

EAST INDIA. (PROGRESS AND CONDITION).

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STATEMENT

EXHIBITING THE

MORAL AND MATERIAL PROGRESS AND CONDITION

INDIA

DURING THE YEAR 1902-03.

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THIRTY-NINTH NUMBER.

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

India Office,  
31 May 1904. }

ARTHUR GODLEY,  
Under Secretary of State for India.

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## NOTE.

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. Of these reports, many 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. One annual volume which is largely used in the preparation of the Statement is the "Finance and Revenue Accounts of the Government of India," containing the complete audited accounts of the revenue and expenditure—Imperial, Provincial, and Local—of every public department in each Province of India, including the Railways, Irrigation Works, and other commercial enterprises which are under Government management.

Of the reports mentioned above, some, 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 at about the same date that the Finance and Revenue Accounts are received.

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; and it is often necessary to exceed the prescribed date by some weeks.

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## CHAPTER I.

### ADMINISTRATION AND LEGISLATION.

ADMINIS-  
TRATION.

#### THE CORONATION.

Two great ceremonies of Imperial interest marked the year under review: the Coronation of the King-Emperor at Westminster on the 9th August 1902, and the Durbar held at Delhi in honour of that auspicious event on the 1st January 1903.

To the former ceremony a limited number of Indian Princes had the honour to be bidden, and representatives from the Presidencies, Provinces, and Chief Centres of India were present as guests of this country.

A brief account of the Durbar at Delhi has already been published\* and an official history of the proceedings is in course of preparation.

It need only be recorded here that simultaneously with the great ceremony at Delhi local celebrations were held with every demonstration of loyalty throughout the length and breadth of the Indian dominions of His Majesty the King-Emperor.

#### ADMINISTRATION.

List of the holders in 1902-1903 of the more important appointments connected with the Administration of India, those appointed during the year being shown *in italics*.

OFFICE.	—	Date of Appointment or Assumption of Charge of Office.	REMARKS.
Secretary of State . . .	The Right Hon. Lord George Hamilton.	5 July 1895	
Permanent Under Secretary of State.	Sir Arthur Godley, K.C.B.	30 September 1883	
Parliamentary Under Secretary of State.	The Earl of Hardwicke . . .	17 January 1901	
	<i>Earl Percy</i> . . . . .	18 August 1902 . . .	
Members of the Council of India	Sir James B. Peile, K.C.S.I.	12 November 1887	Re-appointed 12 November 1897.
	Sir Alfred C. Lyall, K.C.B., G.C.I.E.	17 January 1888	Re-appointed 17 January 1898.
	Sir Charles H. T. Cros- thwaite, K.C.S.I.	3 March 1895	In succession to Sir R. H. Davies.
	Sir Stuart C. Bayley K.C.S.I., C.I.E.	16 September 1895	In succession to Sir H. C. Rawlinson.
	F. C. Le Marchant . . .	27 February 1896	In succession to B. W. Currie.
	General Sir J. J. H. Gordon, K.C.B.	1 January 1897	In succession to Sir O. T. Burne.
	Sir Dennis Fitzpatrick, K.C.S.I.	24 April 1897	In succession to Sir J. Strachey.
	Sir J. L. Mackay, G.C.M.G., K.C.I.E.	27 April 1897	In succession to Robert Hardie.
	Sir John Edge, K.C. . . .	30 March 1898	In succession to Sir C. Turner.
	Sir Philip P. Hutchins, K.C.S.I.	1 August 1898	In succession to Sir A. J. Arbuthnot.
	Sir James Westland, K.C.S.I.	8 August 1899	In succession to Sir A. Alison.
	Lieut.-General Sir A. R. Badcock, K.C.B., C.S.I.	26 March 1901	In succession to Sir D. M. Stewart.
	<i>Sir William Lee-Warner</i> , K.C.S.I.	12 November 1902	In succession to Sir J. Peile.
	<i>Rt. Hon. Sir A. P. Mac- donnell</i> , G.C.S.I.	17 January 1903	In succession to Sir Alfred Lyall.
Governor-General	The Right Hon. Lord Curzon of Kedleston. G.M.S.I., G.M.I.E.	6 January 1899	

\* Parliamentary Paper [Cd. 1644] 1903.

ADMINIS-  
TRATION.

OFFICE.		Date of Appointment or Assumption of Charge of Office.	REMARKS.
Members of Council	General Sir A. P. Palmer (extraordinary), Commander-in-Chief.	22 April 1901	Commander-in-Chief from 19 March 1900.
	General Viscount Kitchener of Khartoum, G.C.B., O.M., G.C.M.G. (extraordinary), Commander-in-Chief.	28 November 1902	In succession to Sir A. P. Palmer.
	Thomas Raleigh	3 April 1899	
	Sir E. F. Law, K.C.M.G.	31 March 1900	
	Major-General Sir E. R. Elles, K.C.B.	11 April 1901	
	A. T. Arundel, C.S.I.	18 May 1901	
Lieutenant-Governor of Bengal	Sir D. C. J. Ibbetson, K.C.S.I.	5 March 1902	
	Sir John Woodburn, K.C.S.I.	7 April 1898	Died 21 November 1902.
Lieutenant-Governor of the United Provinces of Agra and Oudh.	J. A. Bourdillon, C.S.I.	22 November 1902	Officiating.
	Sir J. J. D. La Touche, K.C.S.I.	14 November 1901	
Lieutenant-Governor of the Punjab.	Sir Charles M. Rivaz, K.C.S.I.	6 March 1902	
Lieutenant-Governor of Burma	Sir F. W. R. Fryer, K.C.S.I.	1 May 1897	Formerly Chief Commissioner
Chief Commissioner of the Central Provinces.	Sir A. H. L. Fraser, K.C.S.I.	6 March 1902	On deputation from September 1902 as President of the Indian Police Commission.
	J. P. Hewitt, C.S.I., C.I.E.	16 September 1902	Officiating.
Chief Commissioner of Assam	Sir Henry J. S. Cotton, K.C.S.I.	28 November 1900	
	J. D. Fuller, C.S.I., C.I.E.	29 October 1902	Acting from 29 April 1902.
Agent to the Governor-General in Rajputana and Chief Commissioner of Ajmer-Merwara.	A. H. T. Martindale, C.S.I.	9 March 1898	
Resident in Mysore and Chief Commissioner of Coorg.	Lieutenant-Colonel Sir D. Robertson, K.C.S.I.	10 February 1897	
Resident, Hyderabad	Lieut.-Colonel Sir D. W. K. Barr, K.C.S.I.	1 September 1900	
Agent to the Governor-General in Central India.	C. S. Bayley, C.S.I.	3 November 1901	
Resident in Kashmir	L. W. Dane	5 November 1901	Appointed Secretary to the Government of India in the Foreign Department, 17 March 1903.
	E. G. Colvin	17 March 1903	Officiating from 24 September 1902.
Resident and Agent to the Governor-General, Baroda.	Lieutenant-Colonel M. J. Meade, C.I.E.	5 November 1901	
Agent to the Governor-General in Baluchistan and Chief Commissioner of British Baluchistan.	Colonel C. E. Yate, C.S.I., C.M.G.	24 December 1900	
Political Resident, Persian Gulf and H.P.M.'s Consul-General at Bushire.	Major (temporary Lieut.-Colonel) C. A. Kemball, C.I.E.	7 April 1900	Officiating Political Resident. Acting Consul-General at Bushire from April 1900; Consul-General from 2 June 1902.
Governor of Madras	Lord Amthill, G.C.I.E.	28 December 1900	
Members of Council	Sir Henry M. Winterbotham, K.C.S.I.	9 November 1898	
	J. Thomson, C.S.I.	9 May 1901	
Governor of Bombay	Lord Northcote, G.C.I.E.	17 February 1900	
Members of Council	Sir E. C. K. Ollivant, K.C.I.E.	24 April 1897	
	Sir J. Monteath, K.C.S.I.	6 August 1900	
	E. McG. H. Fulton	24 April 1902	In succession to Sir E. Ollivant.
Political Resident, Aden	Major-General P. J. Maitland, C.B.	25 June 1901	

## LEGISLATION.

Between the 1st April 1902 and the 31st March 1903, fifteen Acts were passed by the Council of the Governor-General for making Laws and

Regulations, two by the Legislative Council of Madras, two by that of Bombay, two by that of the Punjab, six by that of Bengal, and two by that of Burma. In the United Provinces of Agra and Oudh no Bill was passed during the year. Four Regulations were also 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 Vic. c. 3.

LEGISLA-  
TION.

The following were the more important of the measures referred to :—

India.

Act VIII. of 1902 "to amend the Indian Tariff Act, 1894," empowered the Government of India, by imposing further duties at the port of importation into India, to countervail the bounties on sugar created by the operations of the trade combinations known as cartels. Act XIV. of 1899 had already given the power to countervail bounties granted by foreign Governments. The Act was to remain in force only until the 31st August 1903.

Indian Tariff  
(Amend-  
ment) Act,  
1902.

Act IX. of 1902 "to amend the Indian Paper Currency Act, 1900," made the latter Act permanent by repealing the clause which limited its operation to a period of two years.

Indian Paper  
Currency  
Act, 1902.

Act X. of 1902 "further to amend the Indian Emigration Act, 1883," is referred to in the chapter of this review dealing with emigration.

Indian Emi-  
gration  
(Amend-  
ment) Act,  
1902.

Act XI. of 1902 "to make further provision for sanitation in villages in the Central Provinces," repealed Act XIX. of 1889, and re-enacted its provisions with certain amendments which experience had shown to be desirable.

Central  
Provinces  
Village-  
Sanitation  
Act, 1902.

Act I. of 1903 was passed with the object of lightening the Statute-book, and paving the way for the publication of a new edition of the Bengal code. With two or three unimportant exceptions, the repeals and amendments were purely formal.

Repealing  
and Amend-  
ing Act,  
1903.

Act II. of 1903 "to amend the Indian Post Office Act, 1898," enabled the Union, instead of the inland, rules and rates of postage to be made applicable, by Notification, to articles of private correspondence exchanged between British Indian post offices and Indian post offices in Persia and Turkish Arabia.

Indian Post  
Office  
(Amend-  
ment) Act,  
1903.

Act III. of 1903 "to make better provision for facilitating and regulating the supply and use of electrical energy for lighting and other purposes," provides that no energy shall be supplied for electric traction, or to the public for any purpose, except under the terms and conditions of a license to be granted by the local government, and makes provision for the grant and revocation of licenses, for the laying of lines, and generally for the regulation of the supply of energy. The supply of electricity otherwise than as above indicated is to be regulated by rules laid down under the Act.

Indian  
Electricity  
Act, 1903.

Act IV. of 1903 "further to amend the Provident Funds Act, 1897," secured more completely to the widows and orphans of subscribers to, and depositors in, Government or Railway Provident Funds, the protection from debts and liabilities incurred during the lifetime of the deceased which was intended to be given by the Act of 1897.

Provident  
Funds  
(Amend-  
ment) Act,  
1903.

Act V. of 1903 "further to amend the Indian Ports Act, 1889," corrected three defects of a formal character which had been brought to notice in the working of the latter Act.

Indian Ports  
(Amend-  
ment) Act,  
1903.

Act VI. of 1903 "further to amend the Indian Paper Currency Act, 1882," introduced provisions which were designed to facilitate an increase in the circulation of five-rupee notes, so as to admit of a larger portion of the currency reserve being held in gold or invested securities, and to do away with the obligation imposed on Government of providing at the Presidency towns, as well as in the sub-circles, cash for payment of sub-circle currency notes exceeding five rupees.

Indian Paper  
Currency  
(Amend-  
ment) Act,  
1903.

Act VII. of 1903 provided for the establishment round works of defence of concentric zones in which restrictions of varying stringency were to be

Indian  
Works of

- LEGISLATION.**
- Defence Act, 1903.** placed upon the use and enjoyment of land, the object being to enable Government to maintain, clear of buildings and obstructions, such zones of fire as are essential to the defensive value of works under the conditions of modern warfare.
- Probate and Administration Act, 1903.** Act VIII. of 1903 extended to all High Courts the power to grant probates of wills and letters of administration having effect throughout British India, and conferred upon District Judges the power to grant such probates in certain cases.
- Indian Tea Cess Act, 1903.** Act IX. of 1903 provided for the levy of a small customs-duty on Indian tea exported from British India, with the object of creating a fund for pushing the sale and increasing the consumption of such tea. The administration of the fund was entrusted to a special committee, consisting of members representing the tea interest and recommended by local mercantile bodies.
- Victoria Memorial Act, 1903.** Act X. of 1903 made legal provision for the erection, maintenance, and management of the building which it was proposed to construct at Calcutta as a Memorial of the life and reign of the late Queen-Empress, and for the incorporation of a permanent body of trustees.
- Indian Income-tax (Amendment) Act, 1903.** Act XI. of 1903 "further to amend the Indian Income-tax Act, 1886," raised the limit below which incomes are not liable to income-tax from Rs. 500 to Rs. 1,000 per annum. This Act was passed in connection with the Budget statement of March 1903.
- Madras. Madras Impartible Estates Act, 1902.** Act II. of 1902 was intended to prevent, for the space of one year, and pending the passing of a permanent measure, the dismemberment of old landed estates in the presidency, which recent judicial decisions appeared to render probable. Certain specified estates were declared impartible, and restrictions were placed on the rights of the proprietors to alienate them. The Act was to continue in force until the 1st June 1903; by Act II. of 1903, passed shortly after the end of the period under review, its operation was continued until the 1st March 1904.
- Madras Planters Labour Act, 1902.** Act I. of 1903 "to regulate the conditions of labour in the planting districts of the Presidency of Madras," aimed at removing, in the interests of both the planter and the labourer, various difficulties which had hampered the development of planting enterprise. While regulating the form and operation of labour contracts, and providing facilities for an employer to enforce a statutory contract against a labourer through the criminal courts, the Act at the same time enabled the magistracy to require from employers fair treatment and proper accommodation for their labourers.
- Bombay. City of Bombay Police Act.** Act IV. of 1902 "to amend and consolidate the law relating to the Police in the City of Bombay," was intended to provide, in one comprehensive enactment of Police law, for remedial and preventive measures which the growing needs of the city rendered necessary. The Act deals fully with the organisation and discipline of the police, and with their powers and duties.
- Bengal. Chittagong Port Commissioners (Amendment) Act, 1903.** Act IV. of 1903 authorised the imposition of a small river-duty on goods imported into or exported from Chittagong in sea-going vessels, with a view to placing the finances of the Port on a more satisfactory basis.
- Punjab. Punjab Military Transport Animals Act, 1903.** Act I. of 1903 provided for "the periodical enumeration and registration of animals in the Punjab fit, or ordinarily used, for the purposes of military transport, and for the compulsory acquisition of such animals in time of war, and for impressment of the same for hire for purposes of military transport at any time." It is hoped that this Act will regularise and distribute the burden which in former frontier campaigns was often unequally and unfairly spread over the districts of the province.
- Burma. Upper Burma Towns Regulation (Amendment) Act, 1903.** Act I. of 1903 was passed for the purpose of taking power under the Upper Burma Towns Regulation, 1891, to require reports to be made of the arrival of strangers in certain towns in Upper Burma, similar to the power already exercised in villages under the village enactments of both Upper and Lower Burma, the object being to obtain early information of the movements of dangerous characters.

Two Regulations of some importance were passed with respect to Aden. The first removed from the Aden Pilgrims and Paupers Regulation, 1837, the clause which limited its operation to natives of Asia and Africa. This step was necessitated by the fact that large numbers of indigent Europeans, mainly Italians, had in recent years made their way to Aden, throwing considerable expense upon the Residency. The second aimed at restricting the traffic in arms and ammunition between Aden and places in the Gulf of Aden. Provision was made for the taking of surety-bonds from the masters of vessels, for the detention and confiscation of vessels in certain cases, and for the establishment of searching posts at landing places.

LEGISLA-  
TION.  
Regulations.  
Aden Sea-  
traffic in  
Arms  
Regulation,  
1902.





## CHAPTER II.

## LOCAL SELF-GOVERNMENT.

## GENERAL.

Local self-government, municipal and rural, in the legally constituted form in which it now prevails in India, 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 the various provincial Acts passed about that time, which form the basis of the provincial systems at present in force. Municipal committees now exist in most places having any pretension to importance, and have charge of municipal business generally, including the care and superintendence of streets, roads, fairs and markets, open spaces, water supply, drainage, education, hospitals, and the like. The number of such committees in each province is given in the body of this chapter.\* Local and district boards have charge of local roads, sanitary works, education, hospitals, and dispensaries in rural districts. A large proportion of their income is provided by provincial rates. Bodies of port trustees have charge of harbour works, port approaches, and pilotage. There is also a smaller number of non-elective local bodies discharging similar duties in towns other than constituted municipalities, and in cantonments. The importance of the work of local administration performed by these various authorities is best shown by a statement of the funds at their disposal. The income of the municipalities for 1902-03, apart from loans, sale of securities, and such-like extraordinary receipts, was £3,473,500. The sources of this income and the yield of each source are shown in the table on the last page of this chapter. The expenditure by the local and district boards during the year was £3,534,000, partly met by grants and transfers from provincial revenues. Of the revenue classed as "local," amounting to £3,158,000, the rates levied on land, "for expenditure on roads, schools, hospitals and general purposes," account for 72 per cent. ; and among other sources of income belonging to the local boards are tolls on ferries and roads, school fees, and the rent of corporate property. The balance consists of grants by the Government for educational and other purposes.

The income of the port funds, exclusive of loans, &c., amounted in 1902-03 to £1,281,500.

The revenue of cantonment funds amounted to £177,000; that of town and bazaar funds came to £71,000; and other miscellaneous funds had a revenue amounting to £150,700.

Thus, the revenue managed by all the various local bodies amounted in 1902-03 to about £8,688,000, besides large sums proceeding from loans and sale proceeds of investments.

## MUNICIPALITIES.

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 majority of towns, most of the commissioners or members of the committees are elected by the townsfolk under legal rules, but in every town some, and in a few minor towns all 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, everywhere largely exceeds the number of Europeans and officials. The municipal bodies are subject to the control of the Government 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.

The sources of municipal revenue, apart from loans and Government contributions, are usually divided 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, and North-West Frontier Province, the Central Provinces, 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. There are also water rates and conservancy rates, tolls on roads and bridges, and taxes on animals and vehicles, and in some places 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, and fees of various kinds.

MUNI-  
CIPALITIES.

The objects on which municipal funds can be spent are, mainly, water supply, hospitals and dispensaries, streets and roads, vaccination, drainage, sanitation, and education. Municipalities do more for the benefit of their citizens under these heads than was done before by Government officers; and the members of the committees generally evince diligence and public spirit in the performance of their honorary duties. The interest in the municipal elections, and in municipal affairs generally, is not keen, save in a few cities and large towns; but, as education and knowledge advance, interest in the management of local affairs gradually increases. It is reported from most provinces that municipal work is fairly well done, and municipal responsibilities are, on the whole, faithfully discharged, though occasional shortcomings and failures occur in particular towns. The tendency of these 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 to work, whether at meetings for business or on benches for decision of petty criminal cases.

The following table exhibits the constitution of the municipal committees in 1902-03:—

	Number of Municipalities.	Total Number of Members.	By Qualification.			By Employment.		By Race.	
			Ex-officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Natives.
<i>Presidency Towns, &amp;c. :—</i>									
Calcutta . . . . .	1	50	—	25	25	Return not available.			
Bombay . . . . .	1	72	—	16	56	7	65	12	60
Madras . . . . .	1	33	1	8	24	10	23	8	25
Rangoon . . . . .	1	25	—	6	19	3	22	13	12
<i>District Municipalities :—</i>									
Bengal . . . . .	157	2,198	110	937	1,152	327	1,871	264	1,934
Bombay (including Karachi).	166	2,277	470	923	884	619	1,658	182	2,095
Madras . . . . .	60	938	65	426	447	213	725	160	778
United Provinces . . . . .	104	1,396	157	206	1,033	329	1,067	266	1,130
Punjab* . . . . .	184	1,662	306	566	790	352	1,310	119	1,543
North - West Frontier Province.*	11	167	52	115	—	53	114	24	133
Central Provinces . . . . .	46	576	20	158	398	126	450	62	514
Assam . . . . .	14	141	21	69	51	47	94	27	114
Burma . . . . .	41	535	170	270	95	199	336	154	381
Berar . . . . .	12	179	—	107	72	55	124	28	151

\* Including "notified areas."

The total indebtedness of municipalities amounted at the end of 1902-03 to £7,961,700, of which £2,179,500 was owed by the Calcutta Municipality and £3,143,700 by Bombay City. Against this total has to be set £688,200 standing at credit of the various sinking funds.

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 a chairman and 12 members, who are selected from among the commissioners, four by the elected, and four by the

BENGAL.  
Calcutta.

MUNI-  
CIPALITIES.

nominated commissioners, and four by the Local Government. The report for 1902-03 is a record of strenuous and many-sided activity. During the three years in which the new Act has been in force there has been a reorganisation of every department by which the work of the municipality is carried on, the reforms proceeding on the lines of devolution of powers, definition of authority, and increase in the numbers and pay of the supervising staff. The changes have had an excellent result in all departments, and especially in that which is concerned with the collection of revenue.

The financial position of the Corporation is thoroughly sound. The revenue of the year, apart from extraordinary and debt headings, was £398,800, or rather less than the figure for 1901-02, but the apparent falling off is illusory, being due to the decline in the heavy recoveries of arrears which have swollen the figures in recent years. The gross expenditure was £503,700, and the balance at the end of the year was £53,000. Of the receipts £344,800 accrued from municipal rates and taxes, which included, as in the previous year, a general rate of  $9\frac{1}{2}$  per cent., and water, lighting, and sewage rates aggregating 10 per cent., besides taxes on animals and vehicles and on trades and professions. The incidence of the net receipts from consolidated rates per head of the population was Rs.  $5\frac{1}{2}$ ; and including other taxes the total incidence of taxation was about Rs.  $6\frac{1}{2}$  per head. The total assessed valuation of the city rose to £1,602,700. About £139,500 of the expenditure shown above was met from loan funds, chiefly from the drainage and miscellaneous loan, but also from the water supply loan, and to a small extent from the loan raised for plague; of the remainder, £78,300 was spent out of income for interest and other charges in connection with the water supply, £34,600 for lighting, £24,800 for sewage, and £220,000 for general purposes, including conservancy. A loan of £100,000 was raised in the year for drainage and water-supply and miscellaneous purposes; it bears interest at 4 per cent., and was floated at an average rate of  $98\frac{1}{2}$ ; the indebtedness of the Corporation increased by a net sum of £33,300, and stood at £2,179,500 at the end of the year, which is well within the legal limit. The Calcutta Improvement scheme was still under consideration.

Interior of  
Bengal.

The municipalities in the interior of Bengal numbered 157, besides two new municipalities which were constituted shortly before the close of the year. The incomes of the municipalities, excluding debt heads, amounted to £283,000, of which £219,600 came from taxation. The taxes are levied either on persons, according to their circumstances and property, or on holdings at a rate generally  $7\frac{1}{2}$  per cent. of the assessed annual value, besides lighting and water rates; there are no octroi duties. The general question of improving the procedure of assessment has engaged the attention of the Government, and the outlines of a scheme for a trained staff of permanent assessors were formulated. The total expenditure of the funds, excluding debt heads, was £321,500, of which £24,200 was for water-supply, £11,400 for drainage, £83,800 for conservancy, £31,300 for hospitals and dispensaries, and £49,700 for buildings and roads. The closing balances amounted to £55,400, being increased by the inability of the Howrah municipality to utilise the loan funds received from Government during the year. The difficult question of municipal administration of Puri, a great pilgrimage centre, received special attention during the year. At Howrah a great improvement in the financial administration of the municipality has rendered it possible for the Commissioners to carry out large schemes of sanitary improvement.

United  
Provinces.

In the United Provinces the framing of rules under the Act of 1900 and the laborious work of the revision of the octroi schedules were engaging the attention of the boards. These numbered 104, as in previous years; but after the close of the year, 15 of the more backward were converted into "notified areas." Octroi duties were levied in 82 towns; thirty-nine schedules were entirely recast during the year. The income of the municipalities, excluding loans, was £370,500, of which £276,100 accrued from taxation. Of the taxation revenue, octroi duties accounted for a net amount of £197,900, compared with £208,500 in 1901-02, the decrease being due to a return to a normal figure after the exceptional conditions of the preceding year, when stocks of grain were accumulated in anticipation of higher prices. In view of the effect of plague, it is regarded as satisfactory that the receipts

stood as high as they did. The average incidence of taxation per head of population was nearly Re. 1½, though this rate was greatly exceeded in the hill municipalities. The expenditure also showed an increase, amounting to £387,100, excluding debt and advances. It included £150,400 spent on water supply, drainage and conservancy, and £12,600 on plague. Small loans were taken from the Government by Agra and two other towns, and a loan of £8,100 by Benares, during the year, while Cawnpore floated a consolidated loan of £67,700 in the open market, refunding to Government the advances made towards its sewerage scheme.

MUNI-  
CIPALITIES.

There were in the Punjab 138 municipalities, besides 46 notified areas, which have a modified form of municipal government. Elected members serve on 109 of the municipal committees, the proportion being generally two elected to one nominated member. The total income of the municipalities and notified areas, excluding loans and extraordinary receipts, was £329,300, of which £193,600 was raised by octroi duties, in force in 141 towns. The poor harvests of the year, and the disorganisation caused in some places by plague, resulted in a decreased return from octroi duties, and in spite of an improvement under other taxes the total receipts from taxation were less by about £11,700 than in the preceding year. The average incidence of taxation was 23 annas per head of the municipal population. The expenditure rose from £299,900 to £346,100, including £47,700 on fire brigades, lighting and police, £39,700 on education, £42,500 on conservancy, and £30,400 on roads and buildings. The Government advanced £14,400 to Amritsar, and other smaller amounts to other towns, while Lahore raised £20,000 in the market, for waterworks and drainage, and repayments were made to Government by various towns amounting to £7,800.

Punjab.

In the town of Rangoon there is a municipal committee of 25 members, for the most part elected by the various national communities, with a salaried president. There was a general election during the year, of which a notable feature was a contest, for the first time, for the representation of the Chinese community. The ordinary revenue continued to increase, and amounted to £164,200, against £150,500 in 1901-2, in spite of the reduction of the rate of the general municipal tax from 9 to 8 per cent. at the beginning of the year under report, which resulted in a decline of the receipts under that head. Of the above total, direct taxation accounted for £89,100, falling at the rate of Rs. 6 per head of the population. Loans for £222,200 were raised in the open market at 4½ per cent., chiefly on account of the new Hlawga water supply scheme and the town lands reclamation works. The expenditure was £290,700, apart from repayment of loans and advances, but including the large expenditure on the above-mentioned schemes. The debt of the municipality at the end of the year was £559,000, against which has to be set a sinking fund of £36,500; the net addition to the debt during the year was £175,600. The financial questions raised regarding reclamation and the credit of receipts from town lands were still under discussion. The main point, namely, that the receipts should be devoted to the reclamation of waste lands in Rangoon for 50 years, had been conceded by the Government, but a further question, relating to the provision of adequate accommodation for the housing of the poor, was being considered.

BURMA.  
Rangoon.

The number of other municipalities in Burma at the end of 1902-03 was 40, or one less than at the beginning of the year. Elected members were serving on 10 of the committees; but with the exception of Mandalay little interest was shown in the elections. The income of the municipalities, excluding debt heads, was £165,800, of which £65,200 came from taxation and ferry tolls, and £73,300 from markets and slaughter-houses. There are no octroi duties in Burma. The expenditure, excluding repayment of loans and advances, amounted to £195,100, the closing balances rising to an aggregate of £47,800. The expansion of expenditure is mainly due to the large works in course of execution at Moulmein, Prome, and Myaungmya, the cost of which has been met by raising loans. The amount spent on upkeep of water supply and drainage works, conservancy and hospitals, was £64,200; and capital outlay on water supply accounts for £26,700. Loans to the total amount of £36,300 were granted to Moulmein, Prome, and Myaungmya, but the total outstanding indebtedness of the municipalities at the end of the year was no more than £18,600. The municipal funds

Interior of  
Burma.

**MUNI- CIPALITIES.** are for the most part small, only six, including Rangoon, exceeding £6,500 per annum. The incidence of taxation and tolls per head of municipal population was  $20\frac{1}{2}$  annas, the highest rate being Rs.  $2\frac{3}{4}$  at Moulmein.

**Central Provinces.** In the Central Provinces 46 towns had municipal committees in 1902-03, but in spite of the recent exclusion of several very small places from the operation of the Act there are still many municipalities whose importance is very small, and only 20 of them have a population exceeding 10,000. The municipal incomes, excluding loans and advances, amounted to £99,600; of which £55,500 accrued from octroi duties, levied in 25 municipalities. The incidence of taxation per head of the municipal population was Re.  $1\frac{3}{8}$ , that of income from all sources being Rs.  $2\frac{1}{8}$ . In Nagpur, the most important of the towns, a new tax on animals and vehicles was imposed. The expenditure was £100,900, excluding advances and repayment of loans; this sum included £16,100 for refunds of octroi duties on exported articles, £17,100 for conservancy, £10,200 for education, and £8,000 for hospitals and dispensaries. After taking into account a few small loans from Government, the balance at the credit of the municipalities at the end of the year was £16,000, compared with £17,500 at the beginning, only one town, Jubbulpore, being without a balance to its credit. There was an epidemic of plague, and the expenditure entailed by it accounts for the low state of the finances in Jubbulpore and in some other towns. Several of the committees failed to do their duty in face of the epidemic, but there were many honourable exceptions.

**Assam.** The number of municipalities in Assam, including two stations and three unions, remained at 14, but only three of them have a population of more than 10,000. The income, excluding deposits and advances, amounted to £15,700, compared with £16,300 in the previous year; but a large part of the receipts consist of contributions from Government, and some of the decrease was due to a special grant made to Shillong in the previous year. The receipts from taxation were £8,000, the incidence of taxation being  $20\frac{1}{2}$  annas per head of the municipal population. The expenditure was £16,100, of which £7,200 was spent on water supply, drainage and conservancy.

**MADRAS.** On the municipality of Madras there are 33 Commissioners, 24 being elected by the ratepayers. Two elections were held, at which 33 per cent. of the registered electors came to the poll. The income of the year, including £19,400 borrowed in the open market, amounted to £124,100, of which £72,100 came from taxation and £23,100 from municipal property and powers apart from taxation, these two items showing a steady increase as compared with 1901-02. Taxation fell on the population at the rate of Rs.  $2\frac{1}{8}$  per head; the principal tax is one of 10 per cent. on buildings and lands, and there is also a water tax at 4 per cent. and a lighting tax at  $1\frac{1}{4}$  per cent., besides a tax on professions and trades, and taxes and tolls on animals and vehicles; there are no octroi duties. The expenditure came to £109,700, of which £17,700 was spent on maintenance of the existing water supply and drainage works, £12,700 on new works, and £19,500 on conservancy. The outstanding debt of the municipality amounted on the 31st March 1903 to £392,200, against which must be set the sinking fund, amounting to £109,450.

**Interior of Madras.** The number of municipalities in the interior of Madras was 60, of which 56 contained elected members. Two towns, to which the privilege of election had been extended, did not exercise it. The right of electing the chairman was withdrawn from the Tanjore municipality, owing to the extreme inefficiency of the administration; 36 towns now have the privilege. The total income of the municipalities, excluding debt heads, was £195,800, of which £126,000 was drawn from taxation and tolls. There was a slight increase in the receipts from taxes, which included the tax on buildings and lands and the water and drainage tax and the tax on arts and professions. The average incidence of taxes and tolls was close upon Re. 1 per head of the municipal population; there are no octroi duties in these towns. The expenditure was £242,700, of which £97,000, or £21,500 more than in the previous year, was spent on public works. The outstanding debts at the end of the year amounted to £124,000, against which there were sinking funds of £6,200.

MUNI-  
CIPALITIES.  
BOMBAY.  
Bombay  
City.

The municipality of Bombay is administered by a corporation consisting 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 revenue realised was £545,000, or £27,300 more than in 1901-02, owing for the most part to an increase in the receipts from octroi duties, a source of revenue which is always liable to fluctuation. The general rate was maintained at 10 per cent., to which it had been reduced in 1901-02 from 12 per cent., and the reduced rates on grain and firewood were also retained. There was, however, a deficit, met out of the excessive surplus balances in hand, which it is desired to reduce. After eliminating all fortuitous increases in revenue it is estimated that the permanent addition during the year to the income of the municipality may safely be placed at £6,700. The expenditure was £563,500, or £15,100 more than in the preceding year, including a contribution of £33,300 to the City Improvement Trust, £100,100 spent on public works under the Engineer's control, £133,700 on public health, and £180,700 on debt services. The balance at the end of the year was £151,500, compared with £6,700 required by law, and with £168,900 at the end of the preceding year. Against this are to be set an estimated deficit of £20,200 in the ensuing year, and the necessity for a further payment of £34,100 in April 1904 for the City Improvement Trust. The net advances of £86,600 made from current revenue for expenditure on plague operations had been recouped, such expenditure being now entirely met from loan funds.

Loans to the amount of £80,000 was raised from the public for plague purposes; the outstanding debt at the end of the year was £3,143,700, the sinking fund amounting to £274,800. The expenditure from loan funds during the year was £32,300 on sewerage works, and £4,200 on minor works, besides a plague expenditure of £15,400, compared with £29,600 in the preceding year. The expenditure since the plague began was £383,500 at the end of March 1903, of which £96,700 has been received from the Government, and the remainder has been met partly by plague loans, and partly out of other loan funds.

The first of the schemes undertaken by the City Improvement Trust, namely, the Nagpada scheme, had been practically completed by the end of the year 1902-03, the acquisition of properties in connection with the second scheme (Queen's Road to Carnac Bridge) was also far advanced, and considerable progress had been made in acquiring property for two other schemes. Two additional schemes, for reclamation of a part of Colaba and for the improvement of the Mandvi-Koliwada section of B ward respectively, were sanctioned during the year; and two other important schemes have been notified, besides several minor schemes, one of which received sanction during the year. A loan for £200,000 at 4 per cent. was raised at an average rate of rather more than 98. The year's revenue of the Trust amounted to £69,000, and the expenditure, exclusive of capital charges, to £34,200. The revenue consisted of the statutory municipal contribution £33,300 mentioned above, and other receipts from investments, rents, and other proceeds of property. The capital expenditure during the year amounted to £242,100, bringing the grand total to the end of 1902-03, with the proportionate cost of engineer's establishment, &c. up to £403,000.

The municipalities in the interior of Bombay numbered 166, of which five were temporary. The municipality of Bassein continued under suspension during the year. Forty-one municipal committees were entirely composed of nominated members. The income of the municipalities was £398,900, excluding loans and advances, and of this total £238,400 was raised by taxation, the incidence per head of population varying from Rs. 5½ in Karachi downwards. The receipts showed a general increase, part of which was due to the Ahmedabad municipality having raised in the open market £13,000 of the loan sanctioned for drainage works. Larger octroi receipts, however, contributed to swell the total. The expenditure, also excluding loan heads, increased by £13,600, owing to larger outlay on drainage and water supply in the towns of the northern division, and stood at £381,800. The total indebtedness of the municipalities amounted at the end of the year to £286,100. Repayments of debt during the year amounted

Interior of  
Bombay.

MUNI-  
CIPALITIES.  
Berar.

to £17,100, which was almost exactly balanced by the fresh loans raised. The closing balance at credit of the municipal funds was £101,800.

The number of municipalities in Berar was 12, as in the previous year, and in six of these towns the majority of the municipal committees are elected by the ratepayers. The finances and administration of most of the Committees were tried by the appearance of plague, and it is satisfactory that they were found to work well, many of the members receiving special notice for good work. The income of the municipalities, excluding deposits and advances, was £18,900, including £9,400 from rates and taxes; there are no octroi duties. The expenditure was £16,800, apart from deposits and advances, a small item; and the closing balances amounted to £19,400.

#### DISTRICT BOARDS.

DISTRICT  
BOARDS.  
General.

The constitution of district boards with precise powers and responsibilities under the law took place more recently than the creation of municipalities; in most provinces district committees had, for many years, given assistance or exercised control in the administration of local roads, local hospitals, and local schools, but before 1870 there was no organised attempt to introduce rural self government. The present system is based on the principles laid down by the Government of Lord Ripon, in 1882. In all the more advanced provinces district boards are constituted under different enactments. The funds of the boards are supplied for the most part from the yield of specific imposts, known as provincial rates, made over to them in whole or in part by the local governments. They 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. But the part of the district funds which admits of an extension of the general usefulness of the boards is that accruing from provincial rates. In most provinces the district boards delegate much of their detailed work to sub-divisional or "local" boards, which are constituted under the law, and are responsible for sub-divisions or parts of a district. The local boards contain a proportion of elected members, varying from three-quarters to a half of the whole number in all provinces excepting Assam, where the elective system has not been generally introduced, and Madras, where it is only applied to members of district boards. The latter are to a large extent chosen, either by election or appointment, from the ranks of the local board members. The following table shows the general constitution of the boards in each province, the figures in italics relating to the local boards:—

	Number of Boards.	Total Number of Members.	By Appointment.			By Employment.		By Race.	
			Ex Officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Native.
Madras	{ 21 80*	{ 658 1,176	{ 102 81	{ 244 1,095	{ 312 —	{ 256 356	{ 402 820	{ 124 90	{ 534 1,086
Bombay	{ 24 207	{ 524 3,049	{ 3 29	{ 286 1,655	{ 235 1,365	{ 130 631	{ 394 2,418	{ 68 121	{ 456 2,928
Bengal	{ 42 104	{ 842 1,249	{ 213 46	{ 296 845	{ 333 358	{ 270 175	{ 572 1,074	{ 214 110	{ 628 1,139
United Provinces.	48	936	271	57	608	274	662	101	835
Punjab	{ 27 28	{ 1,080 533	{ 203 26	{ 499 164	{ 378 343	{ 233 25	{ 847 508	{ 64 3	{ 1,016 530
Central Provinces.	{ 17 55	{ 328 905	{ 8 33	{ 76 184	{ 244 688	{ 49 102	{ 279 803	{ 16 5	{ 312 900
Assam	19	364	59	172	133	71	293	135	229
Berar	{ 6 21	{ 157 377	{ — —	{ 32 126	{ 125 251	{ 301 30	{ 127 347	{ 7 —	{ 150 377

\* Besides 379 union panchayats, with 3,574 members.

In Bengal there were 42 district boards as in the previous year, and there were also 57 union committees entrusted with minor duties. It is reported that at present the union committees, which are formed with the object of stimulating local interest in sanitary improvements, are no real help to the administration. With three exceptions each district board held 12 or more meetings. Of the local boards 49, or nearly one half, failed to meet once a month. The income of the district boards, apart from the head of deposits and advances, rose from £459,800 to £519,000, owing chiefly to special contributions from the local government towards the improvement of communications in backward districts. These figures include £292,000 from the road cess. The expenditure, also excluding deposits and advances, was £489,700, of which £116,500 was spent on education and £306,400 on civil works. The closing balances amounted to £154,700, which was considerably in excess of their amount at the end of the preceding year. The district boards are reported to have worked smoothly, but the members of the local boards display little interest, and have a tendency to leave all duties to the official chairman.

DISTRICT  
BOARDS.  
Bengal.

There were, as in the previous year, 44 district boards and four district committees in the United Provinces. The income of the boards and committees during 1902-03 was £413,800, excluding deposits and advances; of this amount, £220,700 came from provincial rates, and £77,800 was contributed by the local government, including a large special grant for education. The ordinary receipts, apart from contributions, showed a considerable increase, chiefly owing to larger revenue from provincial rates, pounds, and ferries. The expenditure amounted to £410,600, the additional sums received in the manner described being used for the furtherance of primary education, the equipment of hospitals and dispensaries, the erection of school and dispensary buildings, and the improvement of communications. The new scheme of local finance mentioned in last year's Statement is still under consideration. When it is introduced, a larger measure of independence in the exercise of their financial powers will be secured to the boards, and ample opportunity will be afforded for the expenditure of the accumulated balances, which stood at £93,400 at the end of the year.

United  
Provinces.

The number of district board in the Punjab was 27, and that of the local boards 28, as at the end of the preceding year. Local boards have been found to be useless in many parts of the province, and have been abolished; they only exist at present in seven districts. In nine districts, most of which are situated on or near the frontier, the district boards are composed entirely of nominated or ex-officio members. The working of the district boards was generally satisfactory, and the members showed much interest in such matters as scarcity, plague, the breeding of cattle, and the preservation of trees. The year's income of the district boards, apart from loans and advances, came to £198,800, of which the chief items were £145,200 from local rates and £22,100 from civil works. The expenditure of the year was £188,600, of which the chief items were education, £43,900; medical and sanitary charges, £29,700; and roads and other public works, £53,400. The larger part of the plague charges has now been undertaken by the Government, provision being made that no district board shall be burdened beyond its capacity with this expenditure. The closing balances of the district funds taken together amounted to £65,300, compared with £54,900 at the end of 1901-02.

Punjab.

In the Central Provinces district councils and local boards have been established everywhere except in the backward tract of Mandla, and their numbers were 17 and 55 respectively. The number of meetings held by councils and boards was satisfactory, but the working of the local boards has not much vitality at present. The income of the district funds amounted to £69,100, excluding debt heads, while the expenditure, also excluding repayment of loans, &c., was £67,500. The chief source of income, as in other provinces, is the provincial rates, but receipts from cattle pounds constitute a much higher proportion of the total in the Central Provinces than elsewhere. The expenditure included £27,900 on education and £21,500 on public works; the former item shows a considerable growth, as a special grant was made by the Government of India for expenditure on primary schools.

Central  
Provinces.



DISTRICT  
BOARDS.

Assam.

In Assam there were 19 local boards, constituted under a Regulation of 1879, modified by executive rules, and except in three districts the members are nominated. A special feature of their constitution is the presence of a large proportion of Europeans among their members, representing the planting community. It was considered by the Local Government that the boards required closer supervision and control from without, and arrangements were accordingly being made for periodical inspection by the Deputy Commissioners or the Commissioner. The income of the boards, apart from debt heads, was £79,200; the local rates, which are assessed generally at one sixteenth of the land revenue, realised £45,700. The boards spent £66,100; nearly 60 of the total expenditure was devoted to public works, and 22 per cent. to education. The closing balances amounted to £25,500.

Madras.

In Madras there were 21 district boards and 80 taluk boards, and the number of village unions was 379. The taluk or subdivisional boards are not elective, the members being appointed by the Government, but some of them elect their vice-presidents. The village unions deal chiefly with local sanitation, though in some cases they have the management of elementary schools, markets, and other local institutions entrusted to them by the taluk boards. The income of the boards and unions, excluding debt heads and contributions from one district board to another, amounted to £643,800. The chief item is the land cess, levied at rates varying from one to two annas per rupee of the land revenue assessment, which yielded £13,600 more than in the previous year. The above figure includes also grants from provincial revenues amounting to £50,800, chiefly for education and public works. The expenditure of the boards, also excluding the heads mentioned above, amounted to £654,600, or nearly 2 per cent. less than in 1901-02. The chief items of expenditure were £262,800 on public works and £71,800 on medical and sanitary purposes. About one half of the expenditure is controlled by the taluk boards. The Mayaveram-Mutupet Railway, which belongs to the Tanjore District Board, brought in a net profit of 5.4 per cent. on the capital outlay. It was extended to Padukottai during the year.

Bombay.

