number from 316 to 403; most of these dealt with religious subjects, but some were aggressively political. Dramatic works were few in number and of poor quality. The fiction issued during the year was remarkable



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LITERATURE. for its ultra-Gallic lubricity, but included a number of novels dealing in an interesting manner with questions of social reform—such as child marriage, the *pardah* system, and the comparative merits of monogamy and polygamy. There was a revival of interest in Eastern philosophy, and two legal works, D. C. Banerji's *Law of Arbitration* and Agarwala's *Indian Practice*, deserve mention. Amongst magazines, *Indian Thought* and *The Pandit* continued to uphold their reputation for scholarship. The number of newspapers and periodicals fell from 121 to 114, of which about 60 per cent. were conducted by Hindus and 33 per cent. by Muhammadans, while two publications were edited by Theosophists, two by Christians, and four by joint editors of different creeds. Two new periodicals are noteworthy, the *Prabudha Bharat*, or Awakened India, a Vedic philosophical and religious monthly of enlightened moral tone, and the *Saddharm Pracharak*, which had great influence in the Arya Samaj, and enjoyed a wide circulation beyond the limits of the province. The tone of several newspapers changed for the worse during the year, especially after the outrages in Bengal; some writers declared that nothing could be gained by constitutional agitation and advocated recourse to stronger measures. Muhammadan journals, on the other hand, emphatically dissociated themselves from these views, and at times were unsparing in their denunciation of the boycott and other extremist methods of agitation. The policy adopted by the Government of warning an editor on the first appearance of an article that rendered him liable to a criminal charge generally proved effective, but it became necessary to proceed to a prosecution in three cases, under section 124 A. of the Penal Code.

Punjab. Fewer publications were received for registration in the Punjab, the number being 1,185, as compared with 1,204 in the previous year. Of books, religion, as usual, claimed the highest number, viz., 293, and attracted more writers than any other subject. It is a sign of the times that religious works, which are in classical language and unintelligible to the majority of readers, are being translated into the vernaculars of the Punjab, and a new critical spirit is noticeable in several works which show a tendency to question authority and try to explain religious doctrines in the light of reason and science. The volume of verse published every year in Punjab and Urdu is immense; most of the poems deal with the lives and adventures of popular heroes. Notable among those issued during the year under report are Ufaq's *Guru Gobind Singh*, describing scenes in the life of the Guru, and the *Tuzuk-i-Qaisari*, a historical poem which reviews the chief incidents of Indian history, and enumerates the blessings of British rule. There is little strictly political literature in the Punjab, but biographies of political and religious leaders are coming into vogue. Newspapers numbered 252, of which 38 were published in English and 182 in Urdu. Proceedings under the Newspapers (Incitement of Offences) Act had to be taken against one newspaper, the *Inquilab* of Lahore.

Burma. Out of 221 books published during the year in Burma, 83 were devoted to religious subjects; among them were numerous commentaries on the *Vinaya*, treatises on the Beatitudes, and stories of the Buddha. Many of these works were little more than pamphlets. Only four books are classified under the head of Poetry; the most noteworthy is the *Patcari Pyo Thit Hnin Vatthu*, by Saya Taing, a clever attempt to imitate and revive the spirit of the old Burmese poetry which is fast dying out. Another interesting publication is the diary of the late Kinwun Mingyi, a record of the author's visit to England in 1872 as head of a special mission from King Mindôn Min of Burma. Under the heading of language, the most important contribution was a Kachin dictionary written by the Rev. O. Hanson; this is the first serious attempt to give a full and complete account of the Kachin language, and is the result of sixteen years' research and personal investigation among the natives. No original work of fiction was produced during the year, and the drama, as a whole, was disappointing. There were 42 newspapers published, of which 23 were in English and 12 in Burmese.

Bengal. There was a greatly increased literary output in Bengal during the year under report, 3,417 publications having been registered as compared with 2,995 in the previous year. Of these publications, 2,341 were books, 1,903 being original works and 438 re-publications or translations. The new spirit is stimulating and giving a new direction to literary activity. Light literature, which till lately occupied the attention of the best writers, is giving place to more serious subjects. Laborious, but rather uncritical attempts were made to write the history of Bengal in the light of modern research. Of an unprecedented number of biographies, the majority were life-stories of pious and philanthropic persons or of religious and social reformers.

Philosophical publications consisted principally of attempts to popularise the study of Hindu philosophy. Science still receives no contribution worthy of mention. In the domain of drama a work entitled *Nur Jehan* is the only one of real importance. The bulk of the novels issued consisted of translations or adaptations of English or French detective stories; the falling off in the quality of works of fiction is attributed partly to the increasing demand for short stories in the numerous vernacular magazines. Industrial activity, which was a prominent feature of the year, was fully reflected in current literature. Among the chief topics discussed in the press during the year were the Royal Proclamation on the 50th anniversary of the assumption of the government of India by the Crown, the reform of the councils, the judgments in important criminal trials, the nationalist movement and anarchism, the deportations, and the relations between police and public. The number of vernacular newspapers at the close of the year was 84, a decrease of six.

In Eastern Bengal political writings formed, as in 1907-8, the bulk of the literary work of the year. The number of newspapers rose from 43 to 53, and the number of books registered fell from 247 to 223. The tone of the papers became less violent after the introduction of the Newspapers (Incitement to Offences) Act; but their literary standard was very low, and unintelligent abuse of the British people and British goods continued to be their most popular theme.

The books published during the year were 122 in number, of which 41 were devoted to religious subjects. There were 20 newspapers and periodicals; none of these had any considerable circulation except the *Hindi Kesari*, an extremist paper which has now ceased to appear, and the *Marwari*, which treats chiefly of commercial and industrial matters.

There were no publications in Coorg, and only one, a newspaper, in the North-West Frontier Province.

Eastern Bengal.

Central Provinces and Berar.

Other Provinces.

CHAPTER XV.

LOCAL SELF-GOVERNMENT.

GENERAL.
MUNICIPALITIES.DISTRICT AND LOCAL BOARDS.
PORT TRUSTS.

GENERAL.

GENERAL.

Local self-government, municipal and rural, in its present form is essentially a product of British rule. Beginning in the Presidency towns, the principle made little progress until 1870, when it was expressly recognised by Lord Mayo's Government that "local interest, supervision, and care are necessary to success in the management of funds devoted to education, sanitation, medical charity, and local public works." The result was a gradual advance in local self-government, leading up to the action taken by Lord Ripon's Government in 1882-84, and to various provincial Acts passed about that time, which greatly altered the constitution, powers and functions of municipal bodies—especially by widely extending the elective system—and which still form the basis of the provincial systems in force. At the same time the resources and financial responsibility of municipalities were increased. Municipal committees now exist in most towns of any importance. In the rural districts local and district boards were established by Acts of 1883-5. The local boards are under the control of a general district board, or send delegates to a district council. The systems vary in different provinces, as a large discretion is left to the provincial governments. The elective principle has been adopted in varying degrees. There is also a smaller number of non-elective local bodies discharging similar duties in towns other than constituted municipalities and in cantonments. In the chief ports trustees have charge of harbour works, port approaches, and pilotage.

MUNICIPALITIES.

(For further details see Statistical Abstract for British India, Tables 101 to 103.)

MUNI-
CIPALITIES.

General.

The municipal bodies exist, raise funds, and exercise powers under enactments which provide separately for the special requirements of each province and of the three presidency capitals, Bombay, Calcutta, and Madras. In the municipalities as a whole about half of the members are elected by the townsfolk under legal rules; in every town some, and in a few minor towns all, of the members are appointed by the Government. In almost every municipal body one or more Government officials sit as members. The number of Indian and non-official members, however, in every province largely exceeds the number of Europeans and officials. The municipal bodies are subject to Government control in so far that no new tax can be imposed, no loan can be raised, no work costing more than a prescribed sum can be undertaken, and no serious departure from the sanctioned budget for the year can be made, without the previous sanction of the Government; and no rules or bye-laws can be enforced without similar sanction and full publication.

There were 717 municipalities at the end of 1908-9, containing within their limits nearly 17 million people, or 7 per cent. of the total population. Generally speaking, the income of municipalities is small. In 1908-9 their aggregate income amounted to £4,027,000, excluding loans, sales of securities, and other extraordinary receipts. About 40 per cent. of the total is provided by Calcutta, Bombay, Madras, and Rangoon. Loans are incurred for water supply and drainage schemes, the cost of which is too large to be defrayed from ordinary revenues. Borrowings are largely from Government. The sources of municipal revenue, apart from loans and Government contributions, fall mainly under the two heads, "Taxation" and "Municipal Property and Powers apart from Taxation." Of the taxes the most important are octroi duties, levied in the United Provinces, the Punjab, the North-West Frontier Province, the Central Provinces and Berar, and Bombay, and the tax on houses and lands, which holds the chief place in the other provinces, as well as in Bombay city, and also contributes a considerable share of the receipts in the provinces named above. These two taxes each yield over one-fifth of the total income of municipalities. There are also water, conservancy and lighting rates, tolls on roads and ferries, taxes on animals and vehicles, and in some parts a tax on professions and trades. The other sources of income include cattle-pound receipts, rents of municipal property, such as

markets and slaughter-houses (an important item in Burma), and fees of various kinds. The objects on which municipal funds are spent are, mainly, water supply, hospitals, vaccination, conservancy, drainage, lighting, fairs and markets, and education.

The interest in municipal elections, and in municipal affairs generally, is not usually keen, save in a few cities and large towns; but, as education and knowledge advance, interest in the management of local affairs gradually increases. In most provinces municipal work is fairly well done, and municipal responsibilities are, on the whole, faithfully discharged, though occasional shortcomings and failures occur. The tendency of local bodies, especially in the smaller towns, is to be slow in imposing additional taxes, in adopting sanitary reforms, and in incurring new expenditure. Many members of municipal bodies are diligent in their attendance, whether at meetings for business or on benches for the decision of petty criminal cases.

The following table exhibits the constitution of the municipal committees in 1908-9:—

	Number of Municipalities.	Total Number of Members.	By Qualification.			By Employment.		By Race.	
			Ex-officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.
<i>Presidency Towns, &c. :—</i>									
Calcutta	1	50	—	25	25	9	42	26	25
Bombay	1	72	—	16	56	6	66	18	54
Madras	1	37	1	16	20	10	27	14	23
Rangoon	1	25	—	6	19	5	20	13	12
<i>District Municipalities :—</i>									
Bengal	128	1,750	138	711	901	261	1,489	252	1,498
Bombay (including Sind)	158	2,179	466	844	869	566	1,613	173	2,006
Madras	60	919	72	403	444	189	730	148	771
United Provinces	87	1,208	140	148	920	260	948	207	1,001
Punjab	111	1,268	233	432	603	262	1,006	108	1,160
North-West Frontier Province	9	149	45	104	—	45	104	22	127
Central Provinces and Berar	57	760	20	272	468	177	583	79	681
Eastern Bengal and Assam	50	656	68	259	329	140	516	72	584
Burma	43	540	167	310	63	189	351	144	396

The Calcutta Corporation consists, under the Act of 1899, of 25 elected commissioners and 25 appointed—four by the Bengal Chamber of Commerce, four by the Calcutta Trades' Association, two by the Port Commissioners, and 15 by the Local Government. There is a General Committee, with executive powers, consisting of the chairman and 12 members, who are selected from among the commissioners. In spite of important reforms in the registration of voters which increased their number more than threefold, a lack of interest was shown in the elections, only 11 per cent. of the total electorate actually voting. Progress was made in 1908-9 with great schemes of water supply and drainage (referred to in Chapter XVI. under "Sanitation"). With the growth of prosperity the valuation of the city has increased by nearly 50 per cent. in ten years to £2,129,444, and the revenue shows great elasticity. Retrenchments were effected in establishment charges in 1908-9. The revenue amounted to £520,064, while the expenditure was £504,463. Of the income about three-fourths is derived from the consolidated rate, and about one-eighth from licences; of the expenditure more than one-third is for loan charges. The debt at the close of the year amounted to £2,840,000. The annual loan charges must not exceed one-tenth of the annual valuation. The interest and sinking fund charges in 1908-9 were £148,926. Byelaws relating to plumbers, theatres, house drainage, and cattle sheds were issued. Progress in the improvement of bustees was well maintained. The Sir Stuart Hogg market is being extended at a cost of £77,000. A scheme for clearing congested areas and making street improvements, to be spread over 20 years and to cost £5,500,000, has received general sanction, and a draft bill giving effect to the proposals has been prepared.

General elections were held in 37 out of the 128 municipalities. The percentage of voters varied greatly. The average attendance of members at the meetings was less satisfactory. The incidence of municipal taxation for the whole province averaged 2s. 0½d., showing an increase of 1d. per head over that of 1907-8. The incidence varied between 13s. 4d. at Darjeeling and 5d. at Rambhijanpur. In 22 municipalities it was below 8d. There were revisions of assessments in 63 municipalities. That at Copossier-Chitpur yielded an increase in revenue of £3,632.

MUNI-
CIPALITIESBENGAL.
Calcutta.Interior of
Bengal.

MUNI-
CIPALITIES.

The rate on holdings was in force in 61, and the tax on persons in 67, municipalities. The total revenue of the Bengal municipalities amounted to £338,637, and the ordinary expenditure to £321,965. Thirty-seven municipalities were in debt at the close of the year to a net amount of £259,300, more than half of which was on account of Howrah, which adjoins Calcutta.

United
Provinces.

There were 87 municipalities and 43 notified areas at the close of 1908-9. At present only in two municipalities are the chairmen non-officials, but in future non-official chairmen and vice-chairmen are to be installed wherever suitable persons are forthcoming and local circumstances permit. Polls were held in 49 municipalities, and 55 per cent. of the electors voted. Owing to the discovery of abuses, reforms in election procedure are under consideration. Board meetings were fewer last year, but the attendance was better. The income of the municipalities was £437,237, of which about £223,000 was derived from octroi duties. The incidence of taxation as a whole fell to about 2s. 0d. per head. The expenditure amounted to £470,860. During the year there was larger expenditure on education. In consequence of the report of the Special Committee on Municipal Taxation, published in June 1909, octroi is to be restricted, and, wherever possible, replaced by other sources of taxation.

Punjab.

The powers of self-government provided in the municipal Acts were granted more freely in the Punjab than elsewhere. Owing, however, to the unsatisfactory working, lack of equity in assessing taxation, and expensive machinery of the smaller municipalities which have insignificant incomes, many municipalities have been converted into notified areas. At the end of 1908-9 there were 111 municipalities (a reduction of 25), besides 90 notified areas in which cheapness and simplicity of administration are the chief requisites. The system by which each religious community elects its own representatives has proved popular and successful. Except in the larger towns, elections excite very little interest, and nomination to a seat is said to be preferred to election. The work of the committees was generally satisfactory. The total income of the year amounted to £370,530, and the total expenditure to £371,188. Octroi accounts for 89 per cent. of the income from rates and taxes. The octroi receipts fell off as a result of widespread malaria, floods, and depressed trade. It is intended to adopt as far as possible the recommendations in the report of United Provinces Committee on Municipal Taxation regarding octroi (see above). In the municipalities that were converted into notified areas a house tax was generally substituted for octroi. The average incidence of taxation was 2s. 8d. per head.

North-West
Frontier
Province.

In the Frontier Province there were nine municipalities and five notified areas, with an income of £39,200, of which two-thirds is derived from octroi duties. The expenditure was mainly on public health and safety. The elective system is not in force in this province, and members are nominated for three years.

BURMA.
Rangoon.

The ordinary revenue of the Rangoon municipality decreased to £225,726, while the expenditure increased to £240,959. There was larger expenditure owing to the reorganisation of establishment, the introduction of electric lighting, loan services, &c. Strict supervision of the milk supply has been instituted. A scheme has been framed to induce private enterprise to provide sanitary barracks for the large floating coolie population. The incidence per head of direct taxation was 14s. 7d. The outstanding loans at the end of the year amounted to £993,967, including the reclamation works loans of £182,400.

Interior of
Burma.

There are 43 municipalities and 16 notified areas. Plague had again a serious effect on the finances, and expenditure in other directions had to be postponed. A recurring contribution of £20,000 is granted from imperial revenues to meet special plague expenditure in the province. Municipalities have been generally administered with efficiency, and most of the members take an interest in the affairs of the towns. Specially good work has been done by the Moulmein Committee. The average incidence of taxation rose to 2s. 9d. per head of population. The aggregate income, excluding debt heads, was £244,756, of which £94,283 came from rates and taxes, and £90,683 from markets and slaughter-houses. The municipal incomes are mostly small.

Central
Provinces
and Berar.

In the Central Provinces and Berar 57 towns had municipal committees in 1908-9, and there were six notified areas. The interest in municipal elections was, as usual, limited. There was a further extension of the elective principle. In the larger towns the interest of members in their civic duties has increased, but in the smaller

MUNI-
CIPALITIES.

towns, especially in Berar, it is difficult to find men suitable to administer municipal affairs. Under these conditions it has not been possible to adopt in Berar the policy which obtains generally in the Central Provinces of placing the chairmanship in non-official hands. The total income of the municipalities was £144,216, over two-thirds of which was derived from rates and taxes. The expenditure amounted to £153,694. The average incidence of taxation was about 2s. 3d. per head. Measures are being taken to render the levy of octroi more uniform in the Central Provinces. Octroi is not levied in Berar. Of the 44 municipalities in the Central Provinces proper, no less than 16 subsisted during 1908-9 on revenues smaller—in most cases considerably smaller—than £700. In Berar municipal taxation is especially low, the incidence being only 1s. 4d. per head. The total indebtedness of the municipalities was £82,045, half of which was owed by Nagpur and Jubbulpore. The financial position of the borrowing municipalities is sound.

The returns of attendance at meetings indicated a decline in interest in municipal affairs. Aid from provincial revenues is to be withheld from inefficient municipal bodies. Muhammadans are still insufficiently represented in the towns of Eastern Bengal. The total income of the 50 municipalities of Eastern Bengal and Assam in 1908-9 was £94,720, and the average incidence of taxation was 2s. 0d. per head. The expenditure amounted to £102,094. The net indebtedness at the end of the year was £23,786, the greater part of which is on account of Dacca and Narayanganj.

Eastern
Bengal and
Assam.

The number of members in the Madras Corporation is 36 (besides the chairman) of whom 20 are elected and the remainder appointed by Government and by various commercial bodies. The income in 1908-9, excluding loans and advances, amounted to £152,603, and the expenditure to £153,768. The average incidence of taxation was about 4s. 2d. per head. The principal taxes are one of 10 per cent. on the annual value of buildings and lands, a water and drainage tax of 6½ per cent. levied on the same basis, and a lighting tax of 1½ per cent., besides taxes on animals and vehicles, &c. The outstanding debt of the municipality at the end of the year was £483,000, against which must be set a sinking fund of £154,000.

MADRAS.
Madras City.

The number of municipal councils in the interior of Madras was 60, in 58 of which the elective system was in force. Of 193 seats filled by election in 1908-9 only 98 were contested, and 58 per cent. of the registered voters polled. Four councils consisted entirely of Indian members. The income increased to £292,656, and the average incidence of taxation was nearly 1s. 9d. per head. The total expenditure was £293,490. The outstanding debts at the end of the year amounted to £165,465, against which there was a sinking fund of £11,283. A fair standard of efficiency was maintained in some municipalities, but in eight (including Tanjore and Cuddapah) the administration left much to be desired.

Interior of
Madras.

Bombay City is administered by a corporation of 72 councillors, of whom 16 are nominated by the Government, 36 are elected by the ratepayers, 16 by the justices, 2 by the Chamber of Commerce, and 2 by the University. The ordinary income in 1908-9 was £662,909 and the expenditure £685,357. In spite of a reduction in the general and water rates there was a further large increase of receipts, resulting from the general expansion of the city and the rise in values of rateable properties. There was, however, a deficit in the year's working owing to expenditure on improvements, &c. It is now realised that increased taxation is the only alternative to curtailment of the expenditure. The average incidence of taxation per head was 11s. 11d. At the end of the year the outstanding debt was £3,468,196, and the invested sinking fund £568,746. The financial position of the municipality is assured beyond question. The expenditure on plague preventive measures from the outbreak of the epidemic in 1896, to the end of March 1909, has amounted to £468,693, of which £96,700 was received from the Government, and the remainder met partly from loans and partly from municipal revenues.

BOMBAY.
Bombay City.

The capital expenditure of the Bombay City Improvement Trust, which is engaged in reclaiming land, clearing slum areas, laying out new streets, erecting chawls, &c., amounted to £364,000. A further loan of £200,000 was raised in 1908-9, the year's revenue, derived from the loans being thus brought up to £2,100,000. The year's revenue, exclusive of the municipal contribution and receipts from investments, rents and other property, amounted to £104,000, and the expenditure, exclusive of capital charges, to £112,500.

The municipalities in the interior of Bombay and Sind numbered 158, besides 10 notified areas. During the year Government relaxed the official control over these bodies by empowering 87 municipalities not specially excepted to select

Interior of
Bombay.

MUNI-
CIPALITIES.

non-official presidents and by conceding to five city municipalities the privilege of electing two-thirds of the number of their councillors on their agreeing to appoint a Government servant as chief officer of the executive. It is hoped that these changes will stimulate a further interest in municipal affairs. On the whole, municipal administration in 1908-9, where not impeded by faction, showed evidence of a due sense of public responsibility. The aggregate income rose to £474,737, and the aggregate expenditure to £448,402.

DISTRICT
BOARDS.

DISTRICT AND LOCAL BOARDS.

(For further details see *Statistical Abstract for British India, Table 104.*)

General.

In rural areas district and local boards perform the duties assigned to municipalities in urban areas. In each district there is a board subordinate to which are two or more local boards. The boards contain a varying proportion of elected members in all provinces except Madras, where the elective system is only applied to members of district boards. Elected members form a large proportion of the boards in the United Provinces and the Central Provinces and Berar. On all boards the great majority of members are Indians. The total number of district boards is 194, and of local boards 515. There are no boards in Burma. The following table shows the general constitution of the boards in each province, the figures in italics relating to local boards, the others to district boards:—

Province.	Number of Boards.	Total Number of Members.	By Appointment.			By Employment.		By Race.	
			Ex-officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.
Madras	23	715	109	276	330	288	427	132	583
	82*	1,185	85	1,100	—	352	833	80	1,105
Bombay	25	3,645	25	1,996	1,624	773	2,872	216	3,343
	212								
Bengal	29	597	165	183	249	202	395	191	406
	78*	948	61	628	259	129	819	89	859
United Provinces	48	904	1	256	647	246	658	94	810
Punjab	29	1,115	245	487	383	260	855	77	1,038
	16	302	16	99	187	16	286	3	299
N.-W. Frontier Province	5	216	49	167	—	49	167	26	190
Central Provinces and Berar.	21	465	5	119	341	74	391	20	445
	75	1,200	13	313	874	123	1,077	7	1,193
Eastern Bengal and Assam.	14	283	74	105	104	103	180	53	230
	52*	682	93	285	294	144	538	145	537

* Besides 386 union committees or *panchayats* (with 3,670 members, of whom only 43 are Europeans) in Madras, 51 in Bengal, and 9 in Eastern Bengal and Assam.

The funds of district and local boards are largely derived from rates or cesses levied upon agricultural land over and above the land revenue. Up to 31st March 1908 the proceeds of these rates were included in the general revenues, and assignments from them were made to the boards. From April 1908 the accounts of the boards have been excluded from the general provincial accounts, and their funds treated independently in the same way as municipal funds. The new system remedies certain practical inconveniences and gives the boards freedom of reappropriation. The Government of India now make a grant-in-aid to the funds of all boards equal approximately to one-fourth of their income from rates or cesses levied on land. The chief object is to enable the boards to provide improved roads and other local needs. The boards have also other sources of income, such as cattle pound receipts (except in Madras), educational receipts, medical receipts, tolls from ferries and bridges, and contributions for specific purposes from the provincial funds. Their aggregate income (excluding debt items) in 1908-9 was £3,190,000. The expenditure of the boards is chiefly for roads and bridges, hospitals, vaccination, conservancy, drainage, water supply, primary education, markets, and resthouses.

Bengal.

In Bengal, the attendance at the district, and still more at the local board, meetings, was unsatisfactory, though there was absence of friction in working. Little interest was shown in elections. There were 51 union committees entrusted with minor duties and having an aggregate income of only £1,145. An amendment of the Bengal Local Self-Government Act of 1885 was effected in 1908, and changes were made with regard to appointment, powers, administration, financial powers, &c. The

DISTRICT
BOARDS.

ordinary income of the district boards was £420,350. The receipts from provincial rates, £232,561, were larger, while those from civil works declined to £79,912. The expenditure, excluding debt, was £469,067, of which £85,652 was spent on education and £292,226 on civil works, chiefly roads and bridges. Scarcity diminished the incomes and increased the expenditure of the boards affected. Four light railways constructed under the guarantee of district boards continued to work satisfactorily, and some extensions were made. Considerable progress was again made with the construction of railway feeder roads and bridges.

During 1908-9 there were marked signs in many districts of a growing interest in local affairs on the part of non-official members of district boards, and this is being fostered by the policy of extending their powers and responsibilities. The change by which district board funds became, from 1st April 1908, excluded local funds, increases the freedom of the boards in dealing with the money at their disposal and simplifies local accounts. The expenditure of district boards has rapidly increased during recent years, and has been largely met from provincial contributions which amounted, in 1908-9, to £157,000. The time has come for greater reliance on local resources. The total income last year increased to £540,730, including provincial grants. The expenditure amounted to £533,885. There were increases under education and civil works. Medical charges increased owing to larger expenditure resulting from the widespread epidemic of malarial fever.

A lack of interest is still shown in elections to district boards. Few elections elicit contests. In the working of the boards, too, members display little enthusiasm. The Local Government has ordered that a meeting of each district or local board should be held at least once in two months. The ordinary income of the boards for 1908-9 came to £326,357, of which the chief item was £170,000 from provincial rates. The expenditure was £356,900, of which the chief items were civil works £143,000, education £81,500, and medical charges £42,100.

There is no elective system in this province. The year's income of the boards was £23,650 and their expenditure £22,196. Most of the income was derived from provincial rates. Of the expenditure about 24 per cent. was on education. The members of the boards have little sense of their responsibilities.

The year was one of steady progress, especially in promoting education and works of public utility. Any further extension of activities is hampered by the limited sources of income. The attendance of members of the boards at the meetings perceptibly improved. This is ascribed to the enhanced powers recently entrusted to them. The ordinary income of the district funds amounted to £150,624, excluding debt heads, while the expenditure was £200,842. The chief source of income, as in other provinces, is the provincial rates, but receipts from cattle pounds constitute an exceptionally large proportion of the total. The bulk of the expenditure was on civil works, including roads and schools and other buildings, and on education.

In Eastern Bengal there was a distinct improvement in the attendance of members of boards, but elections were not very satisfactory. In Assam there were 19 local boards, constituted under executive rules. The latter boards generally resemble district boards in their functions and responsibilities, and a special feature of their membership is the large proportion of Europeans, who represent the planting community. In Eastern Bengal the Muhammadan community, which includes two-thirds of the population, was more adequately represented on the boards in 1908-9. Of the income of the boards, £326,373, nearly one-half accrued from provincial rates, and over one-third from Government contributions for education, roads, &c. Their expenditure amounted to £347,508, of which £97,892 was devoted to education and £199,586 to civil works.

There were in Madras 23 district boards, 82 taluk boards, and 386 village unions. The taluk or sub-divisional boards are not elective, the members being appointed by the Government, but some of them elect their vice-presidents. The village union *panchayats* or councils have each not less than five members; they deal chiefly with sanitation, and the making and repair of roads, and in some cases they have the management of choultries, markets, and other local institutions entrusted to them by the taluk boards. On the whole the working of the local bodies was satisfactory. The income of the boards and unions, excluding debt heads and contributions from one district board to another, amounted to £888,879, and the expenditure rose to £864,554. The chief source of income is the land cess, which is levied at rates varying from one to two annas per rupee of the land revenue assessment,

DISTRICT BOARDS. and yielded £372,360. Railway cesses amounted to £48,412. The income included also grants from provincial revenues amounting to £190,637, chiefly for roads and bridges and for education. There was larger expenditure on public works, sanitation, and education. The Tanjore and Kistna District Boards railways yielded net profits of 5·8 and 7·4 per cent. respectively on the capital outlay.

Bombay. The average attendance of members at meetings of the boards showed a decided improvement. New boards were constituted in three districts. The income of all boards, in 1908-9, excluding debt heads, was £431,856, a rise, as compared with 1907-8, due to the recovery of past arrears, to more liberal Government grants, &c. The total expenditure of the boards rose to £445,671, most of the increase being for water supply and other civil works and education. Of the total expenditure, 32 per cent. was for education, and 56 per cent. for roads, schoolhouses and other buildings, water supply, and other works.

Burma. There are no local boards in Burma. Their place is taken by the district funds under the control of Government officers. These numbered 36, and had an income of £237,364 and an expenditure of £238,687 in 1908-9. Those in Lower Burma, known as "District Cess Funds," are the largest, as they include the proceeds of a 10 per cent. cess on the land revenue, and account for £198,285 of the expenditure, of which about £26,000 was on education and nearly £120,000 on public works. The expenditure from district funds in Upper Burma was chiefly on public works.

PORT TRUSTS.

PORT TRUSTS.

(For further details, see *Statistical Abstract for British India*, Table 178.)

General. The administration of the larger ports is placed by various Acts in the hands of Port Commissioners, who are charged with the provision of suitable dock accommodation and other services necessary to shipping. They have wide powers, but are more subject than municipal bodies to Government control. Members of these Port Trusts, which include both Europeans and Indians, are for the most part appointed by the Local Governments, and are largely representative of the local commercial communities. Except in Calcutta the elected members are fewer than the nominated members. Port trustees are empowered, subject to the control of the Government, to levy dues on shipping and goods, to charge fees for services rendered, to contract loans for port improvements, to maintain the harbour and its approaches, and to erect warehouses, jetties, harbour lights, and docks for the convenience of traders and shipping. The chief ports, in which is carried on by far the largest proportion of the trade of India, are alone dealt with here. There are smaller ports, especially in Madras and Burma, where sums are raised yearly for expenditure on improvements. For the trade of the principal ports see page 64.

Calcutta. The receipts of the Port Trust, in spite of trade depression, increased by 10 per cent. to £801,100 in 1908-9, the highest figure on record, while the expenditure was £799,000. Receipts have doubled in the last 10 years owing to the enormous expansion in the trade of the port, although considerable reductions have from time to time been made in the charges on goods. The expenditure upon capital works amounted to £401,000. The more important works completed or in progress were the extension of docks and jetties, the erection of warehouses, the provision of four ferry steamers, and the reclamation of low-lying land. The capital debt of the Trust on 31st March 1909 was £4,513,000, of which about £1,931,000 represents Government loans, and the rest mainly debenture loans. The Commissioners during the year raised their first sterling loan, amounting to £500,000. Against this total debt may be set the value of properties, £5,929,000, besides valuable foreshore lands, sinking funds amounting to £513,000, and Revenue, Reserve, and other Funds of £284,000. Lands and buildings and the railway are a growing source of income. Increased trade in coal, Java sugar, and Burma rice has greatly added to the receipts. The provision of ferry steamers has met a great public need. In connection with the scheme for the extension of the Kidderpore Docks and the general improvement of the port, large areas of land are being acquired.

Bombay. Notwithstanding the depression in the export business, the receipts of the Port Trust were higher than in any year except 1908-9. Their income amounted to £508,000, and the expenditure to £454,000. The trustees continued the temporary rebate on certain port dues and pilotage charges, initiated in 1907, which amounted to £48,000; nevertheless, there was a surplus of £5,400 on the year's working,

and the Reserve Fund was raised to £373,000. The capital expenditure amounted to £596,300, including £295,000 spent on the Alexandra Dock works, and £225,000 on the Mazagon-Sewri reclamation. A debenture loan of £500,000 was issued. The debt of the Trust amounted at the end of the year to £5,239,000, of which over £2,000,000 is due to Government, while the remainder consists of foreshore securities and debenture loans. The cost price of the properties vested in the Trust was £5,446,000, and various depreciation, reserve, and sinking funds amounted in the aggregate to £733,000. Works for the improvement of the harbour and the excavation of the new docks made good progress. Government has sanctioned an estimated expenditure of £872,000 for the Mazagon-Sewri reclamation scheme, the area involved being 518 acres.