In Bombay and Sind there were 24 district and 207 taluk (or subdivisional) boards, nearly all of which are partly elective. The income of the local boards, excluding debt heads, was £325,000, of which £158,300 was derived from provincial rates and £115,500 from Government contributions. The rates showed a smaller total than in the previous year, owing to the partially unfavourable circumstances of the year; but the total income was higher, owing to large special grants, amounting in the aggregate to £50,000, made by the Government to many of the district boards for medical and educational purposes. The expenditure of the boards, also excluding debt heads, was £297,700, including £106,800 on education, £144,600 on civil works, and £19,000 on medical objects. The actual balances at credit of the boards, which owing to the disorganisation by famine and plague were reduced at the end of the year 1900-01 to £75,700, stood at £127,500 at the end of 1902-03. The boards are gradually recovering the ground lost during the famine, by the help of the Government; many works of utility which owing to lack of funds had been left unfinished or postponed have been carried out, and substantial progress has been made in connection with education.

Berar.

In Berar there were six district and 21 taluk or sub-divisional boards. No interest is displayed in the elections to the taluk boards, and a proposal has been made to change the time of year at which they are held. All the boards held the required number of meetings, and there was a slight improvement in the attendance of members. The income of the district boards, apart from loans and advances, was £48,000, of which £22,700 accrued from rates, and £7,400 from a license tax on non-agricultural incomes exceeding Rs. 100. The expenditure, also deducting debt heads, was £37,200, of which £12,800 was spent on education. It is reported that the members of the boards take a growing interest in the duties committed to them, and have been useful in explaining to the people the efficiency of the measures to be adopted against the outbreak or spread of plague.

There are no local boards in Burma or Coorg. Their place is taken in Burma to some extent by the district funds under the control of Government officers.

## PORT TRUSTS

## PORT TRUSTS.

The custody of the harbours and the administration of harbour and shore affairs in the more important ports are placed by various legislative acts in the hands of Port Commissioners. Members of these Port Trusts are for the most part appointed by the Local Governments, and are usually representative of the various Indian and commercial interests of the place. Port trustees are empowered, subject to the control of the Government, to levy dues, to contract loans for port improvements, to do all that may be needed for the maintenance of the harbour and its approaches, and to erect warehouses, jetties, and docks for the convenience of traders and shipping. The Local Governments, and, so far as can be judged, the public are well satisfied with the work done by the various Port Trusts. The Commissioners of Port Trusts are the only members of local public bodies who receive a small fee for each attendance at meetings for business. No members of municipal councils, or of district or local boards, receive any fees for the performance of their local duties.

Exports of grain, oilseeds, and manganese ore from Bombay were large; those of raw cotton were rather lower than in 1901-02, though much above other recent years. Among imports, petroleum and coal both show figures which are lower than the large amounts exported in 1901-02. The net result to the Bombay Port Trust was a rise in their revenue, which amounted to £394,500, a record figure. The receipts for wharfage fees and dock dues were £193,400, and from other sources, such as port dues, warehouse fees and rents, &c., £201,100. The total number of square-rigged vessels entering the port was 2,262, of 2,641,000 tons, against 2,154 of 2,549,000 tons in the preceding year. The expenditure amounted to £366,600, including £170,300 for interest and sinking fund charges, £40,800 for the working and maintenance of the bandar properties, and £93,900 for that of the Prince's and Victoria Docks. These docks, on which rather more than 1½ millions had been spent up to the end of the year, yielded in 1902-03 a net return of £91,300. The debt of the Trust amounted at the end of the year to £3,727,600, including £90,000 raised at 4 per cent. during the year for expenditure on capital works. About two millions of this is owed to Government, and the remainder consists of foreshore securities and debenture loans. The properties vested in the Board are valued at £3,914,000, and various depreciation, reserve, and sinking funds amount in the aggregate to £382,500.

The receipts of the Calcutta Port Trust were £515,200, which is rather better than in 1901-02, and the highest on record; the expenditure was £484,700, including the Kidderpore Dock Account and payments for interest and sinking funds. The surplus of £30,500 was added to the Revenue Reserve Fund, which stood at £111,700 at the end of the year. Having regard to this position, the Commissioners have reduced the charges on trade and shipping for 1903-04 by an estimated amount of £14,200, which, added to previous concessions, makes a total reduction of about £27,000 in the annual charges since July 1902. The jetties yielded a surplus of £42,500, and the petroleum wharf £16,300. The receipts from the Kidderpore wet docks were £146,000, there having been a decrease in the amount of coal, tea, and jute shipped from the docks; the working expenses were £146,600, showing a slight net profit, apart from interest charges. If the small figures for the dry dock are included, and interest charges taken into account, the net deficit shows as £89,500 for the year. The debt on account of the docks was £2,360,000, and the annual recurring deficits up to the end of 1902-03 make a total of £907,000. The proposal to transfer the import trade, in whole or in part, from the jetties to the docks, has not found favour, owing to the disturbance which such a change would occasion. The loss on the docks will continue, therefore, to be met from profits on other portions of the property of the Trust. The chief improvements in progress were the construction of a second dry dock, purchase of a tug, reclamation work and provision of new sheds. The sum expended during the year on capital works was not large, yet considerable progress was made in schemes for

## PORT TRUSTS.

developing the Trust's resources on a comprehensive plan, designed not only to afford the facilities immediately required, but also to form part of the general scheme of improvement of the whole port. The number and tonnage of vessels berthed in the port in recent years is shown in the margin. In both respects the year's figures are below those of 1901-02. The outstanding debt of the port, including the dock loan of £1,918,000, amounted at the end of the year to £3,134,000, of which £2,165,000 was due to the

Government and the remainder to debenture holders. Against this are to be set £253,600 at credit of sinking funds, and value of properties £3,965,000 besides the valuable Strand Bank lands held from the Government.

## Rangoon.

The receipts of the port of Rangoon were £103,300, and the expenditure £95,800. The year closed with a balance of £50,400, and the total amount of the debt of the Commissioners was no more than £16,300. There was a slight falling off in the revenue derived from the Strand Bank properties, as compared with 1901-02, but there was a large increase under the Port Department, due to vessels of larger tonnage entering the port. The total import trade of the port was higher than in 1901-02 or any previous year, though the imports from foreign countries showed a slight fall; exports were also unprecedentedly high. The net tonnage of seagoing vessels entering the port was 1,966,000 tons, against 1,741,000 tons in 1901-02, and consisted almost entirely of steamers, the number of which rose from 1,168 to 1,194; 222 steamers of tonnage exceeding 4,000 tons entered the port, compared with 156 in the preceding year and only one in 1890-91. A new line of steamers running between Hamburg and Rangoon has been established within the last few years, and accounts to some extent for the increase in entries. The scheme for the new port works was approved by the Local Government early in 1902, and during the year under review a detailed plan was submitted for the execution of the first part, namely, extension of the Latter Street wharf and reclamation of part of the foreshore, which it was expected would be completed by the end of 1904. These works were estimated to cost £275,000. The whole scheme will cost about £617,000, which will be raised by public loans. A loan for £67,000 at  $4\frac{1}{2}$  per cent. has now been floated at a premium, and the work is being begun.

## Madras.

The ordinary expenditure of the Madras Harbour Trust was £10,100, and its receipts were £18,500, excluding debt headings in either case. Taking into account payments from revenue to capital account, and the exceptionally large repayments of capital advances, as well as a decrease in the receipts owing to the operation of a reduced scale of tonnage rates, the total result was a decline in the balance from £77,000 to £60,900. The outstanding indebtedness to Government at the end of the year amounted to £277,000. The Government has reduced the rate of interest from  $4\frac{1}{2}$  per cent. to 4 per cent. There was a further small increase in the steam tonnage entering the port, to 1,241,000 tons. The proposal referred to in last year's Statement, to close the eastern entrance of the harbour and to open a new one in the north arm, was considered by a committee of experts appointed by the Secretary of State, and was approved by them. Steps have been taken to give effect to their proposals.

## Karachi.

The year under review established a fresh record in respect of the Karachi Port Trust, the accumulated income from revenue resources rising to £103,700, and showing an excess over the expenditure of £28,800, of which £15,800 was spent on revenue works and £4,700 in liquidation of capital debt. The successful year was mainly due to the unprecedented export trade in wheat. Special works of restoration were necessitated by the disastrous cyclone of June 1902, in spite of which the efficiency of the port remained unimpaired. The new village of Keamari was more than half completed by the close of the year, and the undertaking has already justified itself. The capital liabilities of the Trust stood at £353,800 at the end of the year, debt to the amount of £4,700 having been paid off during the year.

There are other minor ports at which smaller sums are raised yearly and expended on improvements, but these do not require notice.

Year.	No.	Net Tonnage.
1898-99	1,263	2,350,900
1899-1900	1,179	2,425,800
1900-01	1,112	2,539,900
1901-02	1,347	2,937,300
1902-03	1,309	2,881,600

STATEMENT showing the Number of Municipalities in British India, their Receipts and their Expenditure, for the Year 1902-03.

	Bengal.		United Provinces.	Punjab.	North-West Frontier Province.	Burma.	Central Provinces.	Assam.	Madras.		Bombay.		Berar.*	Minor Provinces.	Total.
	Presidency Corporation.	District Municipalities.							Presidency Corporation.	District Municipalities.	Presidency Corporation.	District Municipalities.			
Number of Municipalities - - -	1	150	104	137	10	42	46	14	1	60	1	166	12	9	762
Population with municipal limits - -	847,796	2,850,000	3,235,449	2,094,799	186,375	889,524	704,638	94,982	509,346	1,903,890	776,006	2,376,275	201,982	127,429	16,798,491
Receipts :	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Octroi - - - - -	—	—	197,931	193,605	25,099	—	55,541	—	—	—	107,546	174,347	—	22,106	776,175
Other Taxation - - - - -	344,852	224,576	78,202	25,657	392	154,495	20,644	7,994	72,061	126,011	364,300	126,442	6,109	2,298	1,554,033
Revenue sources other than Taxation - - -	53,923	53,576	94,407	110,005	8,486	183,926	23,423	7,754	31,713	69,764	73,200	96,641	5,338	8,511	826,667
Extraordinary and Debt - - - - -	149,054	46,880	22,571	47,096	1	316,555	8,842	39	65,337	69,994	1,887,371	47,995	151	1,070	2,662,956
Total (1902-03) - £	547,829	330,032	393,111	376,363	33,978	654,976	108,450	15,787	169,111	265,769	2,432,417	445,425	11,598	33,985	5,818,831
Corresponding Total (1901-02) - £	662,152	303,823	381,389	331,890	44,637	433,278	105,294	16,427	147,306	234,182	2,265,799	514,654	—	34,446	5,475,277
Expenditure :															
Cost of Collection and Administration - -	42,339	28,689	45,080	46,210	3,652	34,004	28,182	1,260	7,566	17,178	39,666	105,502	851	7,101	407,280
Public Health and Convenience - - - - -	296,119	204,728	220,500	182,411	15,411	341,475	54,273	12,660	69,229	176,322	265,693	174,365	4,850	11,389	2,029,425
Public Safety - - - - -	35,947	20,138	46,398	47,689	6,045	18,938	1,635	675	5,026	7,775	64,277	15,410	349	3,228	273,530
Public Instruction - - - - -	1,301	9,160	16,976	39,691	3,403	23,880	10,223	637	1,587	25,634	7,365	49,753	1,587	1,954	190,501
Interest and Miscellaneous - - - - -	128,082	19,374	59,126	30,129	3,413	34,866	6,602	849	24,339	15,789	197,209	44,376	875	5,686	671,215
Extraordinary and Debt - - - - -	118,578	34,282	16,292	26,618	83	115,832	12,505	64	42,200	27,511	1,863,041	54,980	252	2,967	2,314,606
Total (1902-03) - £	622,266	316,871	403,372	372,748	32,007	568,995	113,420	16,145	149,947	270,209	2,437,251	443,786	8,764	32,325	5,788,106
Corresponding Total (1901-02) - £	614,681	303,744	356,834	322,506	33,012	414,108	101,847	15,732	150,154	234,940	2,278,207	489,925	—	32,281	5,367,971

\* From 1st October 1902 only.

## CHAPTER II.

## VITAL STATISTICS AND SANITATION.

VITAL  
STATISTICS.

## VITAL STATISTICS.

(Detailed information on the subjects treated in this chapter is contained in the annual Report on Sanitary Measures in India, which is published as a Parliamentary Paper; and a brief review only is given in this place.)

European  
troops.

The health of the European troops in India in 1902 was not quite so good as during the previous year, for though the admission rate, the constantly sick rate, and the invaliding rate were all slightly lower than in 1901, the death-rate was considerably higher. The following table gives details :—

Year.	Average Strength.	Ratio per Mille of Strength.			
		Admissions into Hospital.	Constantly Sick.	Deaths.	Invaliding.
1891-1900 (10 years' average) -	68,224	1,399	87	16·21	29
1901 - - - - -	60,838	1,104	67	12·38	39
1902 - - - - -	60,540	1,078	66	14·68	37

The chief causes of admission were, as usual, venereal diseases and ague, which accounted for 26 and 23 per cent. respectively of the total sickness. The ratio of admission on account of the latter disease, 247 per mille of the strength, as well as the admission rates for simple continued fever, influenza, and respiratory diseases, was considerably lower than in 1901; venereal diseases showed an admission rate of 281 per mille, against 276 per mille in 1901, 298 in 1900, 313 in 1899, 363 in 1898, and 486 in 1897. Enteric fever and hepatic abscess were the chief causes of mortality, showing a death-rate of 4·29 and 1·85 per mille respectively, in each case a higher rate than in the preceding year. Enteric fever alone caused 29 per cent. of the total deaths, 1,012 admissions and 260 deaths being due to this disease, compared with 776 admissions and 202 deaths in 1901; but it was much less prevalent than in 1898, when the death-rate from that cause alone was 10·17 per mille. As usually observed, the greatest liability to suffer and die from enteric fever was between the ages of 20 and 25, and during the first year of Indian service; in 1902 the liability of men under one year's service to fall sick from enteric fever was at least twice as great as in any other period of service. Among troops between the ages of 20 and 25 the death-rate from this disease was 7·06 per mille, while among men between the ages of 25 and 30, 30 and 35, or 35 and 40 the mortality equalled 2·91, 1·92, and 1·87 per mille respectively. There was only one death from plague, and only three deaths from cholera, during 1902.

The loss by invaliding during 1902 amounted to 2,255 men, equal to 37·25 per mille of strength, against 2,393, or 39·33 per mille, in 1901. Venereal diseases were the cause of invaliding in nearly 14 per cent. of the number of cases, and the next most important cause was malaria. The percentage of men invalided while under 25 years of age to the whole number invalided was 35, and 17 per cent. of the total number invalided had less than two years' service.

Native  
troops.

The health of the Native troops in 1902 was, on the whole, better than in 1901, though there was a slight increase in the total death-rate. The details are given below.

VITAL STATISTICS,

Year.	Average Strength.	Ratio per Mille of Strength.		
		Admissions into Hospital.	Constantly Sick.	Deaths (including deaths during absence).
1891-1900 (10 years' average)	127,666	852	32	16.62
1901	122,806	820	30	13.89
1902	124,231	718	27	15.01

The native soldier suffered less than the European from enteric fever, simple continued fever, hepatic affections, and venereal diseases, and more from fevers, lung affections, and other diseases. The admission rates for the year were higher than in 1901 in respect of enteric fever, tubercle of the lungs, pneumonia, and dysentery, and lower for other respiratory diseases, ague, and some other headings. Ague continued to rank first among the causes of admission, and accounted for 38 per cent. of the total. Pneumonia, as usual, was the chief cause of death, 33 per cent. of the deaths being due to this disease; while intermittent and remittent fevers accounted for 18 per cent. The death-rate from cholera was low. The death-rate from enteric fever among the Native troops was only 0.1 per mille, as compared with 4.29 among the European troops. The deaths from plague during 1902 numbered 95. The rate of admission to hospital for venereal diseases was 33 per mille.

The health of the jail population in 1902 was good. The ratio of admissions to hospital was 913 per mille; the chief causes were dysentery and diarrhoea, which between them accounted for 16 per cent. of the admissions, and ague, which was the cause of 41 per cent. The death-rate was 24.8 per mille, compared with 25.3 in the previous year; it ranged from 17.2 in the inland jails of Burma to 42 in the Andamans. The chief causes of death were dysentery, tubercle of the lungs, and pneumonia. There were only 20 deaths from plague, and there was very little cholera or small-pox. The jail death-rates in Bengal (25.5 per mille), Burma (15.9), the United Provinces (20.5), the Punjab (24.8), Madras (17.8), Bombay (28.2), and the Central Provinces (24.8) all show an improvement as compared with 1901, the Burma rate being, as usual, the lowest of all provinces.

The accuracy of the birth and deaths statistics collected with regard to the general population is said to be improving, although the improvement is

DEATH RATES.

	1901.			1902.		
	Rural.	Urban.	Total.	Rural.	Urban.	Total.
Bengal	30.7	37.1	31.0	33.3	36.0	33.4
Assam	27.8	29.7	27.8	29.0	28.5	29.0
United Provinces	29.3	42.9	30.3	31.5	46.7	32.5
Punjab	36.0	37.7	36.1	43.5	49.4	44.1
North-West Frontier Province.	19.3	18.3	19.2	24.1	27.6	24.4
Central Provinces	23.0	28.5	23.5	25.2	32.4	25.8
Berar	27.2	29.6	27.6	32.0	36.6	32.8
Madras	20.4	32.7	21.3	19.3	28.2	20.2
Coorg	34.9	53.2	36.5	26.1	36.9	27.1
Bombay	34.0	57.8	37.1	35.8	60.2	39.0
Burma { Lower	20.6	30.0	21.7	20.0	29.9	21.2
Upper	—	33.8	33.3	15.8	29.9	17.3
Ajmere-Merwara	30.9	39.1	38.1	29.9	40.8	32.9

by no means uniform and much remains to be done. The provincial death-rates are compared in the marginal table. In every important province, except Madras and Burma, the death-rate was higher than in the preceding year, and in every province, except Assam, where the towns are merely large villages, the urban were higher than the rural death-rates. The death-rate for the whole of India was 31.49 per mille, compared with 29.46 in 1901.

Registered deaths from cholera in British India were considerably fewer than in 1901, and gave a rate of 1.01 per mille of the population under registration. As compared with the year 1900, when the number of cholera deaths was 797,200, and the death-rate from this cause was 3.7 per mille, the number for 1902, namely 224,100, showed a great decrease. It was

VITAL  
STATISTICS.

most prevalent during the year in Assam, Bengal, and Madras. The number of deaths from plague forms the subject of a separate section at the end of this chapter. Fevers are returned as having caused 4½ million deaths, or a ratio of 19·2 per mille. The mortality rate from bowel complaints was low, only 1·1 per mille.

In every province except Lower Burma the birth-rate in 1902 was higher than in the preceding year; in most provinces the increase was considerable,

BIRTH RATES.

	1901.	1902.
Bengal - - -	38·6	40·1
Assam - - -	34·0	34·2
United Provinces - - -	41·3	45·8
Punjab - - -	35·4	43·8
North-West Frontier Province.	29·5	33·6
Central Provinces - - -	28·8	48·3
Berar - - -	30·8	56·9
Madras - - -	25·1	28·2
Coorg - - -	18·8	23·9
Bombay - - -	25·2	34·2
Burma { Lower - - -	32·1	31·6
{ Upper - - -	37·7	38·0
Ajmere-Merwara - - -	16·1	36·1

and in two, Berar and Ajmere-Merwara, enormous. In every province except three the number of recorded births exceeded the deaths. In the Punjab, where the plague death-rate was 8·5 per mille, the death-rate was ·3 per mille higher than the birth-rate, and in Bombay, where the plague death-rate was 10 per mille, there was a similar excess of 4·9 per mille in deaths over births. The other exception was the small province of Coorg. The birth-rate for the whole of India was 39·4 per mille, compared with 34·6 in 1901.

The total number of vaccinations performed among the civil population during 1902-03 was 8,432,000, being an increase of 395,000 on

## Vaccination.

the previous year's work. Of primary vaccinations 95 per cent. were successful, and 65 per cent. in the case of re-vaccinations, 33 per mille of the population having been successfully vaccinated. The number of infants successfully vaccinated was 3,707,600, and of children between one and six years of age 3,160,400.

## SANITATION.

## SANITATION.

Some of the important sanitary works which have been completed or were in progress, or under consideration, during 1902-03 were as follows:—

## BENGAL.

## Calcutta.

In Calcutta the two chief works which the Corporation have in hand are the suburban drainage scheme and the continuous water supply scheme. The former of these has been brought, by the efforts of the new Corporation, out of the state of confusion into which it had drifted, and has been sanctioned in a remodelled form. It is to be executed under eleven separate contracts, in eight of which work was begun during 1902-03, while tenders had been invited for the remainder. Other main drainage schemes are in contemplation, and the surface drainage of the suburbs will claim attention after the execution of the main drainage scheme mentioned above. The work of converting the intermittent into a continuous filtered water system had been in progress for a year, and the improved system had been extended over a portion of the city containing 126,000 inhabitants. The average consumption of filtered water in the city per head of the population was 24·23 gallons, which was very slightly in excess of the consumption of the preceding year. The birth-rate of the town is returned at 14·2 per mille, the death-rate as 37; probably many births escape registration; the death-rate was raised by an epidemic of plague.

During the past three years the Corporation have vigorously pursued the policy of mending or ending obnoxious "bustees," or collections of huts, while at the same time they have opened out insanitary areas by constructing a number of public squares and making new roads or widening old ones. But overcrowding, with its concomitant circumstances, is a great evil in the city. The census of 1901 disclosed a very serious increase in the number of population per acre in many wards, accompanied by a very high death-rate. The Corporation have created a building department, and have taken into consideration the problem of the expansion of the city by finding space for new suburbs on the north and south, connected with the city by new and cheap tramway communications.

Interior of  
Bengal.

The municipalities of the interior of Bengal spent more than 46 per cent. of their total receipts on sanitation in the financial year 1902-03. No new work of first-class importance was either begun or finished during the year,

but drainage schemes were being prepared for many municipalities, including Howrah, Dacca, Berhampore, Garden Reach, Maniktola, and Cossipore-Chitpur. As regards schemes for water supply, heavy outlay was incurred on the works at Darjeeling and on the extension of the filtered water supply from the Calcutta mains to the Garden Reach municipality. Seven towns in the province, besides Calcutta, have waterworks of their own, namely, Howrah, Burdwan, Berhampore, Dacca, Nasirabad, Arrah, and Bhagalpur. SANITATION.

In the United Provinces municipalities the expenditure on sanitary objects was higher than in the preceding year. The increase under waterworks was due to improvements in the waterworks of Mussoorie, Agra, Cawnpore and Benares. Capital expenditure on drainage was nearly twice as large as in the previous year. The Cawnpore scheme was nearly completed, and good progress was made at Lucknow, with the aid of the Government grant of £6,700. Muzaffarnagar and Aligarh began the operations for which they had borrowed money, and the efficient system of drainage in Farrukhabad was further extended. In regard to rural sanitation, many districts, particularly in the Meerut, Rohilkhand, and Allahabad divisions, failed to utilize the full sums allotted for the purpose; but in many cases action is taken to improve and repair wells, under the Village Sanitation Act, at the cost of the villagers, without help from the district board. United Provinces.

Plague was again very prevalent in many of the municipalities of the Delhi, Jullundur and Lahore divisions of the Punjab in 1902-03, but only appeared in two municipalities of the Rawalpindi division and in three of the Mooltan division. The survey portion of the Hansi drainage scheme has been completed, as has also the extra-mural portion of the drainage scheme at Umballa. The Delhi intra-mural drainage scheme was being proceeded with; and it was in contemplation to raise a local loan of £36,400 to meet the cost. The Delhi waterworks have been finished, and the city is now adequately supplied with pure water. Measures for the improvement of the water supply of Simla, Umballa and Kalka, were being taken in hand. Considerable progress was made with the construction of the Amritsar waterworks. The capital expenditure on water supply and drainage works from municipal funds was £48,600 in 1902-03, against £18,400 in the preceding year, owing to expenditure, in addition to the items mentioned above, on the water supply at Lahore, and drainage at Lyallpur. The system of village sanitary notebooks is in force in every district, and is found to be of considerable value. In the Jullundur district a system of village sanitation in the larger villages has been initiated by the Board, under which sweepers are employed to clean the village streets and are paid in the same way as the village watchman. Punjab.

The municipal expenditure on water supply in Burma amounted to £33,500, a large part of which was spent on the Moulmein waterworks, now approaching completion. This scheme is an extensive one, and met with some opposition, but it is expected to have favourable results on the health of the town. At Prome also, a considerable amount was spent on improvement of the existing waterworks. The Mandalay scheme was suspended, and the Myingyan scheme has been abandoned for the present. Plans were also under consideration for giving a water supply in Akyab, Yamethin and Minbu, and tube wells were being sunk at Mandalay and other places. The expenditure under drainage was small, and was almost confined to minor sanitary improvements in Prome. In rural areas something, but not very much, is done in respect of village sanitation by expenditure from the small district cess funds. Village sanitation notebooks are in general use, and by their aid permanent sanitary records are to be kept. BURMA.  
Interior.

The work of reclaiming and draining East Rangoon was continued during the year 1902-03, and several blocks of houses were prepared for the indigent inhabitants of insanitary areas about to be reclaimed. The health officer gives it as his opinion that the only remedy for the insanitary conditions prevailing in the riverain suburbs is the raising and grading of every house site to drain into properly constructed masonry surface drains. The reclamation scheme is to be financed by the cession by the Government of the townland rents for a period of 50 years to the municipality. The Rangoon.



**SANITATION.** main drainage of the city is on the Shone system, and its working was improved by the extraction of a large quantity of silt near the outflow, and by the installation of stronger engines. The two sources of the water supply were formerly the Roval and the Victoria Lakes. But the supply from the former has been so bad that in 1900 its use for domestic purposes was discontinued. Owing to the delayed rainfall the supply from the Victoria Lake was restricted during the summer months. The Hlawga water supply scheme, which is being carried out to augment the present supply from Victoria Lake, at a cost of about £233,000, is well in hand. About three-fourths of the reservoir is finished, and water to half tank level was stored during the rains of 1903. The birth-rate of the town is given as 15·21 per mille in 1902, and the death-rate was 36·2 per mille.

**Central Provinces.** The main feature of the year 1902-03 in several of the most important of the municipalities of the Central Provinces was the appearance of plague. In consequence of the strain which this placed upon the resources of the municipalities, notably in Jubbulpore, large measures of improvement were brought to a standstill except in Nagpur, Harda, and Seoni, where some progress in respect of water supply was effected, and in Sambalpur, where the drainage scheme was pushed forward, and it was anticipated that it would be completed in the ensuing year. Village sites were cleared and cleaned in the ordinary way during 1902, but special measures in respect of sanitation were deferred to the following year, in which a special grant was allotted for this purpose.

**Assam.** The municipalities of Assam are small, and cannot afford costly works for a water supply, which has generally to be provided by the construction of wells and tanks, as funds permit. Excluding four towns which have no separate incomes of their own, the municipal authorities spent 54 per cent. of their income on sanitary objects in the year 1902. The sanitary improvements effected in rural tracts were chiefly in the direction of providing a purer water supply by the construction or repair of masonry wells and the excavation of tanks at some of the larger villages.

**MADRAS.**  
**Madras City.** In Madras city good progress was made during 1902-03 with the scheme for providing a system of drainage, and the cast-iron main running from the north to the south of the city was nearly completed. The quantity of water supplied from the Red Hills Lake was about 1 per cent. greater than in the previous year; and the level of the lake was about 3 inches higher at the close of the year than at the beginning. When the drainage has been put in order there will be much to do for the improvement of the water supply, both in quantity and quality; though the latter was reported by the analyst to be "satisfactory on the whole" during the year under report. The birth-rate of the town was 34·8 per mille, and the death-rate was 42 per mille.

**Interior of Madras.** The district municipalities in the Madras Presidency executed no new drainage works of importance during the year, and the scheme for the drainage of Madura was still under the consideration of the municipal council. The Vizagapatam waterworks were being carried out, and the construction of the Tiger Hill reservoir in Ootacamund and the scheme for the water supply of Cocanada were completed, while water supply schemes for Coonoor, Guntur, Dindigul, Tiruvannamalai, and Negapatam were under consideration. The municipal expenditure on public health amounted to £140,100, of which £54,000 was capital outlay and £53,100 was spent on conservancy. The outlay on sanitation by local boards in Madras rose to £33,900, the greater part of which is expended on conservancy of towns and villages. There is no Village Sanitation Act in the presidency, the work being carried out so far as possible by expenditure from the available funds of local boards.

**BOMBAY.**  
**Bombay City.** Apart from the Bombay Improvement Trust, which is mentioned in treating of the municipality, no very important works were in progress during 1902-03 in the city of Bombay. Considerable progress was, however, made with the sectional sewerage works which are in hand. The channel for the new subsoil and surface drainage of the lower parts of the city has,

after some discussion, been fixed, and a new outfall has been sanctioned at Worli. The work was to be put in hand shortly. The rainfall at the three lakes—Tansa, Vehar, and Tulsi—which furnish the water supply of the city was rather below the average. The quantity drawn from these lakes and reaching the consumer is about 36 million gallons a day. The birth-rate is given as 22·67 per mille; the death-rate was 62·38, which, though a very high figure, was the lowest since 1897. The number of deaths from plague during 1902 is given as 13,800, which equals 17·81 per mille, but is much lower than the number in the preceding year.

In the other municipalities of the Presidency the large expenditure on plague precautions continued to check the prosecution of sanitary works. Public works of the usual character are required in some form or other in almost every municipality. In one or two large towns, Poona for instance, where a constant water supply has been provided, drainage schemes are urgently required. Many need an improved water supply. During the year 1902-03, the capital outlay on water supply and drainage amounted to £14,900; and the total municipal expenditure on public health, including conservancy, was £133,200. The chief items of expenditure on new schemes were £8,400 on drainage at Allahabad, and a smaller sum at Poona in connection with the Manjri experimental farm. The extension of the Village Sanitation Act has been interfered with by the famine and plague, which have claimed the attention of district officers in recent years. The Act provides for the establishment of a sanitary committee or a sanitary board, consisting of members chosen by the collector of the district or by the Local Government, to supervise sanitary matters.

No public sanitary works of any importance were carried out by the Berar municipalities during the year, as their operations were hampered by the presence or the fear of plague epidemics, which entailed exceptional expenditure. In Karanja, however, steps have been taken to provide funds for a drainage scheme, and Ellichpur city and Amraoti town were devising means for the improvement of their water supply. Little could be done in the way of rural sanitation, apart from the clearing of village sites and the improvement, where possible, of the well-water supply.

#### HOSPITALS, DISPENSARIES, AND LEPER ASYLUMS.

There are in India, besides the large hospitals in presidency and other important towns, a number of dispensaries which are maintained for the most part at the expense of municipal or local bodies. These are the chief agencies for the medical attendance of the rural population, but there is a large number of missionary dispensaries in many provinces for which no statistics are available; and an attempt is being made in a district of Bengal to deal with the question by issuing simple medicine chests to headmen of villages remote from dispensaries. The latter, however, is as yet still in the position of an experiment.

The hospitals in the larger towns are in many cases on an important scale, as, for instance, the Campbell hospital at Calcutta, with 752 beds and a daily average of 445 in-patients in 1902, the Sir J. Jijibhoy hospital in Bombay city with 339 beds, the Government General hospital at Madras with 473 beds, the Mayo hospital at Lahore with 221 beds, the Rangoon General hospital with 461 beds, and others. The expenses are met to a large extent by the State, especially in the Presidency towns, and State subventions are frequently given to dispensaries supported by local funds or private subscriptions. In Calcutta, the Government paid £60,700 towards a total expenditure of £79,800; in Bombay city, £17,900 out of £28,500; in Madras city, £22,900 out of £28,900. Elsewhere, however, the chief contributions are from local funds; of the £73,500 received by the Madras dispensaries in the interior, £61,600 came from local funds; in Burma, out of £57,200, nearly two-thirds came from local funds; and so on. Private subscriptions do not form a large proportion of the receipts; in Bengal they amounted to £25,500, chiefly from native donors, including about £1,200 subscribed in Calcutta, and in the United Provinces to £9,800; elsewhere the amounts were smaller.

HOSPITALS,  
&c.

The year under notice shows a continued increase in the number of patients in attendance at the hospitals and dispensaries in most provinces, though in Bombay and the Central Provinces the improved health conditions of the year led to a decline. There is, however, an enormous mass of disease and sickness in India, which is as yet untouched by any hospitals or dispensaries.

At the Government leper hospital, in Madras, 576 patients were under treatment during the year 1902, and 594 patients were treated at the Homeless Leper Asylum in Bombay. But besides the cases admitted to, or treated at, special leper hospitals or asylums, a large number of leprosy cases are dealt with each year at the dispensaries. The census of 1901 shows 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 in every 100,000 of the population. Berar has 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.

## LUNATIC ASYLUMS.

LUNATIC  
ASYLUMS.

The treatment of lunatics at asylums prevails only on a small scale in India. In comparison with European countries insanity appears to be infrequent in India, and 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 explained in many of them by the probability that the insane would suffer more than the general population in years of scarcity of food.

In Bombay there are seven lunatic asylums, at which 797 lunatics were under treatment at the end of 1902; in Bengal, there are six asylums, with 1,033 patients, more than half of them being criminal lunatics; in the United Provinces, four asylums, with 1,136 patients at the end of 1902; three asylums, with 574 patients, in the Madras Presidency; two, with 317 patients, in the Central Provinces; and one each in the Punjab, Burma, and Assam, with 503, 415, and 154 lunatics respectively.

## PLAGUE.

PLAGUE.  
1902.

The mortality from plague during the year 1902 showed a very large extension. The recorded deaths from the disease had amounted in 1899 to 139,000, to 92,800 in 1900, and to 283,000 in 1901. In the year 1902 they were more than double that high figure, and stood at 583,900, a mortality which somewhat approaches that which cholera is wont to occasion in years in which that disease is active. The month of highest mortality, as in the two preceding years, was March, when 110,700 plague deaths were recorded, and the minimum was returned in June, when the number was only 6,600.

All the provinces of India were more or less affected by plague in 1902, except Assam, Burma and Coorg, where no plague deaths were recorded, and the North West Frontier Province and Ajmere-Merwara, where the numbers were only four and one respectively. In Bengal there was a nominal decrease from 78,600 deaths in 1901 to 33,000 in 1902, though probably many other deaths, recorded under fevers, were in reality due to this disease. The plague death-rate in Calcutta was 8.58 per mille in 1902, against 9.29 per mille in the preceding year. In the United Provinces plague was much more prevalent, the deaths rising to 43,500; the plague death-rate at Cawnpore was 36.69 per mille of the population. The Punjab also showed a great increase in plague, no less than 175,600 deaths being recorded as due to this cause. The disease was confined chiefly to the central and thickly populated portion of the province. In the Ludhiana district the plague death-rate was 71 per mille, and instances occurred in 22 villages of that district in which the enormous death-rates of from 20 to 40 per cent. of the population were registered. The Punjab Government undertook, with the sanction of the Government of India, a scheme for plague inoculation on a great scale. Seven millions of persons were to be

## PLAGUE.

inoculated, by the combined efforts of all the available medical establishment and of 37 doctors specially engaged in England. But the scheme was unfortunate from the beginning. Owing to the magnitude of the demand, the manufacturing laboratory was not at first able to supply the quantity of prophylactic required, and the commencement of operations had to be deferred until the 1st October, a month later than the intended date; and a deplorable catastrophe at Mulkowal, where, early in November, 19 persons died of tetanus after inoculation from a bottle of the fluid, brought operations to a standstill, less than half a million inoculations having been performed. The result of the campaign, so far as it went, showed that deaths bore a proportion of 24·8 per cent. to attacks among inoculated persons, while the corresponding percentage for the whole number of cases reported, inoculated and uninoculated together, was 59·8 per cent. Plague appeared for the first time in Berar during 1902, and caused 4,200 deaths. In the Central Provinces and Central India there was no general epidemic. In Madras, and the Mysore and Hyderabad States, there was a considerable increase in the number of plague deaths; though in Madras the only district severely affected was Bellary, which is specially liable to infection from the above-mentioned States. The largest number of deaths from plague in any province was again recorded in Bombay, where the disease accounted for 184,700 deaths, against 128,200 in 1901. All the collectorates in the Presidency except Upper Sind Frontier were affected, and the total is the highest recorded since the appearance of plague in 1896. In Bombay city, however, the number of recorded plague deaths sank from 18,700 in 1901 to 13,800 in 1902.

There was a further large increase in plague mortality in the year 1903, 1903. the total for all India, according to the returns at present available, being 851,400 deaths. In the Bombay Presidency 353,500 deaths are returned, while the plague mortality in the city rose again to above the level of 1901. There were rather more deaths in Calcutta than in 1902, and in the rest of Bengal the number is more than twice that recorded in that year. The Central Provinces and Central India States for the first time take a high position in the list, with 41,200 and 30,100 deaths respectively. There are heavy increases in the United Provinces and Hyderabad State, and the Punjab again shows a large death-rate from plague. Madras and the Mysore State alone return a smaller number of plague deaths than in the preceding year.

The effect of the mortality from plague, though large and deplorable in itself, on the general death-rate of the population of British India, aggregating 231 millions of persons, has so far been less marked than might be supposed. The mean annual death-rate from all causes for the whole of India during the ten years ending 1901 was 32·2 per mille. The death-rate for 1902 was slightly below this, being 31·49 per mille, of which 2·7 was due to plague. In 1900 the general death-rate for India was 38·91 per mille, and the death-rate from cholera, 3·70. Excluding from consideration the year 1903, the detailed mortality statistics of which have not yet been received from India, the number of deaths due to plague in any year has not equalled the mortality from cholera in a year of severe epidemic.

## CHAPTER III.

JUSTICE  
AND POLICE.

## JUSTICE AND POLICE.

## CRIME AND POLICE.

The Commission which was appointed by the Government of India, in their Resolution of the 9th July 1902, to enquire into the question of police administration in India (for the terms of reference; see the last number of this Statement, page 81) was able to complete its enquiry, with the aid of the Committees appointed by the local governments, in the cold season of the year under review. A notice was published giving particulars of the dates and places at which the Commission would hold public sittings, and inviting any person who wished to furnish evidence to apply for a copy of the questions framed for the province, and to forward his answers to the Commission; and many persons, especially in Bengal, availed themselves of this opportunity. Beginning work in October 1902, the Commission visited before the close of the year Assam, Bengal and the United Provinces. In January 1903 they went to the Central Provinces, and then in turn to Burma, Madras, Hyderabad, Bombay, the Punjab and the North-West Frontier Province. A number of police stations and offices, and the four police training schools, were also visited. The Commission held 50 public sittings for the examination of witnesses, and examined 279 witnesses. Replies to questions were received from 683 persons, of whom 244 were examined orally. On the conclusion of their tour the Commission proceeded to Simla, where various points were discussed with a conference of Inspector-Generals of Police. The report of the Commission has been submitted since the close of the period under review.

Bengal.

The total sanctioned strength of the police force in Bengal, excluding the Calcutta force and the military police, was at the end of the year under review 24,742. The expenditure on the force during the year was £350,533, an increase of £2,579 on the previous year. In proportion to the population, the number of police was considerably lower than in the other provinces, and proposals for strengthening the force were submitted to the Police Commission.

The town police were reported to be almost everywhere inadequate in numbers and under-officered. As regards the rural police, the total number of *chaukidars* fell from 152,018 to 151,745. The proportion of men of good caste continued to be very small, and improvement in this particular was in most districts very desirable. A sum of £4,187 was paid in rewards to *chaukidars* as against £3,710 in 1901. The percentage of *chaukidars* punished rose from 26·5 to 27·8, non-attendance at parade being the most prevalent offence. The *daffadari* system had been introduced almost completely in all divisions except Chota Nagpur, where the whole police system was reported to be in need of revision. On the whole, however, there appeared to be little doubt that the rural police were gradually, if very slowly, improving.

Of the total force employed at the end of the year, 88·9 per cent. of the officers, and 27·5 per cent. of the men, could read and write. The charges of torture and extortion brought against the police numbered respectively 8 and 95, as compared with 18 and 110 in 1901. Of these 3 and 49, respectively, were declared to be false or dismissed. The general character of the subordinate investigating staff was, however, unfavourably commented upon.

The military police numbered 400, as in the previous year. Their discipline was reported to be good.

The total number of cognisable\* offences reported diminished from 178,646 to 177,335. Of the total number made up of these together with pending cases, 42,028 were taken up by magistrates, while 140,856 were reported to the police, who investigated 70 per cent. of the whole number, as against 76 per cent. in 1901. Excluding cases in which enquiry was refused, the police enquired into 118,273 cases *suo motu*; and into 5,724 cases by order of a magistrate. The percentage of convictions was 37·9 against 36·7 in the previous year.

As regards serious crimes, the total number of cases of rioting and unlawful assembly tried fell from 2,584 to 2,452, the percentage of convictions being 57. True cases were fewer than in any previous year since 1884, except 1900. The number of riots attended with loss of life was 56. Murders increased slightly; dakaities fell from 358 to 336.

The reported value of property stolen was £128,475, and that of property recovered £18,529. The figures are untrustworthy, but it is certain that the percentage of recovery was very low.

The number of cases of non-cognisable crime fell from 125,075 to 121,911.

The Calcutta police force, which was slightly strengthened during the year, numbered 3,262 officers and men. The total number of cognisable cases was 29,604, as against 25,115 in 1901, the increase, however, being due to petty offences. Of the police cases sent up for trial, 80·8 per cent. ended in conviction. The figures relating to previous convictions showed clearly that crimes against property were in Calcutta mainly the work of professional criminals. It was remarked that the magistrates appeared to be too ready to deal summarily with old offenders, who if committed to the sessions court could be sentenced to longer terms of imprisonment, and thus more adequately dealt with.

The total strength of the police force in the United Provinces was 25,030, and the total cost £408,932. The year's record showed an appreciable improvement in the work of the police. Good progress was made as regards the prevention of crime, and detection also improved slightly. The *morale* of the force was said to have risen considerably. Punishments and resignations were fewer, and rewards more numerous, than in the previous year. At the same time a better class of officer, on the whole, was being recruited. Confidence in the police appears to be increasing among the people, but in this connection dissatisfaction was expressed that so little good use was made of the *chaukidars*, who in intelligent and friendly hands are the most valuable assistants at the disposal of the police. Excellent preventive action, and the final breaking up of the notorious dakait gangs which had given so much trouble, were the most satisfactory features of the year's work.

United  
Provinces.

The total volume of reported crime fell by 9,372 cases—rather more than 5 per cent. Of the total record of crime for disposal, the police investigated 86,358 cases, or 49·8 per cent., as against 51 per cent. in 1901. Considering only crime reported to the police, 9·4 per cent. of cases enquired into were not sent before the courts, for want of proof, 61·2 per cent. were sent before the magistrates, and in 29·4 per cent. of the cases no clue was obtained. In 45·7 per cent. of the total crime reported enquiry was refused. The corresponding percentages for the previous year were 8·6, 61·0, 30·4, and 46.

As regards professional and organised crime, there was a general improvement, though cattle theft showed no real diminution, and highway robberies were more numerous. The latter increase was due entirely to the *Haburas*, a criminal tribe, who were as usual active and committed most of these offences and of the road-dakaitis. The total number of dakaitis decreased, and in the case of armed dakaitis the decrease was very marked, the number having fallen to 50, as against 104 in 1901 and 151 in 1900. No cases of thagi or river dakaiti were reported.

The number of cases decided was 57,320, or 1,554 less than in the previous year. The percentage of convictions fell from 84 to 83. In cases investigated by the police the percentage of convictions rose from 50 to 55.

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

CRIME  
AND POLICE.

The number of non-cognisable cases rose slightly, from 94,388 to 94,877. Property stolen was valued at £111,182, a considerable decrease, and the percentage of recovery was the same as in the previous year, 23.

## Punjab.

The total strength of the police force in the Punjab at the end of 1902 was 3,079 officers and 14,961 men; the strength was during the year increased by 258. As regards nationality, there were 85 Europeans, 13 Eurasians, and 17,942 natives. The estimated cost of the force was £233,371. The number of officers, including sergeants, who could read and write was 2,515, and of constables 3,339. Departmental punishments inflicted on members of the force numbered 1,578, and judicial punishments 109, these figures being greater than those for 1901, but considerably less than those for 1900. Dismissals numbered 235.

The amount of crime, which fell in 1901, rose again during the year under review, but was less than in 1900. The retrogression is largely explained by the unfavourable agricultural conditions of the early part of the year, and by the disorganisation caused during the same period by plague. The total number of cognisable offences was 86,344, as against 81,316 in 1901. Offences under the Penal Code increased to 62,920. Of the total number of cases, 50,501 were reported to the police and 35,843 to magistrates. A large number of the latter were unfounded, and the true cases related for the most part to minor offences. The increase in crime was especially marked in serious offences against the person and against property, but murders decreased, and the number of dakaitis, which was 66, as against 68 in 1901, showed no tendency to rise again to the high figures of 1900 and previous years. The percentage of convictions in cases reported to the police was 30, as against 32 in 1901; the percentage to persons arrested was 56, as against 58. The estimated value of property stolen during the year was £69,337, of which 44 per cent, was recovered. The police arrangements of the Delhi Durbar were reported to be excellent, and the crime committed during the Durbar was inconsiderable.

## Burma.

The total strength of the Burma civil police was 12,888, and the cost of the force was £241,313. The military police included 406 officers and 14,664 men. Discipline and efficiency were well maintained in both sections of the force, although dismissals and punishments were more numerous, and rewards fewer, than in the previous year. The proportion of actual to sanctioned strength was greater than in 1901, although the high wages paid for labour again caused difficulty in many districts in obtaining recruits. The number of literate men showed a satisfactory increase. With a somewhat larger volume of crime to deal with than in 1901 (37,918 true cognisable cases as against 36,265) the police attained about the same measure of success in detection, the percentage of convictions being 66 in both years.

An unsatisfactory feature was the increase from 1,192 to 1,386 in cases of serious hurt, and special measures have been taken with a view to diminishing the number of cases arising out of the use of clasp knives. Excise and opium cases also increased, probably owing to the strengthening of the excise establishments. Cattle thefts showed a substantial diminution.

The total number of headmen in the province increased by 192 during the year. The numbers with special criminal and civil powers were respectively 534 and 775, as against 498 and 709 in 1901. Although the number dismissed rose from 213 to 290, the work of the headmen continued to be on the whole very satisfactory. As in former years they showed a tendency to apathy towards gambling, excise and opium cases, but in more serious cases they give valuable assistance to the police.

The conduct of the military police was good. A new Kachin Company was raised during the year, and the possibility of further recruitment from indigenous races was under consideration. The health of the force still left much to be desired.

Central  
Provinces.

In the Central Provinces, the year was, on the whole, much more prosperous than 1901, and the total number of cognisable offences reported fell from 25,310 to 21,532, the lowest total of the last decade, with the exception of that for 1898.

There was an increase in the number of constables from 7,090 to 7,227, mainly on account of the introduction of Government Police into the

Ohhindwara Jagirs and the Chanda Zamindaris. Recruitment was difficult, partly owing to the outbreak of plague. The numbers of officers and men shown as actually entertained were 1,415 and 7,102 respectively. The total cost of the police rose from £93,690 to £97,963. The year's record of punishments was again heavy. The total number of dismissals was 102, as compared with 113 in 1901, while other departmental punishments were inflicted on 439 officers and 365 men, as against 392 officers and 319 men in the previous year. The punishment of almost one-third of the strength of officers must be regarded as the least satisfactory feature of the year's administration.

The percentage of cases investigated to reported fell from 63 to 61, while the percentages of convictions to investigations and decided cases were respectively 54 and 81, the same figures as in 1901. Preventive action improved generally, and remarkable success attended the special measures directed against professional and organised crime in the districts of Sambalpur, Saugor and Nimar. The Sambalpur district, which in previous years had a very bad record, showed only 1,994 reported cognisable offences, as against 3,428 in 1901.

There was a general decline in serious crime. Murders numbered 115, the smallest total in recent years, and dakaities 43. Real dakaity occurred only in the northern and western border-districts. The numbers of robberies, house-breakings, and cattle-thefts were also unusually low. Riots increased from 34 to 69, but were not a serious character, arising, for the most part, out of disputes regarding crops and fields.

The percentage of recovery of stolen property fell from 44 to 33, owing mainly to failure in four large cases. There was good reason to believe that for some years past the Central Provinces had been regularly exploited, to a much greater extent than had hitherto been apprehended, by gangs of professional criminals having their headquarters in the adjoining Native States.

The Military Police in Assam numbered at the close of the year 345 officers and 2,588 men; the force was very favourably reported upon by inspecting officers. The strength of the Civil force, including Union Police, was 387 officers and 2,324 constables. The discipline of the force was not altogether satisfactory, though punishments diminished somewhat, and the number of resignations increased. These unsatisfactory features were attributed to the fact that the police in Assam were overworked and underpaid.

The total number of cognisable cases for disposal was 16,484, as compared with 17,010 in 1901. Of this number 10,467 cases were investigated by the police, and 6,474 cases were decided, the percentage of convictions being 68·3. Cases reported to the police numbered 10,130, of which 95·5 per cent. were investigated, convictions being obtained in 77 per cent. of the cases brought to trial. Robbery and dakaity increased slightly, and there was a marked increase in rioting, true cases of which rose from 645 to 788. The cases were mostly of a petty character, arising out of land or paddy-cutting disputes, but a better use of preventive measures is necessary.

Non-cognisable crime showed an increase from 15,403 to 16,039 cases.

The total number of *chaukidars* in the districts of Sylhet, Cachar and Goalpara, where alone a Rural Police force was maintained, was 6,846. In the two latter districts they did good work.

The record of cognisable crime in Berar for 1901 was the lowest on record for 35 years, and, in view of this fact, a further reduction from 4,267 to 4,078 in the number of cognisable offences (omitting public nuisances) in the year under review was highly satisfactory. There was no change in the sanctioned strength of the police force, which consisted of 572 officers and 2,330 men. The conduct of the force was not altogether satisfactory, the total number of punishments being 1,563, as against 1,505 in 1901, and the number of fines 341, as against 278. The police had altogether to deal with 2,867 true cases, as compared with 3,340 in 1901 and 8,411 in 1900. In cases actually tried, the percentage of convictions was 77·4. Preventive measures were carried out with success; but the results of the year in respect of the detection of serious offences were only moderately good, and the percentage of stolen property recovered was below the average. Serious offences



**CRIME AND POLICE.** against persons and property fell from 1,130 to 1,069, a lower total than in any year since 1890. There were 54 dakaities, against 89 in 1901. The most serious were the work of a gang of Bhils, which was eventually dispersed, several of its members being captured.

**North-West Frontier Province.** The total strength of the police in the North-West Frontier Province was 3,115, and the estimated cost of the force £39,564. The province inevitably shows a worse record of crime than the other more settled provinces, and the returns for the year under review must, on the whole, be regarded as satisfactory. There was a marked reduction in the number of serious crimes, especially in the Peshawar district. The discipline of the force was good; punishments and dismissals were fewer, and rewards more numerous than in 1901. There was, however, a regrettable increase in the number of resignations. The percentage of literate officers was 82, of literate men 13.

The number of cognisable cases reported was 9,966, as compared with 10,243 in 1901. The decrease was common to all classes of crime. Murders fell from 214 to 192, dakaities from 82 to 61, and robberies from 154 to 132. The percentage of convictions to cases reported rose from 23 to 26. Property stolen was valued at £9,414, and the percentage of recoveries rose from 26 to 39. The number of persons ordered to furnish security for good behaviour was 969, as compared with 545 in the previous year. Four new punitive posts were established during the year.

A noteworthy feature of the year's working was the general clearance of bad characters from the Kohat Bannā border, brought about by the military operations in the Waziri country which followed the raid on the Gurguri Police Station in August. Satisfactory features also were the increased co-operation between the Border Military and the Regular police, and the reconciliation of several leading men whose feuds had been a constant source of crime amongst their retainers.

**Coorg.** The total strength of the Coorg police force was 221, and it cost £2,833. The total number of cognisable cases reported was 604, as against 671 in the previous year, the improvement being especially marked under offences against property. There were four cases of murder, and one only of dakaity. The proportion of convictions obtained in cognisable cases investigated by the police improved, the percentage rising from 64 to 76.

**Madras.** The total strength of the police force in Madras (excluding the punitive police, who numbered altogether 522) was at the end of the year 23,350, the increase of 653 during the year being due mainly to the strengthening of the Madras City Police and to the employment of an additional establishment temporarily on plague duty. The total cost of the force was £298,809, as against £295,224 in 1901. Great difficulty was experienced in many districts in finding recruits of suitable physique and education; but the proportion of constables able to read and write increased from 85·4 to 85·8 per cent. There was a slight increase (from 22·7 to 24·7) in the percentage of men punished for offences other than absence without leave. This, however, was attributed to the closer supervision exercised by inspectors, and judicial convictions declined from 267 to 242. The numbers of officers and men dismissed were respectively 42 and 420, compared with 34 and 422 in 1901. The Madras City Police were reorganised during the year, their pay being improved and the force strengthened by the addition of 252 constables. The punitive force maintained in the Madras District was also slightly increased. Both here and in the Tinnevely District this force maintained a high standard of efficiency, and there were no disturbances in either district. The work of the village police, as of the village magistrates, was in most cases unsatisfactory.

Prices were favourable during the year, and there was a marked decrease in the number of grave crimes. Murders decreased from 463 to 435, dakaities from 585 to 498, and robberies from 737 to 684. The number of cognisable cases reported under the Penal Code, excluding nuisances, was 60,277 as against 64,987 in 1901, the number of true cases being 41,302 against 48,379. Cases under Special and Local laws also decreased, but the number of nuisances increased somewhat. The decrease in crime was accompanied by a falling off in detection, the general percentage of detection in cases under the Indian Penal Code—38·8—being the lowest recorded during

recent years. The percentage in cases of murder was 19·6, in dakaities 23·0. The proportion of convictions to cases prosecuted by the police decreased from 83·2 to 79·9 per cent.

CRIME  
AND POLICE.

Serious riots occurred in Cuddapah town in April during the Muharram, which synchronised with the "Sri-Rám-navami" festival of the Hindus. Most of the leading offenders were convicted.

The work of the Criminal Identification Bureau has been conducted, since the latter part of 1902, entirely by means of the finger-print system, first introduced in 1899. During the year, 663 identifications of old offenders were made as the result of 3,668 searches.

The total strength of the police force in the Bombay Presidency, inclusive of Sind and railways, but excluding the special forces employed temporarily on plague and famine duty, was 22,308, an increase of 161 on 1901. The total cost of the force rose correspondingly from £289,916 to £311,696. There was a slight improvement in the education of the force, the percentage of officers and men able to read and write increasing from 49 to 51. The total number of men punished, 3,263, was practically the same as in the previous year, but judicial punishments showed a decrease.

Bombay.

A general improvement in seasonal conditions was accompanied by a marked diminution of crime, as a whole, though there was an increase in the Northern Division, where famine prevailed, and in Bombay City, as well as a general rise in the value of property stolen, which was estimated at £124,276, against £116,890 in 1901, and a fall from 35 to 33 in the percentage of recoveries. The decrease in serious crime was particularly marked in respect of dakaiti, the number of real cases of which fell from 1,305 to 663. With fewer cases to deal with, the police were distinctly more successful, the percentage of convictions to cases of dakaiti tried increasing from 58 to 77. In Khándesh the operations against dakaitis were brought to a successful close by the capture of their leaders.

During the year 135,980 offences in all, cognisable and non-cognisable, were reported, as against 142,092 in 1901. The total of cognisable cases reported to the police, or taken up by them, was 38,634. Including pending cases of the previous year, the complaints for disposal totalled 42,051, including 34,489 Indian Penal Code cases: of these all but 141 were investigated. The percentage of convictions in cases brought before the courts by the police was 80·56, a slight improvement on the previous year. The proportion of undetected cases to those for disposal was 19·09 per cent., showing an improvement less marked than might have been expected in view of the general decrease of crime.

In Bombay City cognisable offences numbered 31,783, compared with 23,571 in the previous year, but there was a decrease in serious crime, the increase being due to offences under local laws. The percentage of convictions in police cognisable cases rose from 88·7 to 92·4. The aggregate value of property stolen fell, in the case of Bombay City, from £24,096 to £18,850, and the percentage of recoveries improved from 42 to 59.

#### CRIMINAL JUSTICE.

The judicial staff available during the year for Sessions work in Bengal consisted of 29 Sessions Judges and three Additional Sessions Judges, besides five temporary Additional Sessions Judges who were employed for short periods. The magisterial staff of the province, including Calcutta, consisted of 425 Stipendiary and 1,787 Honorary Magistrates.

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JUSTICE.  
Bengal.

The total number of criminal offences reported was 299,060, a decrease of 3,103 on the figures for 1901. Of these 200,185 were under the Indian Penal Code, and the remainder under special and local laws. The number of cases declared to be false and dismissed constituted 19·5 per cent. of the whole number. Of the 238,132 true cases, 172,644 were brought to trial.

Presidency magistrates, including the municipal magistrates, dealt with 27,312 cases. Of the 33,674 persons brought to trial, 29,841 were convicted. Magistrates outside Calcutta had before them 145,367 cases, a less number than in either of the two previous years, but the pending file at the end of the year showed 4,998 cases as against 4,818 at the end of 1901. Of the persons whose cases were disposed of 59·2 per cent. were convicted. The total number of witnesses called in the magistrates' courts of the mufassal

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was 642,042, of whom 26·4 per cent. were discharged without examination, and 1·8 per cent. were detained after the third day; these figures compare favourably with those for the previous year. The sentences passed by magistrates included 26,191 of rigorous imprisonment, 743 of simple imprisonment, and 2,104 of whipping, with or without other punishment.

Cases committed or referred to the Sessions Courts during the year numbered 1,778, or 74 less than in 1901, and, 1,860 cases being disposed of, the pending file was reduced to 245 cases. Of 4,525 persons under trial 61·6 per cent. were convicted. There were 65 sentences of death, 250 of transportation, and 30 of whipping. The number of persons tried by jury was 1,130. In 1,007 cases the Sessions Judge approved of the verdict; 85 cases in which there was complete disagreement were referred to the High Court. Of these 57 were decided, the verdict of the jury being accepted in 20 cases and in 35 rejected. In 2,291 cases tried with the aid of Assessors, the judge concurred with the opinion of both Assessors in 1,602 cases, and in 374 differed from both. The average duration of Sessions trials was 51 days, as against 53 in 1901. Out of 26,882 witnesses, 12·4 per cent. were kept after the third day.

The High Court tried 48 cases, involving 63 persons, of whom 48 were convicted, and left 11 cases undecided at the end of the year. The average duration of cases from commitment was 37·9 days.

Including 112 pending cases, there were before the High Court 1,118 appeals, of which 1,036 were decided. Out of 936 appeals from sentences of the Sessions Courts, the orders of the Lower Courts were upheld in 701 instances and reversed in 83. Seventeen appeals by the Local Government against orders of acquittal were heard, the orders being reversed in 10 cases. The Sessions Courts decided 6,487 appeals, and the Magistrates' Courts 5,169, the percentages of wholly unsuccessful appellants being respectively 66·4 and 70·3. Of the 65 death sentences referred from the Sessions Court, 38 were confirmed and 15 commuted to transportation or imprisonment, while in 10 cases the person sentenced was acquitted. The High Court decided 270 revision cases, and the Sessions Courts 6,690.

The total charges for the year in connection with the administration of criminal justice amounted to £207,994, and receipts to £107,386.

North-West  
Provinces.

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

The total number of offences reported in the North-West Provinces was 128,230, against 134,107 in 1901, while the number brought to trial fell from 93,418 to 91,121. Under the Indian Penal Code 62,254 cases were returned as true, as compared with 63,788 in the previous year. In spite of the diminution in the number of cases, the total number of persons under trial increased slightly to 161,643. Of these, 155,560 were tried in Magistrates' Courts and 3,498 in the Sessions Courts, the percentage of convictions in the former being 52 and in the latter 69. The average duration of cases was nine days, as in 1901, but there appear to have been in some districts an unnecessarily large number of cases pending over six weeks. Out of 327,532 witnesses summoned in Magistrates' Courts, the number detained after the third day was 2,190; in many districts there was room for improvement in this matter. It was generally observed by District Officers that magistrates did not sufficiently make use of Section 250 of the Code of Criminal Procedure for dealing with frivolous and vexatious accusations.

Out of a total of 18,229 appeals, 4,397 were rejected, and in 7,800 the previous orders were confirmed. Trials by jury were fewer than in 1901, but the number of cases (12 out of 112) in which the judge disagreed with the verdict, and referred the case to the High Court, was larger.

## Oudh.

The total number of offences reported in Oudh was 44,089 (including 30,912 under the Indian Penal Code) as against 44,223 in 1901. The number of true cases was 31,203, slightly less than in the previous year, but 1,941 more persons were brought to trial, the percentage of convictions falling slightly to 43·87. The number of cases disposed of fell from 34,581 in 1901 to 31,656 in the year under review, and the average duration

increased from 8·3 to 9·1 days in Magistrates' Courts, and from 38·2 to 44·7 days in the Sessions Courts.

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JUSTICE.

As regards punishments, sentences of death and transportation rose from 32 and 108 to 58 and 188 respectively. The number of whippings inflicted in lieu of other punishments was 1,283, as compared with 1,679 in 1901.

The total number of appeals was 4,107, out of which 687 were rejected, while in 1,947 the previous orders were confirmed. The corresponding figures for 1901 were 3,825, 559, and 1,910.

In the Punjab, 1902 showed a somewhat worse record, as regards crime generally, than did 1901. In all, 169,944 offences were reported, of which 116,515 were returned as true. Cases brought to trial numbered 99,059, involving 228,581 persons, the corresponding figures for 1901 being 91,807 and 207,771 respectively. The percentage of convictions further decreased to 27. Punjab.

Of the offences returned as true, 70 per cent. were under the Indian Penal Code. There was a satisfactory decrease, from 889 to 821, in offences affecting life, and the number of murders fell from 410 to 389. Thefts also fell considerably, while robberies and dakaities showed a trifling increase.

District magistrates disposed of 2,565 cases, as against 2,361 in 1901, and honorary magistrates also did good work. Sessions trials numbered 384, or one less than in the previous year. No case came before the Chief Court in the exercise of its original jurisdiction, an evidence of the abstention of the large European population of the province from serious forms of crime.

The Chief Court confirmed the sentence of death upon 70 persons, and commuted it in the case of 26, the figures for 1901 being 102 and 13. Sentences of solitary confinement rose from 7,931 to 8,204, but whippings fell from 2,560 to 2,228, and forfeiture of property was ordered in only four cases, as compared with 24 in 1901, and 139 in 1900.

Of the 63,855 persons convicted, 28 per cent. appealed. Twenty per cent. of the appeals were summarily dismissed, and 43 per cent. dismissed after notice; in the remaining cases the sentences were reduced, altered or set aside, or the proceedings quashed.

In the Chief Court the number of appeals instituted fell from 797 to 610, and the pending file was reduced from 163 to 141. In the case of revisions, disposals rose from 1,404 to 1,449, but the pending file also rose slightly, from 202 to 211.

The total number of cases instituted during the year in Burma was 74,274, as against 72,674 in 1901. The percentage of true cases rose slightly, in Lower Burma to 94·3 and in Upper Burma to 87·65. True cases under the Indian Penal Code numbered 25,115 in Lower and 8,263 in Upper Burma. Burma.

Magistrates of all classes disposed of 70,325 cases, an increase of 2,094 on the previous year. The average duration of cases was in Upper Burma 8 days, as in 1901; in Lower Burma it fell from 11 to 10 days. The percentage of persons convicted or committed showed a slight improvement in both divisions of the province, being 62·3 and 66·5 in the Lower and Upper divisions respectively. There appears to have been an improvement in the work of the subordinate magistrates, but it was remarked that there was still a tendency to impose inadequate or disproportionately heavy sentences.

The Sessions Courts in Lower Burma dealt with 851 persons, or 100 more than in 1901. The percentage of convictions rose to 64·7. Capital sentences referred to the Chief Court for confirmation numbered 65, of which 40 were confirmed and 13 reversed. The average duration of trials increased in the Sessions Courts from 41 to 51 days, and in the Chief Court from 31 to 36 days. In Upper Burma, Sessions judges disposed of 93 cases, as compared with 106 in 1901. The percentage of convictions rose from 65·1 to 78·4, and the duration of trials fell from 37 to 34 days. Of 26 death sentences referred to the High Court, 16 were confirmed and one reversed.

As regards punishments, there was a considerable increase, in Lower Burma, in the number of cases in which solitary confinement was awarded.

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JUSTICE.**

The number of whippings in lieu of other punishments also increased, but juvenile whippings decreased. Death sentences numbered 12, and sentences of transportation 183. In Upper Burma, there was also an increase in the number of sentences of whipping and of solitary confinement, while sentences of death and transportation numbered 26 and 35 respectively.

There was a general increase in the number of appeals preferred. In Lower Burma the number disposed of (1,618) was less than in 1901 (1,723), and in Upper Burma greater, viz., 1,351 as against 1,206. The percentage of sentences confirmed was 58·5 in the latter division, and 72·8 in the former, a slight fall in each case. The duration of appeals rose in Lower Burma from 14 to 21 days, and in Upper Burma from 10 to 11 days.

The number of revision cases examined by district magistrates in Lower Burma increased by nearly a thousand to 5,203. Sessions judges did less revisional work than in 1901, only 779 against 927 cases having been called for.

**Central  
Provinces.**

In no year in the previous two decades was the number of cases reported (25,532), and of cases returned as true (23,173), in the Central Provinces, so low as in 1902, and the less serious nature of the offences dealt with was reflected in the decreased percentage of convictions, and the general lightness of sentences.

The strength of the magistracy fell from 376 to 375 during the year. The percentage of convictions among the 37,351 persons disposed of was 50·7, the lowest figure of the past ten years. Although partly explained by the considerations referred to above, this result suggests that there was also insufficient discrimination in the issue of process. The average duration of cases continued unduly high, being 10·1 days for police cases, and 27·5 days for complaint cases. So far, the separation of magisterial and civil business, which was initiated in 1901, did not seem to have had the effect of quickening the disposal of criminal work, but it was hoped that improvement would be shown as more favourable economic conditions diminished the claims made upon district officials by matters of revenue administration.

The four Sessions Courts dealt with 161 cases, involving 283 persons, of whom 66·8 per cent. were convicted. In view of the long duration of Sessions trials (70 days), it was felt that an increase in the number of judges was necessary.

Punishments were as a rule lighter than the average. Sentences of death, transportation for life and rigorous imprisonment passed by Sessions Courts numbered respectively 23, 49, and 29, while of 19,300 persons punished by magistrates, four were sentenced to transportation, and 1,519 to whipping, 12,349 being merely fined.

The percentages of appeals rejected remained fairly steady at 59 by District Magistrates, 78 by Sessions Judges, and 83 by the Judicial Commissioner.

The experiment of appointing Public Prosecutors for the better representation of the Crown in Sessions cases was found to be a success in the Nagpur and Jubbulpore divisions, and similar appointments were made in Nerbudda and Chhattisgarh. The experiment promised to give good results.

**Assam.**

The judicial staff employed on criminal work in Assam consisted of two sessions judges, eight district magistrates, 53 subordinate stipendiary magistrates, and 21 honorary magistrates. During the year 30,476 offences were reported to the criminal courts, including 23,019 under the Penal Code. True cases numbered 18,965, as against 19,851 in 1901.

Including cases pending at the beginning of the year, there were 20,754 true cases before the courts, or 540 less than in 1901; of these, 14,391 were brought to trial, as compared with 14,162 in the previous year.

Magistrates' Courts disposed of 14,307 cases, the proportion of convictions being 50·3 per cent. The Courts of Session disposed of 101 cases, the pending file being increased from 37 to 47. Of the 184 persons tried, 108 were convicted.

The High Court disposed of 60 appeals, leaving four undecided at the end of the year. The decisions of the lower courts were upheld in 44 cases. In appeals decided by the Courts of Session, the percentage of confirmation was 67·4, and in the Courts of District Magistrates 57·8.

CRIMINAL  
JUSTICE.

The charges of the Criminal Courts amounted to £15,168, and the receipts to £9,088.

In the hill districts and frontier tracts, which are not under the High Court, 617 cases were disposed of, the percentage of convictions being 71·5.

Offences reported during the year in the North-West Frontier Province numbered 21,095, of which 72 per cent. were returned as true. Complaints dismissed *in limine* numbered 4,951. In Hazara, where petty and vexatious complaints are very common, the percentage of cases so dismissed rose to nearly 41. The number of cases brought to trial was 13,947, as against 14,387 in 1901, the percentage of convictions being 48, a distinct improvement on 1901, when the percentage was 45. In cases brought to trial under the Indian Penal Code, which numbered 6,266, the percentage of convictions rose from 25 to 26. The large proportion of persons acquitted or discharged in these cases continued to be an unsatisfactory feature. There was a considerable improvement during the year as regards the non-infliction of fines by magistrates, in addition to imprisonment, where the additional penalty was inappropriate.

North West  
Frontier  
Province.

Of 923 persons (about one fourth of the number convicted by second and third-class magistrates) who appealed to district magistrates, 325 were in some degree successful, about the same proportion as in 1901. The Courts of Session heard 803 appeals, in 36 per cent. of which sentences were reversed or reduced.

There were in the areas under the Resident 66 Criminal Courts open at the end of 1902, an increase of two as compared with 1901. Offences reported increased from 19,410 to 21,470, but the percentage of complaints summarily dismissed fell slightly to 10·2, and there was room for improvement in this respect. The total number of offences brought to trial (19,445) was considerably greater than in the previous year (17,602), but the increase was confined to petty cases. The percentage of convictions in cases disposed of fell from 57·6 to 55·3. The average duration of proceedings fell from 9·7 to 9·4 days, and the average period of detention of witnesses also showed an improvement. The pending file was reduced in all the Berar Courts.

Berar.

The number of appeals filed was 816, as against 819 in 1901. They were promptly dealt with both by the Judicial Commissioner and by the Sessions Judge, the percentage of sentences reversed being 24·7 in the former and 17 in the latter court.

The total number of offences brought to notice in Coorg was 1,642, or 76 less than in the previous year, and the number of actual trials also declined slightly to 1,400. The fall in each case was attributed to the continued decrease in the number of complaints under the Workmen's Breach of Contract Act, 1859, owing to the overstocking of the labour market and the decline of coffee-planting. Excluding breach of contract cases, which were mostly compromised, the Criminal Courts dealt with 1,994 individuals, of whom nearly 27 per cent. were convicted. Only nine convictions for really serious crime were recorded. There was a marked improvement in the average duration of trials, and in the proportion of convictions upheld on appeal.

Coorg.

The total numbers of cases and appeals instituted during the year in Madras, excluding those in Village Magistrates' Courts, were respectively 305,344 and 10,437, showing, in the former case, a slight increase and, in the latter, a slight decrease, as compared with 1901. There was a fall from 10,735 to 9,971 in the number of cases instituted in Village Magistrates' Courts. The number of offences reported showed a total decrease of 631 under the Penal Code, there being a large decrease—2,716—under thefts, while there was an increase of 3,575 under special and local laws, which was largely due to an increase of 4,726 cases under the Towns Nuisances Act.

Madras.

CRIMINAL  
JUSTICE.

Grave crime decreased perceptibly. The percentage of convictions in cases brought to trial was 24·36 in the case of offences under the Penal Code, and 85·96 in the case of offences under special and local laws, the average percentages for the preceding five years being 26·26 and 85·36 respectively. The number of European British subjects brought to trial was 117, of whom 56 were convicted. There was a further increase during the year in preventive proceedings under the Criminal Procedure Code, 1,470 persons being ordered to give security for good behaviour, against 1,214 in 1901.

Of 16,438 persons tried in Village Magistrates' Courts, 5,643 were convicted. In the regular Magistrates' Courts in the mufassal, 238,780 cases were instituted, against 229,205 in 1901, but the number of cases pending at the end of the year was reduced by 474. The total number of persons under trial in these courts was 398,188, of whom 387,894 were dealt with, the percentage of convictions rising slightly — from 51·09 to 51·12. Sentences of rigorous imprisonment and whipping were less numerous, while the number of sentences of simple imprisonment increased. Fines were more numerous and less severe. The number of appeals was 8,058, of which 60·71 per cent. were confirmed.

The cases committed to Sessions Courts in the mufassal numbered 1,274, and 3,284 persons in all were tried. Of these 1,516 were tried by jury, 1,444 with the aid of assessors, and 78 partly by jury and partly with assessors. The jury system was reported to have worked satisfactorily on the whole, though the average of intelligence among the jurors was hardly high enough for them to deal adequately with any but simple cases. The percentage of convictions was 47·07. Appeals numbered 1,516, the sentence appealed against being confirmed in 72·77 per cent. of the cases.

There was a fall from 71,768 to 65,249 in the number of cases instituted in the Presidency Magistrates' Courts. The percentage of convictions was 90. A sum of £376 levied as fines in cases of cruelty to animals was paid to the S.P.C.A.

The High Court received for trial 41 Sessions cases, involving 54 persons, of whom 46 were convicted. Thirty-four other cases and 82 death-sentences were also referred by the Sessions Judges to the High Court. The number of appeals received during the year was 767; in 77 per cent. of the total number of cases decided, the proceedings of the lower courts were not interfered with.

## Bombay.

The total number of offences reported in Bombay (including Sind) fell from 171,823 in 1901 to 162,883 in 1902. The decrease is noteworthy in view of the general prevalence of famine, but was mainly due to a fall of 21,479 in cases under the Bombay District Municipal Act. Of the total number of cases, 146,220 were returned as true. Cases brought to trial numbered in all 148,254, involving 255,882 persons, the figures being considerably less than for the previous year. Of the persons under trial, 46 per cent. were acquitted or discharged, and 39 per cent. convicted, while 11 per cent. remained under trial. The total number of cases decided was 147,299, as against 198,591 in 1901. Of these 97 per cent. were disposed of by magistrates. Of the total number of persons convicted, 52 per cent. were tried summarily, as against 36 per cent. in 1901. The average duration of cases rose from seven to 28 days. There were 54 sentences of death, and 216 of transportation, as against 59 and 175 in 1901. Whippings increased in number, and formed 18·2 per cent. of the total number of punishments. The number of Europeans brought to trial, mostly for minor offences, was 357, of whom 260 were convicted.

Out of a total of 8,824 appeals, 41 per cent. were rejected; in 32 per cent. the sentences were confirmed, and in 14·5 per cent. reversed. Applications for revision numbered 2,491, the sentence being reduced in 173 cases, reversed in 316 cases, and enhanced in 31 cases.

The numbers of persons tried by jury and with the aid of assessors were respectively 526 and 1,589. The verdicts of the juries were approved, in the High Court, in all cases, and in the Courts of Sessions in 94 per cent. of the cases. In cases tried by assessors, the judge agreed with all or some of the assessors in 86 per cent. of the cases, and differed from all in 14 per cent.

JAILS.

JAILS.

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

	1902.	1901.	1900.	1899.	1898.
Jail population of all classes on 1st January	108,741	115,059	109,406	102,125	109,942
Admissions during the year	471,529	487,374	586,895	484,420	465,921
Aggregate Discharged during the year from all causes	580,270 478,532	602,433 493,693	696,301 581,281	586,545 477,167	575,863 473,736
Jail population on 31st December	101,738	108,740	115,020	109,378	102,127
Convict population on 1st January	98,873	105,047	97,196	93,828	101,035
Admissions during the year	171,256	176,568	207,437	174,060	174,110
Aggregate Released during the year	270,129 172,202	281,615 178,362	304,733 194,924	267,888 167,358	275,145 177,403
Casualties, &c.	4,167	4,381	4,796	3,326	3,912
Convict population on 31st December	93,760	98,872	105,013	97,204	93,830

The decrease in the number of prisoners, including under-trial prisoners, admitted to jail during 1902, as compared with 1901, was common to all provinces, except Bombay, the Punjab, and Burma. The largest decreases occurred in the Hyderabad Assigned Districts and the Central Provinces. Although the total daily average population decreased similarly by nearly 4 per cent., the daily average in Bengal was the highest recorded since 1876.

The decrease in the number of convicts admitted to jail was much more marked in the case of female convicts (with 9,460 admissions, as against 10,457 in 1901) than in that of males (with 161,796, as against 166,111). There was a decline of 9 per cent. in the number of persons imprisoned for offences connected with property, while those convicted for offences against the person increased by 7 per cent.

The number of escapes during 1902 was 74, as compared with 126 in 1901, and 30 fugitives remained uncaptured at the end of the year. The number of escapes was again largest in the Madras Presidency.

The proportion of juveniles to the total number of prisoners admitted was practically the same as in 1901, the total number of admissions under the age of 16 being 1,564 males and 497 females. The high proportion of female offenders continued to be a characteristic of juvenile crime in Madras.

As regards the religion of convicts admitted during the year, the figures are as follows :—Hindus and Sikhs, 103,848; Muhammadans, 47,875; Buddhists and Jains, 13,496; Christians, 1,684; all other classes, 4,169. The number of those able to read and write was 20,223, while 147,144 were wholly illiterate. The statistics relating to the occupation of prisoners previous to admission show no striking variations from those of 1901. The only increase was one of 9 per cent. under "professional persons"; the majority (93,091) were, as usual, "persons engaged in agriculture and with animals."

The percentage of persons previously convicted to persons admitted to jail fell from 14.68 to 13.7, a large proportion of the crime in 1902 consisting of casual offences. It was remarked that in some provinces too little use was still made of the punishments of solitary confinement and transportation in dealing with habitual offenders. The identification of such offenders received suitable attention in all provinces.

The year's record as regards conduct was somewhat less satisfactory than in 1901, the proportion of punishments to the total daily average population increasing by nearly 4 per cent. The largest increase was in Burma, where



**JAILS.** the proportion rose by nearly 31 per cent. The figures for the different provinces are given below :—

	1902.			1901.			1900.		
	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 - -	10,702	15	14,819	10,813	13	13,924	10,435	25	14,299
Bombay - -	10,053	20	10,110	10,422	23	10,746	11,805	11	9,499
Bengal - -	19,636	29	34,458	19,181	49	40,267	18,453	49	11,576
United Provinces	26,038	20	42,063	27,527	19	42,788	28,767	30	43,859
Punjab - -	11,928	84	38,591	12,644	123	37,951	13,911	59	28,311
Burma - -	11,076	58	38,643	11,510	48	34,635	12,187	35	39,244
Central Provinces	3,870	20	5,476	4,465	13	5,795	6,163	24	6,521
Assam - -	1,362	19	1,699	1,463	21	1,503	1,463	27	1,543
North-West Frontier Province.	893	4	1,500	881	5	1,541	—	—	—
Coorg - -	62	—	69	97	1	266	99	3	312
Hyderabad Assigned Districts.	1,087	2	620	1,389	3	904	1,740	—	1,211
	96,707	271	188,948	100,892	317	192,320	104,023	264	186,380

The Government of India were satisfied that the increase in the number of punishments was not attributable to undue severity. More than one half of the offences (100,083) related to work. The total number of corporal punishments decreased from 1,364 to 1,315, and the statistics showed a growing tendency to resort to flogging only in cases in which either the offence was of a serious character or other forms of punishment had failed. Punishments by solitary confinement and by the imposition of fetters also decreased.

The number of convicts who came under the mark system increased very slightly, but only 99 failed to gain some remission of their sentences, as compared with 235 in 1901. The Government of India decided in 1902 that the system should be applied to persons committed to prison in default of furnishing security. The balance of opinion continued to be in its favour, though complaints were still made as to the complicated nature of the rules and the amount of clerical work involved.

In the provision of separate accommodation for prisoners at night, good progress continued to be made in all provinces.

Partly in consequence of the fall in price of food-grains, the gross cost of maintaining prisoners fell from Rs. 65 4 2 (87s.) per head of average strength to Rs. 64 5 11 (85s. 5d.). The cost varied from over 135s. in Coorg to under 66s. in the United Provinces. The total expenditure fell from £479,376 to £454,259. The cost of establishment rose from £150,559 to £155,229, while dieting charges fell from £226,293 to £197,757, and hospital charges from £23,732 to £21,939, though the average cost per head of patients increased somewhat. The cash earnings of prisoners increased in a highly satisfactory manner from Rs. 10 11 9 (14s. 4d.) to Rs. 14 3 10 (19s.) per head of average strength, the total cash earnings being £100,499, as against £78,859 in 1901. As in previous years, the amount earned was greatest in Coorg, with Rs. 81 (108s.) per head. The reforms effected in financial control in the Central Provinces resulted in a striking increase in cash earnings from Rs. 18 13 (25s.) to Rs. 51 1 0 (68s.). The earnings of prisoners in the Nagpur Jail sufficed to defray the cost of their maintenance, while those of the Jubbulpore Jail, after meeting all expenses, left a profit to Government of over £600.

The health of the prisoners in all provinces except the Andamans, the North-West Frontier Province, and the Central Provinces, was better than in 1901. The total death rate was 24·87 per mille, as compared with 26·87

in 1901 and 32·8 in 1900. In all jails there were only 36 cases of cholera, with 24 deaths, as compared with 211 cases and 106 deaths in the previous year. Malarial fevers also were somewhat less prevalent. The proportion of admissions and deaths on account of pulmonary tuberculosis was, however, unsatisfactory, the death rate (4·28 per mille) being the highest recorded in recent years. The death rate from this form of disease was particularly high (9·61 per mille) in the Andamans.

JAILS.

The number of convicts remaining in the settlement at the end of the year under review was 12,724, as against 12,777 at the end of the previous year, but there was an increase from 12,379 to 12,922 in the average daily strength. The reduction at the end of the year was due to the release of 399 convicts in connection with the Coronation festivities. Conduct was on the whole good, and discipline well maintained. The number of jail offences, most of which were of a petty nature, fell from 3,424 to 2,429, and punishments were less in proportion. During the year, 57 convicts escaped, as compared with 38 in the previous year. Of these 42 were recaptured.

Penal settle-  
ment at Port  
Blair.

The receipts of the settlement during 1902-3 amounted to £45,927 and the expenditure to £125,138. The net cost of each convict rose from Rs. 87 14 6 (117s.) to Rs. 91 15 2 (122s.).

There was an improvement in the working of the three tea-gardens, which showed a net profit, although the area under cultivation was slightly reduced, and the total output, 165,792 lbs., was 3,495 lbs. less than in the previous year.

The year was characterised by a very heavy rainfall, and by an exceptional amount of sickness, which was the least satisfactory feature of the year's working. Special measures were taken with a view to checking the growing prevalence of malaria and of lung and bowel diseases, and particular attention was given to phthisis.

#### CIVIL JUSTICE.

The permanent Civil Judicial staff employed in Bengal during 1902 consisted of 14 High Court Judges; 29 District and Sessions Judges; 3 Additional District and Sessions Judges; a Chief Judge and 4 Judges of the Presidency Small Cause Court; 3 Provincial Small Cause Court Judges, of whom 2 also exercised the powers of a Subordinate Judge; 53 Subordinate Judges; and 290 Munsifs. Additional temporary officers were also employed in various districts during the year.

CIVIL  
JUSTICE.  
Bengal.

The number of civil suits pending on the original side of the High Court, at the end of 1901, excluding 78 pending suits received by transfer from other courts, was 1,467, and the number instituted during 1902 was 910. During the year 726 suits were disposed of, as against 964 in 1901, and the pending file rose to 1,651. The number of suits pending for more than a year (929), however, showed a slight reduction as compared with the number (954) in 1901. The number of insolvency cases pending at the end of the year rose from 179 to 211.

In the civil courts in the mufassal, the total number of ordinary suits and small causes instituted was 642,807, a number larger than in any previous year, except 1900. The increase was chiefly in rent suits. The Munsifs especially worked well, and the number of suits disposed of was 664,599, more than in any previous year, the number of pending suits being reduced from 107,678 to 105,008. The arrears list thus remained unsatisfactorily large, and the appointment of additional officers to cope with it was contemplated.

In the Presidency Small Cause Court, both institutions and disposals showed an increase over the previous year's figures. The number of pending cases had steadily risen from 1,205 in 1899 to 2,427 at the end of 1902.

The most unsatisfactory feature of the year's work was the increase in the number of appeals pending at the end of the year. In the High Court, although there was a considerable increase in the number of appeals disposed of (3,392), this was more than balanced by the increase in the number preferred (3,876), and the number of pending appeals rose from 6,978 to 7,462, a number representing over two years' average appellate work. In

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JUSTICE.

the subordinate courts 20,587 regular appeals were instituted during the year, and only 19,521 were decided, as against 19,836 in 1901; the number of appeals pending at the end of the year increased by 1,464 to 13,050.

North-West  
Provinces.

The fall which was noticed in 1901 in the number of original suits instituted in the North-West Provinces continued during 1902, when 87,399 suits were instituted, as against 91,153 in 1901. The continued fall was attributed in large measure to the general disorganisation following the spread of plague.

The pending file was reduced from 10,912 to 9,787, and a material reduction was also effected in the file of cases pending over three months. Although there were 1,948 fewer cases for disposal than in 1901, the number of cases decided after contest rose by 1,046, the percentage of suits decided after contest being 31·32, as compared with 29·9 in the previous year.

The number of appeals before the Subordinate Courts during the year was 13,704, against 13,445 in 1901. A satisfactory reduction in the pending file was, however, effected, the number of appeals disposed of rising from 9,322 to 10,576. The High Court had before it 3,628 appeals, or 450 less than in 1901, and the number disposed of fell from 1,999 to 1,695. Of these, however, 455 were first appeals, as against 120 in 1901. In view of this fact the reduction of the pending file by 146 cases indicated good progress towards the reduction of a heavy file. Of the total number of appeals decided, 1,066 were summarily rejected or dismissed, while previous orders were confirmed in 7,132 cases, modified in 1,317, and reversed in 2,033.

The results of the year's working as regards the disposal of applications for execution of decree were less satisfactory. The number of institutions fell from 90,153 to 86,250, but the number of applications pending at the end of the year was 12,485, as compared with 11,659 at the end of 1901. Realisation was complete in 19,868 cases, and partial in 16,015, while 49,141 applications were wholly infructuous. The percentage of productive applications to applications disposed of was 39·9, slightly above the average for the preceding five years.

Village Munsifs decided 5,602 cases out of a total of 6,273 for disposal: of these only 366, or 6 per cent., were contested. In 1901 the percentage was 8.