Owing to the falling off in the export trade, the year 1908-9 was not very satisfactory for the Karachi Port Trust. The revenue receipts declined to £170,000, while the expenditure was £163,000. The capital expenditure reached £206,000. The total liabilities of the Trust at the end of the year stood at £753,000, of which £83,000 is due to Government. Considerable progress was made in the various schemes for the improvement of the port, and important additions were made to the wharfrage.

In 1908-9, owing to the great expansion of inland trade, the ordinary revenue increased by £32,500 to £192,000, while the revenue expenditure was £195,000, leaving a small deficit on the year's working. A sterling loan of £500,000 was raised. The capital expenditure of the year was £450,000, and the total debt amounted to £1,381,000. Substantial progress was made with the construction of up-to-date extensions of wharves in connection with the scheme for the new port works, which was sanctioned in 1901 and is now nearly completed. Since the commencement of the works, £613,000 has been expended out of sanctioned estimates of £695,750. The project for improving the channel across the Hastings shoal was successfully completed. The condition of the Rangoon river has given rise to grave anxiety for some time past, and preliminary operations were undertaken for training the river.

The year 1908-9 was prosperous, and the receipts of the Madras Port Trust increased to £77,000. The expenditure was £50,000. Progress was made in improving the harbour and in furnishing better facilities for handling cargo. The harbour is being provided with a new north sheltering arm and a new entrance, and new berths and moorings. The capital outlay on extensions was £70,000. The debt outstanding was £438,000.

CHAPTER XVI.

CONDITION OF THE PEOPLE.

VITAL STATISTICS.
PLAGUE.
SANITATION.
HOSPITALS, DISPENSARIES, AND
ASYLUMS.

EMIGRATION AND MIGRATION.
PRICES.
WAGES.
FAMINE OR SCARCITY.
GENERAL REMARKS.

VITAL
STATISTICS.
General
population.

VITAL STATISTICS.

(Detailed information on Vital Statistics, Sanitation, &c. is contained in the annual Report on Sanitary Measures in India, which is published as a Parliamentary Paper, and in the Statistical Abstract for British India, Tables 103-4 and 192 to 199.)

Registration.

As the date of the census of 1901 recedes, the birth and death rates calculated upon the census returns necessarily become unduly high. Although improvement in registration is being steadily effected, there are still serious defects in some areas. The facts are nearly everywhere collected by an illiterate agency (usually by village watchmen in rural areas), and accurate figures, especially of the causes of death, are unobtainable. It is more difficult, especially in towns, to obtain information about births than about deaths. The actuarial reviews of the returns of the last three censuses show that the registered birth and death rates are understated, and, as registration improves, the registered rates must tend to approximate to the calculated rates. An increase in the registered death-rates cannot, therefore, be regarded as proving the impoverishment of the masses. The high Indian birth-rate is due, not to exceptional fertility, but to the large proportion of married women. The high infantile death-rate is partly due to the weakness of the children of immature and ignorant parents, but to some extent it is only apparent, being calculated on imperfect returns of births.

Birth-rates
and death-
rates.

The population of the areas in which births and deaths were registered was 226,409,600 according to the census of 1901, and the number of births registered in

Province.	BIRTH-RATES.		DEATH-RATES.					
	1907.	1908.	1907.			1908.		
			Rural.	Urban.	Total.	Rural.	Urban.	Total.
Bengal	37.7	36.1	37.8	36.2	37.7	39.1	31.2	38.6
Eastern Bengal and Assam.	37.0	41.1	29.5	22.7	29.3	30.1	22.2	30.7
United Provinces	41.2	37.5	42.6	55.1	43.5	53.0	49.2	52.7
Punjab	40.8	41.8	62.9	54.7	62.1	50.2	55.6	50.7
North-West Frontier Province.	32.5	37.3	35.0	36.0	35.1	35.9	35.6	35.8
Central Provinces and Berar.	52.5	52.8	41.3	45.1	41.7	38.2	37.7	38.1
Madras	30.8	32.4	23.7	28.5	24.3	25.3	32.3	26.2
Coorg	23.8	24.2	34.3	44.0	35.2	33.5	50.3	34.9
Bombay	33.0	35.7	31.5	38.2	32.8	25.1	37.5	27.1
Burma	32.7	34.1	24.6	42.2	26.8	25.9	42.6	28.1
Upper	33.1	36.3	24.4	39.7	26.1	27.2	38.8	28.5
Ajmere-Merwara	31.2	42.5	25.5	40.8	29.6	35.3	52.6	40.0

rates, the most considerable excesses being 14.72 per mille in the Central Provinces, 10.40 in Eastern Bengal, and 8.57 in Bombay. In the United Provinces

the excess of the death-rate over the birth-rate was 15.27 per 1,000. The percentage of male to female births ranged from 123.6 in the North West Frontier Province to 104.0 in the Central Provinces and Berar. VITAL STATISTICS.

The number of deaths registered during 1908 was 8,653,007, compared with 8,399,623 in 1907, while the death-rate was 38.21 per thousand, or 1.03 higher than in 1907, and 4.25 above the quinquennial mean. The rise in the death-rate was most marked in the more populous provinces of Northern India, and especially in the United Provinces, where the rate increased from 43.5 to 52.7 per mille. The Punjab rate, though lower than in 1907, was yet extremely high, 50.7 per mille. The lowest death-rate was again in Madras.

The greatest mortality occurred in November, while the lowest was July. Infantile mortality was highest in the United Provinces and the Punjab, and lowest in the North West Frontier Province and Madras.

The following table gives the ratio of deaths per mille in cities of British India whose population exceeded 150,000 in 1901:—

City.	1907.	1908.	City.	1907.	1908.	City.	1907.	1908.
Calcutta -	37.7	32.6	Benares*	60.7	53.1	Ahmedabad*	57.2	56.5
Bombay -	39.9	39.5	Delhi -	65.2	60.0	Mandalay -	45.6	40.7
Madras -	40.8	44.1	Lahore -	60.4	56.4	Allahabad*	36.7	28.5
Lucknow*	72.8	55.3	Cawnpore*	55.1	63.1	Amritsar -	50.0	94.7
Rangoon -	45.0	41.6	Agra*	28.2	35.8	Poona*	41.9	41.4

* Excluding cantonment.

There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indications of scurvy, widely prevail. Much of the sickness and mortality is due to deficient powers of resistance and to insanitary habits and surroundings. The marginal table shows the number of deaths, and the death-rates per 1,000 from each of the principal diseases recorded during the three years from 1906 to 1908. With

Years.	Cholera.	Small-pox.	Fevers.	Dysentery and Diarrhoea.	Plague.	Respiratory Diseases.	All causes.
1906	690,519	109,583	4,452,842	298,117	300,355	201,307	7,852,330
	3.05	0.48	19.69	1.32	1.33	1.00	34.73
1907	408,102	103,988	4,464,881	282,191	1,166,223	226,419	8,399,623
	1.81	0.46	19.76	1.25	5.16	1.00	37.18
1908	591,725	170,694	5,424,372	285,921	113,888	227,817	8,653,007
	2.61	0.75	23.96	1.26	0.50	1.01	38.21

regard to special diseases, no province escaped the visitation of cholera, which was very prevalent in Bengal, Eastern Bengal and Assam, the United Provinces and Madras, where the death-rates were 5.32, 1.99, 1.75, and 3.9 per mille respectively. Small-pox was more widespread than in 1907, especially in Northern India, and the death-rates were as high as 1.42 and 1.26 per 1,000 in the Punjab and United Provinces respectively. Plague, the mortality from which was much smaller, forms the subject of a separate section. When reference is made to fever in India, malarial fever is generally understood, but many causes of death and many diseases much more fatal than malarial fever are included under the heading. Owing to the severe epidemic of malarial fever in the autumn, the fever death-rates in the United Provinces (41.31) and the Punjab (34.66) were exceptionally high.

In October 1909 a malaria conference was held at Simla which recommended systematic investigation into the distribution of malaria, the epidemiology and endemiology of malaria, and the physiological and therapeutical action of quinine and other remedies by means of local organisations working under a Central Scientific Committee. The Conference suggested practical measures for the extirpation of mosquitoes and for quinine treatment and prophylaxis. It also recommended measures for instructing the people on the subject of malaria. Malaria Conference.

The total number of vaccinations performed among the civil population during 1908-9 was 9,096,362, being a decrease of 73,511 on the previous year's work. Of primary vaccinations 97.5 per cent., and of re-vaccinations 74.4 per cent., were successful, about 36 per mille of the population being successfully vaccinated. The number of infants successfully vaccinated was 43.2 per cent. of the number born. Vaccination.

PLAGUE.

PLAGUE.

The present epidemic of plague in India first broke out at Bombay in August 1896, and, as the marginal table shows, it has been responsible for a heavy rate of mortality since that date. In 1907 the deaths from plague attained the highest total yet recorded, viz., 1,315,892 for India as a whole, the number in British India alone being 1,166,223, or 5·16 per mille. In 1908 the mortality declined enormously, falling to 156,480, the lowest total since 1900. The fall in the Punjab was from 30·3 to 1·5 per 1,000, in the United Provinces from 6·9 to 0·5, and in Bombay from 5·1 to 1·5. The course of the epidemic differed from that of the previous four years in that its maximum prevalence was in March instead of in April. In 1909 there was once more a relatively low mortality, the preliminary figures showing only 174,874 deaths, or fewer than in any year since 1900, excepting 1908. The mortality again reached its height in March. After reaching its lowest level in July, the epidemic increased steadily until October, when a decline again occurred.

Plague is so local in its visitations that all general and unanalysed statistics are likely to prove misleading. Many parts of India have been almost entirely free from its ravages, and in the greater part of the country the outbreaks cannot be described as having been severe or disastrous. The mortality in Eastern Bengal and Assam has been at no time appreciable, while in the Madras Presidency and in Burma the epidemic has never reached serious dimensions. On the other hand, general statistics tend to conceal the severity of the distress caused by the disease in particular districts. In some parts of the Punjab the mortality in 1907 was so severe as to disorganise the labour market and to affect the level of wages.

The efforts of Government to discover and apply the most effective methods of remedial action have not been relaxed. The Advisory Committee on Plague Investigation in England and the Plague Commission in India, whose constitution has been described in former issues of this Report, have continued their investigations, which have already led to most important results. The main facts in regard to the mode of propagation of an epidemic and the life history of the plague bacillus have been ascertained, and rational methods of attack have thus been made possible. A popular summary of the principal conclusions arrived at was given in "The Etiology and Epidemiology of Plague" (price 5d.), published early in 1908. It is now generally agreed: (1) That bubonic plague is spread by infected rats; (2) that the vehicle of contagion between rat and rat and between rat and man is the rat-flea; and (3) that the life of the plague germ in the soil, the floors and walls of houses, and the like, is of short duration.

In the light of the knowledge and experience now acquired it is possible to deal satisfactorily with the disease when effective control can be established over the sanitary conditions; and in the case of the native army and in limited areas such as jails there has been remarkable success. But attempts to establish such control over large areas would involve too great an interference with the habits, prejudices, and sentiments of the people, and the application of measures of proved utility must depend upon the particular circumstances of each locality and upon the character of its inhabitants. In the face of great practical obstacles, three principal measures for combating plague are now adopted:—

- (1) The temporary evacuation of quarters in which plague is prevalent. This has proved to be the most effective way of removing man from contact with infected rat-fleas. Government is ready to supply money and material to provide temporary dwellings and to alleviate the discomfort and distress which must accompany evacuation of quarters, a matter, of course, in which no pressure can be exerted, and in regard to which the wishes and even the prejudices of the people must be consulted.
- (2) Inoculation with the prophylactic fluid. The great efficacy of this remedy has been placed beyond doubt; its use has spread rapidly, and the popular prejudice against it is beginning to disappear.
- (3) The systematic destruction of rats, the diminution of the food supply to which they have access, and, in the course of time, such improvement in the structure of houses as shall render them reasonably rat-proof.

Plague Deaths.

1896	-	57,543
1897	-	116,285
1898	-	139,069
1899	-	92,807
1900	-	282,027
1901	-	576,365
1902	-	883,076
1903	-	1,143,993
1904	-	1,069,140
1905	-	356,721
1906	-	1,315,892
1907	-	156,480
1908	-	174,874*
1909	-	

* Preliminary figures.

SANITATION.

SANITATION.

Increasing attention has been paid in recent years to questions of sanitary reform. General. Proposals for reorganising and developing the Sanitary Department by appointing medical officers of health and sanitary inspectors are under consideration. The following paragraphs give some account of the chief sanitary works undertaken in the various provinces during 1908.

In Calcutta steady progress was made towards carrying out great projects of water-supply and drainage, which are of vital importance to the health and comfort of the citizens. The water-supply is being doubled and the whole system of distribution reconstructed, so that the legal requirement of a continuous supply of filtered water at a pressure of 40 feet may be complied with. The principal feature of the scheme is a great elevated reservoir at Tallah, to contain nine million gallons, into which all the water will be pumped and from which it will be distributed by gravitation. The reservoir was begun in 1908. The total estimated cost is £461,000. The suburban drainage scheme has been completed, while the most difficult part of the drainage scheme in the Fringe Area, estimated to cost £200,000, has been carried out.

A scheme for the improvement of the congested areas of Calcutta, to be carried out by a Board of Trustees, has been drawn up, and a Bill has been drafted for carrying it out. The expenditure on street improvements and attendant measures is estimated at about £5,500,000 in the course of some twenty years. A portion of this large sum will be recovered in rent from the lands acquired, and the balance will be provided partly from a municipal contribution, partly from certain special taxes, and partly from Government grants.

The 127 municipalities in Bengal (excluding Calcutta) spent about 40 per cent. of their income on sanitation. Sanitary progress is slow, chiefly owing to the lack of funds, which must, for the most part, be raised locally. Much attention was paid to the working of septic tanks, especially those installed by mills on the banks of the Hooghly, and an inspector was appointed to ensure their efficient working. Schemes of water-supply were in hand at Puri, Monghyr, Gaya, and elsewhere. Drainage schemes were in progress in several important municipalities. Work was commenced on a further portion of the comprehensive Howrah drainage scheme, and the drainage scheme at Tittaghar was finished. The expenditure under the head of conservancy is steadily rising in almost all municipalities. Night-soil is now properly trenched, and trenching grounds are in many cases cultivated at a profit. Sanction was given to a scheme for the drainage of a large area near Magrahat at an estimated cost of £134,000, in order to improve the sanitary condition of a tract 290 square miles in extent, Government contributing about £33,000.

In the United Provinces a record sum, amounting to about 54 per cent. of their income, was expended by municipalities on conservancy, water-supply, and drainage. Improvements in drainage and the opening up of congested areas are now the chief needs. Improvements were effected in the Benares water-supply, and schemes were under consideration for Cawnpore, Agra, and Allahabad. The results of analysis of drinking-water were, on the whole, satisfactory. A large drainage project for Moradabad was approved. A large number of drainage schemes was in progress. A sanitary conference which was held at Naini Tal in September 1908, to consider questions of public health in urban and rural areas, put forward some valuable suggestions.

About 48 per cent. of the income of Punjab municipalities was spent on sanitation in 1908. The intramural drainage works at Delhi were completed during the year, and the suburban drainage scheme, estimated to cost £25,250, was put in hand. Drainage works were in progress at Amritsar and elsewhere. The Ludhiana and Lahore waterworks were nearly completed. In rural areas sanitation makes little advance, although the District Boards offer rewards for village sanitation.

A great advance in sanitation has been made by the cities of Peshawar and Dera Ismail Khan, which have appointed surgeons as health officers out of special grants placed at their disposal for sanitary improvements.

In Rangoon a loan was raised for a new pumping station at Yegu and connected works, and contracts for machinery and plant and buildings were given out. Land reclamation in Lanmadaw and Theinbyu was completed. A revised scheme for further reclamation work, estimated to cost about £700,000, was drawn up.

SANITATION. The Burma municipalities (exclusive of Rangoon) spent less than 39 per cent. of their income on sanitation, plague measures having left only a small amount available. Sanitation in Burma is in a very backward condition, and there is hardly a town or district in which sanitary reform is not a pressing need. At Akyab work on the gravitation water supply scheme approached completion. Water-supply schemes were under consideration for Mandalay and other towns. Experiments were made in several towns with cheap refuse incinerators. The Local Government contributed about £3,500 to Mandalay for re-grading the channel of the Shwetachaung Canal and £3,300 each to Mandalay and Prome for improving congested areas.