## Oudh.

The total number of suits instituted in Oudh was very nearly the same as in 1901, viz., 47,257 as compared with 47,209. The total number of suits before the courts was 55,745, and the number decided, by all courts, was 47,240, as against 46,962 in 1901. The pending files rose from 7,352 to 8,505. The duration of contested suits rose from 74·5 to 80·2 days. The total number of appeals from decrees before the courts was 4,981, as against 4,892 in 1901, and the pending file rose from 2,029 to 2,145. Of the appeals decided 175 were dismissed, and previous orders were confirmed in 1,650 cases, modified in 376, and reversed in 480. Miscellaneous appeals numbered 1,058, out of which 886 were disposed of, previous orders being confirmed in 422 cases, modified in 16 cases, and reversed in 128, while 187 appeals were rejected or dismissed.

The Village Courts Act was extended during the year under report to two tahsils of the Sultaupur district. The number of Village Munsifs appointed was 23, of whom one resigned and another was dismissed. Suits to the number of 16 were instituted in the courts of two Munsifs only. They were all decided, 7 being contested. The total value of the suits was Rs. 113 (150s.).

## Punjab.

The total number of suits instituted in Civil Courts in the Punjab was 219,599, as compared with 232,234 in the previous year. The decrease was attributed partly to the effect of the Land Alienation Act in reducing pre-emption and mortgage suits, and partly to the scarcity in the Eastern Punjab, which discouraged litigation there. The total number of suits brought by money-lenders against agriculturists fell from 105,958 to 100,449, while suits to establish a right to pre-emption declined from 5,528 to 3,537. The number of suits for trifling sums of money continued to be regrettably large.

Out of 265,771 suits for disposal in District Courts, 236,016 were decided. As compared with 1901, there was a fall of 6,502 in the number of disposals, but the pending file was reduced by 899. The average durations of contested

and uncontested cases were respectively 45 and 27 days, a slight improvement in each case.

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JUSTICE

The percentage of appeals to appealable orders fell from 24 to 22. In Divisional Courts, 6,897 appeals were instituted, an increase of 1,070, but the pending file rose only from 1,905 to 2,419. In 57 per cent. of the appeals the order of the lower court was upheld. In District Courts appeals fell from 6,201 to 6,164, and the pending file was reduced by 11 to 802. The percentage of confirmation was 56·3.

In the Chief Court, four original suits, 719 appeals from decrees, and 259 appeals from orders were instituted during the year. The latter figures show a slight fall, but the number of disposals fell similarly, and the pending file increased by one to 1,529. The decision of the lower court was confirmed in 40 per cent. of the cases.

As regards the execution of decrees, the results recorded for 1902 showed no improvement. There were in all 225,823 applications, of which 195,103 were disposed of. The amount realised was as usual small, amounting to about 22 per cent. of the value of the money decrees in execution. Steps have been taken to improve the working of the courts in this respect, but many decrees are settled out of court, and the statistics do not altogether do justice to the results obtained.

In order to expedite the disposal of suits, it was arranged during the year that in certain districts where the amount of civil work is large, the whole-time of certain officers should be devoted to the trial of such cases.

In the Burma Civil Courts there was a considerable increase in the volume of original litigation and execution proceedings, and a corresponding increase in the duration of cases. The total number of suits instituted rose from 58,143 to 64,618, the increase being common to both sections of the province. In Lower Burma the increase was due to the institution of a larger number of suits for money and moveable property; in Upper Burma it was attributed to the progress of the province. The number of cases disposed of during the year was 64,784, as compared with 57,490 in 1901. Of this number 19,424 were contested, judgment being given for the plaintiff in 68 per cent. of the cases, as in the previous year. The pending file rose from 4,859 to 5,141.

Burma.

The total number of regular appeals rose slightly to 5,024, of which 956 were pending at the end of the year. Decrees of lower courts in Lower Burma were confirmed in 59 per cent. of cases, modified in 7 per cent., and reversed in 27·8 per cent., the corresponding figures for 1901 being 59·6, 6·5, and 31·1. Out of 1,195 cases disposed of in district courts in Upper Burma, 60 per cent. were confirmed, as against 57 per cent. in the previous year. In divisional courts in Lower Burma, the decrees of the lower courts were confirmed in 66·3 of the cases decided. In Upper Burma only three appeals came before divisional judges, previous orders being confirmed in one case and modified in two. The Chief Court disposed of 306 appeals, as compared with 293 in 1901.

Applications for execution of decrees rose in Lower Burma from 20,318 to 23,739, and in Upper Burma from 6,164 to 8,411. In Lower Burma there was a noticeable fall in the percentage of wholly infructuous cases, and an increase in the amount realised.

During the year, the schemes for reorganising the administration of civil justice in Lower Burma by the constitution of superior and subordinate judicial services advanced considerably towards realisation.

During the year under review civil judicial work in the Central Provinces was for the first time carried on by a separate staff. Although the separation was not yet complete in some respects, there was considerable improvement in the quality and despatch of civil business. The number of suits instituted rose slightly, from 78,889 to 80,681, so that in spite of a substantial increase, from 76,672 to 80,622, in the number of suits disposed of, the pending file, with 13,355 cases, showed hardly any improvement. The average duration of contested cases rose from 104 to 106 days, while that of uncontested cases fell from 56 to 54 days.

Central  
Provinces.

There was a considerable increase both in the number of appeals instituted and in the number disposed of. In the court of the Judicial Commissioner, 500 regular second appeals were disposed of, as against 382 in 1901, and the

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JUSTICE.

pending file was reduced from 86 to 40. Divisional judges also disposed of an increased number of appeals, although the pending file rose somewhat. The district appellate courts had before them 5,598 appeals (as against 4,931 in 1901) and disposed of 4,703 (as against 4,080), the average duration falling from 76 to 68 days. The decrees of the lower courts were confirmed in 51.7 per cent. of all cases.

Applications for the execution of decrees numbered 91,572, considerably less than in 1901, and the pending file was reduced from 12,068 to 11,890. The aggregate amount realised showed a satisfactory increase from £75,602 to £84,592. In 18.7 per cent. of the cases satisfaction was obtained in full, and in 18.9 per cent. in part, while 57.2 per cent. were wholly infructuous. The corresponding figures for 1901 were 16.1, 18.1, and 61.1.

## Assam.

The civil judicial staff in Assam consisted during 1902 of three district judges, eight subordinate judges, and 30 munsifs. Towards the close of the year, the appointment of District Judge in the Assam Valley districts was separated from that of Commissioner. The number of original suits instituted during the year was 30,282, an increase of 1,412 on 1901. The increase was mainly in Sylhet, there being a slight decrease in the Assam Valley districts. Altogether there were 36,423 suits for disposal, and 30,689 were disposed of, an advance of 1,105 on 1901, the number of cases disposed of in the Assam Valley district, however, falling by 550. The pending file increased from 4,911 to 5,192.

In the High Court 91 appeals were preferred during the year, and 72 were disposed of, the pending file rising from 182 to 201. Previous orders were confirmed in 46 cases, modified in four, and reversed in four. In subordinate courts 1,114 appeals were instituted and 843 disposed of during the year, the pending file increasing from 634 to 938. Of 766 appeals decided after hearing, the decisions of the lower courts were confirmed in 70.4 per cent. and reversed in 18 per cent.

The number of applications for execution of decrees disposed of was 16,908, full satisfaction being obtained in 2,688 cases and partial satisfaction in 3,816.

In the hill districts and frontier tracts, there were 1,390 cases for disposal, of which 1,057 were decided.

North-West  
Frontier  
Province.

The suits instituted in the North-West Frontier Province during 1902 numbered 18,797, as against 19,514 in the previous year. The decrease in the number of suits instituted in the Peshawar District was maintained, the figures being the lowest on record since 1895, and the policy of compromise among the leading families of the district was constantly adopted. There was a satisfactory fall from 919 to 684 in the number of suits for pre-emption, which had in this province been to a large extent brought merely with the hope of obtaining some gratification in consideration of the withdrawal of the suit.

Out of 23,360 suits for disposal in the district courts, 21,040 were decided, a somewhat less number than in 1901. An unsatisfactory feature was the increase in the average duration of cases, contested and uncontested, from 37 to 42 days, and from 23 to 25 days, respectively. The increase was, however, explained as being due to temporary causes, and to the clearing off of old suits.

District judges and subordinate judges with appellate powers disposed of 552 appeals, as against 647 in 1901. The proportion of cases in which the order of the lower court was interfered with showed a satisfactory decrease from 34 to 26 per cent. Divisional courts disposed of 1,029 appeals, previous orders being interfered with in 30 per cent. of the cases.

## Berar.

The number of officers presiding over civil courts in the areas under the Resident was 34, as in the preceding year. The increase in litigation that marked the disappearance of famine was not maintained during 1902. The total number of suits fell by 1,112 to 26,494. Pre-emption and mortgage suits alone showed a marked increase; suits for money and movable property decreased largely. There were in all 37,076 suits for disposal, and the pending file was reduced from 9,924 to 8,716. The average duration of contested cases, which was high in 1901, increased further to 222 days, and improvement was looked for in this respect.

As regards appeals, there was a considerable improvement, both in respect of the number of cases disposed of and their duration, in the court of the Civil and Sessions Judge, but more appeals came before the Judicial Commissioner and the average duration in this court rose.

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JUSTICE.

Applications for execution of decrees increased by 1,430. The fact that full satisfaction was obtained in more cases, while fewer were wholly infructuous, was an evidence of the improved financial condition of the people.

The number of civil courts in Coorg was five, as in 1901. The total number of institutions declined from 1,903 to 1,650 and the value of suits fell by £1,904 to £17,790. The decrease in litigation was regarded as the effect of the general depression of trade connected with the unfavourable conditions affecting the planting interest. Judged by the results of appeals there was an improvement in the quality of judicial work. Execution proceedings (3,102), were even more numerous than in 1901: the proportion of wholly infructuous applications (74·5 per cent.), though still exceedingly high, showed a slight improvement.

Coorg.

The number of tribunals exercising civil jurisdiction in Madras remained practically as in previous years, except that village courts fell from 5,517 to 5,377. The year was marked by a considerable diminution in the volume of litigation, which was attributed partly to the favourable season and partly to the fact that the new Civil Rules of Practice were not yet thoroughly understood by the litigant public. The total number of suits instituted was 333,516, or 14,067 less than in 1901, the decrease being distributed over all classes of courts, and the number of appeals was 11,795, a decrease of 581. Although there was at the same time in most courts a falling-off in the number of suits disposed of, arrears were substantially reduced. There was a general reduction of arrears in the subordinate judges' courts and in the village and revenue courts. In the district courts an increase from 383 to 491 in the number of ordinary suits pending at the end of the year was more than balanced by a reduction from 502 to 97 of the arrears under the head of small causes. In the Presidency Court of Small Causes and in the City Civil Court arrears increased slightly.

Madras.

Before village courts 84,746 suits were instituted, a decrease of 4,781 on 1901, and 85,221 were disposed of. Out of 103,386 ordinary suits and 130,350 small causes for disposal (78,201 and 119,601 of which respectively were instituted during the year) the district munsifs disposed of 79,732 and 120,728 respectively, as against 81,903 and 128,292 in 1901. In subordinate judges' courts the numbers of ordinary suits and small causes disposed of were respectively 987 and 18,229, as against 982 and 18,760 in the previous year. In district courts the numbers were 417 and 1,293, compared with 462 and 1,442 in 1901.

In the High Court a fall from 236 to 196 in the number of suits instituted on the original side was accompanied by a decrease from 232 to 203 in the number disposed of, and 106 cases were pending at the end of the year. The average duration of contested suits was 214 days, of uncontested suits 218 days. The number of appeals of all kinds preferred to the High Court was 2,183. More were disposed of than in 1901—346 first appeals and 1,728 second appeals, against 309 and 1,090 in the previous year—and arrears under both of these heads were reduced.

In the Bombay Presidency (including Sind), the total number of suits instituted showed a small decrease, from 191,823 to 187,570, which was attributed partly to famine and plague. Of these 74 per cent. were for money or moveable property, and 15 per cent. related to immoveable property, all other suits totalling 11 per cent. The percentage of contested suits rose from 27 to 30. The disposal of civil work seems to have been considerably retarded, the average duration of contested and uncontested suits having risen from 93 and 61 days respectively to 188 and 96 days. The total number of suits disposed of was 188,267, as against 193,892 in 1901, and arrears increased from 37,618 to 38,078, the number of suits for disposal having been increased by the revival of 1,157 cases.

Bombay.

Including arrears from the previous year to the number of 4,174, there were 8,776 appeals before the courts, of which 4,514 were decided. In 2,183

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JUSTICE.

cases the decrees of the lower courts were confirmed, while 1,010 cases were not prosecuted or were dismissed. The average duration of appeals rose slightly to 240 days.

The number of applications for execution of decrees was 204,238, of which 203,807 were disposed of, arrears increasing from 57,250 to 57,681. Excluding 3,593 applications disposed of by transfer, or under the Dakhan Agriculturists' Relief Act, 67 per cent. of the applications proved wholly infructuous; full satisfaction was obtained in 12 per cent. of the cases, partial satisfaction in the remainder. The total amount recovered in execution fell from £366,907 to £278,316. The number of persons imprisoned in process of execution was 905, as against 973 in 1901.

During the year 6,073 civil court decrees were referred to the Collectors for execution, as compared with 4,967 in 1901, making with arrears a total of 14,737 decrees for disposal. Of these 4,850 were disposed of, the smallness of this number being in part attributable to the unfavourable season.

Under the Dakhan Agriculturists' Relief Act, 15,188 suits were instituted, an increase of 930 on the figures for 1901. Of these 58 per cent. were under Chapter II. The percentage of agricultural suits contested was 47. The average cost of litigation varied from 8 to 13 per cent. of the amount claimed. The village munsifs appointed under the Act, 89 in number, disposed of 4,679 out of 4,781 suits instituted. The conciliators, who numbered 233 at the end of the year, received in all 31,909 applications. Claims of the value of £35,682 were settled for £30,139, showing an abatement of 15 per cent.

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## CHAPTER IV.

## REGISTRATION.

REGISTRATION.  
General.

The Registration Law of 1877 was in force during the year under review throughout British India, with the exception of Upper Burma, for which there was a special regulation, and of certain other tracts in which the conditions are exceptional. For the purpose of registration, documents are divided into (a) those of which registration is compulsory, or necessary to the validity of the deed, and (b) those which are not required by the law to be registered, but which can be so treated or not at the option of the holder, though liable, if unregistered, to be superseded by subsequent 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 value more than Rs. 100, and, with certain exceptions, annual or longer leases. In the second category, that of optionally registrable documents, are those relating to immovable property not included in the above-mentioned classes, deeds affecting movable property, wills, and other documents. As concerns transfers of immovable property, however, the situation is affected in most provinces by the Transfer of Property Act of 1882. This Act was in force during the year under review throughout British India, with the exception of Burma, the Punjab, and Sind, and other scheduled districts. Under its provisions all transfers by sale or mortgage of immovable property must be registered, excepting that in the case of tangible immovable property of value below Rs. 100 transfer may alternatively be effected by delivery of the property. The Transfer of Property Act was amended by an Act recently passed. Offices are established in every district for the registration of documents, and for keeping copies of such documents. *Ad valorem* fees are charged for registration, and a small fixed fee for searching the records. The total registration receipts of the year 1902-03 were £312,600 as compared with £312,100 in the preceding year; and the cost of the registration offices was £171,800, leaving a surplus of £140,800, against £140,300 in the year 1901-02.

There was in the year 1902 an increase in the total number of deeds registered in Bengal from 1,418,500 to 1,468,100. The rise occurred entirely in deeds affecting immovable property, and much the larger part of it was in the compulsory classes, which contained 999,852 registrations. Sales of immovable property showed an advance of 7 per cent., numbering 397,800. Mortgages coming under the compulsory heading numbered 161,300, or over 5 per cent. more than in 1901. On the other hand, the number of money bonds declined. The aggregate value of the property affected by the documents registered amounted to £15,388,000, against £14,726,000 in the previous year; nearly one fifth of that amount is contributed by the comparatively small number of deeds (3,932) registered in Calcutta. The number of registered transfers of holdings by tenants paying at fixed rates or enjoying occupancy rights was 299,300, compared with 271,300 in 1901; the transfer was made in 214,100 cases to other ryots, and in 31,800 cases to traders or money-lenders. Occupancy holdings realised 19·2 years' purchase against 17·9 years' purchase in 1901. Registrations under the Bengal Tenancy Act numbered 88,400.

Registrations under the Bengal Land Records Maintenance Act of 1895 were in progress during the year 1902-03 in parts of the Champaran and Muzaffarpur districts, but the operations are on a small scale, and show a tendency to decrease. The total number of mutations recorded during the year under report was 2,785 (2,075 sales and 728 successions), against 3,111 in the preceding year. Only 916 mutations were recorded on application, as against 1,094 in the year 1901-02.

The number of documents registered in the United Provinces fell from 235,800 to 199,900 in the year 1902, of which 162,700 affected immovable property. The number of registered sales of such property fell from 48,700 to 44,700, owing to good harvests and other causes; that of mortgages from 79,200 to 69,900, owing to the passing of the Rent Act, and the obstacles

United  
Provinces.



- REGISTRATION.** placed in the way of mortgagees of occupancy rights by tenants; while the number of term leases fell 50 per cent., the figures returning to more normal conditions after three years of agitation over the Rent Act. The value of the immovable property affected by the deeds registered was £6,114,500. The value of all classes of property affected by all deeds registered during the year was £6,778,000.
- Punjab.** The number of documents registered in the Punjab in the year 1902 was 70,800, or nearly 6 per cent. less than in the preceding year. The fall occurred about equally in sales and mortgages of immovable property; but the comparison with 1901 is vitiated by the fact that the Punjab Alienation of Land Act was not passed until five months of the earlier year had elapsed, and that during those months the number of transactions was exceptional. The latter months of 1902 seem to show a tendency to a revival in the number of transactions. Registrations of deeds affecting immovable property numbered 64,400, which 25,100 were sales and 34,000 were mortgages. The total value of all classes of property transferred under the documents registered was £2,429,200, of which £1,914,600 is under sales and mortgages of immovable property.
- Burma.** The number of registrations in Lower Burma increased from 24,500 to 28,300, the increase occurring for the most part in deeds of which registration is compulsory; and the aggregate value of immovable property affected was £2,705,000, which was more than 30 per cent. above the figure for 1901, owing to the inclusion of some properties of exceptionally large value. Of this total, £1,145,100, or 42 per cent., represents property in Rangoon town. The registration system of Upper Burma differs from that of Lower Burma in that all deeds relating to transfers of land, however small the value, must be registered. The registered deeds affecting immovable property showed an increase in 1902 as compared with the previous year, and the value of the property affected was higher, amounting to £293,900; 519 deeds affecting movable property were filed under the optional system established in 1898-99. The total number of documents registered was 7,300.
- Central Provinces.** The number of registrations in the Central Provinces fell from 25,310 to 23,372, which is, however, higher than in some recent years, though far below the figures of the period before the passing of the Tenancy Act. Sales and mortgages of land both were fewer, but perpetual leases, which are suspected of being a means of evading the provisions of the Tenancy Act, increased in number. The aggregate value of the property affected fell to £624,400, which included £251,300 under sales, and £188,000 under mortgages, of immovable property. The greater part of the sales are made to agriculturists, while mortgages, on the other hand, are to a larger extent made to the non-agricultural classes.
- Assam.** In Assam 53,200 documents were registered, or 17 per cent. more than the total of the preceding year; 74 per cent of the registrations occurred in the Sylhet district; 46,000 of the deeds related to transactions affecting immovable property, which were considerably more numerous than in the previous year, owing partly, perhaps, to the growing impression that unregistered deeds are of little value. The aggregate value of property affected by the deeds registered was £591,800, of which £466,800 related to immovable property. The number of registrations in the optional class rose from 11,400 to 12,600.
- Madras.** In Madras the number of registrations fell from 995,800 to 937,600, owing to a decline in the price of food grains resulting from the favourable season. The number of registered sales of land was 324,300, or considerably less than in the preceding year; of that number more than half affected land worth less than Rs. 100; the number of other deeds affecting immovable property was lower than in the previous year, while those relating to movable property, which are comparatively few in number, also show a decline. The value represented by the registered sales and mortgages of immovable property amounted to £10,051,100, by other deeds affecting such property £2,796,100, and by deeds affecting movable property £698,700.
- Bombay.** The number of registrations in Bombay was 166,100, or 16 per cent. less than in 1901, the decrease being universal in all districts, and ascribed in part to the liberal grant of agricultural loans by the Government, and in part

to the ravages of plague, both of which tended to restrict the amount of loans by money-lenders. A contributing cause is also the introduction of the Deccan Agriculturists' Relief Act into Sind. The decrease occurred in practically all classes of deeds. Registered deeds of sale or exchange and mortgages of immovable property numbered 65,700 and 55,400 respectively, against 75,100 and 74,100 in the previous year; but the average value of all deeds transferring land was higher than in the preceding year, and the aggregate value represented by such deeds was £5,656,300. The aggregate value of the property affected by all instruments registered in the year was £5,790,000, or £783,800 less than in 1901.

REGISTRATION.

Under the special law for the protection of agriculturists in the four Deccan districts of Poona, Satara, Ahmednagar, and Sholapur, there were 102,300 registrations, which was 16 per cent. below the total of the previous year. The registered sales, leases, and mortgages of agricultural land numbered 88,500, and the transactions between agriculturists on both sides appear from the returns to have increased, whether owing to genuine agriculturists having undertaken money-lending or to money-lenders having registered themselves as agriculturists after acquiring land. The aggregate value of property concerned in these special registrations was £327,000.

The number of registrations in Berar amounted in 1902 to 32,200, compared with 34,900 in the preceding year. The decrease is attributed to the general tranquillity. It occurred in all classes of deeds, but especially in instruments of sale of immovable property. The total value of property transferred, £762,600, shows a proportionate decrease, the value of the land sold having been considerably less than in 1901.

Berar.

### JOINT STOCK COMPANIES.

JOINT STOCK COMPANIES.

The Report on Joint Stock Companies for 1902-03 for the whole of India shows that the number of new joint stock companies registered was 118, with a nominal capital of £1,553,000, and a paid-up capital of £132,100; while 83 companies, with a paid-up capital of £795,800, ceased to work. On the other hand, the paid-up capital of 434 companies was increased by an aggregate amount of £1,396,000, while 49 companies reduced their paid-up capital by £37,400 in all. The net result was that at the end of the year there were in operation 1,440 companies, with a paid-up capital of £26,201,000, which is 2·7 per cent. larger than the figure for 1901-02. The companies work chiefly in the provinces of Bengal and Bombay, which possess 43 and 40 per cent. respectively of all the paid-up capital; in Madras the number of companies (424) was larger than in either of the two former provinces, but the paid-up capital constituted only about 7 per cent. of the whole; in the United Provinces the paid-up capital of the 86 companies aggregated £1,268,000, or 5 per cent. of the whole; in no other province did the aggregate paid-up capital of registered companies reach £600,000. The Bombay companies are, taking the figures as they stand, the richest, the average of paid-up capital for the 329 companies in that presidency being £31,600; while for the 407 companies of Bengal it is £27,900, for the 424 of Madras £4,300, and for the 86 of the United Provinces £14,700. The average in Bengal has risen much in recent years, owing to the extinction of most of the native provident societies with practically no paid-up capital. In Bombay, on the other hand, companies limited by guarantee, and working without any capital paid-up, are still active, and though the number of them was reduced during the year by 20, there were still 72 of them at work in March 1903. The distribution of paid-up capital among registered companies for different classes of industry was as follows:—

	Paid-up Capital.		Paid-up Capital.
	£		£
Banking and insurance	3,308,000	Mills and presses	12,714,000
Trading and shipping	4,861,000	Tea and planting	2,438,000
Mining and quarrying	1,671,000		

JOINT  
STOCK  
COMPANIES.

The group of companies with the largest aggregate subscribed capital, £12,714,000, constituting nearly 49 per cent. of the total paid-up capital, were for weaving and nearly 59 per cent. of the total capital of the Bombay Presidency. The number of joint stock companies of which the total paid-up capital has risen from

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onged to the  
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## PATENTS.

## PATENTS AND DESIGNS.

The total number of applications filed in 1902, the latest year for which statistics are to hand, for the registration of inventions under the Patents Law was 524, or 28 more than in the preceding year. Of these, 46 were refused or abandoned, and 120 were undecided at the end of the year. Fifty-three only of the applications were made by natives of India, 144 by Anglo-Indians, and 327 by other persons. The number of specifications filed during the year was 375, or 37 less than in the preceding year. The number of exclusive privileges kept alive by payment of the prescribed fees was 457. There were 28 applications for the registration of designs, of which 10 were rejected. Of the inventions for which protection was sought, 62 were connected with railways, 21 with electrical contrivances, 17 with the manufacture of tea, 13 with the treatment of fibres, and seven with the manufacture of indigo.

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CHAPTER V.

FINANCE.

FINANCE.

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 are next stated: and the two last 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 sixteen pence to the rupee, and that the Government is under obligations to carry out various transactions at fixed rates differing from the rate of sixteen pence to the rupee, are included in a single line under the head of Exchange in the Miscellaneous group of Revenue and Expenditure.

GROSS REVENUE AND EXPENDITURE.

The gross revenue and expenditure of British India in 1902-03 may be thus compared with the figures for 1901-02:—

Gross Revenue and Expenditure.

	1901-02.	1902-03.	Difference.
Revenue	£ 76,344,525	£ 77,434,915	+1,090,390
Expenditure	71,394,282	74,365,366	+2,971,084
Surplus	£ 4,950,243	3,060,549	-1,880,694 ( <i>worse</i> )

In the gross revenue are included receipts of the various civil and military departments and interest receipts, amounting altogether to about £4,000,000, which are rather of the nature of a set-off against the corresponding charges than revenue proper: and, on the other hand, there are included in the gross expenditure the refunds, assignments and compensations, the cost of the cultivation and manufacture of opium, the expenses of the railways, irrigation, post-office, telegraphs and mint, and some miscellaneous charges, which are a direct set-off against the revenue. The financial position of the Government can be much better appreciated by looking at the Return of Net Income and Expenditure, which is annually laid before Parliament.\* The following is a statement for 1901-02 and 1902-03 of the net revenue and expenditure, i.e., the revenue and expenditure remaining after the deduction in each case of the receipts and charges just mentioned:—

\* See Parliamentary Paper H. of C. 95 of 1904.

## NET REVENUE.

FINANCE.  
Net  
Revenue  
and Ex-  
penditure.

	1901-02.		1902-03.		Net Revenue Increase (+) or Decrease (-).	
	£	₹	₹	₹	₹	₹
<b>Land Revenue, &amp;c. :</b>						
Land Revenue	17,533,612		17,689,653		+156,041	
Forests	1,153,820		1,235,029		+81,209	
Tributes from Native States	556,980		581,995		+25,015	
		19,244,412		19,506,677		+262,265
<b>Opium : Net Receipts</b>		3,240,068		2,816,869		-423,199
<b>Taxation :</b>						
Salt	5,673,991		5,931,933		+257,942	
Stamps	3,409,436		3,434,401		+24,965	
Excise	4,025,770		4,384,181		+358,411	
Provincial Rates	2,737,448		2,741,419		+3,971	
Customs	3,734,517		3,829,848		+95,331	
Assessed Taxes	1,362,227		1,402,672		+40,445	
Registration	312,081		312,659		+578	
		21,255,470		22,037,143		+781,673
<b>Commercial Undertakings* :</b>						
Post Office	103,085		83,157		-19,928	
Telegraph	3,922		-32,765		-36,687	
Railways	846,616		228,919		-617,697	
Irrigation	172,872		193,746		+20,874	
		1,126,495		473,059		-653,436
<b>Miscellaneous Receipts :</b>						
Mint	51,310		-12,776		-64,116	
Miscellaneous	22,239		-254,516		-276,555	
		73,579		-267,292		-340,871
<b>Exchange</b>		25,494		31,571		+6,077
<b>Total Net Revenue</b> - £		41,965,548		44,688,257		+2,722,709

## NET EXPENDITURE.

	1901-02.		1902-03.		Net Expenditure Increase (+) or Decrease (-).	
	₹	₹	₹	₹	₹	₹
<b>Debt Services :</b>						
Interest on Public Debt (other than that charged to Railways and Irrigation) and other obligations.		1,158,658		965,018		-193,640
<b>Military Services :</b>						
Army	14,786,342		16,221,402		+1,435,060	
Military Works	917,140		1,058,368		+141,228	
		15,703,482		17,279,770		+1,576,288
<b>Collection of Revenue</b>		4,582,407		4,704,858		+122,451
<b>Civil Services :</b>						
Civil Departments	9,885,601		10,366,855		+481,254	
Miscellaneous Civil Charges	3,559,115		3,646,258		+87,143	
Civil Works	3,235,929		3,697,139		+461,210	
Construction of Railways charged to Provincial or Local Revenues.	-66,709		51,659		+118,368	
		16,613,936		17,758,911		1,144,976
<b>Famine Relief and Insurance</b>		884,512		982,576		+98,064
<b>Provincial and Local Surpluses or Deficits.</b>		1,072,310		-72,325		-1,144,635
<b>Total Net Expenditure</b> - ₹		40,015,305		41,618,708		+1,603,403
<b>Excess of Income over Expenditure.</b>		1,950,243		3,069,549		+1,119,306
		41,965,548		44,688,257		

\* In this table, for the first time, the Commercial Undertakings are treated as a branch of Revenue. The receipts from these Undertakings have exceeded the charges since 1893-1899.

Thus there was in 1902-03, as compared with the previous year, a decrease in the net revenue of £277,291, and an increase in the net expenditure of £1,603,103, making the position worse by £1,880,694, and producing a surplus of £3,069,549 in 1902-03, as compared with a surplus of £4,950,243 in 1901-02. This is the result of a decrease in the net revenue in India by £184,762, an increase of net expenditure in India by £906,363, and an increase of £789,569 in the net disbursements of the Home Treasury.

FINANCE.  
Net  
Revenue  
and Ex-  
penditure.

Detailed explanations of the figures of revenue and expenditure are published annually 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 most important increases and decreases in 1902-03 :—

*Net Revenue.*

*Increases.*—The improvement in the Excise revenue, £358,411, was general throughout India, and is attributed to increased prosperity. The increase in the Salt Revenue, £257,942, is partly attributed to the same cause, partly to improved facilities of distribution favouring consumption; it would have been somewhat larger but for the reduction in the salt duty which came into force on the 18th March 1903, and lessened the receipts for the last fortnight of the year.

*Decreases.*—The net revenue from Railways shows a falling-off of £617,667, due chiefly to heavier expenditure on State railways for maintenance and renewals. Under Opium there was a decrease of £393,199. In 1901-02 the average price obtained at the Calcutta opium sales was higher than that realised in 1902-03; in addition, the crop was small in the earlier year and the payments to cultivators were accordingly low.

*Net Expenditure.*

*Increases.*—The most important is that in the Army charges, viz., £1,435,060. In England, the net payments to the War Office on account of the British forces in India amounted to £852,000, as against £64,010 in the previous year. In that year there were large refunds by the War Office of sums overpaid in earlier years, and £220,000 was also received from the War Office as a moiety of the cost of bounties given to soldiers in India to extend their service with the colours. In India there was a smaller saving through the absence of troops in South Africa, China, and Somaliland, the amounts being £743,000 in 1901-02 and about £480,000 in 1902-03, while an addition of 2*d.* a day to the pay of the British soldier from the 1st April 1902 increased the charges by about £214,000. Since the 1st October 1902 the Hyderabad Contingent has been paid by the Government of India, and about £114,000 was issued on this account in 1902-03. Lastly, the net expenditure in England on the Troop Service was increased by £121,379 in consequence of the restoration of the system of Indian reliefs after the dislocation that occurred during the war in South Africa.

The net charges of the Civil Departments show an increase of £481,254, mainly on Education, the General Administration, and Political services. A portion of the increase was due to expenses in connection with the Delhi Durbar.

Of the additional outlay on Civil Works, £461,210, a portion was spent on the construction of schools, while part was the outcome of a special grant by the Government of India to those provinces in which famine and other causes had necessitated the postponement of useful and urgent works.

*Decreases.*—In 1901-02 the Government of India, having regard to the strain that had been thrown on Provincial revenues by famine, made special grants of £1,362,900 to the Provincial Governments, and the balances of these Governments were higher by £1,072,310 at the end of that year than at the beginning. In 1902-03, on the other hand, they defrayed from their balances £72,425 of the expenditure of the year. Thus the Provincial adjustments in 1902-03 were more favourable to the Government of India by £1,144,735 than in the previous year.

## FINANCE.

The tables in the Appendix show the net revenue and expenditure in India of the several Provinces under the chief heads for the years 1901-02 and 1902-03, and the net payments in England.

The following summary shows the surpluses or deficits in the various Provinces and the net expenditure by the Government of India and the Secretary of State :—

Provinces, &c.	1901-02.		1902-03.	
	Surplus.	Deficit.	Surplus.	Deficit.
	£	£	£	£
Bengal	8,934,492	—	8,413,632	—
United Provinces	4,490,639	—	4,488,197	—
Punjab	2,871,805	—	2,541,780	—
Burma	1,807,776	—	2,349,816	—
Central Provinces	508,219	—	577,446	—
Assam	287,176	—	225,937	—
Madras	3,515,872	—	3,760,650	—
Bombay	3,337,582	—	3,498,215	—
North-West Frontier Province	—	—88,830	—	—221,712
Berar	—	—	357,922	—
India, General	—	—3,837,041	—	—5,255,313
England	—	—16,877,447	—	—17,667,016
Net result	4,950,243	—	3,039,549	—

## CAPITAL OUTLAY ON PUBLIC WORKS.

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

Capital  
outlay on  
public  
works.

	1901-02.	1902-03.
Amount supplied by Ordinary borrowing or from the Cash Balances, without being charged against the Revenue of the year :	£	£
State Railways	2,759,503	3,260,640
Irrigation Works	547,551	564,191
Amount met by Debenture Stock issued by the East Indian and South Indian Railway Companies.	764,098	1,303,361
Amount defrayed from Revenue :		
Provincial Railways	—66,709	54,659
Surveys of Railways charged to Revenue in previous years	81,671	—
Protective Railways	—	1,625
Protective Irrigation Works	70,692	94,742
Other Irrigation Works*	61,398	15,840
Total Direct Outlay by the State	4,218,204	5,295,058
Outlay by companies guaranteed or subsidised by Government	2,404,116	2,194,067
Outlay by railways outside Government accounts	269,940	668,060
Outlay by Local Boards	107,007	—
Total Capital Outlay on Railways and Irrigation - £	6,999,267	8,157,185

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

DEBT.

FINANCE

Debt.

The following table shows the alteration in the amount of the debt that took place in 1902-03, the amount of the rupee debt in India being expressed in pounds at the rate of Rs. 15 = £1 :—

	Amount of Debt on 31st March 1902.	Amount of Debt on 31st March 1903.	Increase.	Decrease.
	£	£	£	£
In India (permanent)	77,460,922	78,369,377	908,455	—
In England (permanent)	130,307,090	130,296,261	—	10,829
„ (temporary)	4,000,000	3,500,000	—	500,000
Total	£ 211,768,012	212,165,638	397,626	—

In India a loan of one crore and a half of rupees (£1,000,000) was raised at an average price of about 97·6, while debt to the amount of £91,545 was discharged. In England £1,500,000 India 3 per cent. Stock was issued (mainly to discharge Great Indian Peninsular Railway Debentures) at an average price of £101 10s. 2d. per cent. Of the £4,000,000 sterling bills which fell due in June, September, and December 1902, and March 1903, £3,500,000 were replaced at average prices varying from £2 18s. 4d. to £3 11s. 1d. per cent., and £500,000 were paid off without replacement.

OTHER OBLIGATIONS OF THE GOVERNMENT OF INDIA.

Particulars regarding the obligations of the Government of India other than the permanent or temporary debt, and of loans by the Government of India and the Provincial Governments, are given in the following tables :—

Other obligations.

OBLIGATIONS.

	Amount outstanding 31st March 1902.	Amount incurred 1902-03.	Amount discharged 1902-03.	Amount outstanding 31st March 1903.	Increase 1902-03.	Decrease 1902-03.
	£	£	£	£	£	£
Savings Bank Deposits	8,404,415	3,392,085	2,755,625	9,040,875	636,460	—
Deposits of Service Funds.	1,141,595	95,216	78,919	1,157,892	16,297	—
Excluded Local Funds	222,293	690,634	669,824	243,103	20,810	—
Railway Funds -	73,420	54,567	52,744	75,243	1,823	—
Deposits of Sinking Funds.	72,427	9,504	—	81,931	9,504	—
Special Loans	1,130,176	—	3,374	1,126,802	—	3,374
Treasury Notes	29,861	—	—	29,861	—	—
Departmental and Judicial Deposits.	3,443,573	16,701,174	16,589,506	3,555,241	111,668	—
Total	14,517,760	20,943,180	20,149,992	15,310,948	793,188	—



## FINANCE.

## LOANS BY THE GOVERNMENT OF INDIA AND THE PROVINCIAL GOVERNMENTS.

—	Amount outstanding 31st March 1902.	Amount advanced 1902-03.	Amount repaid 1902-03.	Amount outstanding 31st March 1903.	Increase 1902-03.	Decrease 1902-03.
	£	£	£	£	£	£
Loans by the Government of India to Port Trusts, Municipalities, Native States, &c.	8,817,102	669,473	687,083	8,799,492	--	17,610
Loans by the Provincial Governments.	3,586,360	591,511	679,098	3,798,773	--	87,597
Total - - -	12,703,462	1,260,984	1,366,181	12,598,265	--	105,197

## 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.	
	1901.	1902.	1903.	In 1901-02.	In 1902-03.
	£	£	£	£	£
In India - - -	10,598,981	11,880,301	12,082,416	+1,281,320	+202,115
In England - - -	4,091,926	6,693,137	5,767,787	+2,601,211	-925,350
Total - - -	14,690,907	18,573,438	17,850,203	+3,882,531	-723,235

## Coinage and paper currency.

## COINAGE AND PAPER CURRENCY.

The value of the coinage at the Mints in India was :—

—	1901-02.	1902-03.
	£	£
Silver - - - -	7,537,597	12,383,966
Copper - - - -	90,761	91,765
Total - - - - £	7,628,358	12,475,731

The silver coinage in 1902-03 consisted of 112,722,680 rupees, 2,471,516 quarter rupees, 4,431,301 eighth rupees, and 31,671,117 British dollars for use in Singapore, Penang, and Hong Kong. A small part of the rupee coinage was undertaken on behalf of the Native State of Indore: the balance was for circulation in British India.

The receipts and expenditure of the Indian Mints were as follows :—

—	1901-02.	1902-03.
	£	£
Receipts - - - -	555,369	411,238
Expenditure - - - -	504,029	424,014
Net Receipts - - - -	51,340	-12,776

The net profit on the coinage of rupees, amounting to £264,028, which is included in "expenditure" in the preceding table, was transferred to the Gold Reserve Fund, which, on the 31st March 1903, consisted of Consols of the nominal value of £4,052,561 and a sum of £1,028 held in the Treasury balances in India. FINANCE.

*Paper Currency.*—On the 31st of March 1903 the value of notes in circulation was £23,815,738, being greater by £2,708,209 than on the corresponding date in 1902. The paper currency reserve was, in gold £9,859,565, in silver £7,289,510, and £6,666,663 invested in securities of the Government of India.

#### RATE OF EXCHANGE.

In 1901-02 the Secretary of State for India in Council sold Bills and Telegraphic Transfers on the Treasuries in India for Rs. 27,58,95,050, and received for them £18,379,611; the average rate was thus *ls. 3·988d.* per rupee. The Bills and Telegraphic Transfers sold in 1902-03 amounted to Rs. 27,74,67,265; the sterling received was £18,499,946; and the average rate was *ls. 4·00184d.* per rupee. Rate of exchange.

## CHAPTER VI.

## SURVEYS.

## SURVEYS.

## SURVEY OF INDIA DEPARTMENT.

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 1901-02. Particulars of the progress of forest and cadastral surveys, which are carried out partly by local agencies, are given in the chapters on forests and land revenue. The Survey Department has now a general control over the forest surveys, and in most provinces over the cadastral surveys. The recent Bombay survey, however, was conducted by a separate department, and there is also a Madras Survey Department in charge of the operations in that Presidency.

Reviewing first the operations of the Survey of India Department as a whole, the field operations of the year were carried on by three double and 15 ordinary parties and two detachments. Of these, one party was employed on trigonometrical surveys; one double and six ordinary parties on topographical surveys; one double and two ordinary parties on forest surveys; one double and two ordinary parties on cadastral surveys; two detachments on traverse surveys; and four parties on scientific operations. The operations of the Forest Survey Branch were continued in addition to the above.

Trigono-  
metrical.

The party (No. 24) which was engaged on trigonometrical work, was employed in completing the Manipur Minor Meridional series, extending it southwards over the Kyaukpyu Yomas, in the neighbourhood of Mount Victoria. The work was completed, and a very satisfactory junction effected with two stations of the Burma Coast series.

Topo-  
graphical.

The total area topographically surveyed during the year was 8,801 square miles of new survey and 10,084 square miles of revision survey; 62 per cent. of this area was surveyed on the 1-inch scale, the remainder for the most part on the scale of 2 inches to the mile. Parties Nos. 11 and 21, engaged in Upper Burma, were amalgamated during the year, and the aggregate area completed by them amounted to 2,663 square miles on the 1-inch scale, besides some minor operations.—No. 10 party was engaged in the eastern portion of Upper Burma in revising and adding to the maps produced by reducing the cadastral sheets, inserting hills and other topographical detail. This work was carried out over the large area of 4,100 square miles, at a cheap rate. Another party, No. 3, engaged in Lower Burma, completed 1,255 square miles of detail survey, for the most part on the 1-inch scale, besides the usual triangulation, and revised maps reduced from cadastral surveys over an area of 1,048 square miles. The whole question as to how far topographical surveys should be carried in Burma is under discussion, the quarter-inch reconnaissance survey which was commenced as soon as Upper Burma was occupied being, over large areas, at present the only guide to the topography of the country. No. 12 party continued the survey of Sind on the 2-inch scale, and completed an area of 1,597 square miles, besides a special survey of the desert portions of the Khairpur State. The work of No. 15 party consisted in topographical survey of 4,483 square miles in Sind and Kashmir, in addition to reconnaissance survey over a large area on the frontier. They also commenced the survey of the cantonments in the Bengal command, completing the work in eight cantonments and bazars. The Himalaya party, No. 18, having completed its work in the Kangra district, was transferred to the plains of the Punjab, to compile a topographical map from the large scale *patwari* maps of the province. Three thousand square miles of the Montgomery and Lahore districts were thus mapped, besides riverain surveys, and boundary and other surveys near Simla. The survey of the Lushai hills having been closed, No. 14 party was strengthened and transferred to the United Provinces, to take up the topographical survey

of Allahabad and other districts; 1,988 square miles were prepared by traversing, and an area of 203 square miles was mapped. SURVEYS.

Two parties (Nos. 22 and 23) were combined and employed on latitude observations at stations on the Calcutta meridional series and Darjeeling triangulation. The zone of positive deflection was found to extend very much closer to the foot of the hills than was expected, and the transition from a positive deflection to a large negative one was found to take place with startling rapidity. An interesting paper by Major Burrard, on the whole question of local attraction in India, especially with reference to the effect of the mass of the Himalayas, was published among the professional papers of the Department during the year. Steps have since been taken to procure from Europe accurate pendulum apparatus for the further investigation of this problem. Special operations.  
Geodetic.