Proposals for improving the sanitary service were under consideration.

Central Provinces and Berar. The municipalities spent nearly 60 per cent. of their income on sanitation. The important scheme for extending the water supply of Jubbulpore at an estimated cost of £21,500 made good progress in 1908. Grants were made for the opening up of congested areas in Raipur and Hoshangabad, and also for the acquisition of land for plague camps and miscellaneous sanitary improvements in Nagpur. A sanitary engineer is preparing or advising on drainage schemes for various towns, but sufficient money is not yet available for their execution. Village sites and water supplies were improved under the direction of the Sanitary Board.

Eastern Bengal and Assam. The expenditure on sanitation amounted to about 48 per cent. of the income of the municipalities. Schemes for extending the water supply and improving the surface drainage of Dacca were under consideration, while the conservancy reforms were practically completed. At Chittagong a project for improving the water supply is in hand. A large scheme of urban sanitation is in contemplation. A grant of about £4,000 was made for improving the water supplies in rural areas.

Proposals for improving the sanitary service were under consideration.

Madras. A special engineer from England was engaged on the new water-supply and drainage programme for Madras city, and active progress was made with the water-works section. The lack of proper drainage in a large part of the city and a deficient water supply are the most serious sanitary defects. Definite steps were taken in 1908 to open up insanitary congested areas. Good work continued to be done in drainage or in filling up disused tanks, wells, &c.

Sanitary progress in mofussil municipalities is slow, owing in some cases to want of money, in others to lack of interest and capacity for management on the part of some of the councils. During the year waterworks were under construction at Salem, Berhampur, Bezwada, and elsewhere. The Sanitary Board supervised many water-supply and drainage schemes, projects for opening up congested areas, the sinking and repair of wells, &c.

Bombay. The water-supply and drainage works in Bombay city were satisfactorily maintained. A large area of land was acquired by the Bombay Improvement Trust. Several improvement schemes for transforming insanitary areas were advanced, and chawls capable of housing nearly 14,600 people were provided or under construction.

Sanitary progress in towns is delayed by lack of funds, and in the rural districts by general indifference. At Pandharpur, an important place of pilgrimage, the extensive drainage scheme was in progress, and a scheme for the improvement of the water supply was sanctioned. Progress was made with waterworks and drainage at Ahmedabad and Karachi. Water-supply projects were prepared for Nasik, Ahmednagar, Hyderabad, Bijapur, Dharwar, Hubli, Broach, and other towns.

Vessels for the Red Sea pilgrim traffic were cleansed and freed from rats under the direction of the Bombay Port Health Officer. The out-going pilgrims, who numbered 16,097, were medically inspected and their clothing and bedding thoroughly disinfected before embarkation.

HOSPITALS, DISPENSARIES, AND ASYLUMS.

Hospitals and Dispensaries. The civil hospitals and dispensaries in India, which numbered 2,593 in 1908, against 2,514 in 1907, treated 443,909 indoor and 26,631,945 outdoor patients during the year. The great bulk of their income is derived from government and local and municipal funds, and their total expenditure in 1908 was £812,700. In addition there is a large number of special police and other medical institutions, as well as many private institutions which are not State-aided. These numbered 1,476, and provided treatment for 142,343 indoor and 6,507,014 outdoor patients. A satisfactory feature is the increased popularity of the dispensaries among women and children. The United Provinces had the largest number of indoor patients, followed by Bengal and Madras.

Madras had by far the largest number of outdoor patients. The principal diseases treated are malarial fevers, diseases of the digestive system, ulcers and other skin diseases, diseases of the eye, and diseases of the respiratory system, worms, and diseases of the ear. About 1,184,500 surgical operations were performed. Special mention is made of the appreciation of the work of lady doctors in Burma and the Punjab. In recent years the 17 public medical institutions in Calcutta have been greatly improved and extended. In Bengal, outside Calcutta, satisfactory results have attended the system of deputing medical officers of dispensaries to give medical aid at outlying market centres. In Bombay extensions of several hospitals were in progress. A nursing home was provided at Ahmedabad. In the Punjab a problem has arisen as to the use of charitable institutions by well-to-do persons. In the United Provinces there was a large expenditure on buildings. Eye departments have been added to the Rangoon and Mandalay hospitals. Hospital extensions were made in Madras.

There are Pasteur Institutes for anti-rabic treatment at Kasauli (Punjab) and Coonoor (Madras), and the number of patients treated was 1,389 and 340 respectively.

The treatment of lunatics at asylums prevails on only a small scale in India, where in comparison with European countries insanity appears to be infrequent. The census of 1901 showed a decrease of nearly 11 per cent. in the number of insane since 1891. The decrease occurred in nearly every province, and was ascribed in many of them to the high death-rate of the insane in famine years. The number admitted into Indian asylums in 1908 was 1,584, the average for the five years to 1908 being 1,571. The total asylum population of the year was 7,245. The causes of insanity are not very accurately classified, but the most important alleged cause is the use of hemp drugs. The expenditure of the asylums amounted to £74,250, most of which was borne by the State.

There are many leper asylums, of which may be mentioned the Madras Government Leper Asylum, the Matunga Leper Home, Bombay, the Trivandrum State Leper Asylum, and the Calcutta Leper Asylum. There are also many asylums or homes, frequently under some sort of Government supervision, including about 50 asylums of the Mission to Lepers. The census of 1901 showed a decline in the number of lepers to 97,340, compared with 126,244 in 1891, and the proportion works out to 48 male and 17 female lepers per 100,000 of the population. Berar had the largest proportion of lepers (2 per mille), followed at some distance by Assam, Bengal, the Central Provinces, Burma, Madras, and Bombay, in that order.

EMIGRATION AND MIGRATION.

(For further details see *Statistical Abstract for British India, Tables 191 and 192.*)

Emigration from India, so far as it is brought under the cognizance of Government, is mainly regulated by Act XVII. of 1908 and the Rules issued under its provisions. Emigration to Ceylon, to the Straits Settlements, and for employment under Government in East and Central Africa, is, however, excepted from the restrictions of the Act. By this Act, natives of India are permitted to emigrate, under contract to labour for hire, only to such countries as have satisfied the Government of India that sufficient provision is made in them for the protection of Indian immigrants; and a similar protection is extended to natives of India engaged to emigrate, individually or in small parties, to work as artisans, for the purposes of an entertainment or exhibition, or for service in restaurants or other places of public resort. Emigration, otherwise than under contract to labour or work in one of the above capacities, is not controlled by legislation. This Act, passed during the year under review, made no changes in the substance of existing law, but merely for convenience repealed all previous enactments and incorporated in one statute the provisions relating to colonial emigration.

There were six emigration agencies at work during the year at Calcutta, five representing British colonies and one the Dutch colony of Surinam. The total number of labourers requisitioned rose from 8,414 in 1907 to 9,276 in 1908. The number supplied during the year was 10,160. There was no alteration in the terms offered to intending emigrants. The number of recruiting licences granted was 598, as compared with 566 in 1907, and of these 25, or 4.18 per cent., were subsequently cancelled. The total number of emigrants registered during the year was 17,748, giving an average of 29 emigrants per recruiter, as against 23 in the preceding year. This number was contributed by the different provinces in the following proportions:—United Provinces, 86.99 per cent.; Bihar, 5.08 per cent.; Bengal,

EMIGRATION. 5.13 per cent.; Punjab, 2.11 per cent.; Central Provinces, 0.40 per cent.; Ajmere, 0.27 per cent.

The number of emigrants admitted to the Calcutta depôts was 13,789, or 3,575 more than in 1907. Of the remainder, 3,030 were rejected subsequently to registration as unfit to emigrate. The percentage of deaths in the depôts was 0.55, as compared with 0.74 in the preceding year, and the percentage of rejections increased from 12.65 to 12.78. The percentage of desertions decreased from 1.79 to 0.34. After deducting casualties of all kinds, there remained 11,349 emigrants available for despatch to the colonies, of whom 10,519 actually embarked during the year, as against 7,178 in the previous year. They were distributed as follows:—Trinidad, 2,447; Demerara, 1,797; Surinam, 1,872; Fiji, 3,162; Jamaica, 416; Natal, 825. The total number shipped included 2,808 women and 383 returned emigrants who re-emigrated. The death-rate on the ships carrying emigrants was 0.52 per cent., 19 out of the 55 deaths that occurred being due to cerebro-spinal fever, 20 to measles, and the rest to chest affections and other diseases.

The number of emigrants who returned from the several colonies was 4,197, and their ascertained aggregate savings amounted to nearly £50,000. The average savings per head varied from about £25 in Trinidad to about £5 in Natal, no figures being available for Mauritius; but 1,560 adults—37.16 per cent. of the total number of returned emigrants—brought back no savings.

There was a slight increase in the average amount remitted by resident immigrants in Demerara, Trinidad, and Fiji, and some decrease as regards Natal, Mauritius, and Jamaica. The average was again highest in the case of Natal (about 10s.), and Fiji was again the only other colony where the average remittance exceeded one rupee.

Madras.

The numbers of emigrants embarking from Madras for Natal and Fiji respectively were 2,190 and 349, the corresponding figures for 1907 being 5,963 and 796. More than half the emigrants to Natal were from Madras, Vizagapatam, and North Arcot districts. No emigrants went to Mauritius or the Seychelles. Two thousand seven hundred and sixty-three emigrants returned from Natal with savings amounting to £20,271, 86 from Fiji with £44, and 199 and 59 from Mauritius and Réunion respectively without savings.

As regards non-regulated emigration, the number of emigrants to the Straits Settlements decreased from 62,537 to 58,778, of whom 50,156 started from ports in the Tanjore district. There was an increase in the number of passengers both to Burma and Ceylon; to be attributed, in the former case to increased demand for labour in Burma, and in the latter case to the cheapening of steamer fares from Tuticorin.

Bombay.

The number of emigrants shipped from the port of Bombay fell from 254 to 67. Of these, 27 were bound for Mombasa and Uganda; 32 of them were Punjabis. From Karachi 52 emigrants left for service on the Uganda Railway; 32 were from the Punjab and 18 from Sind. The number of emigrants who returned to Bombay was 131, all time-expired men from Mombasa. From Broach 99, from Surat 718, and from Kolaba 331 persons emigrated to South Africa. The colonial immigration laws had a deterrent effect.

MIGRATION.
Assam.

During the year under review, the Government of India by notification under section 221 of Act VI. of 1901 declared that the provisions of that Act relating to labour districts were, with some minor exceptions, withdrawn from the Surma Valley districts and the districts of Kamrup and Goalpara in Lower Assam; and they passed Act XI. of 1908, the object of which was to enable contracts to be dispensed with in the case of emigrants proceeding to those four districts. The new Act re-enacted section 91 of the 1901 Act so as to enable local governments by notification to dispense with, or relax, any of the provisions of chapters 3-4 of the Act. Thereupon the Governments of Madras and Bengal issued notifications under the revised section 91, declaring that in the case of emigrants recruited for those districts by licensed contractors and *sardars* not accredited to the local agent of an approved association, the provisions of the Act that prescribe the execution of agreements should no longer be enforced; and the Government of the United Provinces made use of its new powers to exempt *sardars* from the four districts from the provisions of chapter 4 of the Act.

The total labour population at the end of June 1909 was 755,838, an increase of 16,043 on the figures for the preceding year, the decline of 20,750 in the number of "Act" labourers being more than balanced by an increase of 26,112 in the number

of free labourers. The number of immigrants was 60,773, as against 84,824 in 1907-8, which was, however, an abnormal figure. Of the 42,524 adults who immigrated, 35,229 were free labourers. The high importations, with so large a proportion of free labourers, may be attributed to some extent to a decline in the prejudice against Assam in the recruiting districts. The largest number came from Chota Nagpur and the Sonthal Parganas. There was a great improvement in the health of coolies during transit, and the number of deaths fell to 75, of which 50 were from cholera. There was a satisfactory decrease in the number of complaints of fraudulent recruitment from 72 to 46; and fraud or irregularity was proved in only eight cases. The number of contracts made in recruiting districts fell from 13,312 to 7,295; the number of coolies recruited by *sardars* being 1,123. There was little change in the rate of wages.

The rate of mortality among adults rose from 32.27 to 39.1, owing to the general unhealthiness of the year and the fact that many of the 1907-8 immigrants were of inferior physique. Only two complaints of ill-treatment were lodged by coolies against employers, and both were dismissed. Desertions increased from 2,730 to 3,023. The relations between planters and villagers continued to be satisfactory.

During 1908, 319,271 immigrants and 301,059 emigrants passed through the ports of Rangoon, Akyab, Moulmein, Kyaukpyu, Tavoy, and Mergui; the figures for Rangoon being 252,075 and 227,568.

The number of passengers, excluding indentured emigrants, who arrived at the several ports of the Madras Presidency during the year was 295,029, against 284,431 in 1907. Of this total, 89,516 came from Burma and 151,700 from Ceylon, the decrease in the former case being due to the unfavourable season in some districts, which deterred emigrants from returning to their homes.

The only movement of the population that occurred in Bombay during the year under report, beyond the usual seasonal emigration in search of employment, was the immigration of 22 families from Bhavnagar into Kaira in order to take up waste lands in the district.

PRICES.

PRICES.

(For further details see *Statistical Abstract for British India, Tables 203 to 209.*)

The rise in the prices of commodities in India during recent years has been the subject of much discussion. The marginal table of prices during the 11 years to 1908 has been compiled from Government

Year.	Index Number for Articles imported.	Index Number for Articles consumed or exported.	Index Number for Food-grains (Retail Prices).
1873	100	100	100
1898	80	102	139
1899	87	100	137
1900	97	124	192
1901	96	116	157
1902	86	113	141
1903	88	103	126
1904	93	104	117
1905	96	117	147
1906	105	141	179
1907	116	148	180
1908	118	155	231

returns showing the index numbers of the prices of: (a) 11 articles imported; (b) 28 articles consumed in India or exported; (c) food-grains. The prices under (a) and (b) are wholesale, and under (c) retail. The index number of each year represents a simple average of the separate price ratios of the selected articles. In showing the variations the prices of 1873 are taken as 100.

After 1900, a year of severe famine, the tendency of prices for articles of Indian produce was, for several years, downward. The prices of imported articles steadily rose after 1902, while a sharp and rapid rise in the prices of articles of Indian produce, especially food-grains, began in 1905. The rise was accentuated in 1907 and 1908 by the

widespread failure of crops in Northern India. The Government has deputed an officer to investigate the extent, the causes, and the probable effects of the general rise in Indian prices. Landholders whose land revenue assessments have been settled for long periods, and cultivators who hold land at fixed rentals, reap an advantage from high prices. It is probable that the trading classes have benefited by the rise in prices, and there is reason to believe that owing to the enhanced demand for labour, due to industrial activity, the advance in wages has kept pace with the rise in prices in great industrial centres. But where wage rates are more or less customary, or where incomes are more or less fixed, as in the case of pensioners, public and private employees, and the professional classes, the increased cost of living

PRICES. is a serious matter. Extra allowances, known as grain compensation allowances, have been made on a large scale to Government servants to cover the cost of dearer food. The following paragraphs relating to prices are based on statements contained in agricultural and other reports.

Bengal. Prices, which had attained an unusually high level in 1906-7 and 1907-8, continued high at the beginning of 1908-9, but there was a perceptible fall after the paddy harvest. Common rice was cheaper in most districts, but wheat and gram were dearer.

United Provinces. Prices, which had been generally at a high level since 1905, and had been exceptionally high in 1907-8 owing to famine, eased off appreciably during 1908-9. There was a marked fall in the prices of the coarser grains, which, as usual, during scarcity had approximated more closely than usual to those of wheat. There was again a shortage of gram, which fetched a high price.

Punjab. With a much better harvest than in 1907-8, prices fell, though they continued far in excess of the average of previous years, owing partly to the desire of grain merchants to replenish their depleted stocks of food-grains, and partly to forward purchases of wheat for export. As regards particular crops, the price of rice was 54 per cent., of wheat and barley, 63 per cent., of jowar, 63 per cent., of bajra, 58 per cent., and of maize, 70 per cent. above normal.

North-West Frontier Province. Owing to large exports down-country and to the military operations in 1908, the prices of all food-grains continued high throughout the year, but prices of oilseeds and gram declined owing to good harvests, though remaining above normal.