The recording of tidal curves by self-registering tide gauges, their reduction, and the publication of tide tables, were continued during the year by No. 25 party at 13 stations, of which seven are permanent and six are temporary. The new tidal observatory at Bassein was opened during the year. The levelling detachment was again employed on the Eastern Bengal State Railway, and later in the year in Bengal from Siliguri to Sonakhoda base-line, and in Assam from Fakirganj to Gauhati, completing 259 miles of double levels. During the following season it was to be employed in Upper Burma. Tidal and levelling operations.

A Magnetic Survey party commenced field work during the year, confining its operations to the country west of the line joining the Bombay and Dehra Dun observatories, the only base stations in actual work. Three observers only were employed in this first season, and magnetic determinations were made at 163 stations. The Kodaikanal base has since been installed; and that at Barrackpore, which will take the place of the Calcutta one, rendered useless by the electric tramways, is under construction. Magnetic.

Under the geographical head are included surveys and reconnaissances which are executed on the scale of half an inch to a mile or smaller scales. During the year an area of 7,938 square miles of survey on the quarter-inch scale was completed in Kashmir, and 4,556 square miles on the half-inch scale in Sind; and a very large addition made to our knowledge of the Indian frontier geography, some 63,000 square miles being surveyed and reconnoitred in the Shan States and on the North-west Frontier. Geographical surveys and explorations.

The Drawing Office was engaged as usual in the compilation and revision of the various general maps, and on additions to standard sheets when fresh material was available, besides publishing and preparing the sheets received from the field parties, issuing cadastral maps, and miscellaneous work. Two sheets of the new 1:1,000,000 map of India are practically completed, and two other sheets are well advanced. The 32-mile railway and canal map has been published, but is not entirely satisfactory. The new 32-mile lithographed map of India was in hand, as well as general maps on smaller scales. The usual large quantity of provincial and other maps and plans kept the drawing, photographic, and lithographic branches busy during the year. Map production.

#### OTHER SURVEYS.

The marine survey vessel "Investigator" completed a survey of a large portion of the Tenasserim coast, from Button Island to Toby Rock, and then proceeded to the Chittagong coast, where the coastline was sounded and charted for 60 miles; and subsequently to the Andaman Islands, where it was required to take soundings of minor harbours and inlets. The "Nancowry" completed a survey of Cox's Bazar, and then joined the "Investigator" in its work on the Chittagong coast. An examination of the Megna river, in Eastern Bengal, conducted by the officers and crew of the "Nancowry," showed that the river had altered greatly since it was last surveyed in 1884, and that it would be futile to make a detailed survey. Owing to its changes, its strong tides, and its heavy bores, it is dangerous for any but craft of very light draught. Marine surveys.

The Geological Survey Department during the year 1902-03 was engaged in the investigation of coal fields on the Shillong plateau in Assam and in the Mianwali district of the Punjab, on neither of which was a decision reached during the year; also of promising deposits of chrome iron in Baluchistan and fire-clay in Assam. A survey of the auriferous region of Geological.

**SURVEYS.** Chota Nagpur was continued and completed, but the results were not favourable, as they did not include a single instance which could reasonably be regarded as a legitimate mining proposition. Other inquiries of an economic nature were also carried out in connection with iron and manganese in the Dhar State, an oilfield in Burma, and other matters, with inconclusive results. Geological surveys not having a directly economic character were also in progress in many parts of India, including Assam, Baluchistan, Burma, the Dhar State in Central India, Kashmir, and Madras, while an officer of the Department accompanied Professor Koken, of Tübingen, on a tour of observation in the Salt Range of the Punjab.

**Botanical.** The Botanical Survey of India is also being conducted not only from a scientific, but also from an economic and agricultural point of view. Various investigations were carried out by officers of the Department, or by native collectors, with a view to the completion of the botanical records and publications. The economic questions dealt with were chiefly concerned with the Indian yams, the sources of the fibres vaguely classed as Indian hemp, the sources and nature of the supply of indigo seed, and similar matters. The number of plants distributed from the Calcutta Botanic Garden during the year was 37,368.

**Archæological.** The Archæological Surveyor of Western India was occupied in visits to monuments in Ahmedabad, Bijapur, and other parts of Bombay, and also toured with the Director-General of Archæology in Central India, Rajputana, and Sind. The expenditure on the conservation of ancient monuments in the Bombay Presidency amounted to £1,120. In the United Provinces a report on Akbar's tomb at Sikandra near Agra, by the late Mr. Smith, was submitted to the Government; the staff was engaged in surveying historical buildings in the Agra fort. The amount of £10,570 was spent in the province during the year from Government revenues on conservation. The Surveyor of the Punjab circle reports that several important works were commenced and partly completed, with a view to the conservation of monuments, an allotment of £4,300 having been made for the purpose. He also submits a memorandum on the preservation of archæological material in the Peshawar district. In Madras the expenditure is given as £1,147. The excavation of prehistoric remains at Adinachallur is the most notable operation of the year, and resulted in the unearthing of a very large number of objects of great interest. In Bengal, the Archæological Surveyor visited seven districts, and also Assam, in the course of his tours. The Director-General was to have visited Bengal, but the visit had to be postponed. In Burma, £2,746 was spent on conservation. Much progress was made in improvements to the Mandalay palace and its surroundings. The Director-General of Archæology has been engaged in tours of inspection in several provinces, in the course of which he is able to give advice to the local authorities, with a view to the organisation of archæological efforts on a consistent plan throughout India.

#### METEOROLOGICAL DEPARTMENT.

**Meteorological Department.** Meteorological observations were recorded during the year 1902-03 at 226 stations, of which 190 are maintained by the Government of India. Of these latter, seven were first-class observatories and 38 second-class, the remaining 145 belonging to class 3, in which less frequent observations are taken. The area under observation embraces not only India, but the whole of the Arabian Sea and Indian Ocean down to Zanzibar and the Seychelles, and the area northwards up to Resht and Kashgar. Besides observing stations, inquiries are made from ships entering Indian ports, which give valuable meteorological data. The points investigated are rainfall, snowfall, barometric and thermometric readings, cloud movements, storms and earthquakes. Daily charts and weekly and monthly reviews, as well as seasonal forecasts and storm warnings, are issued.

The forecast of the probable rainfall for the monsoon of 1902, issued in June of that year, was founded mainly on information regarding the snowfall on the mountain region to the north and north-west of India, and on the distribution of barometric pressure in India and over the Arabian Sea during the month of May, as compared with the meteorology of previous years. The forecast predicted a rainfall of not more, and possibly less, than normal

strength on the average of the whole season, though it was anticipated there would be no abnormal delay in the setting in of the currents. This forecast was not quite satisfactory, as the prolonged weakness of the Arabian Sea current until the middle of August was not anticipated. But the general distribution of the rainfall, as indicated by the forecast, was on the whole in moderate accordance with the facts, except in the cases of the Central Provinces and Berar, where the rainfall was in considerable to large defect, and where there were partial crop failure, owing chiefly to deficient rainfall and the early termination of the monsoon rains. Besides these two provinces, the only province in which the rainfall of the monsoon season differed by 10 per cent. from the average was Madras, where there was an excess of 18 per cent.

The forecast of the winter rains, from December 1902 to February 1903, was drawn up in December 1902, and predicted normal to abundant rainfall in the whole of North-Western India and in the Gangetic plain. The result showed, however, a rainfall in North-Western and Central India much less than was anticipated; and this was only partially compensated by the rainfall in March, due to the continuance of cold weather conditions in that month.

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 revised system of storm signals introduced in 1898 provides for fuller signals being sent to the larger ports, the port authorities deciding in each case whether they will have the full or the less complete signals. On the Bay of Bengal 22 ports received warnings, three of them on the "brief" system. On the western side of India warnings were sent to 24 ports, to seven of them on the "extended" system. The system of flood warnings to canal, civil, and railway officers, to military officers, and to private firms, continued to be useful; 759 such warnings were issued by the Meteorological Department during the year. The warnings are generally stated by the recipients to have been timely and satisfactory, but criticisms and suggestions are invited, and, in cases where they have been received, have been adopted.

The average rainfall and the actual rainfall of the three years 1898 to 1900, in the regions into which India has been divided, were as follows:—

Meteorological Division.	Area, Square Miles.	Number of Stations.	Normal Rainfall.	Actual Rainfall.		
				1900.	1901.	1902.
Punjab Plains - - -	120,000	29	<i>Inches.</i> 21·28	<i>Inches.</i> 24·48	<i>Inches.</i> 18·08	<i>Inches.</i> 15·92
United Provinces of Agra and Oudh. - - -	83,500	44	38·15	36·97	32·40	33·17
Rajputana, East - - -	67,000	29	25·98	28·69	14·78	19·73
Rajputana, West - - -	58,000	10	11·71	10·61	5·76	7·62
Central India States - - -	91,000	25	42·78	42·18	41·50	36·87
Behar - - -	30,000	15	45·58	43·64	38·77	44·03
Western Bengal - - -	38,000	14	53·21	61·93	47·82	47·60
Lower Bengal - - -	54,000	28	66·16	71·66	65·82	70·51
Assam and Cachar - - -	61,000	17	95·03	82·23	89·36	106·27
Orissa and Northern Circars - - -	27,000	32	52·10	54·79	46·23	49·65
Central Provinces, South - - -	61,000	19	52·47	58·68	53·38	35·51
Berar and Khandesh - - -	43,000	13	35·40	34·46	34·47	29·85
Gujarat - - -	54,500	18	33·02	29·32	16·00	29·92
Sind and Cutch - - -	68,000	10	8·26	6·13	2·70	9·25
North Deccan - - -	48,000	13	30·60	27·55	30·52	32·60
Konkan and Ghâts - - -	16,000	11	139·15	155·79	189·09	134·78
Malabar and Ghâts - - -	18,000	8	114·93	126·69	119·77	124·76
Hyderabad - - -	74,000	17	33·27	30·77	32·17	28·26
Mysore and Bellary - - -	58,000	18	29·15	25·90	28·41	30·43
Carnatic - - -	72,000	36	36·84	33·08	39·13	47·75
Arakan - - -	11,000	6	154·30	131·41	150·62	156·44
Pegu - - -	32,500	7	72·55	78·55	73·13	66·43
Teuasserim - - -	10,500	4	173·33	179·15	175·15	151·11
Upper Burma - - -	?	13	39·50	44·19	38·30	36·85

Over the whole of India the rainfall of 1902 was 3·92 inches below the normal, or 4·13 inches if Burma be excluded.

LAND  
REVENUE.

## CHAPTER VII.

LAND REVENUE, INCLUDING FISHERY RECEIPTS AND  
CAPITATION TAX; AND WARDS' ESTATES.

The subjoined table shows the receipts and disbursements on account of land revenue for each province, as entered in the public accounts for the financial year 1902-03.

## DETAILS of LAND REVENUE and EXPENDITURE.

	In His (Gene- ral) and Berar.*	Bengal.	United Provinces.	Punjab.	North- West Frontier Pro- vince.	Burma.	Central Pro- vinces.	Assam.	Madras.	Bombay.	TOTAL.
REVENUE.	£	£	£	£	£	£	£	£	£	£	£
Ordinary Land Revenue -	640,678	2,639,908	4,240,230	1,409,669	106,119	1,283,101	523,130	399,761	3,883,744	2,102,577	17,129,717
Recovery of Survey and Settlement Charges.	—	26,228	—	—	—	—	—	—	—	—	26,228
Sale of Proprietary Right of Government in Land.	—	790	150	70	—	—	—	76	—	—	1,086
Assessment of alienated lands, less quit-rents.	—	3,850	—	13,656	268	—	—	—	—	633,109	657,883
Sale of Waste Lands and Redemption of Land Revenue.	80	10,837	487	73,406	1,231	5,260	28	306	2,534	—	94,539
Capitation Tax, or House Tax levied in lieu.	440	647	—	—	—	652,056	—	—	—	—	653,152
Receipts for the Improvement of Government Estates.	—	45,529	—	—	—	—	—	—	—	—	45,529
Fisheries and other Receipts classed as Miscellaneous.	3,583	16,164	33,396	39,800	6,960	284,521	4,267	30,305	202,305	21,558	647,114
<b>Total Gross Revenue -</b>	<b>649,698</b>	<b>2,743,303</b>	<b>4,274,163</b>	<b>1,835,401</b>	<b>114,568</b>	<b>2,224,958</b>	<b>527,425</b>	<b>430,538</b>	<b>4,088,943</b>	<b>2,762,344</b>	<b>19,351,235</b>
<i>Deduct</i> portion credited to Public Works for irrigation.	—	—	89,065	100,403	3,152	308	—	—	511,409	109,965	814,393
<b>Total credited to Land Revenue for 1902-03.</b>	<b>649,698</b>	<b>2,743,303</b>	<b>4,185,098</b>	<b>1,434,998</b>	<b>111,416</b>	<b>2,324,950</b>	<b>527,425</b>	<b>430,538</b>	<b>3,877,444</b>	<b>2,652,278</b>	<b>18,486,845</b>
<b>Total for 1901-02 -</b>	<b>93,680</b>	<b>2,720,775</b>	<b>4,215,833</b>	<b>1,861,892</b>	<b>69,816</b>	<b>2,209,382</b>	<b>570,036</b>	<b>411,152</b>	<b>3,396,544</b>	<b>2,942,407</b>	<b>18,388,018</b>
<b>EXPENDITURE.</b>											
District Administration -	34,424	209,733	232,823	120,820	20,231	153,753	59,063	37,788	276,906	204,991	1,349,635
Survey and Settlement -	9,561	47,813	36,801	37,163	17,250	52,076	16,398	3,022	82,630	8,077	280,781
Land Records and Agriculture.	10,450	6,702	240,129	99,763	9,132	42,780	42,320	14,230	132,642	161,820	749,987
Charges directly connected with the collection of Land Revenue.	6,491	37,861	13,306	1,398	2,049	125,861	2,434	10,967	239,705	89,849	528,929
<b>Total Charges in India.</b>	<b>60,916</b>	<b>302,109</b>	<b>523,064</b>	<b>259,213</b>	<b>48,662</b>	<b>373,600</b>	<b>120,215</b>	<b>65,974</b>	<b>691,943</b>	<b>404,737</b>	<b>2,909,332</b>
Charges in England -	—	—	—	—	—	—	—	—	—	—	148
<b>Total Charges, 1902-03 -</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>2,909,480</b>

\* From 1st October 1902 only.

The chief source of revenue in India has from ancient times been a share of the produce of the land. Nearly two-thirds of the total population

returned some form of agriculture as their principal means of subsistence at the last census. The administration of the land revenue is, therefore, even more important from a social and political than it is from a financial point of view; and a proper treatment of the subject involves not only an account of the revenue collections but also some notice of the relations between landlord and tenant, as well as between the Government and the revenue payer, and of changes in ownership or occupancy of the land.

REVENUE SURVEYS AND SETTLEMENTS.

Indian revenue settlements are of two kinds; permanent, by which the demand of the State has been fixed and made unalterable for ever, and temporary, under which the State demand is revised at recurring periods of greater or less duration. The permanently settled districts cover the greater part of Bengal, parts of the United Provinces and Madras, and a few other isolated tracts. The temporarily settled tracts fall into two broad divisions; Zamindari (in some provinces called Malguzari or Talukdari), where the landlord pays the land revenue to the State, whether he cultivates the land himself or by means of rent-paying tenants; and Ryotwari, where the cultivator as a general rule pays direct to the State. In both these tracts the rates of land revenue are settled for periods varying, according to the province, between ten and thirty years, the latter figure prevailing in all the larger provinces with the exception of the Punjab and the Central Provinces, where settlements are usually made for twenty years. In the Zamindari areas, where estates range from hundreds to many thousands of acres, the periodical assessment is a share, generally rather less than one-half, of the rental enjoyed by the proprietors; in the Ryotwari tracts, where the estates are small and cultivated by peasant proprietors, the periodical assessment is imposed on the cultivated area at rates per acre fixed with reference to the productiveness of the land, and varying in different provinces from one-fifth to one twenty-fifth part of the gross value of the produce. The United Provinces of Agra and Oudh, the Punjab, the Central Provinces, and Orissa mainly contain estates held by proprietary communities or large proprietors; while in Bombay, Burma, Assam and Berar, and in the greater part of Madras, the land is held and tilled by petty proprietors.

The appended table gives the acreage of the surveyed areas in which the various tenures prevail, and the amount over which proprietary right was transferred, either by order of court or by voluntary gift or sale (including mortgage with possession, and excluding inheritances and temporary transfers) during the agricultural year 1901-02. The figures are in thousands of acres:—

	Ryotwari (peasant proprietors).	Zamindari (larger proprietors) and Village Communities.		Total.	Transfers
		Permanently settled.	Temporarily settled.		
Upper Burma	50,488	—	6	50,494	102
Lower Burma	53,316	5	155	53,476	467
Assam	26,150	3,909	1,276	31,335	48
Bengal	—	81,984	15,566	97,550	*
United Provinces—Agra	—	6,160	46,437	52,597	923
"          Oudh	—	1,156	14,182	15,338	281
Punjab	—	—	62,222	62,222	555
North-West Frontier Province.	—	—	8,498	8,498	181
Sind	30,078	—	—	30,078	118
Bombay	44,614	—	3,960	48,574	795
Central Provinces	1,515	—	42,878	44,393	696
Berar	11,333	—	—	11,333	223
Madras	60,773	29,665	—	90,438	500

\* Figures not available.

The Ryotwari area may be said, therefore, to embrace 278 million acres, the Zamindari area under permanent settlement 123 millions, and under temporary settlement 195 millions. In the permanently settled tracts of



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Bengal the land revenue falls at about two-thirds of a rupee per acre of cultivated land, and represents on an average about one-fifth of the rental, or perhaps one twenty-fourth of the gross value of the produce; in the permanently settled tracts of the United Provinces the incidence is about Re.  $1\frac{2}{3}$  per acre of cultivated land; in the similar tracts of Madras it is considerably lower than this. In the latter tracts the land revenue represents usually something less than one-half of the actual or estimated rental, and is probably about one-tenth to one-twelfth of the gross value of the produce; the average incidence of the land revenue per acre of fully assessed cultivated land in the temporarily settled tracts, as given in the returns for 1901-02, is approximately Re.  $1\frac{1}{2}$  in the United Provinces, Re.  $1\frac{1}{3}$  in the Punjab, Re.  $1\frac{1}{2}$  in Berar, Rs.  $2\frac{1}{2}$  in Lower Burma, Rs.  $2\frac{2}{3}$  in Assam, Rs.  $2\frac{2}{3}$  in Sind, Re.  $1\frac{1}{2}$  in Bombay, 9 annas in the Central Provinces, Rs.  $2\frac{1}{2}$  in Madras, and Re.  $1\frac{1}{2}$  in Bengal. Rates of rent and revenue vary greatly according to the productive power of the land, according to the advantages of climate and rainfall or means of irrigation, and according to the facilities for carrying produce to markets or to the seaboard. In Sind and Madras the land revenue rates given above include the charge for irrigation supplied by the State; elsewhere payment for water, supplied by State canals or reservoirs for purposes of irrigation, is made over and above the land revenue, either according to the area irrigated or according to the quantity of water used; but the State demand on any land is not enhanced on account of increased productiveness due to improvements made by the proprietors or occupiers themselves.

## Bengal.

Survey and settlement operations were in progress during the year ending in September 1903 in sixteen districts of Bengal. The total area included in these operations was 17,244 square miles, contained in 17,318 villages. The area cadastrally surveyed was 3,757 square miles; preliminary records were written for 4,039 villages; records were attested for 3,213 villages, and finally published in 1,872 villages. The rents of nearly 89,000 tenants were settled. The total area of which a record of rights has been completed in settlements under the control of the Director of Land Records is 32,482 square miles. The cadastral survey and settlement operations on the permanently settled lands of North Behar had been finished, and the Darbhanga report was passing through the press. The Champaran and Muzaffarpur reports have been approved. They contain a mass of information of the greatest importance as to crops, incidence of rent, the pressure of the population on the soil, and the average income of the petty proprietor, the tenant cultivator, and the agricultural labourer. According to Mr. Stevenson-Moore, the Settlement officer, 90 per cent. of the population lives in normal years in a very moderate state of comfort; but the landless day labourer, who represents 9 per cent. of the population of the Muzaffarpur district, very soon feels the effect of times of scarcity. The advantages of the survey are very great; it is said, for instance, that rents "for which ryots held no receipts, of which landlords kept no record, and which they enhanced at their pleasure" have now been ascertained, recorded, and fixed.

The settlement of rights in the Backerganj district, and in Ranchi, North Bhagalpur, and North Monghyr made good progress, and similar work was in progress in private estates in Purnea, Gaya, Singhbhum, and the Sonthal Parganas, and in other districts. Settlements of land revenue were also being made in various temporarily settled tracts and Government estates.

United  
Provinces.

In the United Provinces of Agra and Oudh cadastral surveys were completed over 2,507 square miles and records were written for 2,823 square miles. The work was for the most part performed by the village accountants, whose mapping is said to be excellent, though their record work is not so good. The revision settlements in Oudh are nearly completed. Assessments sanctioned during the year for three portions of the Gonda district, which alone remained to be dealt with under regular revision of settlement, showed increases of one, 18, and 24 per cent. respectively. The assessments recently imposed in the Hardoi district were being revised. In the Agra Province

the settlement of the Shahjahanpur and Meerut districts was completed. The report on the Meerut settlement, which has been received, shows that cultivation and irrigation have both advanced, and that the landholders, as a class, are in comfortable circumstances. The assessment is increased by 34.4 per cent. Operations were continued in eight districts where they had been begun in previous years, and were almost concluded in all but Azamgarh. Fresh assessments were sanctioned for several sub-divisions, the rate of increase varying from 6 per cent. to 31 per cent. Work was also begun in the Mainpuri, Etah, and Jalaun districts, while preparations were made for its extension to part of Allahabad.

The introduction of the new Tenancy Act in 1901 in the Province of Agra, as described in last year's issue of this Statement, is the most important change relating to landlords and tenants; but owing to the difficulty of comparing the procedure under the old and the new Acts it is impossible to draw any conclusions from the statistics of ejectments. But there seems to be ground for the view that the change in the law has not, as yet, tended to a diminution in ejectment cases, though the number of surrenders by tenants has declined substantially. On the other hand, it is reported that the relations between landlords and tenants have become more friendly. The year was one of rest and recuperation, and its result was certainly to establish on a firmer basis the returning prosperity of the provinces. The area of holdings in the Agra Province is given as 27.6 millions of acres, of which 2.4 millions were uncultivated; of this total, 8.8 millions were held by tenants with occupancy rights, 11.1 millions by ordinary tenants, and one million by ex-proprietary tenants with privileged rights, while the remainder was rent free or nominally rented. In Oudh, the holdings amounted to 9.6 millions of acres, of which all but 2 millions were held by ordinary tenants. The rent-rolls for all districts of the United Provinces show that the rental demand of the year 1901-02 was £8,708,700, against which the landlords realised £7,876,600 during the year, £1,072,600 being on account of arrears of previous years. The percentage of recorded rent collections to the total rent demand in the year under report fell from 94 to 90 per cent. in the two provinces together; but the record of collections is defective. The rent-rolls include the reduced rents paid by privileged tenants, and do not take into account any computed rents on accounts of lands cultivated by proprietors.

The number of transfers of proprietary interests in land was higher in both provinces than the figures of the preceding year, but the increase is more than accounted for by the rise of 13,800 in the number of succession cases. The following table shows the number of sales of revenue-paying land and of mortgages for recent years:—

	Sales of Revenue Paying Land.		Mortgages.	
	Agra.	Oudh.	Agra.	Oudh.
1894-95	17,052	2,717	8,256	7,144
1896-97	22,599	3,487	13,388	8,205
1898-99	18,935	4,944	8,262	10,874
1900-01	21,657	4,797	9,778	9,328
1901-02	20,567	4,353	9,177	9,029

In the Punjab orders were passed during the year on the assessment report of the Alipur and Muzaffargarh tahsils, the increase being estimated at 21 per cent.; and the Sirsa-Fazilka settlement operations were brought near their close, the result being an increase of about £10,000. Other settlement operations were in progress in parts of six other districts. There has been a notable decrease in the number of transfers of land, which may safely be ascribed to the operation of the Alienation of Land Act. The chief fall occurred under the heading of mortgages with possession or transfers by order of court for debt; the area of cultivated land transferred under these headings amounted to 207,500 acres only, as compared with 325,100

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acres in the preceding agricultural year, 1900-01. But the heading of sales also shows a decrease, the area so transferred being 283,000 acres of cultivated land, against 366,200 acres in the preceding year. The proportion of the cultivated area of the present province which is under mortgage works out at 12·5 per cent., against a proportion of 13 per cent. of the cultivated area of the old province, with the separated frontier districts, in 1900-01.

The normal effect of the Alienation of Land Act cannot be gauged with accuracy as yet; but it is observed that there is no trace of any sudden or violent depreciation of the value of land, though land prices recorded before the passing of the Act, representing in many cases loans swollen by high interest charges, gave an exaggerated idea of land values; that zamindars generally approve of the Act; and that though some of the richer moneylenders may be abjuring investments in land and seeking other employment for their capital, it is probable that the small village moneylenders as a class will continue their customary dealings with zamindars on a healthier system of credit. The rules and orders under the Act have worked well, and few devices for evading it have so far been detected.

## Burma.

In Burma, a party of the Survey of India completed cadastral-survey in the Kyaukpyu district, and did some traversing and cadastral work in the Shwebo and Pakokku districts. Satisfactory progress was made in settlement work. Original settlements were sanctioned, and the rates notified, in Yamethin and Sagaing, and revision settlements were approved and notified for parts of the Tharrawaddy and Akyab districts. In each case there was an increase of revenue, amounting in the aggregate of these four tracts to £40,000. The area under supplementary survey (37,634 square miles) was much higher than in 1901-02, owing to the inclusion of the Sagaing, Yamethin and Myingyan districts, where settlement had been completed and the establishment employed on land records work was handed over by the settlement officer to the revenue authorities.

A rapid transfer of cultivated lands to the hands of non-agriculturists and an increase in the areas sublet were marked and regrettable features of the year in many districts. Legislative measures to restrict the alienation of land have been in contemplation, but the question required to be more fully considered. It is to be observed that the relations between the non-agricultural landlords and their tenants are usually of a satisfactory character. The area let at full rents is given as 1,926,000 acres, and the average rent as about Rs. 9 per acre. Sales and mortgages of land increased, and the area under mortgage in Lower Burma at the end of the year amounted to 682,000 acres, or over 9 per cent. of the occupied area.

Central  
Provinces.

Settlement operations in the Central Provinces during the agricultural year 1901-02 suffered both from the bad health of the staff in some localities and from the failure of the rice crop, which necessitated an early return of of patwaris to their villages in connection with the possible necessity of relief measures. Settlement was completed and announced in one subdivision of the Raipur district, and work was done in four other districts. An important part of the year's work was the temporary abatement of rents and revenue in the districts of Narsinghpur, Wardha, Bhandara, Balaghat and Betul, where considerable relief was thus afforded to villages which had suffered from the previous famines and crop failures.

The returns of cultivating occupancy in the provinces show that 5 millions of acres were held by the proprietors, while 16½ millions were held by tenants, at an average rent of 12 annas per acre; 2½ millions of this were held by absolute occupancy tenants, at an average rate of Re. 1 per acre, settled for a period of 30 years; and more than 7 millions by occupancy tenants. The above figures leave out of account the 600,000 acres held under the ryotwari system. There was a general increase in the numbers of transfers of land, and the price of land disposed of by private sale was higher; but the consideration money paid in the case of sales over the province generally was, calculated on the land revenue, less than in the previous year. In some parts the value of land is low, but there are not wanting signs that it is recovering its value in many parts of the province.

The survey and settlement of certain temporarily settled estates in Sylhet was concluded during 1902-03, and resulted in a net increase of rather less than 15 per cent. in the demand. The decennial settlement of the Assam Valley was due to expire in 1903, and re-settlement operations were started in 1902 in Kamrup and Sibsagar districts, good progress being made with the work. The settlement of land for ordinary cultivation showed a satisfactory advance in the Assam Valley and in Cachar, but did not make much progress during the year in Sylhet. There was little demand for land for extensions of tea cultivation, and the area settled for this purpose is returned as 1,141,500 acres. A small portion of the land revenue is obtained from permanently settled estates in Sylhet and Goalpara. Of the remainder, some is obtained under annual re-settlements, some by periodical revisions. The permanently settled area was 3,930,000 acres, including a large proportion of waste, and it yielded a revenue of £25,100; the area under periodical or annual settlement was 2,694,500 acres, and it paid about Rs. 2½ per cultivated acre.

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REVENUE.  
Assam.

In Madras, cadastral re-survey prior to re-settlement was in progress during the year 1902-03 in the Kistna, Kurnool, and Nellore districts, and the area covered was 1,304 square miles, including revision. Besides this work, 97 square miles of original survey was carried out in hill villages, and 45 square miles of survey over Government lands excluded from former surveys, and 898 square miles in proprietary estates, under the Act of 1897, which authorised the survey of such estates, either upon the request of the landholders or, in special cases, on the initiative of the Government; and there was also completed 492 square miles of block survey. The work was done under the Madras Survey Department in six divisions, and very little of it is found on inspection to need doing over again. The most important settlement work done during the year was the initial settlement of the South Canara and Malabar districts. Revised rates were introduced into some parts of these areas. The land revenue demand in the districts settled and resettled since the commencement of the operations was £655,000 in the agricultural year 1901-02, or 27 per cent. in excess of the demand prior to the settlements; and the total expenditure of the Settlement Department up to June 1903 was £909,600. Besides the operations in the above-named districts, operations were begun in parts of Kistna and Salem. In the ryotwari lands the extent of "dry" holdings increased by rather more, and that of "wet" holdings by rather less than 1 per cent.; and the area not available for cultivation, as well as the areas of unoccupied arable land, and of occupied land left waste, diminished during the year. In comparison with the figures for the agricultural year 1875-76, the year before the great Madras famine, the area under holdings shows an advance of nearly three million acres.

Madras.

The Bombay Survey Department ceased to exist in October 1900, but small establishments were maintained during the year 1902-03 for special work in Gujarat, the Deccan, the Southern Division, and Sind. These special operations do not require notice. Revised rates were announced during the year in subdivisions of Thana, Ratnagiri, Kolaba, Broach, and Kanara, and original settlements were introduced into 34 scattered villages in the Central Division. In Sind, revised rates for the Rohri taluka of the Sukkur district came into force at the beginning of the year. There was a decrease of more than 100,000 acres in the total area under cultivation in the Presidency, owing to a large contraction of the cultivated area in the Khandesh district. The decline which had occurred in the Northern Division during the two preceding years was arrested, and every district in that division, with the exception of Thana, showed an increase, the extension being most marked in Allahabad.

Bombay.

No survey operations were carried on during the year in Berar. The new rates of the revised settlement which had been sanctioned, but not introduced owing to the famine, were announced in seven taluks, and become payable in the spring of 1904. An ad interim and lower rate has been sanctioned for the first fifteen years, the final and higher rate becoming payable in the last fifteen years of the settlement. The percentages of increase shown by the ad interim rate vary between 21 and 32 per cent.; those of the final rate between 25 and 48 per cent.

Berar.

LAND  
REVENUE.

## COLLECTION OF THE REVENUE.

The fluctuations of the land revenue in past years may be seen in the following table:—

	Land Revenue Receipts excluding Receipts due to Irrigation.	Variation (Average of Five Years, 1881-85=100).
	£	
1861-65 (five years' average)	13,287,000	90.1
1866-70	13,327,000	90.4
1871-75	13,977,000	94.8
1876-80	14,076,000	95.4
	(includes the great famine of South India).	
1881-85	14,748,000	100.0
1886-90	15,445,000	104.7
1891-95	16,522,000	112.0
1895-96 (single year)	17,467,000	118.4
1896-97	15,983,000	108.4
1897-98	17,122,000	116.1
1898-99	18,306,000	124.1
1899-1900	17,205,000	116.7
1900-01	17,503,000	118.7
1901-02	18,288,000	124.0
1902-03	18,437,000	125.0

A part of the increase during later years was due to the acquisition of Upper Burma, which yielded £111,000 of land revenue in the year 1886-87, and £643,000 in the year 1902-03.

The total advances made by Government to cultivators in the financial year 1902-03 are given as follows in the Accounts of the Government of India:—

	By the Government of India.	By provincial Governments (chiefly in Bombay).	Total.
	£	£	£
Advances for improvement of land	7,533	148,814	156,347
„ relief of agriculturists and similar purposes.	5,579	341,738	347,317
Total	13,112	490,552	503,664

The details for the agricultural year will be found below under each province.

The progress of the land revenue is now noticed province by province. The figures are taken from the land revenue reports, and differ in some instances slightly from those given above, which are from the corrected Accounts of the Government of India.

Bengal.

The rainfall of 1902-03 was generally well distributed in Bengal, and the average outturn of the crops was good, resulting in lowered prices in most districts. The land revenue of the province remains fairly constant, as most of it is under permanent settlement. The figures for the last three years are given as follows:—

	1900-01.	1901-02.	1902-03.
	£	£	£
Permanently settled estates	2,155,031	2,155,154	2,155,269
Temporarily settled estates	232,502	235,755	239,846
Estates under the direct management of Government.	279,027	281,771	288,837

The total amount collected during the year under report, including arrears, was slightly in excess of the current demand, 97 $\frac{3}{4}$  per cent. of the

current year's demand being realised in the year. This percentage is very satisfactory, the current year's revenue being collected with even greater completeness than in the good year 1899-1900; and the balance outstanding, of the current and arrear demand, was much less than is usual at the end of the year. The number of estates which became liable to sale for non-payment of Government dues was 13,010, and of these 1,279, or 9·8 per cent., were sold, against 1,328 in the previous year. Under the Public Demands Recovery Act, 151,100 certificates were filed for recovery of arrears of revenue, cesses, &c., compared with 230,570 in the previous year; attached property was sold in 7,042 cases, and 94 defaulters were imprisoned. Defaulters may deposit the amount due, with a penalty, within 30 days after the sale of the property under this procedure, and thus have the sale set aside.

The gross rental of the 43 districts in which the Bengal Cess Act was in force was returned for road cess purposes at £11,357,000 for the year 1902-03, which is £308,000 above the assessment of the previous year, as compared with £8,745,000 for 40 districts in 1873. The three added districts represent a rental of £301,000. The estates assessed to cess in the 43 districts numbered 423,200, of which 264,500 were revenue paying, 49,800 revenue free, and 108,900 rent free holdings. The current demand of land revenue in these districts, including parts of Singhbhum, in which the Cess Act is not in operation, amounted to £2,655,000, or about 23½ per cent. of the rental valuation given above. The actual percentage in the areas under the Cess Act would be rather lower than this figure. Advances to agriculturists under the Loans Acts amounted to £8,400 during the year, and 75 per cent. of the amount due for recovery was repaid. In the six years, 1896-97 to 1902-03, the total of the advances made amounts to £135,750, and of this £122,600 has been repaid and £500 remitted. Very little of the interest which had accrued was outstanding. The difference between the interest calculated at 3½ per cent., the rate at which the Government can borrow, and 6½ per cent., the rate charged to borrowers, may be set against non-recoveries.

The latest report on land revenue affairs in the United Provinces relates to the year ending 30th September 1902. The monsoon of 1901 was short-lived and capricious, but opportune rain at the most critical period saved the provinces from the results that would be expected to follow a season of this description, and the actual result was a moderate crop on an exceptionally large area.

United Provinces.

The demand and collections of land revenue in the last three years are given as follows:—

	1899-1900.	1900-01.	1901-02.
	£	£	£
Land revenue, current and arrear { demand -	4,378,647	4,284,657	4,280,315
{ collections -	4,227,066	4,221,819	4,174,487

The amount of the current demand has grown, and the proportion which collections of current revenue bear to the current demand has been very satisfactory in both the most recent years, reaching the proportion of 99½ per cent. of the current demand in 1901-02. The demand on account of arrears of land revenue from previous years has become less as the effects of famine disappear, and in April 1902 the account was finally cleared by the remission of all sums outstanding at the end of the previous revenue year. Another measure of the same character was the reduction of the demand in Bundelkhand by £36,600, with rebate of £11,700 in each of the next five years. Of coercive processes for recovery of sums due to Government, there were 31,817 writs, 2,909 arrests, 5,268 cases of attachment of movables, 394 of attachment of estates, and 30 sales. These figures are on the whole below those of the preceding year, the collection of revenue being carried out generally without much difficulty. The amount of the loans sanctioned under the Land Improvement Loans Act and the

LAND  
REVENUE.

Agriculturists Loans Act was £12,300. The total outstandings of these loans falling due during the year under report were £39,900, of which £24,200 was recovered. The outstanding balance at the end of the year under both Acts amounted to £18,800, of which the greater part has been remitted since the close of the year.

## Punjab.

The latest Punjab land revenue report is for the year ending on the 30th September 1902. The monsoon of 1901 was anything but good, and the winter rains failed even more completely than in the rainless famine winter of 1899-1900. The area sown was therefore below the average, and there was a general failure of crops on unirrigated land. The fixed land revenue demand for the year amounted to £1,371,500, of which only £1,197,500, or 86·6 per cent., was collected, owing to the unfavourable seasons, suspensions being granted to the amount of £170,000. The Punjab shared to the amount of £264,000 in the provision made by the Budget of March 1903 for the remission of arrears, and £218,900 of this sum was allotted during the year. There remained at the end of the period an amount of £129,900 under suspension. The "fluctuating" system of land revenue, applied for the most part either to canal-irrigated lands or to lands subject to floods, is reported to be increasing in popularity, and it is being gradually extended. The revenue under this heading amounted to £291,600 in 1901-02; and there was a further amount of £51,200 classed as miscellaneous land revenue. The number of writs of demand issued against defaulters fell to 21,504, and there was a decline in other coercive processes; movables were sold in 3,282 cases; imprisonments numbered 13, against 58 in the previous year. The advances during the year under the Agricultural Loans Act amounted to £28,700, and £10,750 was advanced under the Land Improvements Act.

North-West  
Frontier  
Provinces.

The report for this province covers the same period as that for the Punjab. The season, as in the parent province, was unfavourable, and the yield of the crops is estimated at two-thirds only of the normal. The fixed land revenue demand was £106,400, of which £101,800 was collected, a result which was distinctly satisfactory, regard being had to the character of the harvests. Fluctuating and miscellaneous land revenue between them contributed £7,300. Coercive processes included 3,440 writs of demand, 1,018 arrests, and 117 sales of movables. The agricultural advances outstanding at the end of the year amounted to £9,500. The changes incident to the formation of the province in November, including organisation of new offices and territorial changes in these districts, with the consequent alterations, were carried out smoothly without any disturbing effect on the revenue administration.

## Burma.

In Burma the monsoon of 1902 was irregular, and the consequence was a light out-turn of crops in Lower Burma, a total or partial failure of many of the unirrigated crops in Upper Burma, dependent on the latter rains, and a shrinkage of the irrigated area owing to short supplies of water.

The gross demand of current year's revenue for the whole province under the various heads of revenue under review is shown in the marginal table; but a comparison of the two sets of figures is to some extent vitiated by difference in the periods concerned. Remissions of land revenue were higher, in consequence of crop failures, and amounted to £18,400. In Lower Burma the introduction of new rates after revision settlements in some tracts, together with

	1901-02 (15 months.)	1902-03.
	£	£
Land Revenue -	1,313,021	1,322,192
Household tax -	315,237	351,161
Fisheries -	170,202	189,256
Capitation tax -	311,931	320,583
Other sources -	127,027	116,231
<b>TOTAL -</b>	<b>2,267,418</b>	<b>2,299,423</b>

the normal extension of cultivation, led to a higher demand, but in Upper Burma, where the assessment is restricted to crops that have matured, the amount assessed was lower. The collections of current land revenue amounted to £1,301,100, which is slightly less than the figure for 1901-02. There was some diminution in the actual yield from the household tax, or *thathameda*, owing to the reduction of the rates in some districts owing to crop failures. The number of persons assessed to capitation tax rose to 1,156,800, and the yield showed a substantial increase. The river and other

fisheries are a considerable source of revenue in both the upper and the lower parts of the province; measures have been taken for the resuscitation of the sea fishing industry by the grant of advances. The heading "other sources" includes receipts from petroleum royalties, from ruby mines, and from water rate. The amount of agricultural advances was £23,100, compared with £14,500 in the preceding year.

LAND  
REVENUE.

The latest land revenue report from the Central Provinces is for the year ending in September 1902. The monsoon of 1901 was unsatisfactory, and the Christmas rains practically failed; the out-turns of the crops were therefore, with some exceptions, below normal. The demand on account of the land revenue of the year under the general system of the province stood at £561,800, reduced by suspensions and remissions to £526,500, to which may be added £35,400 for arrears outstanding. Collections on account of the year's revenue were extraordinarily good, bearing a proportion of 97½ per cent. to the amount demanded. Arrears of land revenue to the total of £229,300 were remitted during the year under the provisions of the Government of India's Budget, to which reference has already been made. There was a further demand on account of land revenue not on the roll, cesses, and miscellaneous revenue amounting in all to £73,500, deducting suspensions; and the receipts under these heads came to £65,500. Coercive processes on the whole showed an increase; 384 defaulters were arrested and 112 imprisoned; 1,826 attachments and 283 sales of movable property were effected; but the number of estates sold numbered only 15. Advances under the Land Improvements Act and the Agriculturists Loans Act amounted to £24,200 during the year. The total amount of these loans outstanding at the end of September 1901 was £254,000, and £72,600 was collected and £29,400 remitted during 1901-02, the balance outstanding in September 1902 being £172,600.

Central  
Provinces.

The rainfall in Assam during 1902-03 was above the average, but it was badly distributed, and crops suffered in some places from excessive rains, in others from their defect. On the whole, however, the crops were not far below the average, except in Nowgong district. The current land revenue demand rose from £379,900 to £389,700, the increase being due chiefly to the recovery of several of the Assam Valley districts from the effects of the earthquake of 1897, a recovery which has doubtless been stimulated by the reduction of revenue rates specially conceded. Including arrears, the amount collected was £395,100, the percentage of current collections on the current demand being 93 per cent. In addition to this, there were miscellaneous receipts to the amount of £28,300. The number of sales of land for non-payment of revenue was 707, against 1,173 in the previous year. On the other hand, sales of movable property increased from 681 to 2,745. The amount of agricultural loans granted in Assam is insignificant.

Assam.

For the Madras Presidency the latest report available deals with the year ending on the 30th June 1902. The season was generally favourable to agriculture, and the out-turn of all crops, wet or dry, was generally fair, prices showing a material fall. The total demand on account of the year for land revenue, including charges for irrigation and cesses, was £4,464,700, and the total collections were £4,359,400. The uncollected balances at the end of June 1902 amounted to £105,300. The uncollected balance, including arrears of previous years, amounted to £124,000, of which nearly three-fourths had been either collected or written off before the end of the calendar year 1902. Of the above demand, a sum of £404,900 represents land revenue and cesses due from permanently settled estates, and £68,900 revenue from villages held under special tenures, the remainder coming for the most part from the assessment and water rate paid by peasant proprietors. The number of ryotwari (peasant proprietors') villages was 22,880, and the area of their holdings was little short of 23 millions of acres. The favourable character of the season resulted in a considerable increase in the area under occupation as compared with the preceding year, and also in a lowered proportion of fallows. The land revenue demand on this area was £3,042,000, putting aside cesses. If certain remissions and miscellaneous items be taken into consideration, the figures stand at £3,545,000, against £3,443,000 in the preceding year, and 98 per cent of this current demand

Madras.



LAND  
REVENUE.

was realised, in addition to a large recovery of arrears. The number of notices for attachment of property issued was large, and the same is true of notices of sale, which numbered 295,600. Sale was carried out in 18,880 cases. The area of land so sold was 45,700 acres, against 61,600 acres in the previous year; a considerable proportion of it is of inferior quality, less than 16 per cent. of it being irrigated land. Advances under the Land Improvements Act and the Agriculturists Loans Act amounted to £28,800.

## Bombay.

The latest report available from Bombay is for the year ending in August 1902. The rainfall was deficient in some parts, especially in the northern division, but in parts of each division fair crops were obtained. But the season did not allow of any marked recovery from the depression caused by former bad seasons. In the Presidency proper the gross demand of land revenue for the year was £2,033,300, or slightly less than the demand in the preceding year. The remissions granted during the year amounted to £198,300, and £1,407,700 was collected on account of the year's demand, leaving an outstanding balance on the 1st August 1902 of £427,300. The arrears at the beginning of the year had been £755,000, against which are to be set £542,400 written off as irrecoverable and £96,400 collected. The total arrears at the end of the year stood, therefore, at £543,500. The number of notices of demand issued was less than in the previous year, but is still regarded as excessive. Not much resort was had to the severer processes. The area forfeited was 41,433 acres, of which 7,558 acres were returned to the defaulters, 175 acres were sold, and the rest remained in the hands of the Government. The amount of agricultural loans sanctioned during the year was £266,700, compared with £522,400 in the preceding year.

In Sind the season was less favourable than in the previous year, but the inundation was not so bad as in some recent years. The collections of land revenue and village cess on account of the year amounted to £521,000, as compared with £595,600 in 1900-01, the demand having fallen to a corresponding extent by the exemption from assessment of lands lying fallow; £17,600 was collected on account of the outstanding arrears of the previous year. Agricultural advances amounted to £40,300, compared with £29,700 in the previous year. The number of coercive processes for the collection of the revenue showed a decrease, in spite of the circumstances of the season; this is ascribed to a change which has been made in the dates for paying instalments.

## Berar.

The rainfall of 1902-03 was below the average in Berar, and it was not well distributed. The out-turn of crops did not rise above three-fourths of the normal, and jowar, or large millet, which covers 43 per cent. of the crop area and forms the staple food of the people, gave a low yield compared with the good crop of the preceding year. Prices, however, were lower. The land revenue demand for the year 1902-03, including cesses, amounted to £512,800, of which practically the whole was collected during the year. The arrears outstanding were inconsiderable. No defaulter was imprisoned for non-payment of revenue; the area of land sold on this account was 16,200 acres; personal property was sold in 19 cases. The amounts advanced under the Land Improvements Act and the Agriculturists Loans Act were only petty.

## WARDS' ESTATES.

WARDS'  
ESTATES.

Courts of Wards have been established in most of the larger provinces, as will be seen below. 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 made, to a large extent, with this object. Before 1899, the Courts had power to assume the management of estates of minors, of persons physically or mentally incompetent to manage them, or of persons declared by the local Government, at their own request, to be disqualified for managing them. Since that year, various provincial Acts have been passed, giving to the Government further powers of putting estates under the control of the Court, without consent of the owners, when the latter are in a special degree unqualified for their proper management. The duty of the Courts is to manage the estates under their charge to the best advantage of both proprietors and tenants, to support the family of the pro-

prietor, 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.

WARDS' -  
ESTATES.

Bengal.

In Bengal 65 wards' estates and 74 other estates were under the management of the Court of Wards for the whole or part of the year 1902-03, with a total rent and cess income of £672,000. The collections of rents and cesses were very satisfactory, amounting to nearly 105 per cent. of the current demand. With other items, the receipts of the estates amounted to £1,020,300. The disbursements were £848,200, of which £216,300 was for Government revenue and cesses, £30,700 for dues of superior landlords, £62,400, or 9·7 of the rental, for cost of management, £111,500 for wards' and family expenses, £26,200 for improvements, and £145,000 for investments and payment of debts. The total of the debts stood at £781,200, of which £446,200 represents the debts of the Bettiah estate, which is involved to the extent of more than three and a half times the amount of the rent roll. The Burdwan Raj was released from management during the year, after being for seventeen years under the control of the Court. The final report on this large estate had not been received in time to be incorporated in the report for the year.

The number of estates under the Court of Wards in the United Provinces at the close of the year ending in September 1902 was 185. Eleven fresh estates were taken under management and 13 estates were restored to their proprietors during the year. None of the latter estates had any special importance. Some of the estates which came under management were of considerable size, the largest and most deeply indebted being one in the Partabgarh district, which has a rental of more than £11,000, with debts to the amount of about £80,000. The seasons were not altogether satisfactory, and current rental collections amounted to 94·5 per cent. only of the demand. The aggregate receipts of all the estates under management for the whole or part of the year was £524,600, and the charges amounted to £511,800, of which £54,600 was for the education and maintenance of the wards, £9,700 for improvements, and £160,900 for repayment of debts. The Government demand, with cesses and rates, actually paid, amounted to 50·5 per cent. of the rental collections. The cost of management was 9·2 per cent. The total liabilities of all the estates amounted at the end of the year to £1,119,200, but the heavy debt of £353,000 owing by the small Rampur state of Moradabad under a decree for dowry is to be settled by compromise. There are 80 co-operative village banks on the estates under the Court, and they are reported to have worked satisfactorily, though still only in an experimental stage.

United  
Provinces.

At the end of September 1902 the number of estates under the management of the Punjab Court of Wards was 43. Two estates were brought under management, of which one had only been released with a good balance after a minority in 1898, and had in the interval become involved in debt. Four of the estates have an income of over £3,300 a year, and seven of them have an area of 10,000 acres or more, but there are still several petty estates under management. One important estate, namely, Goler, is in a hopeless position, and little progress was made in respect of the Sher Shah estate, the prospects of which are more hopeful; but the figures of income for the estates as a whole are considered to have been gratifying, having regard to the agricultural conditions of the year. The gross income was £74,300, besides £41,800 obtained by loans and sale of properties; and the expenditure, excluding investments and repayments of debt, amounted to £47,900. The cost of management was rather more than 6 per cent. of the gross income, £9,800 was spent on family and educational charges, and £10,500 on improvements. Four estates were released, the results of their management being said to be satisfactory. A Bill to consolidate and amend the law relating to the Punjab Court of Wards was under consideration, and has been passed into law since the close of the year under review.

Punjab.

The year was one of some importance in respect of the Court of Wards in the Central Provinces, as considerable progress was made in winding up the affairs of hopelessly indebted estates, with a view to relieving the Court of Wards of their management. The creditors in most cases took a reasonable

Central  
Provinces.

WARDS'  
ESTATE.

attitude, and the result was the relinquishment of 25 estates from the management of the Court after arrangements had been concluded between the wards and their creditors. With the seven estates taken under management, the number of estates under the Court, in September 1902, was 122, against 140 in September 1901; a further reduction is to be expected. The gross income of all the estates was £89,900, of which £58,500 represented rental collections. The latter figure slightly exceeds the current rental demand, but it includes collections on account of arrears. The latter amounted to £55,800 at the end of the year, of which nearly half has been written off as irrecoverable. The debts were reduced by a net amount of £7,900, and stood at £115,900. The establishment by which the estates are managed is being revised on an efficient but economical basis; the cost of management was 15 per cent. of the year's income. The land revenue, £34,000, was paid practically in full; £6,700 was spent on wards' personal expenses, and £7,300 on estate improvements.

## Madras.

Four estates in Madras were released during the agricultural year ended on 30th June 1903, and two taken under management, so that 37 remained under the control of the Court. The most important of the estates released was the Saptur estate in Madura, the current income of which had increased by nearly 60 per cent. during its sixteen years of management, and stood at £5,300, while £7,700 had been expended on irrigation works and £4,200 on other improvements. The season was, on the whole, favourable on most of the estates; 667,100 acres, or 80 per cent. of the total area of all holdings on these estates, was cultivated. The rent collections during 1902-03 on account of the current year amounted to £174,700, or nearly 75 per cent. on the current demand; the demand on account of arrears amounted to £174,900, of which £70,600 was collected during the year, and £25,700 written off as irrecoverable. The cost of management was reduced to 12 per cent. of the ordinary receipts. The balance at the credit of all estates, invested and uninvested, at the end of the year was £435,200; the debts due were £837,300, of which no less than £745,000 was owed by two estates, Karvetnagar and Kalahasti, taken temporarily under management in 1899, under the additional powers given by the Act of that year. The Government demands amounted to £95,600, and education and maintenance of wards and families accounted for £21,700, the total charges, including repayment of debts and investment in Government securities, being given as £302,200.

## Bombay.

In Bombay the estates under Government management during the year ending in September 1901 were of several kinds, namely, estates under the management of collectors, estates in charge of the Talukdari Settlement officer, and encumbered estates in Sind. Outside Gujarat the estates were of small area. The estates of the second category are all in Gujarat; they include 585 estates, of which 55 were encumbered estates under Act VI. of 1862, 46 were minors' estates, 307 were managed under the provisions of the Civil Procedure Code, and 177 were miscellaneous estates, of which many had been handed over to the Talukdari Settlement officer's charge in order to enable the talukdars to obtain loans for themselves and their tenants. None of the encumbered estates were able to make any reduction of their debts due to the Government. But the season being more favourable, an aggregate amount of £51,300 was collected out of the gross revenue of £83,300 due from all the estates under the Settlement Officer. The manager of encumbered estates in Sind had 525 estates in charge. The year's revenue of these estates amounted to £50,600, and the charges to £51,000. The estates under district officers numbered 127 in all.

CHAPTER VIII.

OPIUM REVENUE, AND TAXATION.

OPIUM.

OPIUM.

The opium revenue is partly raised 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. Though the poppy can be grown in most parts of India, its cultivation in British territory is permitted only in parts of Bengal and of the United Provinces, with the unimportant exception of a restricted cultivation for local use in the Punjab and Ajmere Merwara, and on the frontier of Upper Burma; and the area on which cultivation is permissible is calculated each year with a view of obtaining a stated amount of opium, with the proviso that, under present orders, the area under poppy in 1899-1900, namely 627,300 acres, is not to be materially exceeded. The cultivator of opium in the monopoly districts receives a licence, and is granted advances to enable him to prepare the land for the crop, and he is required to deliver the whole of the produce at a fixed price to opium agents, by whom it is despatched to the Government factories at Patna and Ghazipur to be prepared for the foreign market. This price for some years had been Rs. 5 per seer (two lbs.); and was raised to Rs. 6 per seer with effect from the spring of 1895. The chests of manufactured opium, after provision has been made for home consumption, are sold by auction at monthly sales which take place 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. Opium (known as Malwa opium) is also grown in Baroda and in some of the Native States of Rajputana and Central India. Most of these States have agreed to assimilate their internal opium arrangements to the British excise system, and to prevent contraband dealings. They levy heavy dues on opium exported from their territories for the China market, and such opium pays to the Indian Treasury a duty, which had been £40 per chest (of 140 lbs.) for several years until December 1894, when it was raised to £43½. It was again reduced to £40 in July 1896, and to £33½ in October 1897.

The yield of the opium revenue during recent years has been :—

	1896-97.	1897-98.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
Opium Receipts :*							
Auction sales of monopoly opium.	£ 3,233,568	£ 2,660,697	£ 2,775,878	£ 3,394,290	£ 4,109,249	£ 4,150,290	£ 3,662,600
Duty on Bombay (or Malwa) opium.	892,139	647,092	888,909	852,792	835,117	642,683	661,033
Cost of opium issued to the Excise and other Departments, and miscellaneous.	147,068	145,392	152,099	154,900	157,877	159,049	174,806
Total - - -	4,272,825	3,453,181	3,816,886	4,401,982	5,102,242	4,852,022	4,498,433
Opium expenditure, chiefly in Bengal.	1,657,795	1,592,744	1,582,193	1,727,154	1,785,875	1,608,690	1,648,483
Net Opium Revenue - £	2,615,030	1,860,437	2,234,693	2,674,828	3,316,367	3,243,332	2,849,950

\* These receipts are outside the provincial opium receipts of £735,207 shown below under "Excise."  
0.89.

## OPIMUM.

The number of chests of Bengal opium sold, and the average price obtained per chest in recent financial years, are as follows :—

—	Number.	Average Price.	—	Number.	Average Price.
1895-96	37,695	Rs. 1,390	1900-01	45,300	Rs. 1,361
1897-98	39,300	1,023	1901-02	48,000	1,297
1899-1900	31,700	1,221	1902-03	48,000	1,144

The exports of Bombay opium to China averaged 25,512 chests in the ten years 1890-1901, and were 17,582 chests in 1901-02, and 13,698 chests in the eight months ending on the 31st March 1903. The amount of Malwa opium which entered the Bombay Presidency during the latter period was 15,097 chests, or 14 per cent. more than in the corresponding eight months of 1901-02, though it was much below the amount received in similar periods before. The main permanent causes of the decline in the exports of Malwa opium to China are said to be the increased production of the cheap Chinese drug, and the low rate of exchange of the dollar as compared with the rise in the sterling value of the rupee.

## Bengal.

The net area cultivated with the poppy in the Ganges Valley in recent years, excluding areas on which the crop was sown but failed, is shown in the margin. Both in the Behar and the Benares Agencies the season was unusually favourable for poppy cultivation, and the general average gross produce per acre was 6·7 seers, compared with an average of 5·2 seers in each of the last seven years. The opium is received and prepared at the Government factories at Patna and Ghazipur, where the out-turn for the year included 5,280 chests of opium for the Excise Department, about 400 lbs. of various opium alkaloids, 1,464 lbs. of medical opium, and 64,700 chests of provision opium for the Chinese market. During the calendar year 1903, 48,000 chests of provision opium was sold in equal proportions from Behar and Benares, and the average price realised per chest was Rs. 1,335. The average cost per chest amounted to Rs. 506. There was a considerable increase in the price realised in the latter part of 1903, as compared with recent prices; the average price during the financial year 1902-03 was about Rs. 1,144½ per chest, compared with Rs. 1,361 and Rs. 1,297, respectively, in the two preceding financial years.

	Acres.
1896-97	581,181
1897-98	516,671
1899-1900	627,311
1901-02	591,837
1902-03	582,807

## SALT.

## General.

## SALT.

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 one-fifth of a rupee (in Burma) to 3¼ rupees (in Bengal) per maund of 82½ lbs.; during nearly the whole of the year 1902-03 the rate was 2½ rupees over the whole of India, excepting Burma, where it was one rupee per maund, the Kohat salt mines, the produce of which paid duty at the rate of Rs. 2 per maund of 102½ lbs., and the mines in the Mandi State, where the rate of duty was 7½ annas per maund, the share received by the Government of India being 5 annas per maund. These rates were reduced in March 1903, except in the case of Burma, where the rate remained the same. The new duties are Rs. 2 per maund generally, Rs. 1½ per imperial maund on Kohat salt (involving only a small reduction from the previous rate), and 6 annas per maund on Mandi salt, the Government share being reduced to 4 annas. The Indian sources of salt supply are the coast, where salt is manufactured for the consumption of all southern and western India, and for part of Burma and Central India; the salt lakes and pits of Rajputana, which supply the United Provinces of Agra and Oudh, and a part of Central India; the salt mines of the Punjab, which supply that province and a varying area southward; and importations from beyond the sea, which supply Bengal and the greater part of Burma. The duty is levied on salt at the place of manufacture, or at the port of importation, before it passes into consumption.

The Salt Revenues and Charges in the year 1902-03 were as follows :—

SALT.

PROVINCE.	Price of Government Salt, and Excise on Salt made locally.	Duty on Salt imported from England.	Duty on Salt imported by Sea from other Places.	Miscellaneous.	TOTAL.	Charges.	Net Salt Revenue.
	£	£	£	£	£	£	£
Northern India	1,305,670	—	—	9,766	1,315,436	68,911	1,246,525
Burma	16,112	97,481	8,418	2	122,013	755	121,258
Bengal	9,003	774,579	990,924	11,798	1,786,304	20,466	1,765,838
Madras	1,346,669	177	933	6,628	1,354,407	140,908	1,213,499
Bombay	1,552,202	714	869	52,460	1,606,245	114,709	1,491,536
TOTAL 1902-03	4,229,556	872,951	1,001,144	80,654	6,184,405	345,749	5,838,656
TOTAL 1901-02	4,086,743	972,654	807,072	72,841	5,939,310	343,630	5,595,680

The charges above shown do not include a sum of about £233,400 paid under treaties to Native chiefs who have assigned the management of their salt sources to the British Government.

The rate of salt consumption per head of the population differs widely in the several provinces. If the total of licit consumption is compared with the population, the following results appear :— The consumption in the saliferous tracts of Bengal, including Orissa, was 12·21 lbs. per head; in Behar, 8·39 lbs.; in the rest of Bengal, 11·18 lbs.; in Gujarat, 8·99 lbs.; in the rest of Bombay 10·9 lbs.; in Sind, 7·39 lbs.; in Madras, 16·05 lbs.; in the Central Provinces and Berar, 11·15 lbs.; in the United Provinces, 7·45 lbs.; in the Punjab and North-West Frontier Province, with Kashmir, 7·45 lbs.; in Central India, 8·12 lbs., and in Rajputana, 7·15 lbs. The rate of consumption in Burma is not accurately known; the average rate might perhaps be stated roughly at 16½ lbs. per head.

The consumption of salt and the duty realised during the last 30 years are shown in the table in the margin, which has been taken from a report by the Director-General of Statistics to the Government of India. It will be observed that the amount of the duty received shows a slight divergence from the figures given above.

	Quantity.	Duty.
	Maunds.	£
1865-69 to 1872-73 (average)	22,973,000	3,835,000
1873-74 to 1877-78	24,184,000	3,971,000
1878-79 to 1882-83	27,761,000	4,393,000
1883-84 to 1887-88	32,429,000	4,141,000
1888-89 to 1892-93	33,432,000	5,351,000
1893-94 to 1897-98	34,211,000	5,505,000
1898-99	35,269,000	5,719,000
1899-1900	35,058,000	5,695,000
1900-01	35,815,000	5,837,000
1901-02	35,680,000	5,780,000
1902-03	36,877,000	5,916,000

The salt sources under the control of the Northern India Salt Department are (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 the Mayo, Warcha and Kalabagh mines, the

Northern India.

Kohat mines, the Mandi mines, and the brine springs at Sulthanpur. From these are supplied the wants of the Punjab and North-West Frontier Province, part of the United Provinces, parts of the Behar districts of Bengal, the northern districts of the Central Provinces, and the greater part of the Rajputana and Central India States. The most important sources are the Sambhar Lake and the Mayo mine. At the Sambhar Lake the total quantity of salt made during the season was 4,744,200 maunds. This, though smaller than the outturn of the preceding year, was much above the figures, for some recent years, during which the rainfall has been exceptionally low. Since the year 1870, when the lake was leased by the Government of India, 116 millions of maunds of salt have been taken from it, and the financial results show a total credit balance of £196,400, without taking into account the large stock of salt in hand. Practically all the Sambhar salt is sold at a uniform price of

**SALT.** 4 annas per maund; the sales in 1902-03 amounted to 3,499,400 maunds. In the Mayo mine 1,612,400 maunds of salt were excavated. This salt was sold at 9 pies per maund apart from the duty, and a charge of 6 pies a maund for delivery to the railway; the price of Didwana salt was also 9 pies; Pachbadra salt was sold at the rate of 1½ anna with a charge of 3 pies for clearance; Kohat salt fetched on the average about 8 pies. The total amount of salt which passed into consumption was 7,819,675 maunds, distributed as follows:—

	1901-02.	1902-03.
	Maunds.	Maunds.
Punjab and N.W. Frontier Province, cis-Indus, including Native States and Kashmir (chiefly rock salt).	2,580,056	2,591,498
Ditto trans Indus (chiefly Kohat salt)	336,904	324,218
United Provinces (chiefly Sambhar salt)	3,405,693	3,269,782
Behar	154,419	153,126
Central Provinces	116,110	84,567
Rajputana	800,905	811,104
Central India	467,626	494,292
Other places, including Afghanistan	113,657	91,088
<b>TOTAL</b>	<b>7,975,370</b>	<b>7,819,675</b>

**Bengal.**

The salt consumed in Bengal comes from abroad or from other parts of India; up to the last few years a small amount was annually manufactured in Orissa, but this manufacture has been discontinued, and the accumulated stock of locally made salt has now been exhausted. In the other maritime tracts of the province also, the manufacture of salt is prohibited. The amount of salt imported by sea during the year 1902-03 was 10,615,265 maunds, as shown in the margin; there was a decrease of 21 per cent.

Salt Imports by Sea.	1901-02.	1902-03.
	Maunds.	Maunds.
From United Kingdom -	6,554,361	5,232,650
" Germany -	1,354,514	900,195
" Red Sea -	4,359,447	3,604,292
" Persian Gulf -	347,964	279,963
" Madras -	11,992	—
" Bombay -	752,572	598,165
" Madagascar -	8,036	—
<b>Total</b>	<b>13,388,886</b>	<b>10,615,265</b>

as compared with 1901-02. Nearly half of the total imports came from the United Kingdom, but English salt is being slowly but steadily replaced by salt imported from Aden and the Red Sea. The amount of Madras salt carried into Orissa by rail rose from 711,900 maunds to 828,800 maunds, or more than 16 per cent., while the imports of the same article by sea ceased, owing to the competition of the East Coast Railway. This salt is of high quality, and competes successfully with Liverpool salt. The average price of salt, including duty (Rs. 2½ per maund), at the chief marts of Bengal was Rs. 3¾, having decreased by 2 annas, or about 3 per cent., as compared with the previous year. The average wholesale price of Liverpool salt in 1902-03 was Rs. 56¼ per maund from the ship's side at Calcutta, exclusive of duty, compared with Rs. 69¾ in 1901-02.

The net amount of salt consumed in the province was 11,045,690 maunds, as compared with 10,431,400 maunds in 1901-02. The consumption of salt

	1901-02.	1902-03.
	Lbs.	Lbs.
Saliferous tracts (including Orissa).	12-34	12-21
Rest of province	10-67	11-18

per head of the population during the last two years is given in the marginal table. The gross salt revenue was £1,787,000, or three per cent. more than in the preceding year, a result which was due to larger payments of import duty. The number of cases in which contraband salt was confiscated was 887, and there were 813 prosecutions instituted during the year for offences under the salt laws; 1,017 persons were apprehended, of whom 48 were acquitted,

There were in Madras available for the manufacture of salt by solar evaporation 22 Government and 45 other factories; but of these, four Government and two other factories were not at work during the year 1902-03. The season was, on the whole, very favourable for salt manufacture, and the quantity produced was the highest on record. The amount is given as 9,757,565 maunds, or over 5 per cent. more than in 1901-02, and nearly 20 per cent. above the average of the preceding ten years; of this amount, 5,889,800 maunds were manufactured in private factories. An attempt has been made to produce by sifting a large-grained salt which should compete with Bombay salt, of which a large quantity is imported annually; but the difficulty of disposing of the siftings except at a loss has resulted in its abandonment. The average wholesale price of "excise" (i.e., private factories) salt works out to 3 annas per maund, or rather less than in the preceding year. Government salt is sold at fixed prices (the average rate being 3 annas per maund) with a view to controlling the price of "excise" salt; it is reported that the average retail price of salt varied in the several districts between Rs. 2 $\frac{3}{4}$  and Rs. 3 $\frac{3}{4}$ . Excluding the salt used for fish-curing, or bought by the French Government, the total of salt available for consumption during the last three years was as follows:—

SALT.  
Madras.

	1900-01.	1901-02.	1902-03.
Government, excise, and sea-imported salt -	Maunds. 9,060,452	Maunds. 8,984,823	Maunds. 9,122,219
Salt imported from Bombay by railway -	623,325	615,050	658,503
	9,683,777	9,599,873	9,780,722

After deduction of salt exported from the Presidency, which amounted to 968,000 maunds, the average consumption per head of the population was 16·05 lbs. in the whole Presidency, including Native States except Travancore and Cochin. The corresponding figure for 1901-02 was 16·23 lbs.

The gross revenue from Madras salt was £1,354,400, as compared with £1,276,900 in the preceding year. During the year under report there were 136 bonded yards in the Madras Presidency open for curing fish under special regulations, whereby cheap salt is sold to fish-curiers. The quantity of fish brought to be cured was 50,374 tons, which was considerably less than in the previous year, owing to bad weather on the coasts and other causes. About 800,000 maunds of cured fish left the yards in a fit condition for use. The cost of the yards to the Treasury was more than covered by the amount realised for salt. Prosecutions under the salt laws were numerous in comparison with other provinces, though their number was less than usual; of 5,245 persons charged with salt offences, 672 were released by departmental officers with a warning, and 4,514 were sent for trial.

The salt supply of Bombay comes from the Pritchard salt brine works, owned by the Government, on the Runn of Cutch (Baragra salt); from sea-salt works on the coast; and by importation. Of the sea-salt works one, at Dharasna, belongs to the Government; the remainder, of which there are some hundreds, are for the most part owned privately; the imports of salt come chiefly from Goa. The year was on the whole favourable for the production of salt, and the stock at the Pritchard salt works has reached the amount desired by the Government, namely, a reserve equal to two years' supply. The following table shows the issues of salt from each source for the last two years:—

Bombay.



## SALT.

	1901-02.		1902-03.	
	Total Issues.	For Local Consumption.	Total Issues.	For Local Consumption.
Baragra salt - - -	Maunds. 2,020,720	Maunds. 893,591	Maunds. 2,091,508	Maunds. 892,195
Sea salt - - -	7,568,067	2,130,436	7,121,109	2,033,385
Imported salt - - -	253,987	206,984	272,815	221,891
Total - - -	9,842,774	2,731,011	9,485,432	2,647,471

The issues of duty-paid salt in the whole Presidency were at the rate of 10·38 lbs. per head of the population, but in Gujarat, as usual, the average was lower, amounting only to 8·99 lbs. per head. The corresponding figures of the previous year were 10·71 lbs. and 8·91 lbs. per head of the population. The apparent fall may be due to reluctance to take salt out of bond while the question of a reduction of duty was pending, rather than to actual decrease in consumption. 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 cost price of Baragra salt was 1½ annas per maund, and the generally prevailing price of sea salt, exclusive of duty, was 2 annas. The average market price per maund ranged between Rs. 3, the price in the Ahmedabad district, and Rs. 4½ in Bombay. The number of detected offences against the salt law was 1,428, most of them being clandestine removals of natural salt; 1,522 persons were prosecuted, convictions being obtained against 96 per cent. of them. Twenty-seven fish-curing yards were open at the end of the year, as in the previous year. The quantity of fish brought to be cured in bond was 113,800 maunds, and 36,941 maunds of cheap salt were issued to fish-curiers; the fish-curing season was unfavourable, and the figures are very far below the returns of the exceptionally good year preceding.

## 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 by importation. The amount passed into consumption during the year was 288,383 maunds.\* The consumption per head of the population was 7·39 lbs., against 7·13 lbs. in the preceding year and 7 lbs. in 1900-01. The average market price of salt was rather less than Rs. 3½, showing a slight rise. One fish-curing yard was worked during the year, and used 1,205 maunds of salt and 9,295 maunds of fish. All the salted fish manufactured was exported.

* From Maurypur	Maunds.	224,579
" Saran	"	16,923
" Dilyar	"	27,667
Net imports	"	19,314

## Burma.

The amount of imported salt which paid duty in Burmese ports during the year 1902 was 1,537,176 maunds. This comes chiefly from England and Germany, and pays a duty of Re. 1 per maund; imports from Germany constituted almost 60 per cent. of the salt imported, Liverpool salt comprising barely 25 per cent., while 11 per cent came from Aden, and 4½ per cent. from Madras. The positions of the United Kingdom and Germany in this respect have been entirely reversed since 1894-95. The excise duty on locally manufactured salt was levied generally by a composition rate on vessels used for boiling brine, the amount of which varied in different parts of the province; but a system of levying duty on actual output is being experimentally tried in the Hanthawaddy and Bassein districts, and seems on the whole to have met with success up to the present. The estimated incidence of duty per maund under the composition rate system is given as about half a rupee in most districts, but as the output is not accurately known the

figures are uncertain. The estimated output of locally manufactured salt in 1902 is 544,800 maunds, against 585,300 in 1901. The total amount of salt actually consumed, as distinct from the amount issued, cannot be accurately stated. The imports of salted fish fell from 342,200 to 333,300 maunds. Prices of foreign salt at Rangoon were lower, falling to 25½ annas by the close of the year; but the majority of the markets near Rangoon showed an increase rather than a decrease in the average selling rate, owing to local conditions. The price in inland markets showed no very decided change; the average was not higher than Rs. 2½ per maund. The number of cases of illicit manufacture of salt detected was small.

SALT.

## EXCISE.

EXCISE.

The excise revenue of India is raised by various methods, including :— General.

(1) Monopolies for the manufacture or for the sale, or both, of liquors over defined areas; (2) Still-head duty and fees on spirits manufactured at central distilleries; (3) Licences for the working of outstills at specified places, with the privilege of selling the produce; (4) Licences for the sale of various kinds of liquor; (5) Tax on trees used for the manufacture of toddy, or on mhowra flowers used for distillation; (6) Licences for the sale of intoxicating drugs; (7) Duty on opium and hemp drugs consumed.\* Tobacco, which is grown in almost every village, and is consumed by nearly all men and by many women in India, is not subjected to any duty; tea and coffee are also free from all duties, with the exception of the small tea cess now levied for the purposes of the trade. The excise duty on woven cotton goods manufactured at power mills is dealt with under the heading of "Customs." Over almost the whole of Bombay and the Punjab, over the populous parts of Madras, the United Provinces and Burma, and over part of Bengal and the Central Provinces, a still-head duty is levied on all Indian spirit according to its alcoholic strength; but in some cases the duty is levied on the raw material from which the spirit is distilled. The still-head duty ranges from Rs. 2 to Rs. 5 (in Burma, Rs. 6) per gallon of London proof spirit; if the cost of licences be added, the total duties are in some places more than six rupees per gallon of London proof spirit. The system of excise management followed in these tracts is called the central distillery system, and assumes different forms in different provinces; in Northern India the distilleries are places under Government supervision where licensed distillers are allowed to set up stills and to manufacture spirits generally after a more or less rude fashion. Elsewhere they are large concerns, under private or Government management, at which spirits are made on improved principles. Efforts are continually made to adapt the systems of excise as far as possible to the conditions of each province. In certain parts of India, including the north and west of Bengal, about half of the Central Provinces, the whole of Assam, and in limited tracts in Burma, revenue is levied on Indian spirits by licensing the establishment of private stills, which is called the out-still system. The central distillery system is admittedly the best for preventing the spread and consumption of cheap liquor; and the Government of India have in past years declared their intention to restrict the out-still system as narrowly as possible. The difficulties are that in sparsely-peopled forest tracts the materials for illicit distillation are everywhere available; the tribes addicted to drinking often live in these regions; an adequate and trustworthy preventive staff cannot be kept; and illicit practices prevail, to the consequent demoralisation of the people, if weak liquor cannot be obtained in some lawful way.

\* A customs duty is also levied on all imported spirits, wines and beer, but credited to the head of Customs. The import duty is six rupees per gallon on London proof spirit; 2½ rupees per gallon on sparkling wines; one rupee per gallon on other wines; and one anna per gallon on beer.

EXCISE. The following table gives the excise revenue of 1902-03 for each province under the different heads, as shown in the Finance and Revenue Accounts:—

	India (General) and Berar.*	Bengal.	United Provinces.	Punjab.	North-West Frontier Province.	Burma.	Central Provinces.	Assam.	Madras.	Bombay.	TOTAL.
	£	£	£	£	£	£	£	£	£	£	£
License and distillery fees, and duties for the sale of spirits, fermented liquors, and drugs, viz. :—											
Foreign liquors, &c. -	13,439	80,316	46,593	18,351	1,562	80,876	1,339	1,807	23,795	20,196	290,654
Country spirits -	91,298	497,993	352,489	93,347	6,046	82,331	96,442	46,451	405,729	539,370	2,215,315
Toddy -	3,964	71,807	10,239	—	—	36,011	1,617	28	632,853	74,985	780,795
Opium and its prepara- tions.	7,970	48,439	17,421	27,485	2,186	16,261	13,608	22,600	20,114	1,988	177,972
Other drugs -	3,290	113,945	90,627	21,407	2,540	1	5,049	13,577	10,266	20,497	281,689
Duty on opium consumed in India.	10,239	128,664	37,063	11,360	605	165,811	24,163	90,836	32,353	48,920	555,871
Acceage on land cultivated with the poppy.	—	—	—	1,364	—	—	—	—	—	—	1,864
Duty on ganja -	694	111,202	—	—	—	—	7,349	13,627	9,717	11,028	154,619
Fines, confiscations, mis- cellaneous.	3,956	1,062	136	36	6	2,019	107	46	4,445	4,700	17,663
<b>Total Revenue -</b>	<b>134,039</b>	<b>1,052,528</b>	<b>554,917</b>	<b>178,350</b>	<b>12,848</b>	<b>284,329</b>	<b>160,274</b>	<b>104,672</b>	<b>1,041,162</b>	<b>723,325</b>	<b>4,426,642</b>
<b>Deduct -Charges -</b>	<b>2,540</b>	<b>57,702</b>	<b>5,309</b>	<b>4,314</b>	<b>483</b>	<b>31,784</b>	<b>3,478</b>	<b>1,053</b>	<b>64,940</b>	<b>33,650</b>	<b>189,193</b>
<b>Net Revenue, 1902-03</b>	<b>131,499</b>	<b>1,000,826</b>	<b>549,608</b>	<b>174,036</b>	<b>12,365</b>	<b>252,545</b>	<b>156,796</b>	<b>103,619</b>	<b>976,222</b>	<b>689,675</b>	<b>4,237,449</b>
<b>Net Revenue, 1901-02</b>	<b>63,365</b>	<b>955,958</b>	<b>488,947</b>	<b>174,255</b>	<b>—</b>	<b>240,324</b>	<b>125,980</b>	<b>128,099</b>	<b>887,546</b>	<b>672,962</b>	<b>3,910,528</b>

\* From 1st October 1902 only.

A net sum of £504,000 was yielded by import duties on liquors and drugs imported into India during the year 1902-03, and thus the total drink and drugs revenue of India amounts to about 4½ annas a head on the whole population of British India. There has been, on the whole, a steady increase in the excise revenue with the exception of some of the years of famine; but this growth, though in part due to enhanced consumption of liquors caused by the growth of population and the general increase of earnings, is yet largely, and in some localities mainly, the result of improved excise administration, which has largely increased the rates of taxation, and has, at the same time, restricted the use of illicit intoxicants. The growth of the net excise and customs revenues on liquors and drugs consumed in India during the past 24 years is shown below:—

	£
1874-75	1,755,000
1883-84	2,840,000
1894-95	3,965,000
1895-96	4,118,000
1897-98	3,940,000
1898-99	4,107,000
1900-01	4,239,000
1902-03	4,741,000

For the 228½ millions of the population inhabiting the various excise tracts covered by the statistics, the total number of shops licensed for the

retail sale of spirits, fermented liquors, opium and drugs, is as follows, province by province:—

Excise

PROVINCE.	Number of Retail Shops licensed in 1902-03 for the Sale of					Total in 1902-03.	Total in 1901-02. (revised.)	Population of Excise Area.
	Country Spirits.	European Liquors Imported or made in India.	Toddy and Rice-Beer or other Indian Fermented Drinks.	Opium.	Narcotic or Intoxicating Drugs, other than Opium.			
Bengal - - -	3,371	537	16,901	1,697	3,672	26,178	25,254	74,620,000
United Provinces - -	5,965	288	4,288	1,175	3,653	15,369	15,308	47,671,000
Punjab - - -	1,271	299	38	1,456	1,255	4,319	4,276	20,306,000
North-West Frontier Province.	54	45	—	86	86	271	247	2,042,000
Burma - - -	68	426	1,571	88	—	2,153	2,140	9,187,000
Central Provinces - -	6,396	87	536	954	1,070	9,103	8,598	9,564,000
Assam - - -	216	65	19	767	294	1,361	1,374	5,759,000
Madras - - -	10,072	675	18,781	1,182	549	31,259	31,210	38,196,000
Bombay and Sind (eight months).	2,750	249	1,702	1,108	1,033	6,842	6,838	18,534,000
Berar - - -	1,084	24	929	429	176	2,642	2,665	2,754,000
<b>Total - - -</b>	<b>31,247</b>	<b>2,695</b>	<b>44,825</b>	<b>8,942</b>	<b>11,788</b>	<b>99,497</b>	<b>97,910</b>	<b>—</b>

The increase in the Central Provinces is due to the taking over by Government of the outstill in two zamindari states; that in Bengal chiefly to the disposal of sanctioned licences which were unlet in the preceding year. There are thus 99,500 licensed shops for the retail sale of intoxicants and narcotics in British India, or one shop to an average of 2,300 of the population. In the United Kingdom in 1902-03 there were nearly 173,000 licences for the retail sale of beer, wine and spirits, or one shop to about 240 of the population. In neither computation are occasional or part-year licences reckoned; of these latter licences, 30,800 were issued in the United Kingdom during the year, while the temporary or part-year licences in India are under 2,000 a year, leaving out of account domestic consumption licences issued in Bombay and Bengal.

In Bengal the total excise revenues of 1902-03 and the two previous years, as given in the departmental returns, were as follows:—

Receipts from	1900-01.	1901-02.	1902-03.
Country spirits - - -	£ 451,161	£ 468,115	£ 497,239
Foreign liquors and rum - - -	44,381	38,291	41,815
Fermented local liquors, toddy, and rice-beer	105,189	106,067	110,227
Opium - - -	172,743	174,685	176,810
Ganja, bhang, and their compounds - - -	201,344	213,224	225,352
Miscellaneous - - -	1,243	1,305	1,072
<b>Total Excise Revenue -</b>	<b>976,561</b>	<b>1,001,687</b>	<b>1,052,515</b>
<i>Add</i> duties levied in the Presidency on imported liquors.	140,009	141,667	148,891
<b>Total Revenue from Drink and Drugs } £</b>	<b>1,116,570</b>	<b>1,143,354</b>	<b>1,201,406</b>

## EXCISE.

The excise revenue was nearly 5 per cent. higher than the figure for 1901-02, which was the highest on record; the advance is distributed over practically all the heads of revenue. The average incidence of the total excise revenue in Bengal was  $3\frac{1}{2}$  annas per head, of which more than three-fifths was derived from liquors. Of the country spirit revenue, that accruing under the distillery system in the year under report slightly exceeded that under the out-still system, the order of 1901-02 being thus reversed. The latter system is in force in the Rajshahi and Chittagong divisions, and in parts of western Bengal, containing altogether a population of 40 millions; the rest of the province, containing  $34\frac{1}{2}$  millions, is under the central distillery system. The number of central distilleries was 29, in addition to 33 depôts; that of out-stills rose to 2,134. The still-head duty levied on central distillery liquor ranged from Rs. 2 to Rs. 5 per gallon of proof spirit. The consumption of country spirits in the out-still area cannot be accurately stated, but is estimated, from statements furnished by the vendors, at about 1,316,700 gallons at London proof; the amount of imported spirits consumed in the province cannot be stated; issues of country spirits from distilleries rose to 652,000 gallons, which is nearly 7 per cent. higher than in 1901-02; and 39,000 gallons of rum, mostly imported from Shahjehanpur, were consumed.

To the third item in the table given above, toddy contributed £71,800; the attempt to introduce a tree tax system of collecting this revenue has failed, and it is levied by the sale of licences, which numbered 13,312. A large proportion of the people consume rice beer, and there were 11,379 licences for home-brewing in addition to those included in the tabular statement above, while free home-brewing of small quantities is allowed.

Ganja is grown under close supervision in the Rajshahi district, and its cultivation elsewhere in the province, including the Tributary States of Orissa, is forbidden. A large amount is annually exported, the chief items in 1902-03 being, to the United Provinces, 524 maunds; to Assam, 850 maunds; to Nipal, 297 maunds. The year was marked by a great reduction of cultivation owing to the full stocks in hand; the area of land so employed was only 2,354 acres, and the produce was about 5,040 maunds. The number of shops for the retail sale of ganja was increased by 40, to 2,760. The consumption of opium was higher, but in Calcutta there was a fall, which is suspected to be due in part to the displacement of the drug by cocaine. No shops are licensed for selling opium prepared for smoking after the Chinese fashion, known as *chandu*, or after the Bengali manner, known as *madak*, and it is believed that the consumption of opium in those forms has received a check. Attention has of late been directed to the use of cocaine as an intoxicant, and the drug has been brought under the excise law, and its sale, except under licence for bona fide medicinal purposes, was prohibited in January 1902.

United  
Provinces.

The latest excise report for the United Provinces relates to the year ending in September 1902. For the last three years the gross excise revenues have been :—

Gross Receipts from	1899-1900.	1900 01.	1901 02.
Country spirits and fermented liquors -	£ 277,716	£ 296,509	£ 346,395
Foreign liquors and rum -	36,383	38,840	43,479
Opium -	45,450	50,047	53,362
Other drugs -	78,824	84,657	87,733
Miscellaneous -	213	231	286
Total -	£ 438,586	470,284	531,255

This total is higher by 13 per cent. than that of the previous year, which was the highest on record. This increase has been attained chiefly by the enhancement of the quantitative duties levied, as well as by improved administration, while the consumption, though showing no signs of decline in this prosperous year, has not grown to the same extent as the revenue. The increase of receipts occurred chiefly under the head of country spirits, though all headings show higher figures. The revenue from this source is raised for the most part under the distillery system, though some tracts on the north and on the south of the provinces are under farming or out-still systems. Twenty-seven central distilleries were at work throughout the year. The rate of still-head duty charged was increased from Rs. 2 to Rs. 2½ per gallon of London proof spirits in divisions, a proportionate enhancement being fixed for spirits 25 degrees under proof; these higher rates are now in force practically throughout the provinces. The number of out-stills and shops fell from 1,476 to 1,440. The consumption of spirits under the farming and out-still systems cannot be stated, but the amount of country spirits consumed in the distillery tracts, which constitute most of the province, is given as 1,282,800 gallons at London proof, or 5½ per cent. more than the consumption of the previous year.

Excise.

The amount of the quantitative duty on Bengal ganja was, as before, Rs. 6 to Rs. 9 per seer. The duty on charas was Rs. 4 per seer, and that on ganja from places other than Bengal was raised from Rs. 3 to Rs. 4 per seer. The quantity of hemp drugs consumed included 326 maunds of ganja, 2,341 maunds of charas, and a large quantity of bhang, the two former figures showing an increase. The question of re-adjusting the duty on ganja and charas was being considered. The consumption of opium also (1,558 maunds) was higher than in 1901-02.

The policy which has been pursued in the Punjab of promoting the use of the purer spirit manufactured by European methods in preference to the cruder country-made spirit, for which purpose the duty on all spirits was fixed in 1898 at a common rate of Rs. 4 per gallon of proof, or nearly proof spirit, was carried further after the end of the year under report by the closure of the last of the Government enclosures in which country spirit was manufactured. The supply of spirits may be now said to be left to four large private distilleries worked on European methods; though the actual number in existence is six.

Punjab.