Central Provinces and Berar. The improvement in general conditions resulted in a considerable fall in prices, which, however, remained high. Prices of common rice, jowar, and gram fell about 35 per cent., and of wheat 18 per cent.

Burma. The prices of all agricultural produce, though lower than the extreme rates which prevailed in 1907-8, were still high. The price of paddy in 1908-9 was at or below normal in most districts, and the same remark applies to jowar. The price of gram was everywhere above the average, and that of sesamum generally so.

Eastern Bengal and Assam. The prices of food-grains, which had been extremely high in 1907-8, were uniformly lower in 1908-9. There was a steady fall in rice from September to March, when retail prices were lower than for three years past, in spite of a bad winter crop. The price of jute, which had fallen heavily during 1907-8, was still lower in 1908-9.

Madras. There was a further general advance in the prices of staple food-grains during the year. Rice, ragi, cholum, and cumbu rose almost everywhere.

Bombay. Although the season was favourable except in the East Deccan and Karnatak, prices ruled far above normal everywhere, and were even higher than in 1907-8 in the Karnatak. Rice was generally cheaper, but though the crops of wheat, gram, and cotton were better than in the previous year, prices were higher, probably owing to the depletion of stocks. There was, however, a small but general fall in Sind.

WAGES.**WAGES.**

(For further details see *Statistical Abstract for British India, Tables 201 to 203.*)

Bengal. The high level of wages reached in 1907-8 was maintained during the year, and was even exceeded in the vicinity of Calcutta. This is due partly to the growing demand for skilled labour in towns and in mills, collieries, and brickfields, and on railways, partly to the high prices of food-grains. In some districts it is ascribed to the emigration of the labouring classes to Assam and elsewhere. A strike occurred in the Bettiah sub-division in April 1908, because cultivators attempted to commute wages from grain to cash on the basis of the lower prices of previous years. In the Bhagalpur district the labourers were willing to work at the old rate of grain wages, but not at the old rate of money wages. In Purnea wages rose to 8 annas or more a day in the jute season. The Darjeeling tea industry suffered from a short supply of labour. The Bengal Government has arranged for a quinquennial wage census.

United Provinces. Employment was generally adequate, and during the height of the malaria epidemic in the autumn of 1908, labourers able to work could almost make their own terms. Apart from these exceptional conditions, wages show no sign of returning to the level customary a few years ago, and are probably still tending to rise. This is all to the good for the labourer, and the low-caste small cultivator, who works the land with his family and occasional help, has little ground for

WAGES. complaint, but high caste cultivators feel the change in cases where they cannot command labour at the old customary rates, and in some parts the latter are making their families work. Landholders who cultivate any considerable portion of their land feel the change acutely and are taking much interest in all kinds of labour-saving machinery.

The demand for labour is still in excess of the supply and wages continue to increase. Many districts report a flow of labour from the villages to the towns or the new canal colonies, and the gradual breaking up of the old system of hereditary village menials paid in kind at customary rates. These menials now migrate freely to cities or new colonies or wherever remunerative employment exists.

There is no separate class of agricultural labourers in the province. The wages of those employed in agriculture have risen considerably owing to the great demand for unskilled labour for canal and other works and for military purposes, while plague has reduced the supply. Wages have risen, partly on account of the general rise in the price of foodstuffs.

Wages continued very high during the year. Ample employment was available in agriculture, mining, irrigation, and railway works, and, as usual, there were frequent complaints of a shortage in the supply of labour.

In Lower Burma the rates of wages were much the same as in the previous year. The condition of the factory operatives is good, and unskilled labourers are said to be generally better off in factories than in paddy fields.

The year was not good for labourers, owing to the high prices of rice and other food-grains and the increased supply of labour, combined with the diminished means of employers. There was in parts some decrease in the wages of agricultural labourers, but on the whole they varied little.

The demand for agricultural labour is becoming more difficult to meet and the daily wages paid to coolies are increasing. Agricultural labourers are usually paid in kind, but casual labourers in cash. In towns and in villages near towns, the practice of paying wages in money is gaining ground, and generally with the rise in grain prices it tends to supplant payment in kind. Rice factories have become more numerous, and they provide well-paid work for a large number of coolies. Wages being equal, work in mills is preferred to work in the fields. Although prices of food-grains continued to be high, it was impossible to obtain the average number of coolies for Ceylon. In some districts landowners and ryots fail to realise that if they wish to retain the services of coolies they must give them part of the increased profits due to high prices.

The demand for labour again exceeded the supply, and wages rose. The commercial and industrial expansion of cities like Bombay, Karachi, and Ahmedabad, the growth of mining, and the construction of public works, offer a wider field every year for skilled and unskilled labour. With the increased demand wages tend upward. The high prices of food have also necessitated higher wages. There is a shortage, especially in Ahmedabad, in the supply of agricultural labourers, who are therefore able to command relatively high wages. Although wages were exceptionally high in Sind, canal-clearing operations could scarcely be carried on owing to scarcity of labour.

FAMINE OR SCARCITY.**FAMINE OR SCARCITY.**

In 1907-8 a widespread failure of the autumn harvest and a serious reduction in the area and out-turn of the spring crop forced large numbers of the population to resort to the Government for relief. In spite of the fullest extension of irrigation, the autumn and spring harvests yielded only 31 and 60 per cent. of the normal respectively. The executive was faced with the necessity of providing direct measures of famine relief over an area of 66,000 square miles with a population of nearly 30 millions. Famine was declared in the whole or part of 19 districts, and the full measure of relief contemplated by the code was undertaken. The numbers on relief rose steadily till the 14th March 1908, when there were 1,411,576 persons. With the harvesting of the spring crop and a fall in prices the numbers fell off, but on 2nd May there were still 1,187,148 on relief. Early in May, in anticipation of the setting in of the rains, the large public works were broken up into groups of small works, most of which were placed under the direction of district officers. Dependants were not relieved on these works, and the dependants on the former

United Provinces.

FAMINE OR
SCARCITY.

large public works were drafted where necessary to gratuitous relief. As a result, the numbers on gratuitous relief increased, the total on 1st August reaching 550,000. Owing to the liberal distribution of gratuitous relief to people unable to work or leave home the use of poor-houses was almost unnecessary. The units thus relieved numbered 87,818,584. By August nearly all the works were closed, and the workers received their valedictory doles. By the end of August nearly all gratuitous relief had also ceased. By the close of September the cultivators had harvested the early autumn crops, which yielded a fair normal out-turn. The prices of the cheapest food-grains, which in July were at famine rates, fell considerably in August and September, but they did not fall during the year to the rates current prior to the famine.

The remainder of 1908-9 was chiefly a period of recovery from the effects of this great famine. In a few districts the recovery was not complete, and owing to the failure of the monsoon of 1908 or the subsequent winter rains, relief operations had to be organised in certain areas and were continued until the rainy season of 1909.

Bengal.

The failure of the previous year's paddy crops caused severe distress in Orissa and also in parts of Nadia, Khulna, Murshidabad, Jessore, and Bankura in 1908-9. Gratuitous relief was given and test works opened in the last three of these districts and in the Orissa districts. Famine was declared temporarily in a portion of Ranchi district containing 237,000 persons. The failure of the winter rice crop in North Behar caused fresh disaster in a tract that had not recovered from the previous distress. Gratuitous relief was given, and test works were opened in Muzaffarpur and Bhagalpur. Famine was declared in Darbhanga, and a large number of persons were employed on relief works. Land improvement loans were liberally granted as well as agricultural loans.

Central
Provinces
and Berar.

The effects of the crop failure of 1907-8 continued to be felt during the first half of 1908-9, and relief works could not be closed till the end of September 1908. Relief was given by works and by liberal grants of loans, supplemented by gratuitous relief. The largest number on relief was 51,161 in August. The weavers especially suffered.

Eastern
Bengal
and Assam.
Bombay.

Owing to serious shortage of rain famine conditions prevailed in the Rajshahi Division, with their attendant relief work and gratuitous relief grants.

The season was poor in the East Deccan and the Karnatak, and large suspensions of land revenue had to be granted in the affected tracts, with remissions of land and irrigation revenue. In Nasik, Bijapur, and Dharwar relief works were opened.

GENERAL
REMARKS.

GENERAL REMARKS.

The following general notes on the condition of the people during the year are based on observations recorded by the Provincial Governments.

Bengal.

The comparative poorness of the harvest of 1908-9 (especially in Behar), succeeding two years of bad crops, made the year one of hardship for all classes. The resulting high price of food-grains caused distress to families living on small fixed cash incomes, and to a less extent to labourers, wages responding quickly to the rise in grain prices. The Government made liberal grants of loans, and, where distress was acute, provided liberal relief. The labouring classes moved rather more freely within the province and to other parts of India in search of work. Good crops will be required for two successive years to restore the agricultural classes to their former economic condition. As regards industries, the hand-loom industry in Hooghly district continues to flourish and the condition of the weavers has improved. In the Presidency Division many fly-shuttle looms have been introduced. But there is an absence of joint-stock enterprise, and the aversion of the higher castes to trades and industries hinders economic development. The standard of living is rising among the well-paid labourers in the 24 Parganas, and they now regard umbrellas, shoes, cigarettes, scents, and aerated waters as necessities, while tea-drinking is increasing. Cigarettes and tobacco are now made on a large scale in a factory at Monghyr, and the market is flooded with cheap cigarettes. Distress in Orissa caused emigration to Calcutta.

United Pro-
vinces.

Although some tracts remained depressed as a result of the great famine of 1907-8, the autumn harvest as a rule brought a marked relaxation of the pressure. A terrible epidemic of malaria hindered the sowing of the spring crops, but plague was much less prevalent.

GENERAL
REMARK
Punjab.

The year 1908-9 was one of unprecedented all-round prosperity. With crops well above the average, cultivators sold their surplus produce at rates some 50 per cent. in excess of the prevailing rates of past years on which the revenue demand was based. Both large and small landowners, but especially the former, have profited, while tenants and labourers have shared in the general abundance.

The condition of the people was generally prosperous and improving. The harvests in 1908-9, especially the autumn one, were good, but prices ruled high, and this pressed heavily on the labouring classes who own no land, and upon the inhabitants of the cities.

North-We
Frontier P
vince.

After the bad harvests of 1907-8 ample measures of relief were afforded by the Government, and the condition of the people improved during 1908-9. The recovery, however, was only partial, for the crops were not uniformly good, and high prices continued. The short cotton crop, the fall in the price of manganese ore, and the political agitation accentuated the depression.

Central P
vinces and
Berar.

In Burma, agricultural conditions were very favourable during 1908-9, and the rice crop was, in parts, unprecedentedly abundant. For the cultivator the year was one of marked prosperity and progress. Prices, though lower than in the previous year, were sufficient to yield him a good return. In Upper Burma a succession of bad seasons had caused agriculturists to feel the pinch of poverty, but the season 1908-9 was exceptionally good, especially in the dry districts, and it is hoped that they have now recovered their position. The notable increase in ground-nut cultivation in six of the most precarious districts has been an important factor in the improvement. It is doubtful whether good crops and high prices in parts of Lower Burma have permanently improved the position of the cultivators, who too often squander their increased incomes on unproductive luxuries. The occupation of the cultivable land in Hanthawaddy district, near Rangoon, has brought into existence a non-resident, non-agricultural class of landholders who are said to exploit their tenants, leaving them a bare subsistence. An inquiry has been instituted into the condition of the agricultural population in parts of the Irrawaddy delta.

Burma.

The present tendency of this province is away from self-sufficiency in food-grains, and in the direction of a greater dependence upon cash remuneration derivable for saleable products, such as jute. The high price of rice and the low price of jute in 1908-9 hit the ryot both as consumer and producer. There was general tightness of money, and a distinct rise in rates of interest on loans. Many persons were forced into hired labour from failure of private cultivation and enterprise.

Eastern
Bengal and
Assam.

Continued high prices rendered the general condition of the agricultural classes increasingly prosperous. The condition of the labouring classes is also improving. Greater attention is paid to the raising of new crops and to new methods of cultivation.

Madras.

In 1908-9 the season was only moderately good. But liberal remissions and suspensions of land revenue were made in certain tracts affected by scarcity. There was ample employment in non-agricultural work. In Surat the labouring classes are turning to cultivation.

Bombay &
Sind.

CHAPTER XVII.

ARMY AND MARINE.

(For further details see Statistical Abstract for British India, Tables 70 and 180 to 190.)

ARMY.

ARMY.

The sanctioned establishment of the army in India for 1908-9 and its actual strength on 1st April 1909 were as follows :—

	Sanctioned Establishment.	Actual Strength.
British officers - - - - -	6,220	6,271
British warrant and non-commissioned officers and men -	73,447	74,931
Native officers, non-commissioned officers, and men -	159,337	152,353
Total, 1908-9 -	239,004	233,555
„ 1907-8 -	236,172	227,714

During 1908-9, as in the previous year, four battalions of Native infantry were employed in the colonies. The number of battalions from the Indian establishment absent in China was reduced from two to one.

The sanctioned establishment of the Native army reserve was 35,736, and its actual strength on 1st April 1909 was 36,970, as against 34,846 on 1st April 1908.

The number of Volunteers in the whole of India on 1st April was as under :—

	1908.	1909.
Enrolled strength - - - - -	34,962	36,638
Efficients - - - - -	33,348	35,597
Reservists - - - - -	2,086	2,009

The net expenditure on the army (exclusive of Special Defence Works) in 1907-8 and 1908-9 was as follows :—

	1907-8.	1908-9.
	£	£
Effective charges - - - - -	14,628,955	15,266,362
Non-effective charges - - - - -	2,996,099	3,047,965
Total - - - - -	17,625,054	18,314,327

The following changes affecting the Indian Army came into effect during the year 1908-9.

The reform of Army Administration which began in 1906, when the Military Department of the Government of India was abolished and its work was divided between the Army and Military Supply Departments (then newly created) and the Finance Department, was completed at the end of the year under review by the abolition of the Military Supply Department on 1st April 1909, when the direction of the whole military administration, under the supreme control of the Viceroy, passed to the Commander-in-Chief as Member of the Governor-General's Council in charge of the Army Department.

A revision of the rates of pay of captains and subalterns of the Indian Army, and of regimental salaries, involving a considerable addition to the emoluments of the junior grades, came into effect on 1st January 1909, and also a general increase of the pay of all native ranks, together with arrangements for the free supply of fuel by Government.

A new rate of pension (£600 a year) was instituted for officers of the Indian Army retiring after 30 years' service. The same rate was sanctioned for officers of the Indian Medical Service retiring after 27½ years service.

A new Indian medal, termed the Indian Meritorious Service Medal, was instituted as a reward for specially meritorious service performed by native troops in peace or war.

The only active military operations during the year took place in the spring, when, shortly after the Zakka Khel expedition of the previous year, Major-General Sir James Willcocks successfully carried out a brief punitive expedition against the Mohmands.

In recognition of the services of the troops engaged in these expeditions, H.M. the King sanctioned the institution of a new medal, to be called "The India General Service Medal, 1908," with a clasp inscribed "North West Frontier."

Health of the British and Native Armies.—The year 1908 was an unhealthy one, as the monsoon rainfall was abnormal. In the British Army the rates of admission to hospital, and of mortality, were higher than in 1907, though lower than in the antecedent quinquennium, as appears from the table below. The increased sickness and mortality fell entirely upon the troops of the Northern army, and was due chiefly to the greater prevalence of malaria; but, excepting venereal diseases, most of the important diseases were more prevalent than in 1907. There was a great decline in invaliding, due partly to the healthiness of 1907, partly to more men being sent to hill stations. The admission rate for ague was no less than 244 per 1,000, or 29 per cent. of the total sickness, and the rate for all venereal diseases was 69·6 per mille of strength, which compares favourably with 90 in 1907 and still more with 486 in 1897. The marked decline in venereal diseases is attributed to the encouragement of healthy pastimes, to education and a better moral tone, and to the growth of temperance, as well as to improvement in the methods, and the longer duration of, treatment. The chief causes of death were enteric fever, cholera, and abscess of the liver, the mortality from each being 2·76, 1·10, and 0·80 per mille respectively. Cholera caused 76 deaths, of which 50 were among the troops of the Mohmand Field Force. The mortality from enteric fever was the lowest since 1885.

The health of the Native troops, though better than that of the British troops, was less satisfactory than in the exceptionally healthy year 1907; the admissions, the constantly sick rate, the invaliding rate, and the death-rate being all higher. The chief cause of sickness was, as usual, ague, and the admission rate for 1908 rose to 266·2 per mille, or 39 per cent. of all cases of sickness, as against 220·5 in 1907. Pneumonia, which, as usual, was the chief cause of mortality, accounted for 30 per cent. of all deaths. Cholera, malaria, and enteric fever helped to swell the mortality. There were only 14 deaths from plague during the year.

The following table shows that the admission rate among British troops during 1908 was nearly 1½ times as high as that among Native troops and that the constantly sick rate was more than twice as high :—

	Ratio per Mille of Strength.					
	British Troops.			Native Troops.		
	Average 1902-6.	1907.	1908.	Average 1902-6.	1907.	1908.
Admissions into hospital - - -	939·3	756·4	839·5	649·5	628·9	674·4
Constantly sick - - - - -	57·7	46·4	45·7	24·4	21·7	22·8
Deaths - - - - -	11·72	8·18	9·78	8·93	6·27	7·41
Invalids - - - - -	30·05	25·50	15·64	10·00	5·76	6·63

MILITARY WORKS.

The expenditure on military works in 1908-9 amounted to £908,108. There was also an expenditure of £29,144 on Special Defence Works. The corresponding figures for 1907-8 were £1,109,675 and £116,287.

MARINE.

The net expenditure on marine services amounted to £351,509 in 1908-9, as against £397,338 in 1907-8. In this amount are included the cost of the Royal Indian Marine, the contribution towards the expenses of His Majesty's ships employed in the Indian seas, and charges for pilot establishments and vessels, coast lights, and other smaller items.

On the 1st April 1909 the Royal Indian Marine consisted of ten sea-going vessels, three inland and harbour vessels, and a number of small steamers, launches, &c. There was an establishment of 102 executive officers, 81 engineer officers, and 71 warrant officers (including 12 assistant surgeons of the Indian Subordinate Medical Department); and the native crews of the vessels (seamen, artificers, and others) numbered, in all, 1,961.

CHAPTER XVIII.

FRONTIERS AND NATIVE STATES.

FRONTIER STATES.

FRONTIER
STATES.
Baluchistan :
Frontier
and Native
States.

The land revenue realised in the Baluchistan Province for the year 1908-9 amounted to £59,400, as compared with £50,700 in 1907-8. In some parts there was agricultural depression, but generally fair harvests were secured. Owing to famine in neighbouring provinces, prices rose considerably, especially in the Quetta-Pishin district. The prohibition against the export of wheat from Afghan territory was enforced with strictness, and some inconvenience was thereby caused to the inhabitants of the Chaman, Pishin, and Chagai borders. Scarcity of pasturage, due to scanty rainfall, was especially felt in the Chagai district, the Bolan Pass, the Shahrig Tahsil, Mekran, and in the Marri tribal area. Floods, on the other hand, did considerable damage to the civil buildings at Killa Saifulla, in Zhob, and to the western section of the Nushki-Seistan trade route. Cattle diseases caused much mortality among the agricultural stock in the Loralai district and some parts of Sibi, Nairabad, and Fort Sandeman Tahsils. Cholera caused 71 deaths in the Pishin Tahsil, but the measures taken to isolate the affected villages effectively checked the spread of the disease.

The returns of trade for 1908-9 along the Nushki-Seistan trade route show that there was some decrease in the value of trade with both Persia and Afghanistan as compared with the preceding year.

The Afghan border was much disturbed by bands of outlaws. On the Quetta-Pishin frontier several raids of minor importance occurred. On the Zhob frontier they were more numerous and more serious. The most conspicuous amongst the disturbers of the peace was Jemadar Gul Bahram, Jogezei, of the Zhob Levy Corps, who in January 1909, when in command of the Saradarga post, deserted with 10 sowars and most of the horses, rifles, and ammunition of the post. He was subsequently joined by several bad characters. This band kept the Zhob border in a continual state of unrest. Finally they attacked a party under Captain Loring in the Sharantoi defile on 27th February 1909. Lieutenant Gwatkin, of the 15th Lancers, was unfortunately killed, and the raiders escaped in a snowstorm with the loss of one man killed and one captured. Gul Bahram and his followers crossed, subsequently, into Afghan territory. Steps have been taken in communication with the Amir to prevent their reappearance on the frontier. There were no raids on the Perso-Mekran border during the year.

The importation of arms from the Persian Gulf into Afghanistan and into Persian Baluchistan continued during the year under review on a large scale. A force of 500 infantry with two machine guns was sent to Robat in April 1908 to reinforce the military detachment already there, and to assist in intercepting any caravans which might attempt to reach Afghanistan through the Chagai district. This additional force was withdrawn in August, at the close of the arms-running season. Though no captures were made, the traffic by this route was blocked. But the trade through Persian territory, being practically without check, increased considerably in volume.

The behaviour of the tribes in the Quetta-Pishin, Chagai, and Loralai districts was on the whole satisfactory.

The working of the police of the Province was satisfactory, and the conduct and discipline of the force was good.

The District Levies did excellent work during the year. The Quetta-Pishin Levies especially distinguished themselves by good work during the cholera outbreak at Bostan, where they were employed in carrying out the measures taken for the isolation of affected villages.

The inquiry into Kharan affairs and into disputes regarding the Mekran-Kharan and Kharan-Chagai boundaries, which had been entrusted to Major Whyte, was brought to a close shortly after the termination of the year under review.

A development of the quarrel between the Mengal and Jamot tribes on the frontiers of the Native States of Kalat and Las Bela caused disturbances which at one

time threatened to become serious. At the request of the Jam of Las Bela, who feared reprisals by the Mengals, 300 infantry were sent from Karachi to protect his capital. The Khan of Kalat having confessed that his troops were not fit to march against the rebels, a column of 300 infantry, half a squadron of cavalry, and 2 mountain guns was sent to Kalat from Quetta. A further force was held in reserve to support the Political Agent during his negotiations with the rebels. This show of force had a quieting effect on the refractory tribesmen, who agreed to come to terms. The case was finally settled by arbitration. Apart from these incidents, the year was uneventful in the Kalat State. The general administration of the six Kalat Niabats by the Political Adviser was satisfactory. Their financial condition continued to improve.

The administration of the Las Bela State under the guidance of the Wazir was satisfactory. The ill-feeling between the Jam and his younger brother resulted in January 1909 in an open rupture, and to meet the chief's wishes the latter has been required to live out of the State.

The circumstances in which it was found necessary to send punitive expeditions against the Zakha Khel section of the Afridi tribe in February 1908, and later in May of the same year, against the Mohmands, are recorded in last year's statement. The latter expedition was brought to a satisfactory close on the 30th of May 1908. Papers in regard to both expeditions were presented to Parliament.*

When the year under review opened, the settlement which had been come to with the Afridis, after the close of the Zakha Khel expedition, was jeopardised by intrigue from Afghanistan, whereby the Zakha Khel tribesmen were encouraged to offer further resistance. In the beginning of May, a large *lashkar*, headed by the Sufi Sahib of Ningrahar, entered Khyber limits with the avowed object of raising the Afridi tribes. For a time the situation appeared critical, but the tribes adhered loyally to their pledges, and the Afghan *lashkar* was driven across the border. Meanwhile the Mohmands, with similar encouragement, had committed themselves by attacks on British territory, and the punitive expedition against them, above referred to, was necessitated. The ultimate effect of these expeditions was to produce quiet on the Peshawur border, marred only by incursions from his refuge in Afghanistan of a Zakha Khel irreconcilable with whose death the disquiet ceased. On the frontier to the south of the Peshawur district, with the exception of some disturbance and unrest on the Derajat border, where the struggle for supremacy among the Mahsuds between the party of order and the malcontent faction of the Mulla Powindah, resulted in a number of raids, there was a comparatively small amount of raiding by the tribes under British control. On the other hand, the number of raids from Afghan territory by outlaws and Afghan subjects increased very largely. A regrettable incident occurred in the Shirani country on the 12th of March 1909, when Mr. MacDonald, the officer in charge of a survey party, was murdered by three Shirani fanatics. In consequence of this outrage it was found necessary to bring the work of the survey to a close and withdraw the party. The ringleader of the murderers was promptly arrested and executed. As the other two culprits were not surrendered, punishment was inflicted on their village.

Owing to the prevalence of cholera in Dir, the usual annual reliefs of the Chitral garrison were cancelled. Cholera and the disturbed state of the Mohmand border caused trade with Bajaur to remain at a standstill for two months, the result being a considerable decrease in the volume of trade which passed through the Malakand.

In Swat the attitude of the tribes remained friendly.

In Chitral the Mehtar's administration was satisfactory, and prompt measures were taken by him to control the action of certain Mullas who wished to excite sympathy with the Afghan Mullas at the time of the frontier disturbances.

The Frontier Militia Corps continued to do good work, and the discipline of the force generally is reported to have been excellent. The Khyber Rifles maintained their high record. The Kurram Militia did excellent service in preserving order on the disturbed Afghan-Kurram border.

Some reorganisation of the Border Military Police was reported to be necessary, but during the year they did well on several occasions, notably in Kohat, where a party annihilated a gang of raiders.

A change was inaugurated experimentally in the composition of the Councils of Elders, to whom cases are referred under the Frontier Crimes Regulation. Instead of

FRONTIER STATES. a few men being appointed in each individual case as heretofore, periodical large sessions are held. It is reported that the system, which is similar to that existing in Baluchistan, promises to be a success and is generally popular.

The Province enjoyed an exceptionally good harvest. The results of enumeration showed that the number of cattle had increased largely in the last five years.

Kashmir. Information as to the affairs of the Kashmir State for the year 1908-9 was not available when this Statement was prepared.

The following information as to the affairs of the preceding year was given in last year's Statement :—

"The finances of the Kashmir State continued to be satisfactory. The revised budget estimates for 1907-8 showed the estimated receipts at £660,000, against an actual total of £712,600 for 1906-7. The estimated figure for expenditure was £760,000, against £724,000 for the previous year. The total budget grant under public works was £169,500, and the expenditure amounted to £152,500. The estimates included capital expenditure of £96,000 on the Jhelum power project and £37,000 on the dredging scheme. Special repairs and improvements to the Jhelum valley road were undertaken. In the Jammu Province a cantilever bridge was built at Rajouri over the Tawi river. A large suspension bridge at Kharal, which was washed away by floods in 1906, was rebuilt. The iron suspension bridge at Vailoo on the Leh Treaty Road was completed. The work on the Ranbir canal was pushed on as far as funds would permit. A complete project for the dredging and drainage of the valley of Kashmir was got out and surveys completed.

"The working of the Sericulture Department was satisfactory. The rearing season was most successful, yielding a crop of 28,422 maunds of cocoons, a large increase on the previous record. The total production of the Srinagar factory rose from 190,736 lbs. of silk in 1906-7 to 230,939 lbs. in 1907-8, an increase of 21 per cent. Owing to the dulness of the market the stock of silk in hand at the close of the year was unusually large. A Director of Sericulture for Jammu was appointed during the year.

"The public health was not altogether good. Cholera broke out in an epidemic form, and caused a high mortality (9,575 deaths). Plague also reappeared in the Jammu Province, causing 142 deaths from 1st June 1907 to end of May 1908.

"Ten new primary schools were opened during the year, and a college was established at Jammu. One primary school was also raised to the status of a middle school. The revised estimate of expenditure for the Education Department for the year 1907-8 was £11,600, as against £13,700 in the preceding year."

Nepal. The Prime Minister returned to Nepal in August 1908, after a visit to England which lasted about three months.

The Durbar prohibited the sale of opium in the State. The stock in the possession of vendors was purchased by the State, and will be sold to consumers with the warning that they must abandon the habit of taking opium within a period of three years, after which no opium will be sold.

An irrigation project for the construction of a canal in the Saptari district of Nepal was sanctioned by the Prime Minister.

The trade returns of the year 1908-9 compare as follows with those of the preceding year :—

	1907-8.	1908-9.
	£	£
Exports from Nepal	2,363,551	2,368,277
Imports to Nepal	1,047,528	1,152,200

Sikkim and Bhutan. The Maharaj Kumar Sidkeong Tulku returned to Sikkim in February 1909, after a prolonged tour in England, America, Japan, and China.

The rainfall in Sikkim during 1908-9 was below the average, and the winter crops suffered in consequence. Nevertheless more land was brought under cultivation, and the crops were on the whole normal. Much damage was caused by forest fires, owing to the abnormal drought. The public health was good. Vaccination was made compulsory in the State.

The Maharani continued making carpets at her factory, and has sold many. The cost of production is at present very high. A fourth lace school was opened. The total number of pupils on the rolls was 327, as against 307 during 1907-8. The average attendance was 253. An industrial school was opened at Gangtok.

The total receipts and expenditure of the State during 1908-9 amounted to £12,930 (excluding an opening balance of £3,860) and £12,983, against £21,500 and £17,645, respectively, during the preceding year.

The Bhutia and Aka tribes were well behaved, and received their *posa*, or annual allowance, with the usual ceremony. The Daflas also received their *posa*, but their conduct is stated to have been unsatisfactory. During the year under review members of the tribe were responsible for several outrages. Amongst the Miris inter-tribal disputes were rife, but when they visit British territory these tribesmen are well-behaved and readily submit to arbitration. The Abors behaved well throughout the year, and came in as usual to receive their *posa*. An attempt to blackmail the manager of the Laimekuri Saw Mills having been made by certain Abor tribesmen, the Assistant Political Officer ordered the headmen of the districts concerned to appear before him, and warned them of the consequences of such behaviour. The blockades against two sections of the Mishmi tribe were continued throughout the year. No trouble was given by the Digaru and Mijus sections of the tribe, and several of their headmen paid friendly visits to the Assistant Political Officer at Sadiya. The Khamtis were visited during the year by the Assistant Political Officer. He was informed that a party of Chinese traders had recently made their way to the Khamti Long, and had bartered Chinese opium for Khamti cloths. The Khamtis and Singphos gave no trouble during the year. The Nagas were generally well-behaved during the year. During a visit paid by the Assistant Political Officer to the Rangpang hills he exacted punishment from the tribesmen for the raid of the previous year on the Sarkari Nagas in which seven British subjects were killed. In the Naga Hills the Aishan Kukis continued to harass Naga villages and caused serious trouble towards the close of the year. The conduct of the Trans-Tizu and Trans-Dikhu tribes under British control was good, but among the independent tribes across the frontier raiding, burning of villages, and head-taking went on as usual. Their relations with Government were, on the whole, satisfactory. In the Garo Hills the people still continued to adhere to the cause of one Sonoram, an agitator of whom mention has been made in previous Statements, but having become dissatisfied with the way in which he was spending their money, they appointed men to keep a watch on the expenditure. In the Lushai Hills the year was politically uneventful. The military guard of 50 rifles at Sherkor fulfilled its object, and there were no outrages on the undefined frontier. In the Khasi and Jaintia Hills the behaviour of the several Siems, or chiefs, was generally good. Information as to the Manipur State is given on pages 135, 136.

With the exception of one petty raid from a transfrontier village into Northern Arakan, which was settled without trouble, the condition of the Chin Hills was profoundly peaceful.

The prosperity of the Hill Tracts continued to advance. The medical and educational work of Government and missionaries has done much towards the civilisation of the inhabitants of these remote regions.

In the Kachin Hills peace prevailed throughout the year on the China border. The customary meeting between the British and Chinese officials was held in January 1909, and was more than ordinarily successful. A settlement was arrived at in a number of outstanding frontier cases, including that of the raid on Wajao committed by an armed gang from Santa in 1907. In unadministered territory the behaviour of the tribesmen was generally satisfactory. Friendly overtures were received from the Sana Kachins, who for years past had been bitterly hostile. The year was marked by a great improvement in relations with the trans-border tribes generally. The internal administration of the district was peacefully conducted, tribute was collected without difficulty, and serious crimes were comparatively infrequent. The difficult question of the preservation of forests in the Kachin Hills was receiving careful attention.

Friendly relations were maintained with the Chinese during the year under review.

The Lieutenant-Governor visited the Northern Shan States in November 1908, and held a Darbar at Lashio, which was attended by the Shan chiefs and notables.

Apart from some damage caused by very heavy rains in November, the weather was favourable to agriculture, and good crops were secured. The public health was fairly satisfactory. Diseases amongst cattle still continued, and towards the close of the year an outbreak of rinderpest was feared.