The gross excise revenues in the last three years were raised as follows :—

Receipts from	1900-01.	1901-02.	1902-03.
	£	£	£
Spirits made in India	98,215	95,114	101,865
Imported liquors and beer	12,873	13,312	14,575
Opium	40,611	39,357	40,236
Other drugs and miscellaneous	21,707	19,190	21,673
Total	£ 173,406	166,973	178,349

The quantity of spirits issued for sale in the province was 229,000 gallons, practically all from the private distilleries. Five years previously, nearly three-quarters of the supply had been made in the country fashion. Imported liquor to the amount of 58,000 gallons must be added, in order to obtain the figure of consumption in the Punjab. The province stands fourth in respect of population, but in the excise revenue is almost lowest of the great provinces, owing to the abstemious character of much of the population. The spirit supply works out at an average of 1½ of a quart per head of the population in the year. There is practically no revenue from native fermented liquors, which are not consumed to any extent. The amount

**Excise.** of opium sold retail is returned as 1,307 maunds, but there is some reason to doubt the accuracy of the figure. The area under poppy declined, and the receipts from acreage duty were therefore less. The import duty on Malwa opium is Rs. 4 per seer, and on that imported from Kashmir and the Hill States Rs. 2 per seer. There is a considerable consumption of bhang (2,284 maunds 1902-03), and the retail sales of charas increased from 746 to 878 maunds, though possibly the returns are at fault. It has been determined to increase the rate of duty on this harmful drug from Rs. 2 to Rs. 6 per seer, with effect from the 1st April 1904.

**Burma.** In Burma the gross excise revenue during the past three years was raised thus :—

Receipts from	1900-01.	1901-02.	1902-03.
Liquors imported or made in Burma by European methods at distilleries.	£ 83,523	£ 83,442	£ 75,320
Country spirit (i.e. spirit made at out-stills) - -	9,019	8,895	8,839
Toddy - - - - -	28,772	31,431	37,240
Rice-beer - - - - -	61,985	77,771	72,004
Opium - - - - -	173,689	205,338	204,330
Fines - - - - -	2,568	3,199	2,871
Total - - £	359,556	410,076	400,604
Add,—Duty on Imported liquors - - -	75,092	74,705	83,722
Total - - £	434,648	484,781	484,326

The decrease under the first head is ascribed to the lower prices obtained for licences at the auction sales, combined with a decrease in the consumption of spirits manufactured by European methods at the four distilleries in Burma. In certain places where there is an ascertained demand for country-made spirit, out-stills are permitted, under constant supervision; there were 35 of these out-stills in Lower Burma and 12 in Upper Burma during 1902-03. The excise duty on distillery spirits is Rs. 6 per gallon, which is the same as the import duty on foreign spirits. The chief matter of interest is the working of the new measures introduced in Lower Burma for restricting the use of opium. They came into force on the 1st April 1902. They included (1) an increase in the number of licensed shops, (2) the sale of shops to selected candidates instead of the previous open auction system, (3) the re-opening of the list of registered Burman consumers, for the addition of actual consumers who were over 25 years of age in 1893, and (4) vigorous efforts to suppress smuggling. The result from a financial point of view is shown in the table. For the rest, it is believed, though a definite conclusion can hardly yet be drawn, that a check has been given to the contraband trade, but that the measures have not been altogether successful in restricting consumption and in keeping opium out of the hands of unregistered Burmans. The amount of smuggled opium confiscated in 1902-03 fell to 48 maunds, as compared with 93 maunds in the preceding year. The measures are being applied tentatively, and have more recently been extended to Upper Burma.

No statement can be given of the amount of country spirit made at the out-stills, or of the production of toddy or rice-beer; nor are there available accurate statistics of the consumption of imported beer and spirits. The issues of spirits made in Burma by European methods fell from 70,555 to

55,724 gallons ; the amount of opium issued from the Government treasuries was 1,251 maunds, which was over one-third more than in the preceding year, owing to the new arrangements in Lower Burma.

Excise.  
Central  
Provinces.

In the Central Provinces the excise receipts of recent years have been as follows :—

Receipts from.	1894-95.	1900-01.	1901-02.	1902-03.
Country spirits	£ 115,649	£ 69,637	£ 80,414	£ 95,326
Opium	65,298	48,514	46,574	53,512
Ganja	18,055	11,246	11,839	12,862
Toddy	1,493	1,457	1,561	1,618
Miscellaneous, including foreign liquors	1,937	2,827	3,056	2,990
<b>Total</b>	<b>£ 202,432</b>	<b>£ 133,681</b>	<b>£ 143,444</b>	<b>£ 166,308</b>

These figures show that the Excise Department has shared in the reviving prosperity of the province, but they are still far below those of a normal year, which may be taken as represented by those for 1894-95. The increase would have been still more marked if it had not been the case that a bad crop of mahua was expected, and that the bidding at the auctions was thereby restricted. In the end the crop turned out very well, to the great benefit of the licence-holders.

The greater part of the country is supplied with spirits from out-stills, from which nearly 43 per cent. of the country spirit revenue is derived ; the number of these out-stills was 1,769, having been increased by the taking over of excise arrangements in some zamindaris by the Government. The Government have in view the desirability of substituting the central distillery system in tracts where it is considered possible to do so. The number of central distilleries was 25 as in the previous year. In two districts, Nagpur and Nimar, a modified bonded warehouse system had been for some years on its trial. Under the out-still system the revenue is raised entirely by licence fees, under the central distillery system by licence fees and by a duty varying between one and four annas per seer on the raw material ; under the new system it is raised by licence fees and a duty on liquor consumed, fixed at Rs. 3 per gallon of spirit 10 degrees below London proof and Rs. 1½ per gallon 50 degrees under proof. It was decided to appoint a Committee to consider whether the time had come for the extension of this system, which has the advantage of separating the rights of manufacture and of vend.

The duty on the importation of Shahjehanpur rum was Rs. 5 per gallon, and the amount imported was about 9,500 gallons. The issues of spirits from the distilleries were equivalent to 233,776 gallons at London proof strength, an increase of 22 per cent. compared with the preceding year. The consumption in out-still areas cannot be stated. There was a large increase in the amount of opium issued from the Government treasuries during the year—702 maunds against 590 maunds in 1901-02—but there is much smuggling in the north of the province, and this figure is far from representing the whole of the actual consumption of opium. The duty on ganja was raised from Rs. 3 to Rs. 4 per seer at the beginning of the year 1901-02, and the consumption has since fallen very considerably. It was rather higher—710 maunds—in 1902-03, but there is much smuggling. Its cultivation has recently been prohibited in the feudatory states of Orissa, and inquiry was ordered with respect to its cultivation in some feudatories of the Central Provinces. The number of licences for the cultivation of ganja in the Nimar district rose from 53 to 111, and the area cultivated was 148 acres, or 72 acres more than in 1901-02.



Excise.  
Assam.

The excise revenue of Assam for the year 1902-03 and previous years was distributed thus :—

Receipts from	1900-01.	1901-02.	1902-03.
	£	£	£
Country spirits	46,506	46,854	46,382
Imported liquors and rum	1,767	1,517	1,506
Opium and its compounds	120,292	114,067	119,435
Ganja and its compounds	26,762	26,318	27,197
Miscellaneous, including toddy, &c.	178	113	142
<b>Total</b>	<b>195,505</b>	<b>188,869</b>	<b>194,662</b>

The excise revenue rose in the year under report to within a small amount of the figures for 1900-01, which were the highest recorded. The returns from country spirits were rather lower, but the revenue from opium, which is by far the most important part of the excise revenue of the province, was high. The country spirits are for the most part consumed by the immigrant population; which has grown rapidly during the past few years; no estimate of the consumption of spirits for the year is available, as, owing to the sparse population of the province, the central distillery system has not been introduced, and the out-still system everywhere prevails. The question of the excise system in its relation to country spirits was made the subject of an exhaustive inquiry during the year, but the results were not submitted in 1902-3. Endeavours were made to get planters to undertake the management of country spirit shops in their vicinity, but without much success. One shop was closed, and five removed, on the complaints of the managers of neighbouring gardens. The indigenous population consumes chiefly opium and ganja, the use of the latter being especially prevalent in the two Surma Valley districts; and there is little demand for the other hemp drugs, known as *charas* and *bhang*. Taking the province as a whole, the consumption of opium per head of population is more than twice as large as in any other part of India, and seven or eight times that of Bengal or the United Provinces. The amount of opium issued from the Government treasuries was 1,274 maunds, which was 69 maunds more than in 1901-02, but less than in preceding years. The same may be said of the issues of ganja, which amounted to 614 maunds. Arrests under the excise and opium laws numbered 486, and convictions were obtained against 78 per cent. of the persons concerned.

Madras.

The gross excise revenue of Madras during the last three years was raised thus :—

Receipts from	1900-01.	1901-02.	1902-03.
	£	£	£
Country spirits	337,277	357,969	403,282
Toddy	472,186	497,089	529,654
Foreign liquors and miscellaneous	27,027	32,523	30,620
Opium and other drugs	65,762	66,337	72,240
<b>Total</b>	<b>902,252</b>	<b>953,918</b>	<b>1,035,805</b>
<i>Add</i> ,—Customs duties on imported liquors	63,365	62,256	69,696
<b>Total Revenue from Drink and Drugs - £</b>	<b>965,617</b>	<b>1,016,174</b>	<b>1,105,501</b>

Excise.

Central distillery systems are in force over the greater part of Madras. The distilleries are all private concerns working on European methods; in some parts they compete freely with one another; elsewhere the right of manufacture is sold to contractors. In some small tracts non-distillery systems are in force, but these areas are being restricted. Still-head duty is levied on all spirits issued from contract or other distilleries; the rate varies, but generally speaking is Rs. 4½ per gallon at proof strength. The amount of country spirits consumed in 1902-3 in distillery areas is returned as 1,011,756 gallons at proof strength, compared with 869,700 gallons in the preceding year. The increase is ascribed to the favourable character of the season. Over nearly the whole of the Presidency a tree tax, ranging from one rupee to six rupees a year, is imposed on all palm trees tapped for fermented toddy, while the shops for retail sale of toddy are separately sold by auction to the highest bidder. The amount of toddy consumed in the Presidency cannot be stated, but the increase in the receipts from tree tax by nearly 5 per cent. points to a larger consumption.

The use of opium is almost restricted to the districts in the north-east of the Presidency, chiefly the Godavari district, where the rate of consumption (94 grains per head) is high. The quantity consumed in the Presidency, including that used in the manufacture of drugs, is given as 890 maunds. The amount of hemp drugs of all kinds sold by retail is returned as 1,098 maunds. The number of persons sent for trial for offences against the excise laws was 19,083, against 18,516 in the previous year, and among these nearly 95 per cent. of convictions were obtained.

The central distillery system obtains through practically the whole of the Bombay Presidency, but it differs from the similar system of Madras. In the most prevalent form in Bombay, the monopolies of manufacture and sale of country spirit over an excise area are sold together to one contractor, who guarantees a fixed minimum return of duty to the Government; and nearly all the revenue is obtained from still-head duties; in the Madras distillery system the monopoly of manufacture is separated from that of retail vend, and much of the revenue is obtained from the auction sale of shop licences. The Bombay still-head duty ranges between Re. 1 and Rs. 5½ per proof gallon, averaging about Rs. 3½. In several of the minor Native States the British system of excise management has been adopted; in some others the chiefs have engaged to manage their excise affairs so as to avoid competition with British excise arrangements. The general fiscal results of the excise management in Bombay, Sind, and Aden during the last three years were—

Gross Receipts from	1901-01.	1901-02.	1902-03.*
	£	£	£
Locally made liquors, including toddy - -	569,540	596,357	417,634
Foreign and Indo-European liquors - -	16,066	18,023	12,096
Opium - - - - -	47,607	49,160	34,257
Intoxicating drugs - - - - -	31,768	31,600	20,591
Miscellaneous items - - - - -	5,115	10,773	7,015
<b>Total Excise Revenue. - -</b>	<b>670,096</b>	<b>705,913</b>	<b>491,593</b>
<i>Add,—</i> Customs duties on imported liquors -	187,034	193,094	203,939†
<b>Total Revenue from Drink and Drugs - £</b>	<b>857,130</b>	<b>899,007</b>	<b>695,532</b>

\* Eight months only.

† Twelve months.

The incidence of the revenue from country liquor for the eight months was rather over 6 annas per head of the population in Bombay proper, the

**Excise.** average for the corresponding period of last five years being rather less than that figure. The amount of country spirit consumed in the eight months is returned as 1,766,000 gallons, against an average of about 1,680,000 gallons as an average for the corresponding periods of the last five years. The figures as a whole are taken to be a satisfactory indication of returning prosperity. Issues of opium from Government treasuries for internal consumption are returned at about 805 maunds in the eight months, which is proportionately more than in the last two years, though less than in earlier years. The amount of hemp drugs sold during the eight months included 1,718 maunds of bhang, 431 maunds of ganja, and 243 maunds of other preparations. The consumption in Sind is chiefly in the form of bhang, in Bombay it is chiefly ganja. The use of the latter drug appears to have received a very considerable check by the imposition of the duty of Rs. 4 per seer, and the restrictive measures introduced by the Bombay Act V. of 1901. Offences against the revenue laws in the Presidency proper were rather less frequent, the number of cases detected being 1,631; convictions were obtained in 93 per cent. of the cases brought up for trial.

**Berar.** In Berar the gross excise revenue of the last three years has been as follows :—

	1900-01.	1901-02.	1902-03.
	£	£	£
Country spirit and toddy . . . . .	53,506	68,480	81,928
Opium . . . . .	17,950	16,847	22,381
Ganja . . . . .	1,877	2,708	2,836
Foreign liquors and miscellaneous . . . . .	585	481	577
<b>Total . . . . .</b>	<b>73,918</b>	<b>88,516</b>	<b>108,722</b>

The financial results of the year are very satisfactory. The revenue from country liquor is higher than it has been since the introduction of the central distillery system, though not so high as in some years when the outstill system was everywhere in force. The consumption of distillery liquor amounted to 182,600 gallons at London proof, which is much higher than in previous years. The distillery area comprised the Ellichpur, Amraoti, and Akola districts, and part of the Buldana district; in these tracts the Madras contract distillery system, which replaced the Bombay system in the year 1899, continued in force, the main feature being the separation of the right of retail vend from that of manufacture and wholesale supply. A uniform rate of stillhead duty on country liquor, namely Rs. 2½ on strength of 25 degrees below proof, and Rs. 1¼ on strength of 60 degrees below proof, came into force at the beginning of the year, in place of the former varying rates. The rest of Berar was supplied with country spirits by out-stills, which numbered 578. The amount of opium sold retail increased to 441 maunds, and 129 maunds of ganja and 22 maunds of bhang were consumed. With effect from the 1st April 1901, the rates of duty on opium and ganja were raised respectively from Rs. 10 to Rs. 15 per seer and from Rs. 3 to Rs. 4 per seer. Neither of these drugs is produced in Berar, the cultivation of poppy and of hemp for this purpose being forbidden.

#### STAMPS.

**STAMPS.** The stamp revenue is leviable under Act VII. of 1870 (the Court Fees Act), which imposes fees on plaints, petitions, and other documents, with specified exceptions, filed before civil, criminal, or revenue courts, and under Act II. of 1899 (the Stamp Act), which imposes duties on commercial transactions recorded in writing, such as conveyances, bonds, cheques, bills of

exchange, receipts, and the like. The following table gives the stamp receipts, province by province, from the year 1902-03 :—

Excise.

	India, (General) and Berar.*	Bengal.	United Provinces.	Punjab.	North- West Frontier Pro- vince.	Burma.	Central Pro- vinces.	Assam.	Madras.	Bombay.	TOTAL.
Sale of court fee stamps	£ 34,559	£ 944,590	£ 412,596	£ 180,461	£ 15,905	£ 105,534	£ 67,891	£ 48,636	£ 340,676	£ 232,790	£ 2,392,628
Sale of commercial and other stamps.	17,720	358,804	131,949	77,067	9,398	67,943	29,151	18,493	192,943	121,072	1,013,337
Fines and miscellaneous	247	6,912	1,915	5,798	146	3,114	368	981	7,270	42,723	67,756
Gross Stamp Revenue of 1902-03.	52,526	1,304,696	536,460	263,316	25,949	175,591	97,410	68,280	549,896	399,588	3,473,711
Revenue of 1901-02	£4,300	1,267,037	558,730	271,323	8,006	150,851	103,855	63,204	570,275	418,225	3,446,406

\* From 1st October 1902 only.

The refunds of the year were £39,309, and the charges of collection came to £100,308.

### CUSTOMS.

Import duties, which had been abolished in India in 1882, and were re-imposed in 1894, are levied, generally speaking, at the rate of 5 per cent. of the value of the goods. The chief, though not the only, exceptions are railway material, industrial or agricultural machinery, food grains, raw materials such as coal, jute, raw cotton, or wool, besides books, and gold and unset precious stones, which are all admitted free of duty; petroleum, which pays one anna per gallon; and iron and steel, on which an import duty of 1 per cent. *ad valorem* is levied. At first cotton goods were exempted, but in December 1894 a 5 per cent. duty was imposed on imported cotton goods and yarns, while a countervailing excise duty of 5 per cent. *ad valorem* 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 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 either imported from abroad or manufactured at power mills in India, the products of the village handloom industry being exempted. A duty is levied on exported rice and rice-flour at the rate of 3 annas per maund of unhusked rice. An Act empowering the Government of India to put a countervailing duty on any imported goods which have received a bounty, direct or indirect, from the country of export, was passed in 1899; and this was put in force with regard to sugar. Subsequently, in accordance with the views of the Brussels Convention, and in view of the protection enjoyed by sugar-growers in certain countries in their home markets, Act VIII. of 1902 was passed, by which an additional duty was imposed on sugar coming from countries where the duties on imported sugar exceeded those levied on sugar produced in the country by 6 francs per 100 kilogrammes in the case of refined sugar, or 5½ francs for other sugar, the amount of the additional duty being one-half of such excess.

CUSTOMS.

The appended table shows the changes in the net customs revenue caused by the above-mentioned changes, giving the figures for 1894-95, during which the new tariff was in force, with the addition of the 5 per cent. duty on cotton goods from the 27th December; 1895-96, during which the tariff remained as at the end of the previous year, until the reduction of the cotton duties in February 1896; and the three most recent years, during the whole of which the tariff remained unchanged, with the exception of the sugar duties, the duty on woven cotton goods being 3½ per cent., and cotton yarns being on the free list :—

## CUSTOMS.

	1894-95.	1895-96.	1900-01.	1901-02.	1902-03.
Sea Customs, import duty :	£	£	£	£	£
Arms, ammunition, and military stores.	10,126	11,403	7,146	12,563	10,699
Liquors - - - - -	406,355	440,669	462,547	469,256	504,006
Petroleum - - - - -	213,118	270,782	324,069	348,222	356,438
Cotton manufactures - - -	256,631	776,483	616,633	633,214	634,189
Silver bullion and coin - -	230,557	231,859	29,007	204,054	258,976
Other metals - - - - -	135,078	168,641	193,904	154,010	201,716
Other articles - - - - -	630,450	686,725	830,563	863,432	800,565
Countervailing duties on sugar -	—	—	140,465	244,398	73,360
Export duty on rice - - - -	594,017	609,581	552,964	595,680	823,280
Miscellaneous - - - - -	6,694	1,770	20,534	22,307	19,626
<b>TOTAL Sea Customs</b> -	<b>2,483,026</b>	<b>3,197,913</b>	<b>3,177,832</b>	<b>3,597,136</b>	<b>3,682,855</b>
<b>Land Customs</b> - - - - -	<b>15,884</b>	<b>13,397</b>	<b>9,532</b>	<b>14,185</b>	<b>18,301</b>
<b>Excise duty on cotton manufactures.</b>	<b>6,897</b>	<b>40,632</b>	<b>77,530</b>	<b>114,456</b>	<b>121,698</b>
<b>Miscellaneous (including warehouse and wharf rents).</b>	<b>10,773</b>	<b>18,672</b>	<b>21,052</b>	<b>20,386</b>	<b>18,974</b>
<b>TOTAL NET CUSTOMS REVENUE</b>	<b>2,516,580</b>	<b>3,270,614</b>	<b>3,285,946</b>	<b>3,746,163</b>	<b>3,841,828</b>

There was a decrease, as compared with 1901-02, in the receipts from imported cotton manufactures, and the countervailing sugar duties had the effect of restricting imports of sugar from countries to which the duties applied, and therefore yielded little. Against these declines, however, is to be set a large rise in the receipts from the rice export duty, besides minor increases under liquors, petroleum, and silver. It should be explained that the receipts from the ordinary 5 per cent. *ad valorem* duty on sugar are included under the heading "Other Articles." Regarding the working of the excise duties on cotton goods, the progress of the cotton mill industry is treated in a later chapter.

## PROVINCIAL RATES.

## PROVINCIAL RATES.

Provincial rates or cesses are levied for the most part on the land. They are imposed to meet charges for local roads, local schools, local sanitary work, local postal arrangements, and in some provinces for village police. They are assessed either on the "assets," or rental value, or else, as is the case in the ryotwari provinces, on the land revenue, and they are collected with the land revenue. In Bengal there are two cesses, for roads and public works respectively, which are limited by law to half an anna in the rupee of the rental in each case, or one anna in the rupee ( $6\frac{1}{4}$  per cent.) for the combined cesses. They are levied on immovable property outside the municipalities on a valuation made and kept up from year to year for this purpose. In the ryotwari provinces of Bombay and Madras the incidence of the local rates (for roads and schools) is precisely that in force in Bengal, with the difference that the percentage is on the revenue instead of on the rent, and is therefore probably a smaller proportion of the profits of the land. In Lower Burma the local rates amount to 10 per cent., and in Assam to 8.3 per cent., on the ryotwari revenue. These are the highest rates. In the Punjab, the United Provinces, and the Central Provinces, the local rates are assessed on double the land revenue, that revenue being, except in the case of the Central Provinces, rather less than half the rental assets. In the Punjab they are equivalent to 5.2 per cent. on the rental value. Elsewhere they do not exceed 4 per cent. In the United Provinces they are charged at 6 per cent., but two-fifths of the produce are devoted to the maintenance of the village watch, which in Bengal and other parts of India is a charge upon special contributions assessed and collected apart from the local rates.

The following is a table of the rates and cesses collected during the year :—

PROVINCIAL RATES

	India (General) and Berar.*	Bengal.	United Provinces.	Punjab.	North-West Frontier Province.	Burma.	Central Provinces.	Assam.	Madras.	Bombay.	TOTAL.
<b>REVENUE.</b>	£	£	£	£	£	£	£	£	£	£	£
District Local Fund :											
Cess on Land for expenditure on roads, schools, hospitals, and general purposes.	20,970	321,351	384,603	138,546	9,484	112,022	27,906	46,764	408,471	162,410	1,631,427
Provincial :											
Cess on land for expenditure on roads, schools, &c.	—	320,500	—	—	—	—	266	—	—	—	321,066
Cess on land for famine assurance, canals, and railways.	—87	—	87,849	36,362	4,461	—	11,660	—	—	—	140,245
Cess on land for district post.	—	21,309	—	6,904	443	—	2,865	—	—	—	31,521
Cess on land for village service and patwaris.	24,480	—	168,879	87,540	8,144	—	34,968	—	192,088	27,120	543,169
Assessment on wards' estates for establishment charges.	—	10,800	—	1,441	125	—	—	—	—	—	12,369
Miscellaneous . . . .	2,872	—	62,394	—	310	—	—	—	1,991	—	67,573
<b>Total Receipts</b>	<b>46,325</b>	<b>674,160</b>	<b>703,726</b>	<b>270,816</b>	<b>22,972</b>	<b>112,022</b>	<b>77,663</b>	<b>46,764</b>	<b>602,500</b>	<b>180,530</b>	<b>2,747,390</b>
Refunds and charges of collection.	30	25,968	488	443	2	4,782	86	465	1,367	4,199	47,822
<b>Net Receipts, 1902-03</b>	<b>46,295</b>	<b>638,194</b>	<b>703,237</b>	<b>270,373</b>	<b>22,971</b>	<b>107,239</b>	<b>77,579</b>	<b>46,299</b>	<b>601,133</b>	<b>185,338</b>	<b>2,699,568</b>
<b>Net Receipts, 1901-02</b>	<b>9,181</b>	<b>616,451</b>	<b>693,200</b>	<b>231,871</b>	<b>—</b>	<b>104,040</b>	<b>104,030</b>	<b>42,967</b>	<b>580,451</b>	<b>211,803</b>	<b>2,694,994</b>

\* From 1st October only.

INCOME TAX.

INCOME TAX. General.

There was no change in the income tax law (Act II. of 1886) during the year. The principal provisions of the Act are that incomes derived from salaries and pensions, or from interest on securities (classed as Parts I. and III. in the returns), if amounting to Rs. 2,000 per annum, should pay five pies in the rupee (equal to 6½d. in the £), and if less than Rs. 2,000, four pies in the rupee (5d. in the £); that companies (Part II.) should pay five pies in the rupee on their net profits; and that income derived from other sources (Part IV.) should pay according to a graded scale from Rs. 10 on Rs. 500 to Rs. 42 on Rs. 1,999, the tax on incomes of Rs. 2,000 and upwards being five pies in the rupee. All incomes of less than Rs. 500 (£33½) a year were exempted. It was announced in the budget for 1903-04 that limit of exemption was to be raised from Rs. 500 to Rs. 1,000 (£66⅔). The tax is not levied on profits or incomes derived from agriculture, or on military salaries of less than Rs. 500 a month (£400 a year).

The receipts on account of income tax in each province were as follows :—

	Gross Collections.	Refunds and Collection Charges.	Net Receipts.
	£	£	£
India (General), and Berar since 1st October 1902	111,594	512	111,082
Bengal	395,876	14,936	380,940
United Provinces	176,287	1,320	174,967
Punjab	107,335	1,943	105,392
North-West Frontier Province	7,662	111	7,551
Burma	83,188	3,232	79,956
Central Provinces	24,673	220	24,453
Assam	21,276	160	21,116
Madras	209,325	3,443	205,882
Bombay	273,212	6,029	267,183
<b>Total, 1902-03</b>	<b>1,410,428</b>	<b>31,906</b>	<b>1,378,522</b>
<b>Total, 1901-02</b>	<b>1,369,310</b>	<b>30,907</b>	<b>1,338,403</b>

INCOME  
TAX.

The figures in the following paragraphs are taken from the provincial reports, and differ to some extent from those given above, which were taken from the final accounts of the Government of India.

## Bengal.

In Bengal the collections in 1902-03 amounted to £375,100, compared with £363,500 in the previous year. The realisations under Part IV. amounted to £241,600, showing a slight increase. Calcutta contributed £182,700 against £177,200 in the previous year; £90,000 of this was under Part IV. The total number of objections in the province against 106,151 original assessments in this Part was 12,048, and the final demand was about 2 per cent. below the original assessments; 84,511 of the assesseees under all headings had incomes below Rs. 1,000 per annum, and about 17 per cent. of the receipts was contributed by this class.

United  
Provinces.

For the United Provinces the latest report available is that relating to the three years ending in 1901-02. The receipts for that year were £167,900, of which £31,200 accrued under Part I., and £124,900 under Part IV. The final number of assesseees in Part IV. was 65,574. It is stated that there has been some shifting of the burden of the tax from the lower to the higher classes of assesseees; but the number of incomes assessed below Rs. 1,000 amounted to 39,800.

## Punjab.

The total receipts in the Punjab were £96,400, showing an increase of 2 per cent. compared with the receipts of the previous year. The separation of the North-West Frontier Province has not caused any important reduction in the receipts of the last two years, owing to the paucity of wealthy income-tax payers in the districts concerned. Under Part IV. a net total of £74,400 was realised, 6 per cent. having been struck off the initial assessment on objection. About 24 per cent. of the amount realised under all headings was paid by assesseees having an income less than Rs. 1,000 per annum, who comprised 29,829 out of a total of 48,925 payers.

## Burma.

The Income Tax Act, though in force in the whole of Burma and the Shan States, has only been made operative in certain selected towns and villages throughout Lower Burma, and in Mandalay town alone in Upper Burma; four fresh villages in the Lower province were brought under the Act during 1902-03. The total collections rose slightly to £81,000, in spite of a fall under "profits of companies." Under Part IV. 12 per cent. of the original assessment was remitted on appeal, considerable difficulty being found in making correct assessments in Rangoon; the final demand was £39,900, payable by 16,227 assesseees. The number of assesseees having an annual income less than Rs. 1,000 was 17,670 under all classes taxed, the total of assesseees being 31,412. In Rangoon town the collections amounted to £40,800.

## Assam.

In Assam the yield of the tax was £20,500, which was rather higher than in the previous year, the main increase occurring under Part IV., which constituted over 45 per cent. of the whole yield. The profits of the tea companies, on which the prosperity of the province mainly depends, are taxed in Calcutta and in London. The number of successful objections was 975, out of 7,436 assessments; the total original demand was reduced, on these representations, by less than 1 per cent. The number of income-tax payers having an income less than Rs. 1,000 per annum was 5,392.

## Madras.

The collections in Madras amounted to £195,700, showing a satisfactory advance above the figures of 1901-02. Of this amount, £147,800, or 75 per cent., was under Part IV. The total amount paid in the city of Madras was £35,900. Against 78,312 assessments under Part IV., 30,255 objections were preferred, and the final demand was nearly 6 per cent. below the original assessment. Of the 82,267 persons finally assessed under all headings, 60,256 were in receipt of incomes of not higher than Rs. 1,000 per annum.

## Bombay.

In the city of Bombay, where more than half the income tax of the Presidency is paid, the receipts of the year were £137,400, excluding Government salaries, or 5 per cent. more than in 1901-02. The initial demand in the city, under all headings, apart from arrears, was £162,800, payable by 35,966 assesseees; after revision the figure stood at £128,400,

payable by 31,056 persons and companies. For the whole Presidency the collections amounted to £260,300, compared with £252,900 in the preceding year. Of this amount, £156,200 accrued under Part IV. Of the 91,300 assesseees who paid the tax under all the headings, 53,200 had incomes below Rs. 1,000 a year. INCOME  
TAX.

In the Central Provinces the yield in 1902-03 was £23,500, or rather more than that of the previous year, the increase being distributed over all headings. Under Part IV. the final demand for the year was £14,700, due from 6,905 assesseees. Of the persons assessed under all heads, 4,680 had an income less than Rs. 1,000 per annum. Central  
Provinces.

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## CHAPTER IX.

## FORESTS.

## FORESTS.

The subjoined tables give the forest receipts, expenditure, and net revenue for each province during the year 1902-03 from the Finance and Revenue Accounts.

	India, (General) and Berar.*	Bengal.	United Provinces.	Punjab.	North West Frontier Province.	Burma.	Central Pro- vinces.	Assam.	Madras.	Bombay.	TOTAL.
<b>REVENUE.</b>											
Receipts - - -	₹ 48,200	₹ 81,750	₹ 125,032	₹ 105,781	₹ 6,741	₹ 449,270	₹ 101,147	₹ 38,680	₹ 174,365	₹ 165,377	₹ 1,208,108
<b>EXPENDITURE.</b>											
General direction - -	₹ 5,568	—	—	—	—	—	—	—	—	—	₹ 5,568
Conservancy and Works -	₹ 24,029	₹ 19,388	₹ 35,679	₹ 40,691	₹ 1,963	₹ 115,440	₹ 87,708	₹ 7,218	₹ 64,646	₹ 47,380	₹ 397,301
Establishments, &c. - -	₹ 17,219	₹ 21,811	₹ 28,921	₹ 23,416	₹ 1,648	₹ 77,344	₹ 39,085	₹ 14,820	₹ 57,724	₹ 64,823	₹ 347,185
Charges in England - -	₹ 1,828	—	—	—	—	—	—	—	—	—	₹ 1,828
<b>TOTAL Expenditure -</b>	<b>₹ 48,644</b>	<b>₹ 42,534</b>	<b>₹ 67,600</b>	<b>₹ 64,007</b>	<b>₹ 3,606</b>	<b>₹ 192,684</b>	<b>₹ 76,748</b>	<b>₹ 21,833</b>	<b>₹ 122,370</b>	<b>₹ 111,762</b>	<b>₹ 751,768</b>
Net Revenue or Forest Surplus, 1902-03 - }	— 444	₹ 41,216	₹ 67,422	₹ 41,754	₹ 3,135	₹ 256,586	₹ 24,404	₹ 16,847	₹ 51,885	₹ 48,615	₹ 546,320
Net Revenue or Forest Surplus, 1901-02 - }	— 3,383	₹ 42,340	₹ 47,118	₹ 33,918	— 453	₹ 215,166	₹ 9,367	₹ 12,236	₹ 55,592	₹ 44,004	₹ 461,774

\* From 1st October 1902 only.

Systematic conservancy of the Indian forests received a great impetus from the passing of the Forest Law in 1878, which gave to the Government powers of dealing with private rights in the forests of which the chief proprietary right is vested in the State. The principle upon which the forest administration is based is that State forests should be administered for the public benefit, and they are worked, therefore, with a view of combining all reasonable facilities for their use by the public with the protection necessary for their preservation as sources of fuel and timber and retainers of moisture in the soil. The forests are classed, according to the degree of completeness of the management undertaken, as "reserved," "protected," or "unclassed" forests. In the case of reserved areas the control of the Forest Department is more complete than in the case of the protected or unclassed forests. In the latter category, the area of which cannot be defined with any great exactness, there are included large tracts of uncultivated land, especially in Burma, much of which will in all probability pass into cultivation as agricultural land. Among the most important measures of conservancy are the exclusion, so far as possible, of the yearly fires which used to devastate the forests, the maintenance of a supply of seed-bearing trees, and the regular reproduction of timber of the more valuable kinds. At the present time the reserves cover an area of more than 91,000 square miles; and they may hereafter be further extended in Madras and Burma, where the work of reservation is as yet incomplete. Outside the reserves there are about 135,000 square miles of State forests, including 9,300 square miles of protected forests and 9,400 square miles of "district protected forests" in the United Provinces. Some part of this area will eventually be brought within the reserve area, and all of it is, with

## FORESTS.

more or less completeness, managed and worked for the benefit of the people, of their cattle, and of the public revenue. The forests with which this chapter deals are, almost exclusively, those which belong to the State. The limited areas of private forest are, except where they have been leased to the Government, being gradually exhausted; and as yet few private and no 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 free of 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. Some of the better-managed Native States, such as Kashmir, Mysore, Travancore and Baroda, have followed the example of the British Government, have organised systematic forest administration, and enjoy a considerable forest revenue.

The following paragraphs treat of forest administration in each province. The figures of revenue and expenditure, being compiled from administrative returns for the year ending in June, do not agree precisely with the figures given in the table on the preceding page, which are taken from the finally corrected financial accounts for the year ending in March 1903.

In Bengal, at the end of the year, the areas of reserved and protected forests were 5,961 and 3,496 square miles. Survey operations were carried on by a detachment of the Forest Surveys in Kurseong, Darjeeling and Kalimpong, and 233 square miles were surveyed on the 4-inch scale. This work was to be completed in 1904, when the Singhbhum survey will be resumed. Settlement operations were in progress in Chittagong. A considerable amount of progress was made with working plans, which have now been sanctioned over an area of 4,295 square miles of forest, while they are being compiled for a further area of 1,257 square miles. The year 1902-3 was on the whole favourable for natural reproduction. The area of regular plantations rose to 2,954 acres, while cultural operations were in progress over a reduced area of 4,242 acres. The planting operations include the raising from seed of a number of rubber-producing trees, among them being the *Hevea brasiliensis* or Para rubber. Attempt was made to exclude fire from 2,210 square miles, and the effort succeeded over nearly 97 per cent. of that area; but the conditions were favourable for forest fires in several parts of the province. The number of cases of breach of the forest law taken into court was 186, about half of these being cases of unauthorised felling or appropriation of forest produce. Nearly 43 per cent. of the total area available was thrown open to animals of all kinds for grazing, including all the unclassified forests, 1,212 square miles of protected forests and 498 square miles of reserves. The two latter areas provided grazing for 368,000 cattle. The yield of timber was 6,715,000 cubic feet, which was 10 per cent. less than in 1901-2, and the out-turn of fuel (33½ million cubic feet) was also smaller; but the number of bamboos taken from the forests rose from 24 to 26 millions. The financial results show a surplus of £40,500 or nearly 49 per cent. of the gross receipts.

The reserved forests of the United Provinces rose to 4,171 square miles in 1902-03, including 153 square miles of leased forests; there was also an area of 30 square miles of protected forests under the Forest Department at the end of the year, besides 9,363 square miles of "district protected forests," which are under the Forest Act, but are controlled by district officers. Satisfactory progress was made in the preparation of working plans for the reserved forests, and the area of forests for which plans were complete by the end of the year was 3,842 square miles. Settlements of rights had been made over 3,950 square miles. In the district protected forests no such settlements have as yet been made. There is a scheme in hand for the better protection of selected areas, and when these have been selected a settlement will probably follow. Protection from fire was attempted over

**FORESTS.** 3,204 square miles, or more than three-quarters of the forests, and it was successful over more than 96 per cent of that area. The area thrown open to cattle, for the whole or part of the year, was 1,380 square miles, and the number of cattle grazed was over 578,000. The yield of the forests was 6,377,000 cubic feet of timber, 9,547,000 cubic feet of fuel, and 15½ million bamboos, besides minor produce. The forest receipts were £144,400, and the expenditure was £68,200, leaving a surplus of £76,200, besides a small net receipt from the working of the district protected forests.

**Punjab.**

At the end of 1902-03 the reserved forest area administered by the Punjab Forest Department was 2,294 square miles, besides 117 square miles under military or other control. The protected forests aggregated 4,921 square miles, while an area of 2,266 square miles appears on the books of the Forest Department as unclassified forest. Settlements of rights had been carried out over 2,087 square miles of reserves and 4,888 square miles of protected forests. Surveys were in progress in the Rawalpindi and Chenab divisions. Working plans for several forests were in different stages of preparation, though no new plan was sanctioned during the year. They are complete for 1,829 square miles of protected forests and 779 square miles of reserves, and are under compilation for a further area of 1,045 square miles. For most of the remaining area it is reported that plans are not required. The year was not very favourable as regards forest fires; the area burnt was 3 per cent. of the total area under the Forest Department; protection was attempted over an area of 865 square miles, of which nearly 1 per cent. was burnt. Natural reproduction was bad, so far as regards the deodar, which holds the most important place in this province; the area of regular plantations rose to 975 acres, and the area under cultural operations rose from 6,183 to 6,475 acres. The cultivation of Spanish chestnut is being tried with success. The total yield of the forests for the year was returned at 3,066,700 cubic feet of deodar and pine timber and 39½ million cubic feet of firewood; 34½ million cubic feet of timber and fuel were removed by free-grantees and right-holders without charge or at special rates; 6 millions were worked out by Government agency, and 2 millions by purchasers. The area available for grazing under the charge of the Department was 9,481 square miles, and of this nearly 81 per cent. was thrown open to cattle, while an additional 12 per cent. was open during part of the year; 824,700 cattle are reported to have grazed in the forests, for the most part by right under the settlements. The total forest revenue of the year was £106,100, against an outlay of £76,100, yielding a surplus of £30,000.

**Burma.**

A net addition of 1,102 square miles was made to the reserved forest area in Burma during 1902-03, bringing it up to 19,708 square miles. Settlement of rights has been completed over 18,860 square miles, and a considerable area was under settlement. A Survey of India party (No. 20) was engaged on forest surveys in various parts of the province, and minor and local surveys were also carried out by forest survey parties and by forest officers. Working plans were completed for 2,524 square miles by the end of the year, and plans for a further 1,744 square miles were being compiled. In the meantime, annual or preliminary plans of operations are formed for all reserved forests. Fire protection was carried out over a larger area than in the preceding year, but with rather less success, owing to the dryness of the season. Plantations of rubber, teak, pine, and cutch were extended; in the Mergui rubber plantation 770 acres were planted, but the season was a bad one, and the planting was a failure over most of that area. The quantity of teak extracted from the forests was rather less than 8½ million cubic feet, equal to 168,200 tons; of other timbers, 14 million cubic feet were extracted in the form of logs, &c., and 18½ millions as fuel. The year was a bad one for floating timber down the rivers, and the output suffered accordingly. The total of teak exports from Burma was 229,600 tons, compared with 244,500 tons in 1901-02, and the average value per ton is stated at about £5½, or a little more than in the preceding year. The receipts for the forest year were £449,200, and the expenditure was £197,600, leaving a surplus of £251,600, which was higher than the surplus of the preceding year, but below the figures of some recent years.

The area of reserved forests in the Central Provinces was 18,897 square miles, of which 14,469 square miles were at the end of the year 1902-03 classed as A, or permanent reserves, and 4,428 square miles were classed as B. reserves. The B. reserves are available either for eventual transfer to the A. class (as was done with 1,061 square miles of forest in the Mandla division after the close of the year under report) or for possible extensions of cultivation in future years. The Forest Survey parties turned out 313 square miles of detailed survey. The further preparation of working plans was held in abeyance pending reclassification of the forests. Fire was excluded from 97 per cent. of the 5,244 square miles in which special fire protection was attempted, and from 86 per cent. of that partially protected. The year was generally unfavourable for natural reproduction by seed, and attempts at artificial reproduction met with indifferent success. The experiments with the cultivation of tassar silk and lac have not been successful, except in Bilaspur, owing to unfavourable weather. The number of cattle grazed in the forests was nearly two millions. New grazing rules have been introduced, with a voluntary system of village assessment; and a system of differentiated rates for agricultural cattle is being tried in five districts. The amount of timber removed from the forests during the year was 2,528,000 cubic feet, that of fuel 18,387,000 cubic feet, and 7½ million bamboos were extracted, with other minor produce. The forest revenue of the year, including the Berar circle, was £131,500, against an expenditure of £89,400, leaving a surplus of £42,100, compared with a surplus of £30,000 in 1901-02.

FORESTS  
Central  
Provinces.

Berar having been placed under the government of the Central Provinces in 1903, the Berar forests are now administered as a forest circle under that Government. At the close of 1902-03 they covered 3,943 square miles, including 1,768 square miles of timber and fuel reserves, 84 of fodder and thatching grass reserves, and 2,091 of pasture. The working plan for the Amraoti division was revised, and a single plan for the entire area of the Ellichpur division was under preparation. The forests yielded 735,000 cubic feet of timber, and the yield of fuel was nearly three million cubic feet, while 3½ million bamboos were taken out. The bamboos have suffered severely from the attacks of a fungus, new to India, which has been identified and is being closely studied. The number of cattle grazing in the forests was 2,800,000. The results of fire protection were very good, owing partly to heavy rains at critical seasons.

Berar.

The State forests in Assam are divided into reserved forests and unclassed State forests, the latter including lands recently cultivated and all lands at the disposal of the State other than reserved forests. The area of reserved forests stood at 3,778 square miles at the end of the year. The area of unclassed forests is given as 18,300 square miles; but of this large area perhaps one half consists of grass or treeless tracts. Settlement was completed and notified for 70 square miles during 1902-03, and an area of 134 square miles was surveyed by the Imperial Forest Survey Branch, besides survey work by divisional officers. In Goalpara and the Garo Hills the more valuable of the reserved forests are worked under sanctioned working plans, but for the rest of the forests in the province yearly plans of operations are drawn up. Special fire protective measures extended over 999 square miles, and were successful in respect of nearly the whole of that area; 196 square miles were protected on a less ambitious scale in Goalpara, but about 9 per cent. of it was burnt. The grazing question presents no difficulties in Assam; the reserves afford very little good grazing ground, and are for the most part closed entirely. The large area of unclassed forest was open to all animals throughout the year on payment by professional graziers and free to ryots. Natural reproduction was very good; the plantations comprised 3,252 acres, chiefly of rubber, and 232 acres were under other heads of cultural operations. The larger portion of the produce of the forests consists of sal trees (*shorea robusta*). The gross result of the working of the forests is given as 12½ millions of cubic feet of timber and fuel, against a total of 10½ millions in 1901-02. The forest tramway in Goalpara is said to be economical and to serve its purpose well. The revenue for the forest year ending in 1903 was £39,400, which was better than in any recent year; and the surplus rose from £10,600 to £16,300.