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Mining operations were continued by the Burma Mines Company, Limited, and five new prospecting licences were granted during the year.

The trade returns showed a considerable increase in the value of exports from the Northern States, and a slight decrease in the value of imports from Burma.

The administration of their States by the chiefs was satisfactory. This was notably the case in Tawngpeng and South Hsenwi. Many improvements in communications are projected.

Southern
Shan States.

Friendly relations were maintained with the Chinese, French, and Siamese, and perfect quiet prevailed on the frontiers of the Southern Shan States District.

The Lieutenant-Governor visited the Southern Shan States during the year under review, and held a Darbar at Taunggyi, which was attended by the Shan and Karenni chiefs and notables.

The seasons were unfavourable to agriculture. Except in the Yawngghwe Lake Valley, the rice crop was mostly considerably below the average. The public health was indifferent, and cattle disease was generally prevalent. The trade returns showed a decrease in the value of trade, the total for 1908-9 being £938,000, as compared with £1,000,000 in the preceding year. Both exports and imports showed a decrease.

Mining operations were carried on in several States. The minerals worked included silver, lead, antimony, and coal.

The question of Forest administration was carefully considered and discussed with local officers by the Lieutenant-Governor during his visit to Taunggyi. It was decided to proceed gradually with the reservations which have been proposed and to increase the Forest staff as officers and funds become available.

The need for the improvement of the communications, internally and with the plains, has long been felt in the Southern Shan States. The chiefs appreciate the importance of the matter, and are generally willing to co-operate. After the close of the year under review sanction was accorded to the construction of a railway from Thazi to Yawngghwe.

A revision of the tribute payable by the Southern Shan States was effected during the year under review, which resulted in the reduction of the demand from many of the States.

The administration of the several States was generally satisfactory. The chiefs of Yawngghwe, Lai Hka and Kengtūng and the administratrix of Kēng Khām were specially worthy of commendation for the interest they took in improving the administration of their respective States.

Karenni.

The year was uneventful in Karenni. The crops were normal and the health of the people on the whole good. The export trade, however, was decreasing, and the stick-lac industry had almost disappeared. Measures were taken for the better preservation of the teak forests. Mining exploration works were carried on by the Southern Shan States Syndicate during the year.

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Secunderabad.

The latest information available regarding the administration of Hyderabad is for the calendar year 1908.

The average rainfall in the State was 33 inches. Except in two or three districts, it was fairly well distributed, and on the whole the season was good. The prices of food-grains ruled high, especially during the latter part of the year. On the 28th September 1908 a sudden and violent flood swept down the River Musi, causing great loss of life and property. The mortality was estimated at between 3,000 and 5,000, and not less than 100,000 were rendered homeless. Severe and widespread distress ensued, especially in the city. Relief measures were at once organised, and subscription lists opened, to which contributions were received from all parts of the British Empire. His Highness the Nizam contributed £26,666 from his privy purse for the relief of the sufferers. The services of two British officers were lent to the Nizam's Government for a period of six months—one as special relief commissioner to administer the funds which had been collected, and the other to advise the State authorities as to the best way of rebuilding the ruined portion of the Hyderabad city and opening out a clear waterway for the River Musi.

Arrangements were concluded with the Nizam's Government for the closure of all liquor shops within three miles of the border between the Hyderabad State and the Central Provinces, and also for the gradual reduction of the number of liquor shops in the Cantonment of Secunderabad. The reorganisation of the abkari system of the State

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was also taken in hand. Rules were brought into force to regulate the use and sale of cocaine by medical practitioners and chemists in the State. A final agreement was arrived at with the Nizam's Government in regard to the rectification of the boundary of the Secunderabad Cantonment.

The Hyderabad (Deccan) Mining Company received a lease from the Nizam's Government of the Sasti and Paoni Coal Mines. The same company works the Singareni Collieries, from which there was an output of 444,212 tons of coal—an increase of about 30,000 tons compared with the previous year. 7,047 coolies were employed at the mine, compared with 7,868 in the year 1907. Agreements between the Barsi Light Railway Company and the Nizam's Government and between the same company and the Nizam's Guaranteed State Railway Company, relating to the proposed railway extension from Todwala to Latur, were concluded between the parties concerned, and received the sanction of the Government of India. The Nizam's Government decided to grant to the Indian and Colonial Development Company, Limited, a concession for the lighting by electricity of the city and suburbs of Hyderabad.

The estimated income for the year was approximately £3,332,600, and the estimated expenditure £3,451,400. Increased receipts were anticipated chiefly under the heads of Land Revenue, Forest Revenue, and Abkari. On the expenditure side the principal increases were under the heads—Settlement of Old Debts, Imperial Service Troops, Irrigation and Public Works, and General Administration.

Translations of His Majesty the King-Emperor's message on the occasion of the 50th anniversary of the assumption of the Government of India by the Crown were widely distributed in the State.

The rainfall in the Mysore State during the year 1908-9 was neither timely nor well distributed, and the area under cultivation was the smallest in the last five years. The yield per acre, too, was very poor, and a large rise in the prices of food-grains resulted. The difficulties of the situation were increased by a shortage of water supply, a scarcity of fodder, and by an outbreak of cattle disease in an epidemic form in various parts of the State, and distress of a severe type prevailed over an area of about 7,870 square miles with a population of 1,378,000. Prompt and effective relief measures were, however, taken. Expenditure amounting to £8,866 was incurred on the construction of wells for the supply of drinking water, gratuitous relief, supplies of fodder, establishment, &c., and a sum of £14,000 was spent on special allowances to public servants in receipt of small salaries and on public works. The total cost of relief measures thus amounted to £22,933. In addition, loans and advances amounting to £25,333 were given.

Despite the unfavourable conditions, the public health improved. The birth-rate increased from 14·98 to 20·31 per mille, while the death-rate declined from 18·82 to 16·26 per mille.

The total receipts during the year under report, excluding the opening balance, amounted to £1,847,300, against £2,013,000 during 1907-8. The expenditure was £1,964,263, against £1,947,500. The cash balance at the beginning of 1908-9 was £724,954, against £660,400 in 1907-8.

The second Dussera Exhibition of Agricultural and Industrial Products was held in October 1908, and was largely attended.

Agricultural banks are proving a failure, and six were wound up during the year. Co-operative societies, on the other hand, have increased in numbers from 27 to 45.

The silk industry, which had declined owing to disease among the silk worms, steadily revived during the year under review, and the number of mulberry trees in the State showed a remarkable increase.

The total value of gold extracted from the State mines during 1908-9 was £2,066,666, against £2,045,100 during the preceding year. The royalty realised—nearly £103,333—was almost the same as in 1907-8. The manganese industry was considerably affected by a fall in prices. Fifty-six thousand tons of ore were extracted in 1908-9, as against 75,000 in 1907-8. The royalty obtained by the Durbar was £900, as against £1,733 in the preceding year. The position of chrome was likewise unsatisfactory. Only 3,000 tons of ore were extracted, as against 11,000 in 1907-8. A part of the previous year's produce was also sold, and the royalty realised was £233, against £40 during 1907-8.

The total expenditure on public works during the year under review was nearly £273,333 from all sources, against £359,100 during 1907-8. The third installation

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of the Cauvery Power Scheme was practically completed during the year, and the full supply of power was given to the mines in July 1908. The gross revenue realised from the scheme during 1908-9 was £116,666, and, deducting the working expenses of £20,000, the net revenue amounted to £96,666.

The Harihar water-works and the electrification of the Mysore City waterworks were completed during the year. A project for the supply of water to the town of Mudgere was also sanctioned. No new railway construction was undertaken during the year.

A Criminal Investigation Department was formed for dealing with serious and organised crime.

The 25th Session of the Mysore Representative Assembly was held on the 8th October 1908, when 226 members attended out of 271 delegated to attend the Session. Four hundred and sixteen subjects of general and local interest are reported to have been discussed.

Among the regulations passed during the year was the Mysore Newspaper Regulation. This regulation, which is essentially preventive in nature and is intended to provide for the exercise of effective control over the public press, has worked satisfactorily, and it has not been found necessary to put its penal provisions into motion.

The progress of the Education Department was satisfactory. The total number of boy schools rose from 4,146 to 4,310, and their strength from 123,000 to 139,000 boys. Female education also made good progress. The number of institutions rose from 259 to 272, and of pupils from 19,000 to 21,400. The number of industrial schools increased from 19 to 20, and their strength from 888 to 1,198.

An important event that took place during the year was the celebration on the 2nd November 1908 of the 50th anniversary of the Royal Proclamation of 1858. The day was observed as a holiday throughout the State, and at all district head-quarters local Darbars were held, to which all the leading citizens were invited. The Royal message was read to the assembled people in English and the vernacular. In commemoration of the event the deserving poor were fed and clothed, and sports and treats arranged for school children.

Baroda.

The latest information available regarding the administration of the Baroda State is that contained in the Durbar's report for the year ending the 31st July 1908.

The rainfall of the year was not altogether satisfactory. Owing to its untimely cessation the crops suffered considerably, and suspensions of revenue were granted to the extent of over £106,666. A sum of £8,400 was advanced for sinking and repairing wells, £19,100 for the purchase of plough bullocks, and £5,000 for building purposes, and for the purchase of seed, manure, grass, &c. The total area under cultivation was 40,67,297 bighas, against 47,42,849 bighas during the year 1906-7. In spite of the partial failure of the monsoon the birth-rate per mille, compared with the previous year, rose from 21·6 to 24·2 and the death-rate fell from 32·8 to 24·4.

Facilities were granted to the Imperial Postal Department for the establishment of additional post offices and letter-boxes in all the districts of the State. The arrangements for the mutual extradition of criminals and co-operation in police matters between the Baroda State and the neighbouring British districts and Native States continued to be satisfactory. A reciprocal arrangement was brought tentatively into force for a period of three years between the State police and that of the Bombay Presidency for the provisional surrender, for purposes of identification, of stolen property or property seized on suspicion.

The scheme for the separation of executive and judicial functions was revised and finally adopted.

During the year under review nine new industrial concerns were started, with an authorised capital of £239,700. These included a bank subsidised by the Durbar, a cotton mill, two dyeing factories, a chrome-leather tanning factory, and the Baroda Tramway Company. The Joint Stock Companies doing business in the State numbered 15, with an aggregate capital of £287,000. Ten co-operative credit societies were registered, making a total of 34 in existence at the end of the year.

The introduction of the scheme of compulsory primary education in the State was completed during the year, and the number of schools under the immediate control of the State Educational Department rose from 1,267 to 1,280. The expenditure incurred in maintaining these institutions, and in awarding scholarships to students studying in foreign countries and in parts of India outside the Baroda State, &c., was £64,674,

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the total receipts being £6,190. The corresponding figures for 1906-7 were £52,946 and £6,400.

The total number of students in the different institutions where English is taught was 4,783, against 3,995 in 1906-7. The total number of vernacular schools of all classes in the State was 1,253, against 1,241 during 1906-7. The attendance in these institutions was 104,180, against 99,768 in the previous year.

Various important public works were completed, or were in progress, during the year under review, the expenditure, inclusive of establishment, amounting to about £163,333.

The total length of railway lines open at the end of the year was 249·98 miles. The following new lines were under construction:—

- (a) A line from Kosamba to Zankawav;
- (b) Two extensions of the Mehsana railway system;
- (c) An extension of the Shedhni-Kadarpur Light Railroad to join the Kheralu-Dabhoda line; and
- (d) An extension from Kheralu to Dabhoda.

Besides the above, several schemes for new lines were under consideration. The sanctioned strength of the police, excluding non-effectives, was 4,870, against 4,878 during 1906-7—a proportion of one policeman to every 2·90 square miles of area and one to every 698 of population.

The main source of income is land revenue. The total income and expenditure amounted to £1,054,627 and £1,016,931 respectively, against £1,264,646 and £1,039,200 during 1906-7. The decrease in receipts under the head of Land Revenue amounted to over £171,666 as compared with the figures of the previous year. There were also large decreases under the heads of Customs and Opium.

The following information regarding the Native States in Central India is for the year 1907-8. Central India.

The rainfall of the year was generally unfavourable. The monsoon set in late and ceased early, the fall being generally below the average and unevenly distributed. The abnormally heavy rain in August damaged the makka and jowar crops in many parts of Central India, and its early cessation seriously reduced the area of the rabi crop. The situation in certain parts was, however, relieved by timely rain in January and February 1908, which greatly benefited the tracts which had been brought under rabi. The kharif harvest was generally poor throughout the Agency, except in Bhopal, where the crops were not much affected despite the deficient rainfall. Timely precautions were taken throughout the Agency to meet the threatened famine or scarcity. Relief works were opened at an early date in the Rewa State, where the operations were conducted mostly by the village headmen with the aid of funds supplied by the Durbar. Distress was not much felt in Bundelkhand, owing to the good harvests of the previous year, but wherever relief operations were found to be necessary in this tract, the situation was promptly and thoroughly met. Jhabua, in the Bhopawar Agency, was the only other State in which actual famine relief proved necessary. In Gwalior distress was averted by liberal grants of takkavi and by extensions of the State's public works' programme. Similar steps were also taken in the States of Dhar and Ali Rajpur, with the result that actual relief measures were not required. Throughout Central India the supply of fodder and water was generally sufficient, and the maintenance of cattle did not present the same difficulties as in recent seasons of inadequate rainfall.

The public health was generally good. Deaths from plague decreased from 12,000 in 1906 to 8,800 in 1907. Inoculation was freely resorted to in Bhopal, where plague was, for a time, present in epidemic form. A hospital for women was opened at Indore during the year under review. The number of hospitals and dispensaries in Central India was 208, against 191 in 1906 and 147 in 1905. The number of persons seeking medical relief is estimated to have increased by about 50,000, whilst the expenditure of the States amounted to over £35,000.

Increased attention was paid to forest conservation, especially in Gwalior, Indore, Rewa, Bhopal, and in the States in the Bhopawar and Bundelkhand Agencies.

The Agency police continued to work satisfactorily. There was a considerable diminution of crime in all the agencies, the records being especially good in the case of Gwalior, Indore, Bhopal, and the Bhopawar Agency. Only 68 dakaitis occurred in Central India during 1907, against 90 in 1906 and 98 in 1905.

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The total outlay on Imperial Public Works was £72,300, against £40,600 during 1906-7. The former amount included an expenditure of £4,400 on irrigation works, £26,568 on civil buildings, £16,000 on communications, £7,880 on establishment, and £15,800 on local fund works.

The report on the Sindh canal project was completed. Considerable attention was paid to irrigation in the Bhopal State. The total length of roads maintained by the Imperial Public Works Department in Central India was 761½ miles, against 752½ miles during 1906-7. The net earnings of the Gwalior Light Railways rose from £5,666 in 1905-6 to £8,000 in 1906-7, while the percentage of working expenses to gross earnings fell from 62·88 to 56·68.

The earnings of the other railway lines passing through Gwalior territory also showed an improvement.

Work on the new Daly College buildings at Indore was proceeded with. The total expenditure up to the end of 1907-8 amounted to £16,900, the estimate for the entire scheme amounting to £70,000. The average daily attendance at the Daly College during 1907-8 was 40·93. The health of the boys was on the whole good.

Various excise reforms were introduced by the Durbars on the advice of the Excise Commissioner, whose appointment was created during the year 1906-7.

The leading States in Central India continued to devote attention to their educational departments. The number of village schools in Rewa increased from 32 to 42, whilst the average daily attendance of pupils rose from 1,671 to 2,260.

The Indore State Post Office was amalgamated with the Imperial Post Office with effect from the 1st January 1908.

Many new cotton presses and gins were constructed by private enterprise in the Indore State during the year under review.

The Chiefs of Datia, Maihar, and Khilchipur died during 1907-8.

Their Highnesses the Rajas of Dhar and Dewas (senior branch) were invested with ruling powers.

Rajputana.

The following information regarding the Native States in Rajputana is for the year 1907-8.

Throughout the Agency, except in Bikaner and Kishangarh, the rainfall during the year was scanty and unevenly distributed. But though the prices of food-grains ruled high in most of the States, the condition of the people was generally good and there was no serious crime.

In Bharatpur conditions of scarcity prevailed necessitating the expansion of the ordinary public works programme and the distribution for a period of gratuitous relief. A generous policy was also adopted in the remission of land revenue arrears.

In Dungarpur the kharif crop yielded only 6 annas in the rupee, while the outturn of the rabi harvest was 50 per cent. below the average. No measures of direct relief were, however, required. Takkavi advances were issued liberally; and suspensions and remissions of land revenue were granted to the extent of £970.

In Jaisalmer the average yield of the kharif crop was 2 annas in the rupee, and rabi about 6½ annas. The finances of the State were, however, satisfactory, the year under review having closed with a cash balance of £7,733.

In Alwar both the kharif and rabi harvests were below the normal, and the price of food-grains reached famine rates. Relief was afforded by the suspension of land revenue demands and the distribution of takkavi.

In Dholpur the crops were indifferent, but fodder was sufficient. The area of khalsa land under cultivation showed a decrease from 5,79,350 to 3,98,430 bighas as compared with the previous year. Seasonable winter rains, however, improved the agricultural prospects. The realisations of land revenue were satisfactory and effected without coercive processes.

In Jhalawar the outturn of kharif and rabi crops was below normal, but there was no scarcity or distress.

In Bikaner the area brought under cultivation was 22,42,123 bighas, against 14,57,459 during the preceding year.

The area of land cultivated in the Shahpura Chiefship was 52,827 bighas, as against 55,087 during 1906-7.

In Banswara, owing to the failure of the kharif crop, there was some scarcity in the northern portion of the State, but the situation never became acute, and was met by liberal suspensions of land revenue and takkavi advances. The mortality among cattle was considerable.

In Mewar (Udaipur) the kharif crops in most places were damaged by excessive and continuous rain early in the

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yield of the kharif was from 4 to 5 annas in the rupee. The rabi, however, produced a fair harvest. Fodder was plentiful. The price of foodstuffs was about 50 per cent. above normal.

In Marwar (Jodhpur), on the other hand, the area brought under cultivation was much in excess of that of the previous year. The yield of the rabi crop exceeded the estimates.

In Alwar a flour mill was started during the year under review. A ginning factory was opened as a private enterprise in the Jhalawar State and four grass and timber depôts were opened in Partabgarh.

In Marwar (Jodhpur) a series of useful reforms in the rates and manner of collection of customs duties was effected.

On the 17th October 1907 the railway from Sanganer to Sawai-Madhopur was completed for traffic. On the 26th February 1908 the Nagda-Muttra railway was opened from Morak to Kota. In the Dholpur State, in March 1908, a light railway from Dholpur to Bari on the 2 feet 6 inches gauge, with a total length of 19·2 miles, was completed and opened for traffic.

One new school was opened in Bharatpur during the year, 16 in Jaipur, nine in Jhalawar, and two in Kishangarh and Mewar, and in Dungarpur and Dholpur girls' schools were started. Nine new schools were opened in the Jhalawar State. In Jodhpur (Marwar) the number of State educational institutions increased from 51 to 53; while the number of unaided schools rose from 184 to 193. A vernacular training school was established for Hindi teachers in Jodhpur city.

The public health was generally good, with the exception of outbreaks of plague in Alwar and Sirohi and malaria in Alwar and Bharatpur.

In the Cooch Behar State the landowning and cultivating classes enjoyed a fairly prosperous season, but, as in the preceding year, the poorer classes were affected by the high price of food-grains. The public health was far from good, the year being a very unhealthy one, and there were severe outbreaks of cholera and small-pox in parts of the State. The most important change in the system of administration in the State during the year was the creation of a separate Legislative Council. The new council includes, in addition to all members of the State Council, five members representing the different classes and creeds of the community. These five members are appointed by His Highness the Maharaja. The new council deals with all matters relating to legislation, which were heretofore dealt with by the State Council. The revenue returns showed a slight decrease, and the expenditure was less than in the preceding year by about £1,900.

H.H. the Maharaja paid a visit to England during the year and returned to Cooch Behar on the 4th of January 1909. During his absence from the State the administration was conducted by the Council under his instructions.

When the year opened the two Native States Seraikela and Kharsawan in the Nagpur Division were suffering from scarcity. These conditions soon passed away, and a very favourable agricultural season followed. The public health was generally good. The Seraikela State was administered by its chief, and the Kharsawan State continued under the management of Government owing to the minority of the chief. In the Orissa Tributary Mahals the agricultural outlook was at first poor owing to floods. Conditions improved greatly later in the year, and good rice crops were secured in most of the States. Collection of revenue was made without difficulty, and, except in some of the smaller States, the financial position was sound. The public health was generally fair. The question of forest administration continued to receive careful attention during the year.

Revised sanads were granted to 17 Feudatory chiefs of Orissa. Under the terms of these sanads higher criminal powers were granted to the chiefs of Moharbhani, Dhenkanal, and Talcher, and to the highest administrative officers of the States of Keonjhar, Nayagarh, Sonpur, Bamra, and Rairakhol. A revision of tribute was effected in the following five States:—Patna, Kalahandi, Sonpur, Bamra, and Rairakhol. The payments fixed were slightly enhanced in all cases. The arrangement will remain in force for 30 years. The States of Bonai, Hindol, Nayagarh, Rairakhol, and Keonjhar continued under Government management. The Nilgiri State was restored to the administration of its chief at the beginning of the year under review.

The conduct of the hill tribes in the Manipur State during the year 1908-9 was generally satisfactory. There was some unrest amongst the Kukis living in the unadministered tract outside the eastern boundary of the State, and raids were made by them on the Somra villages. A severe epidemic of cholera broke out towards the

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end of April 1908, and lasted in a virulent form till the end of June. The total number of reported deaths from this disease in the valley during the epidemic amounted to no less than 6·5 per cent. of the population as recorded at the census of 1901. The outbreak is attributed to continued drought. A scheme for conveying water to Imphal from the Maklong and Palok rivers is under contemplation.

The chief of the Hill Tippera State, His Highness Raja Radha Kishore Manikya Bahadur, died on 12th of March 1909 from injuries received on a motor-car accident while on a visit to the Maharaja of Benares. His son, Jubraj Birendra Kishore, was recognised by the Government of India as his successor on the 8th of May 1909. The seasons were generally favourable, trade was brisk, and the people enjoyed a prosperous year. The Appellate Court of Sadar, corresponding to the Sessions Court in a British district, was amalgamated with the Khas Appellate Court, which is now called the Khas Adalat, and has an original as well as an appellate side. The financial condition of the State was satisfactory. The closing balance amounted to about £40,000.

United Provinces of Agra and Oudh.

In the Rampur State there was a partial failure of the spring crops owing to the failure of the monsoon. Conditions improved later in the year, and a good autumn harvest was secured. Scarcity, however, prevailed during a great part of the year. The State was free from plague throughout the year, but the public health was not generally satisfactory. A new sugar factory and a State distillery were erected during the year. There was some increase of crime, which is attributed to the conditions of scarcity. The financial position of the State was satisfactory.

The Tehri State suffered from famine owing to the failure of the monsoon and winter rains. Six grain depôts were established to facilitate the import of grain. Gratuitous relief was given where necessary; reserved forests were thrown open, and relief works started. The public health was not good owing to the prevalence of small-pox, cholera, and malaria. Good work was done by the hospitals and dispensaries. The financial condition of the State was satisfactory. There was a closing balance of about £107,000.

Punjab.

The arrangements for the purposes of the supervision of the Native States in the Punjab remained unchanged during the year under review. The health of the people, on the whole, was good, and agricultural conditions were fairly satisfactory except in the State of Mandi, which suffered from scarcity. In the States of Jind, Bahawalpur, Chamba, and Sirmur a desire was shown to promote the material welfare of the people by an expenditure of accumulated reserves on railways and other works of public utility.

The following administrative changes occurred during the year. In Maler Kotla, Ahmad Ali Khan was installed as Nawab in succession to his father, Nawab Muhammad Ibrahim Khan, who died on the 22nd of August 1908. In Suket, Bhim Sen was installed as Raja in succession to his father, Raja Dusht Nikandan Sen, who died on the 26th of May 1908. In Kalsia, Ravi Sher Singh was installed in succession to his father, Sardar Ranjit Singh, who died in July 1908. During the minority of this chief the administration will be conducted by a council of native gentlemen under the supervision of the Commissioner of the Delhi Division. In Dujana, Khurshed Ali Khan was recognised as Nawab in succession to his cousin, Nawab Muhammad Mumtaz Ali Khan, who died in June 1908.

The administration of all the States proceeded smoothly during the year, except in Mandi, where some friction began to show itself between the people and the Darbar. In the Simla Hill State of Keonthal a financial manager was appointed to administer the income and expenditure of the State, and to arrange for the liquidation of the Raja's debts.

The Raja of Kapurthala spent the summer months of 1908 in Europe. During his absence the business of the State was carried on by the Council.

Central Provinces.

The year was marked by continued progress in the Feudatory States of the Central Provinces, and the relations between the chiefs and the officers of the Local Government were satisfactory. Prices were high at the beginning of the year, but little distress was felt, and when the new crops came into the market conditions became easier. The rice crop was a good one, and though cotton and til suffered in several States, both the spring and the autumn harvests were very fair. The public health was good on the whole, but small-pox, cholera, and malarial fever were prevalent in some of the States. Judicial administration was efficiently carried on, and, apart from an increase in the number of petty offences attributed to scarcity, crime was light. A growing interest was shown in forest management, many public works of utility were completed, and education made a distinct advance.

NATIVE STATES.

The following administrative changes occurred during the year:—the Feudatory chiefs of Bastar and Kawardha assumed the administration of their States. The Khairagarh State was taken under Government management, owing to the death of its chief. At the close of the year 10 of the 15 Feudatory States were under their own chiefs, and the remaining five States, Sarangarh, Khairagarh, Chhuikadan, Nandgaon, and Udaipur, were under management.

Bombay.

The following extract from the Report on the Administration of the Bombay Presidency for the year 1908-9 gives a general view of the condition of the Native States having direct political relations with the Bombay Government:—

"Such trade as is claimed by any of the Native States fully participated in the universal decline, but the fact possesses little independent importance. The main interest of all the States centres in their agriculture, and in this respect they were no less diversely affected by the season than the widely different parts of the Presidency of which they are typical. In general, however, the year nowhere resulted in a marked advance of prosperity, while it was nowhere so unsuccessful as to cause a serious set-back. The States of South Gujarât and the Konkan for the most part enjoyed a favourable season, but elsewhere agriculture suffered from a deficiency of the later rains, in many cases coupled with an excess in the earlier part of the monsoon. Every State, however, succeeded in raising at least one crop which was sufficiently good to save the situation, and the high prices which prevailed throughout the year tended to compensate for any paucity of out-turn. The plentiful demand for labour was another favourable circumstance; and the absence of real distress is illustrated by the fact that the only two test-works that were opened were soon found to be unnecessary. Although, therefore, the smaller recoveries of interest due to Government from some of the States in Kathiawar indicate a year somewhat below the normal, more or less improvement over the previous year's figures is visible in the revenue realisations of a majority of the States, including even the Sátará Jaghirs and the Southern Marátha Country States, where the season was, perhaps, least favourable. The outlay on public works exhibited little variation, but, with few exceptions, the States devoted a considerably larger expenditure to education, with results which were commonly reflected in the number of pupils on the rolls. At the end of the year these formed 2·7 per cent. of the total population, and there was an average of one school to every 26·7 square miles of Native States territory. The population is still backward in some of the States of South Gujarât and the North Konkan, but special efforts were made during the year in the Dángs, Dharampur, and Bānsda to place agriculture on a firmer basis, and the measures adopted, which included the first introduction of *tagávi* into the Dángs, were attended by an appreciable degree of success. In many of the States, in common with the rest of the Presidency, there was some increase in the number of offences reported, but many of these were of a minor character, and the circumstance does not appear to indicate any distinct advance in criminality. The general abatement of plague in the Presidency was also experienced by the Native States, and was largely responsible for the decrease which appears in the death-rate of every State except Pálapur, Mahi Kántha, and Jawhár. At the same time, only Dharampur, Bānsda, and the Sátára Jaghirs were excepted from a uniform increase in the birth-rate, which was one of the most favourable symptoms of returning prosperity during the year."

The year was marked by several administrative changes. H.H. the Mir of Khairpur died on the 5th of March 1909, and was succeeded by his son, Imam Baksh Khan Talpur. Other deaths amongst ruling chiefs included those of the Rana Saheb of Porbandar, the Maharana of Danta, and the representative Talukdars of Makdala and Piprala. The chiefs of Baria, the Maharana of Danta, and the Thakors of Khadal and Limbdi were installed on their respective *gadís*. The Thakors of Rayka and Anghad were placed in charge of their talukas upon their attainment of majority, and the chief of Miraj (junior), having finished his education, was invested with the full powers of his State.

Madras.

The State year in Travancore and Cochin closes on the 15th of August in each year. The information that follows covers the year ended the 15th of August 1908. In Travancore the season was generally favourable, but the prices of grains continued to rise. The public health was not altogether satisfactory. Small-pox, in epidemic form, was present in North Travancore. The revenue of the State, exclusive of debt heads, amounted to £702,000, while the expenditure stood at £698,000, as against £678,000 and £692,000 respectively in the preceding year. Excise showed

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an increase of about £6,900, which was mainly on tobacco, while Customs receipts also increased by about £17,000 owing to a revision of the tariff on copra, cocoanut oil, and cocoanuts. The total expenditure on public works amounted to £134,000, as against £123,000 in the preceding year. The expenditure during the year on the Kodaya irrigation works amounted to £29,000, making a total capital outlay on this scheme up to date of £327,600. The total value of the external trade of the State was £2,152,700, as against £2,140,000 in the preceding year. The total expenditure by the State on education amounted to about £37,500, as against £37,000 in the preceding year. A separate department of agriculture was organised during the year.

In Cochin conditions were generally favourable to agriculture, and the public health was satisfactory. The total receipts and disbursements under Service heads amounted to £223,500 and £249,800 respectively, as against £229,000 and £235,000 in the preceding year. A new department of accounts and finance was constituted during the year, and a settled financial policy to be followed in future was drawn up. The amount spent on public works rose from £18,500 to £25,700. The Public Works Department was reorganised, and a separate irrigation branch was created. A scheme for the reorganisation of the Forest Department was also introduced. The area of forest remained unchanged, but an additional 450 square miles were notified for reservation. The Police Department was thoroughly reorganised. Seven new regulations, four of which related to revenue recovery, salt, stamps, and factories were passed into law during the year, and a commission was constituted to inquire and report regarding the relations between landlord and tenant in the State. A new department of agriculture was also constituted. The net expenditure on education amounted to £8,200. The number of schools remained unchanged, but the teaching staff was reorganised.

The season in the Pudukkottai State was not wholly favourable to agriculture, but the area of land under cultivation increased. Revenue collections improved, and considerable progress was made in dealing with the arrears of past seasons. The general health of the people was fair. The police force continued under the management of the Superintendent of Police, Trichinopoly. The disposal of work was good in the criminal courts, and satisfactory in the civil courts. The Forest Department was reorganised and separated from the Salt and Abkari Department during the year. The finances of the State were in a satisfactory condition, the revenue showing a considerable increase, especially under the heads of Land Revenue and Stamps. Elementary education continued to make marked progress. His Highness the Raja of Pudukkottai left his State in March 1909 in order to visit Europe for the benefit of his health. During his absence the administration is carried on by a council.

The harvest in the Banganapalle State was generally good, and the people enjoyed a fairly prosperous year. The Nawab was formally installed by His Excellency the Governor of Madras, in December 1908, on which date the Assistant Political Agent, who had previously been in charge of the administration, was withdrawn.

The Sandur State continued to be administered by the Diwan, under the control of the Political Agent, owing to the minority of the chief. Fair harvests were secured in the State, but towards the end of the year the rainfall was deficient, and scarcity of water was keenly felt. The public health was not good, cholera being prevalent in the summer months. The revenue receipts of the State were considerably enhanced by the large payments made by the General Sandur Mining Company under the terms of their lease. The company exported 21,353 tons of manganese ore during the year.

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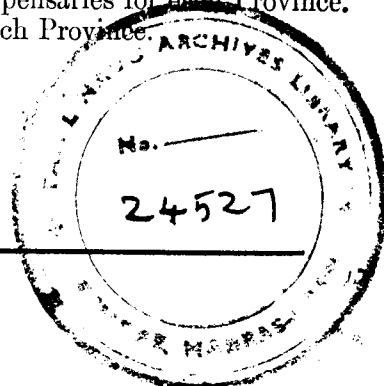
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