Assam.

## FORESTS.

There was a net decrease of 111 square miles in the reserved forests and lands in Madras during the year ending in June 1903, due chiefly to the abandonment of land for the extension of cultivation. The total area of reserves was 19,455 square miles, of which 17,657 square miles were classed as forests, the reserves of all classes forming 38 per cent. of the unoccupied area of the presidency. Of the reserved forests, 555 square miles were finally included during the year under report; a further area of 1,175 square miles of reserved lands was awaiting settlement and inclusion in the forests. Two parties of the Survey of India completed 1,411 square miles of topographical survey, and minor survey operations were also in progress. As regards the management of the forests, detailed working plans were sanctioned for 1,399 square miles during the year, and plans for 2,217 square miles were under preparation; but the greater part of the forests is still worked under annual plans. Protection from fire was undertaken over 5,545 square miles, but was successful in only 91 per cent. of that area, against 96 per cent. in 1901-02. The area of the reserved forests open to cattle for grazing was 17,600 square miles, and 1½ million cattle are reported to have grazed in them. Natural reproduction was poor in some parts of the presidency. The regular plantations, covering 27,037 acres, consist chiefly of teak in Malabar, eucalyptus on the Nilgiri and Palni hills, and casuarina on the eastern coast, and there is a large area under other cultural operations. The yield of the forests according to the returns was 3,298,000 cubic feet of timber and 18,661,000 cubic feet of fuel, besides 36 millions of bamboos, and other minor produce; this outturn of timber and fuel was considerably larger than that of the previous year. The total receipts were £172,800, which was the highest on record; and the surplus was £51,100.

## Bombay.

The area of the reserved forests in the Bombay Presidency was 13,464 square miles at the end of 1902-03, and that of the protected forests 1,033 square miles. Good progress was made in each forest circle in marking out coupes or compartments for exploitation purposes; and a provisional working plan for the babul reserves of Ahmednagar was sanctioned, and one for the Poona teak forests was under consideration. The drought in Sind caused an increase in forest fires, and the whole of the Dang forests in the Northern circle were traversed by fire; but otherwise the destruction caused by fire during the year showed a satisfactory decrease. Natural reproduction was retarded in many parts of the Presidency by the lingering effects of the last year's drought and heat; and in Sind the poor inundation gave unsatisfactory results in this respect. The yield of the forests included four million cubic feet of timber, 30½ million cubic feet of fuel, and about 4½ million bamboos. The revenue amounted to £154,800, and the expenditure to £111,900, leaving a surplus of £42,900.

## Coorg.

The area of reserved forests in Coorg was 242 square miles, besides 323 square miles of reserved lands and a small area of protected forests; the chief timbers are teak and sandal wood. No new working plans were approved during the year; such plans exist for 178 square miles, but the progress of the plan for the sandal area has been disorganised and, for the time being, abandoned, owing to the continuance of the "spike" disease, from which the sandal trees suffer, and for which no cause or means of prevention is as yet known. The steps taken by the Forest Department appear, however, to have checked the further extension of the epidemic. The season was an unfavourable one as regards fires; protection was undertaken over about 205 square miles, and was successful over nearly 98 per cent. of that area. There was, owing to smaller sales, a decrease in the quantity of timber removed from the forests, which amounted, including all the forests, to 244,500 cubic feet, in addition to 190 tons of sandal wood, compared with 306,400 cubic feet, with 201 tons of sandal wood, in 1901-02. The forest surplus rose from £5,600 to £6,100.

## AGRICULTURAL AND MINERAL RESOURCES.

## AGRICULTURE.

AGRICUL-  
TURE.

In every large province of India an Agricultural Department has been organised, which is charged with the duty of supervising the maintenance of the village records of land tenures, rent, produce, and land transfers, and with the work of organising and directing State undertakings for the furtherance of agriculture and for the improvement of stock. The Agricultural Departments also keep the public and the Government informed concerning the condition and the out-turn of the crops, the range of prices, and the approach of dearth or famine in any particular tract. There is an Inspector-General of Agriculture with the Supreme Government, whose function it is to guide and correlate the agricultural inquiries carried on throughout India, whether by the Supreme or the Provincial Governments, and to act as adviser to both in all matters pertaining to agriculture; while under him work the Agricultural Chemist, the Entomologist, and the Cryptogamic Botanist. Finally, with a view to more thoroughly co-ordinating the work carried on by these officers and by the various scientific departments, and of directing it to the greatest possible extent towards practical research, a Board of Scientific Advice has been established, consisting of the heads of those departments, and such other scientific authorities as the Government may invite to serve on it; and the Government of India has the advantage of the advice of a special Committee of the Royal Society on the recommendations made by the Board.

The following provincial details on the subjects of seasons and crops, agricultural inquiry and experiment, and the working of the land records organization, are taken from the reports of the Departments of Land Records and Agriculture.

The season 1902-03 in Bengal was on the whole not favourable to agricultural operations, though it was much better than that of 1901-02. The rainfall of June and August was rather lighter than usual, but July and September showed good monsoon conditions. From the middle of October the whole province was practically rainless up to the end of February, and the spring crops, including oil-seeds and sugar cane, yielded a very poor out-turn. The area under autumn crops was 15 millions of acres, or one third of a million less than in the preceding year; the winter rice crop covered 29½ millions of acres, against 27½ in 1901-02; and 15 millions were returned as having been sown with summer crops, or about one third of a million more than in the previous year. The total area of all crops was 59½ millions of acres, compared with a normal area of 62 millions, and with 57½ millions in 1901-02. The final estimate of the out-turn of autumn crops was 88 per cent. of the normal; the winter rice crop was estimated to be 94 per cent., and the spring crops 86 per cent. of an average crop. Besides the winter rice crop, which is by far the most important crop of the province, the following crop out-turns may be quoted: autumn rice, 87 per cent. of the normal; jute, 80 per cent.; maize, 91 per cent.; sugar cane, 92 per cent.; indigo, 50 per cent.

Experiments with various manures, crops, and methods of cultivation were carried on, as in former years, at the two experimental farms at Burdwan and Dumraon. The results of the trials at Burdwan of the deep-shared Sibpur plough have amply proved its superiority to the local plough. Important experiments with different varieties of cotton were tried at Dumraon, the results of which will, it is hoped, help to solve the problem as to the varieties which may most suitably be introduced in the province. The Chittagong farm has done much to improve the agricultural knowledge of the surrounding people, and has led to the establishment in the district of

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TURE.

several similar farms. The inquiry as to the alleged deterioration of jute was continued, and different varieties of jute seed were cultivated at Burdwan with satisfactory results. A special matter which has arisen during the inquiry is the alleged watering of jute to make it heavy, and this was being investigated. The results of the examinations in the agricultural class at Sibpur College were satisfactory, and the number of admissions was 15, against 6 in the previous year. Steps are being taken for the improvement of agricultural education by the establishment of small demonstration gardens in connection with some secondary schools, and by the opening of agricultural classes at five other selected schools.

The Silk Committee, formed in 1898-99 for the promotion of Pasteur's method of silkworm rearing, continued its operations in the Malda, Birbhum, Rajshahi, Bogra, and Murshidabad silk-rearing districts. The operations, which consist in instructing the rearers how to select seed and to rear silkworms, have been attended with a considerable measure of success, and the record of the work done during the year is one of continued progress. Sericultural instruction is given in the Industrial School at Rampur Boalia, of which the sericultural school is a separate branch. Various scholarships are given by district boards and others, and the success of the students in passing the examinations and in obtaining employment subsequently is very satisfactory.

There is no land record staff in Bengal, but in the tracts which have been cadastrally surveyed a considerable amount of statistical information is available as to cultivation, stocks and crops, and attempt is being made to introduce a record of the mutations of tenures. Reference has already been made, in the Registration chapter of this Statement, to the working of the Bengal Land Records Maintenance Act of 1895. Records are maintained in the Government and wards' estates which have been surveyed and settled.

United  
Provinces.

The monsoon of 1902 in the United Provinces was favourable, and there was also no lack of moisture for sowing the spring crops, though the growing season was dry and irrigation was resorted to on a large scale. The crop area of the autumn harvest was therefore 200,000 acres in excess of the preceding year's figures, and amounted to about 23 million acres, and the area under spring crops, 19½ million acres, was nearly half a million larger than in 1901-02. As regards the nature of the crops sown, rice, maize, early millets and sugar, showed some falling off, for the most part owing to the light rains in June, and gram was below the usual crop. On the other hand, the later millets, cotton, mustard, and wheat covered a larger area. Wheat and rice each occupied an area of about 7 million acres, and gave an out-turn over the whole provinces of 95 and 80 per cent. respectively of the normal. Barley (4 million acres), yielded 95 per cent. ; peas and gram (7 millions) 80 per cent. ; and millets (6½ millions) 85 to 95 per cent. Indigo, sown on the much reduced area of 136,000 acres, gave an out-turn which was 80 per cent. of the normal, and sugar cane, occupying 1½ million acres, yielded only 75 per cent. It is, however, stated that these estimates are made by the local staff whose tendency is towards under-statement, and that the actual results were probably more favourable than would appear.

Ninety per cent. of the village accountants under the Land Records Department hold certificates from the patwari school, and 7 per cent. are exempted by reason of their age or efficiency. Their work is tested by superior officers, and is found to contain a very small percentage of errors.

The Agricultural Department gave assistance to the public by the distribution of implements and seeds, boring for wells, issue of seven bulls for the improvement of the breeds of cattle, a small veterinary hospital at Cawnpore, and the circulation of advice respecting crop pests. The seed distribution is being extended ; about 2,000 maunds of sound seed were sent out during the year, with a small resultant profit, which is devoted to extending operations. It is issued for the most part on loan, the produce being returned at harvest time *plus* 25 per cent., and there is practically no loss in recovery.

At the Cawnpore experimental farm the season 1902-03 was not, on the whole, unfavourable ; but cotton and potatoes suffered very severely from frosts in December. Besides these crops, experiments were continued with varieties of sugar cane, maize, jowar, and Kabuli grain, in deep and shallow

tillage, and with various manures. It has been decided to exclude all experimental work from the Meerut farm, the operations being confined to the demonstration of improved methods. The work of the year ending in September 1902 was carried on under the old programme, and was in many respects unsatisfactory. There is also a small demonstration farm at Sultanpur, under private management, which did useful work in exhibiting different varieties of crops, and another privately owned farm at Jatau. Agricultural shows were held at several places, and were attended by officials of the Agricultural Department.

AGRICULTURE.

In the Punjab the conditions were favourable for sowings in both the harvests of 1902-03. In each season there was a break which caused large areas of unirrigated crops to dry up, but there was good rain at the end of each harvest, and the result was a large out-turn of grain, particularly in the spring crop, though fodder was deficient. For the whole province, out of 26½ million acres sown, crops failed on 5½ million, of which nearly half was in the Delhi division. The autumn sown area was over 12½ millions of acres, and the following spring crop covered nearly 13½ millions; but the areas actually harvested were 9½ and 11 million acres respectively. Wheat occupied more than seven million acres, of which about three millions were unirrigated. The yield of the food crops as a whole is stated to have borne the proportion of 96 per cent. to the normal, while wheat yielded 97 per cent. The latter is the most important of the crops of the province, and its yield is estimated at 2½ million tons. Sugar was grown on about one third of a million acres, and yielded a crop equal to 94 per cent. of the normal. Cotton was grown on a million acres, and was above a normal crop.

The total area of crops matured on irrigated land in the year 1902-03 was about 9½ millions of acres, of which about 3½ millions were irrigated from wells. Colonisation on the Chenab Canal, the extension of the Western Jumna, Bari Doab, and Sirhind Canals, and construction of new canals elsewhere, have resulted in the following increase of the area irrigated by Government canals during recent years :—

	Acres.		Acres.		Acres.
1893-94	2,523,378	1897-98	4,395,453	1901-02	4,530,766
1895-96	3,161,008	1899-1900	4,243,524	1902-03	4,887,677

On the Chenab Canal the area allotted to cultivators in the year ending in September 1902 amounted to 120,584 acres, bringing the gross allotted area to a total of 1,701,130 acres; and the area of crops sown was 1,580,481 acres. This was largely in excess of the area sown in the previous year, but in consequence of the failure of the winter rains and the low supplies in the canal it is estimated that the gross out-turn of the crops was less than in that year.

The staff of patwaris under the Land Records Department was 7,788 in number. It was in contemplation to consolidate the different district patwari funds; and the question of making the service of these public servants pensionable was under consideration. The first annual report of the Lyallpur experimental farm was issued. The chief object which has been kept in view in arranging the work of the farm is the study of different varieties of Punjab crops, especially of wheat, and their improvement by cross-fertilisation and selection. There is a young date plantation at Mooltan, and various orchards from which a considerable number of young fruit trees were distributed. Experiments with the drought-resisting grass, *paspalum dilatatum*, and the salt bush, both Australian plants, have not yet shown conclusive results.

The amount of rainfall in the North-West Frontier Province in the year 1902-03 was about normal, and though the distribution of it during the season gave rise to anxiety, conditions were on the whole favourable. The area harvested, both in the autumn and the spring harvests, much exceeded that of the preceding year, though it fell short of that of 1900-01. It was just short of two million acres, of which 699,000 acres were under wheat, and 358,000 acres under maize, the aggregate area of food grains being 1½ million acres. The out-turn of irrigated crops was everywhere good; that of irrigated crops was about an average one in almost every case.

North-West Frontier Province.



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TURE.

The conduct and efficiency of the patwari staff is reported to have been on the whole fairly good. Abstract village note-books are kept up to date in all districts except in Kohat, and are found of much service. The disposition and habits of the agriculturists of the province do not favour the introduction of new products or processes, and there is not, therefore, any progress to record in this direction.

Central  
Provinces.

In the Central Provinces the monsoon started late and was in considerable defect in most districts, but in the northern and central portions of the province the rainfall was so well distributed that nearly all crops did well. In the south, on the other hand, the light rainfall prevented the transplanting of rice, while the failure of the late monsoon not only ruined the crop, but left much land too dry for spring sowings. While, therefore, the northern districts and the cotton-jowar tracts of the south-west enjoyed one of the most prosperous years on record, there were some famine symptoms in the rice country of the Wainganga valley and Chhattisgarh, and some relief had to be given. Of autumn crops, the area under rice was 8 per cent. below normal, but jowar showed an increase, and the area under cotton was no less than 66 per cent. above the average of the last ten years. The area under the spring crops, wheat, gram and linseed, diminished by about 4 per cent. Taking the province as a whole the out-turn of the year is given as 82 per cent. of the normal cropping of standard area. The percentage for wheat is given as 115, for gram and linseed 87 and 90 respectively, for rice only 49; cotton, jowar and sesamum gave normal yields over their much-expanded areas. The year marks the beginning of State irrigation in the province, nine large tanks being opened as famine works, and several large projects being prospected or begun. The area under irrigation from village tanks and wells shrank, owing to the dryness of the year, to 549,000 acres.

The Land Records staff was revised and strengthened in Bilaspur, and similar measures have been approved for Raipur since the close of the year. Various important changes were also made in the system of Land Records. Besides their ordinary duties, the whole staff had much extra work in the preparation of schemes for suspension, remission, and abatement of the land revenue demand.

The Agricultural Department in the Central Provinces has been largely developed during the last two years. The staff has been strengthened, two experimental farms have been started, at Hoshangabad and Raipur, in addition to the already existing farms at Nagpur and Telinkheri, several demonstration farms have been established, district agricultural associations and a Hindi Agricultural Gazette have come into existence, while attention has been given to the improvement of agricultural education. Of the experimental farms, Hoshangabad is to be devoted chiefly to wheat and other spring staples, while Raipur will be mainly concerned with rice, thus leaving the Nagpur farm to deal chiefly with the locally important staples of cotton and millet. The associations form a link between the Department and the agricultural community, and will be able to distribute seed, disseminate knowledge, and promote discussion on agricultural questions.

## Burma.

The character of the monsoon of 1902 was unsatisfactory throughout Burma. The rains set in well, and were up to the average during the central period, but failed early; the rains of October and November, indispensable to the success of the paddy crops, were lacking. The area cropped fell from  $11\frac{1}{2}$  million acres to  $11\frac{1}{3}$  millions. Of this amount, nearly  $8\frac{1}{2}$  million acres were sown with rice, but crops failed to mature over a larger area than usual. The percentage of a normal crop yielded by rice in the year was 94 per cent. in the 14 chief rice-producing districts, and for the whole province 88 per cent. Other crops showed no very important features. It is said that the cultivation of cotton, though not extensive at present compared with other cotton-producing provinces, is making fairly satisfactory headway. The area under this crop was 141,500 acres, and the percentages of out-turn were good.

The Land Records Department keeps up to date the information gained at settlement, and conducts a supplementary survey annually, for the purpose of fixing the revenue demand, over an area which amounted to 37,634 square miles in 1902-03. The Department has been increased, but is said to be

still undermanned, and will probably require to be strengthened; there were 127 inspectors and 1,240 surveyors in 1902-03. There are 18 survey schools, at which 512 scholars attended during the year. AGRICUL-  
TURE.

Beyond experimental gardens there are no establishments in the province for the conduct of agricultural experiments; but seeds of various products which appear to merit investigation are distributed for cultivation in suitable parts of the province.

In Assam the rainfall of the year 1902-03 was well above the normal in both valleys of the province, but was not well distributed; a deficiency of the rains in October and November detracted from the character of the winter rice crop, which would otherwise have yielded a bumper out-turn, and the scantiness of the winter rains occasioned a short out-turn of pulse and mustard. The area under crops was 5 millions of acres, of which  $3\frac{7}{8}$  millions were under rice and one third of a million under tea. The out-turn of early rice was good, but late rice yielded a distinctly poor crop. The out-turn of tea has been restricted in recent years with a view to reducing the excessive supply. Owing to the good harvest, the price of rice was generally fairly low. Assam.

The number of village officials under the Land Records Department was 1,136; and of these all but 58 have obtained a certificate in surveying. There are three survey schools in the province, at which 170 certificates were granted during the last two years. The work of this staff requires careful supervision, the state of the land records varying from district to district, according to the personal attention given by the district officers. Satisfactory progress is being made in the introduction of a system of inquiry into and tabulation of agricultural conditions. Books for this purpose were instituted during the year in the district of Nowgong, the only district in which they were not previously kept.

At the newly started Shillong experimental farm, experiments were continued with a view to discover new crops that may be grown profitably in the Khasi Hills. Among potatoes, the *magnum bonum* variety was found to meet the requirements best, as it grows freely and does not seem to be liable to be attacked by the blight which frequently follows on the heavy June rainfall. Experiments with fodder plants were also made; and flax was grown with the result that the produce was reported by a Calcutta firm to have "the making of a good merchantable fibre if properly treated." The Government dairy started at Shillong a few years back, with a view to introducing a new industry in the province, has proved a great success financially, and has led to the establishment of a private dairy also at Shillong. Various other experiments have been made by several agencies, and samples of tobacco grown by a tea planter have been favourably reported on.

In Madras the south-west monsoon rains of 1902 were generally above the average, and the north-east monsoon also brought in good rains throughout the Presidency, except in the two northernmost districts. The area under crops, excluding permanently settled estates and those held under exceptional tenures, was  $27\frac{7}{8}$  million acres, including  $6\frac{3}{8}$  millions of "wet" cultivation, against  $27\frac{1}{10}$  millions in 1901-02 and an average of  $26\frac{1}{2}$  millions for the past five years. Rice covered about  $7\frac{1}{4}$  millions, having increased by one third of a million, while millets ( $9\frac{3}{8}$  millions) showed a substantial decline. The area under cotton was  $1\frac{1}{2}$  million acres, and was 200,000 acres above the corresponding area in 1901-02. The out-turn of rice, according to the returns, was something like 86 per cent. of a normal crop; but the averages are based on the figures of the village officials, which are notoriously underestimated, and the crop was a good one. The average prices of rice for the year were lower in all districts. Madras.

The village and taluk accounts kept by the staff under the Land Records Department were, on the whole, fairly well maintained. Village registers are kept up in many districts, but not much progress was made in bringing them up to the end of the year under review.

Two experimental farms, at Bellary and at Koilpatti in the Tinnevely district, were started in the previous year, and some preparatory work was still being done. Crops of cotton were grown during 1902-03, and experiments were also tried with sweet potatoes. Cotton did well at Bellary, but

## AGRICULTURE.

failed owing to excessive rain at Koilpatti. No noteworthy results are as yet recorded. There is also an experimental station at Samalkot, formed for the purpose of investigating sugar-cane disease. Owing to the prevalence of two serious diseases it was decided not to distribute cane to cultivators during the year. Experiments are to be made at the farm attached to the Saidapet College with a variety of indigo known as *indigofera arrecta*. The number of students at the College rose to 50. Orders were passed during the year on the subject of the reform of primary education; elementary science is to be a compulsory subject wherever a trained teacher is available, and a passed student from Saidapet is to be attached to every training school as an additional teacher.

## Bombay.

For Bombay the latest detailed report deals with the year ending on the 31st October 1902. In that year the seasonal conditions were uneven; in parts of each division fair crops were obtained, but some tracts in Gujarat, Khandesh, Ahmednagar and the Southern Mahratta country again suffered considerably from deficient rainfall. Sind suffered from a low inundation. It may be added that the monsoon of 1902 opened rather late, but that the subsequent rains were generally more favourable than during the two preceding years, and that a fairly good harvest of autumn crops was secured, while the spring crops promised an equally fair out-turn. The area under crops in the whole Presidency in the year November 1901 to October 1902 was  $26\frac{1}{2}$  millions of acres, of which  $3\frac{1}{2}$  millions were in Sind; the figures for the Presidency proper show an increase of about 9 per cent. as compared with the previous year, those for Sind a decline of 9 per cent. In Gujarat the area of the spring crops was restricted, owing to a plague of rats; elsewhere in the Presidency proper, there was a considerable expansion of the area of spring sowings. Half the crop area of the Presidency consisted of millets; cotton covered 11 per cent. of it. The area irrigated in the Presidency,  $3\frac{1}{6}$  millions of acres, consists chiefly of lands in Sind irrigated by Government or private canals; these amounted to  $2\frac{3}{4}$  million acres, the area irrigated in the Presidency proper being 773,000 acres, chiefly of well irrigation. The out-turn of crops, owing to the deficient rainfall and the plague of rats, was below the normal everywhere, save in the Satara district, and in some parts of Gujarat the deficiency amounted to a serious failure of the crops.

At the Surat and Nadiad demonstration farms the year was not a favourable one, and no results of value were obtained. At Poona and Manjri, however, much useful work was done, in connection with cross-breeding, selection of seed, trial of foreign varieties, and manure experiments, including a sewage farm. In the cross-breeding of varieties of cottons and of wheats, which must necessarily be the work of years, the first season gave fair promise. The experimental cultivation of rhea has been abandoned, the crop not being suited to the Presidency. The distribution of foreign ground nut seed produced favourable results in the first year, though no final conclusion can yet be formed. Australian drought-resisting grasses were tried for the second year without success.

The ordinary work of the Land Records Staff was again much interrupted by special duties in connection with famine, and no reduction of the heavy arrears of measurement and classification was effected. The preliminary records of rights have been completed in 35 talukas, and the work will be pushed forward vigorously under the Act IV. of 1903, which provides for the maintenance of a record in each village. Substantial progress is being made with the training of village accountants in surveying, a reasonably strict test of proficiency in field work being exacted.

## Berar.

In Berar the late commencement of the monsoon and a prolonged break in the rains in August caused some anxiety, and excessive rain in November and December damaged the cotton crops. The district estimates show a yield rather less than normal for the millet crop, something like 70 per cent. for the cotton crop, and rather less for mustard, while the spring crops, wheat and linseed, are said to have been between 70 and 75 per cent. of the normal. The crop area amounted to  $7\frac{1}{2}$  millions of acres, of which  $3\frac{1}{2}$  millions were under large millets and  $2\frac{3}{4}$  millions under cotton. These, with the mustard crop, constituted the bulk of the autumn crops. The spring crops included rather less than one quarter of a million acres under

wheat. Prices have by no means come down to the normal level, but the year's figures show a satisfactory improvement. AGRICUL-  
TURK.

An agricultural staff of district and circle inspectors was introduced into the Akola and Buldana districts in 1901, and was to be established in the remaining districts in 1904. Their work is still in an early stage, but it is reported that the staff worked satisfactorily and showed its utility in the preparation of land records. It appears, however, that the number of inspectors is insufficient. Circle note-books were started during the year, and particulars of 1,810 villages in Akola and Buldana were thus written up.

AGRICULTURAL PRODUCE.

Before giving the area under different crops, and its territorial distribution, it is necessary to explain that the "crop area" is in all cases greater than the area of cultivated land, owing to double cropping. The extent to which this practice prevails is shown at the end of the following table, which contain the detailed analysis of the crop area. Agricultural  
statistics.

TERRITORIAL DISTRIBUTION OF THE PRINCIPAL CROPS IN 1901-02.

Figures in Thousands of Acres, omitting 000.

I.

	Rice.	Wheat.	Barley.	Millets.			Gram (Pulse).	Other Food Grains including Pulses.	Total Food Grains.
				Cholum or Jowar.	Cumbu or Bajra.	Other Millets and Maize.			
Upper Burma	1,489	22	—	1,029	113	78	77	293	3,101
Lower Burma	6,777	—	—	1	—	14	1	29	6,822
Assam	3,602	—	—	—	—	1	1	81	3,685
Bengal	36,061	1,400	1,340	124	62	2,949	1,020	5,461	48,417
Agra	4,398	4,776	3,047	2,091	1,616	1,626	3,949	4,287	25,790
Oudh	2,736	1,712	1,045	344	345	771	1,720	2,336	11,009
Punjab	678	5,657	579	855	1,352	1,244	1,187	1,260	12,812
North-West Frontier Province	28	511	114	39	120	383	94	74	1,363
Sind	938	499	13	541	807	2	79	211	3,090
Bombay	1,452	1,100	17	6,770	5,524	644	430	2,712	18,659
Central Provinces	4,543	2,622	15	1,965	46	183	947	3,725	14,046
Berar	36	281	—	2,885	87	8	153	366	3,816
Madras	7,237	17	9	5,104	3,093	1,963	122	6,498	24,037
Minor Provinces (Ajmere, Coorg, and Manpur).	82	10	45	71	32	86	5	22	353
Total	70,067	18,607	6,218	21,819	13,197	9,952	9,785	27,355	177,000

II.

	Oilseeds.	Condi-ments and Spices.	Sugar.	Fibres.			Indigo.	Opium.	To- bacco.
				Cotton.	Jute.	Other Fibres.			
Upper Burma	803	—	7	137	—	—	1	—	24
Lower Burma	39	—	11	10	—	1	—	—	38
Assam	275	7	42	4	13	2	—	—	3
Bengal	3,556	276	712	106	2,266	158	311	211	531
Agra	607	50	970	1,119	—	78	157	207	48
Oudh	196	11	259	35	—	21	13	182	16
Punjab	622	28	357	856	—	43	55	7	40
North-West Frontier Province.	38	3	25	20	—	—	—	—	6
Sind	360	6	3	127	—	1	7	—	10
Bombay	1,341	180	51	2,803	—	123	1	—	84
Central Provinces	1,695	38	23	981	—	74	—	—	11
Berar	414	49	1	2,683	—	15	—	—	20
Madras	1,992	472	136	1,381	—	48	247	—	121
Minor Provinces (Ajmere, Coorg, and Manpur).	30	1	—	39	—	—	—	—	—
Total	11,968	1,121	2,598	10,301	2,279	564	792	607	952

## III.

AGRI-  
CULTURAL  
PRODUCE.

	Tea.	Coffee.	Fodder Crops.	Orchards and Garden Produce.	All other Crops.		Total Area Cropped during the Year.	Area Cropped more than once.	Net Area Cropped during the Year.
					Food.	Non-Food.			
Upper Burma	2	—	30	43	78	92	4,318	265	4,053
Lower Burma	—	—	—	334	64	57	7,376	2	7,374
Assam	338	—	37	332	31	118	4,387	282	4,605
Bengal	126	—	80	1,006	1,178	1,039	59,973	10,614	49,359
Agra	8	—	695	260	87	69	30,645*	4,811	25,834
Oudh	—	—	89	89	51	5	11,976	2,861	9,115
Punjab	10	—	1,553	118	293	14	24,390†	2,882	21,508
North-West Frontier Province	—	—	33	9	20	2	2,198†	616	1,582
Sind	—	—	2	36	—	18	3,660	280	3,380
Bombay	—	—	15	140	—	5	23,402	611	22,791
Central Provinces	—	—	248	77	41	10	17,244	783	16,461
Berar	—	—	1	34	—	—	7,033	13	7,020
Madras	12	54	162	734	—	343	29,739	3,584	26,155
Minor Provinces (Ajmere, Coorg, and Manpur).	—	66	3	5	3	4	504	30	474
Total	496	120	2,948	3,217	1,846	1,776	227,345	27,634	199,711

\* Includes 500,000 acres on which crops failed.

† " 7,582,000 " " "

‡ " 679,000 " " "

Regarding some of the more important staples of Indian agriculture, particulars for the year 1902-03 are given below.

## WHEAT.

The ascertained and estimated area under wheat is given thus:—

	Average Wheat Area for preceding Five Years.	Areas Cultivated with Wheat in	
		1901-02.	1902-03.
	Acres.	Acres.	Acres.
Punjab	6,536,600	7,227,100	7,111,700
North-West Frontier Province	—	796,500	822,900
United Provinces	6,051,700	6,461,700	6,926,200
Bengal	1,508,500	1,408,300	1,445,900
Central Provinces	2,066,900	2,620,100	2,272,500
Bombay	1,702,600	1,510,500	1,617,900
Sind	436,000	534,000	301,600
Berar	299,000	280,100	216,900
Hyderabad	772,700	603,200	508,800
Rajputana	989,300	541,800	774,700*
Central India	1,283,700	1,460,100	770,900*
Mysore	3,500	3,700	5,100
Total	21,650,500	23,447,100	22,775,100

\* Incomplete.

The season was favourable, though of an abnormal character, in the important wheat-growing areas of Northern India. In the Punjab especially, which is the most important wheat-growing province, the yield is given as 29 per cent. above the figures of the preceding year; part of this increase is due to the employment of revised rates of produce, but the out-turn is undoubtedly higher than in that year, though the area, owing to smaller sowings on irrigated land, is less. In the United Provinces the yield was also a very good one. In Bengal alone was the result of the wheat crop unfavourable, compared with the average of recent years. In the Central Provinces, Central India, and Rajputana, the conditions were favourable, and there was a very much greater yield in Bombay than was returned in 1901-02. The estimated out-turn of the year in the chief wheat-growing provinces is given in the margin, in comparison with the yield

	1901-02.	1902-03.
	Tons.	Tons.
Bengal	391,500	501,100
United Provinces	2,401,900	2,972,500
Bombay and Sind	288,000	571,000
Punjab	1,846,300	2,389,900
Central Provinces	571,000	666,000

of 1901-02. The total estimate for India was 7,774,800 tons, against 6,063,500 tons in the preceding year, and an average of 6,181,000 tons for the five preceding years. Wheat exports are subject to great fluctuations. The figures are as follows :—

AGRI-  
CULTURAL  
PRODUCTS.

1,053,000 tons in	- - 1885-86	976,000 tons in	- - 1898-99
689,000 "	- - 1889-90	485,000 "	- - 1899-1900
1,515,000 "	- - 1891-92	2,500 "	- - 1900-01
500,000 "	- - 1895-96	366,000 "	- - 1901-02
95,000 "	- - 1896-97	515,000 "	- - 1902-03

The area under, and the yield of, the main oil-seed crops for all India OIL SEEDS, may be approximately given thus :—

		Average for preceding Five Years.	1901-02.	1902-03.
Area in acres -	{ Linseed, rapeseed, and mustard.	5,343,100	5,629,300	6,035,300
	{ Sesamum oil-seeds -	2,580,500	3,018,400	3,468,800
	Total - -	7,923,600	8,647,700	9,504,100
Yield in tons for all seeds, so far as reported		968,400	946,800	1,272,763

The above figures do not include some areas where a considerable amount of the seeds is grown, and the area on which they are sown in conjunction with other crops in the United Provinces has not been taken into account. The area under these crops was specially large in 1902-03, and in several

	1901-02.		1902-03.	
	Tons.	£	Tons.	£
Linseed - -	366,400	4,509,000	316,400	3,794,000
Rape-seed - -	346,200	2,970,000	196,300	1,647,000
Cotton-seed - -	101,800	309,000	198,700	674,000
Sesamum - -	122,400	1,429,000	186,600	1,940,000
Castor-seed - -	66,200	573,000	87,600	614,000
Earthnuts - -	54,300	525,000	51,800	477,000
Other sorts - -	90,900	871,000	72,300	776,000
Total - -	1,148,200	11,186,000	1,109,700	9,922,000

provinces they were grown under favourable conditions, though the rape-seed crops in the Punjab and in Bengal, which contain a large proportion of the area under this crop, suffered from unfavourable weather. The sesamum crop was good. The total amount and value of the oil-seeds exported in the

last two years is shown in the margin. The sudden development and expansion of the trade in cotton-seed is very remarkable, this article having in a year or two reached among oil-seeds the second place in quantity and the fourth in value. The seeds came into demand in 1901 owing to the excessive prices of Egyptian seed caused by speculation. Earthnuts, though exported in smaller quantities than in 1901-02, maintained a high level in comparison with that of the five years following 1895-96, when the combination of drought and disease (now combated by introducing fresh varieties) devastated the crop. The Bombay crop of 1902-03 was not satisfactory owing to deficiency of moisture, but in Madras the crop was grown on an exceptionally large area, and the yield was estimated at 83 per cent. of the normal. Taking the two Presidencies together, the area sown was 468,500 acres, against 434,200 acres in 1901-02 and an average of 267,500 acres in each of the preceding five years.

The rice crop of the season 1902-03 was considerably above the average of recent years in Madras, and the important winter rice crop of Bengal gave a satisfactory yield. In Burma the crop was less than that of 1901-02, but

AGRI-  
CULTURAL  
PRODUCE.

13 per cent. above the average. The figures estimated for the last two years are as follows :—

	Area in Acres.			Yield in Tons of Cleaned Rice.		
	Average of preceding Five Years.	1901-02.	1902-03.	Average of preceding Five Years.	1901-02.	1902-03.
Bengal	38,517,000	35,095,000	37,082,000	16,611,000	13,610,000	17,705,000
Madras	6,747,000	6,858,000	7,300,000	2,348,000	2,574,000	2,716,000
Burma	5,846,000	6,558,000	6,603,000	2,337,000	3,030,000	2,651,000

Other provinces, notably Assam, the United Provinces, Sind, and the Central Provinces, produce a large quantity of rice, a considerable proportion of their cultivable area (generally amounting to about 20 million acres) being thus employed, as may be seen from the table given earlier in this chapter. The quantity of rice and rice-flour exported from India and Burma beyond the sea in 1902-03 was 2,375,000 tons, which was largely in excess of the total of the preceding year. More than 77 per cent. of the exports went from Burma, which also exported 113,500 tons of paddy and 317,000 tons of husked rice to other provinces and states in India. It is estimated that Burma has this year (1904) an exportable surplus of 2,199,000 tons of cleaned rice.

The Indian export duty of three annas per maund on rice yielded to the Indian Treasury a net sum of £823,300 in 1902-03, against £595,700 in the previous year. Siam and Saigon, which with Japan constitute the only other considerable rice-exporting countries of the world, levy the same or a slightly higher rate of duty on rice exports.

## COTTON.

The area under cotton in India is returned and estimated as follows :—

	Average Cotton Area for preceding Five Years.	1901-02.	1902-03.
	Acres.	Acres.	Acres.
Madras (ryotwari villages only)	1,396,000	1,351,000	1,527,000
Bombay, Sind, and Bombay Native States	4,544,000	4,524,000	4,430,000
United Provinces	1,009,000	1,154,000	1,255,000
Punjab and North-West Frontier Province	1,002,000	1,027,000	1,221,000
Central Provinces	757,000	980,000	1,152,000
Berar	2,284,000	2,689,000	2,766,000
Nizam's Dominions	1,588,000	1,689,000	2,114,000
Burma	No estimate available.	131,000	134,000
Central India	460,000	529,000	586,000
Rajputana	312,000	282,000	457,000
Bengal	158,000	119,000	114,000
Total	13,510,000	14,475,000	15,756,000

The area is the highest returned by the reporting districts during the last ten years, and except in Bengal and Bombay there is a considerable increase as compared with 1901-02. The season was also favourable, and the yield is given as 2,800,000 bales, having increased in a larger proportion than the area. In the United Provinces and Hyderabad the crop was not so good as that of the preceding year, but elsewhere it was good, and in Bombay remarkably good. The average yield for the last five years was about two million bales.

The exports of raw cotton from India were—

1894-95	3,387,000 cwts., valued at £5,806,000
1896-97	5,216,000 " " 8,647,000
1897-98	3,723,000 " " 5,914,000
1898-99	5,411,000 " " 7,459,000
1899-1900	4,373,000 " " 6,617,000
1900-01	3,576,000 " " 6,752,000
1901-02	5,700,000 " " 9,617,000
1902-03	6,045,000 " " 9,838,000

The following is an estimate of the cultivation and the production of tea in British India and Travancore during recent years ; no figures are available regarding its cultivation in Cochin State :—

AGRI-  
CULTURAL  
PRODUCE.  
TEA.

	Area under Tea, in Acres (Mature and Immature Plants).			Production of Tea in Lbs.		
	1900.	1901.	1902.	1900.	1901.	1902.
Bengal - - -	134,572	135,129	135,158	46,533,000	46,204,000	46,028,000
Assam - - -	337,327	338,186	339,640	141,119,000	134,896,000	132,117,000
Madras - - -	6,107	6,184	6,613	852,000	827,000	1,067,000
United Provinces - -	8,055	8,252	8,116	2,298,000	2,420,000	2,139,000
Punjab - - -	9,745	10,235	9,324	2,135,000	2,087,000	1,616,000
Travancore - - -	25,202	25,279	24,880	4,253,000	4,608,000	5,360,000
Burma - - -	1,479	1,502	1,521	271,000	261,000	262,000
Total - - -	522,487	524,767	525,252	197,461,000	191,303,000	188,589,000

The addition to the acreage under tea made in 1902 was, therefore, 485 acres only, compared with an addition of 2,280 acres in the preceding year. During some recent years, notably 1897 and 1898, the growth of the tea area was very rapid, but the present tendency is towards restricting the excessive output, under the discouragement of low prices. The area under mature plants increased by 16,273 acres, owing to recent extensions coming into full bearing ; and the newly planted area is now, therefore, less than 7 per cent. of the whole. The total area under tea is now 85 per cent. greater than it was in 1885. The output is 163 per cent. greater, though this showed a diminution of 2¼ million lbs. in 1902, ascribed less to the voluntary limitation of plucking than to unfavourable climatic influences and the shortness of labour, and perhaps also to some deterioration of the plants through imperfect cultivation. The tea gardens of India are reported to have given employment during 1902 to 497,500 persons permanently and 90,900 temporarily. The production of tea in India and Ceylon has increased so much more rapidly than the consumption in the United Kingdom, which is the principal market for these teas, that there has been a heavy fall in price, and in 1902 prices at the London sales were unduly depressed by the anticipations of a large output being thrown on an overweighted market, until at the close of the season, with the assurance of only a moderate crop, prices revived. The prospects for the future are said to be much brighter, owing to the limitation of output to which reference has been made, and the development of markets, which should be much assisted by the judicious application of the funds obtained from the cess of a quarter of a pie per lb. charged from the 1st April 1903 on all tea exported from India. The exports of Indian tea by sea during the last three years are returned as follows :—

	1900-01.	1901-02.	1902-03.
	Lbs.	Lbs.	Lbs.
To United Kingdom - - - - -	166,171,556	159,014,075	152,895,529
„ Australia - - - - -	10,438,984	8,575,039	5,795,494
„ United States - - - - -	1,765,529	1,080,293	2,671,942
„ Canada - - - - -	1,724,922	1,059,483	5,554,309
„ Turkey in Asia - - - - -	3,240,334	2,626,130	3,272,876
„ Persia - - - - -	2,429,140	2,530,546	3,254,035
„ China - - - - -	1,143,194	1,336,644	1,520,997
„ Russia - - - - -	772,495	1,624,580	3,967,836
„ Other Countries - - - - -	2,619,336	1,946,670	2,792,835
Total - - - - -	190,332,258	179,793,460	181,725,843

The total exports of Indian tea in 1886-87 were 78¼ million lbs. only. During the year under report the exports to Belgium, Holland, Russia, Egypt, Natal, Abyssinia, and the United States increased considerably, while the increase in the case of Canada is very remarkable. There were also



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PRODUCE.

nearly 2 million lbs. of tea under the head of exports by land, but the greater part of this comes under the head of exports to Kashmir.

According to the British returns the tea imported into the United Kingdom for home consumption or re-export has come from China, India, and Ceylon in the following proportions :—

In the Year	From China.	From India.	From Ceylon.
1865	93 per cent.	2 per cent.	0 per cent.
1875	86 "	13 "	0 "
1885	66 "	30 "	2 "
1895	16 "	46 "	32 "
1902	6 "	54 "	36 "
1903	7 "	55 "	31 "

## COFFEE.

The area under coffee was all, with the exception of about 400 acres, in Southern India; cultivation of coffee is, in fact, restricted for the most part to a limited zone in Mysore, Coorg, and the Madras districts of Malabar and the Nilgiris. The area reported as under coffee at the end of 1902, with corresponding figures for the two preceding years, is given below; but the figures are not of much value, as information is in some cases withheld by planters, especially in Madras :—

	1900.	1901.	1902.
	Acres.	Acres.	Acres.
Coorg	68,596	65,782	62,381
Madras	40,931	36,722	34,950
Mysore	128,087	126,735	114,660
Travancore and Cochin	7,404	7,022	6,929
Burma, Assam, &c.	387	446	373
Total	245,405	236,657	219,293

London prices of coffee have fallen from 101s. per cwt. in 1894 to 47s. in 1900 and 60s. in 1902. There is no local market for coffee, and the competition of cheap Brazilian coffee has affected the price in the consuming markets. But owing to anticipations of a smaller supply there was an improvement in 1902. The same cause has given an impetus to the export trade, which may be taken as the best criterion of the progress of the coffee industry, very little coffee being consumed in India. The amount of exports is shown below :—

	1900-01.	1901-02.	1902-03.
	Lbs.	Lbs.	Lbs.
To United Kingdom	15,678,768	13,057,408	17,416,112
" France	8,430,016	11,287,024	8,311,184
" other Countries	3,491,888	4,220,272	4,419,184
Total	27,600,172	28,564,704	30,146,480

It seems not unlikely, arguing from the analogy of recent years, that the production in 1902 approached in all 40 million lbs. It certainly exceeded by a considerable amount the production of any year since 1895. The returns show that 28,148 persons were employed permanently, and 62,515 temporarily, on the coffee estates.

## CINCHONA.

Cinchona cultivation, outside the Government plantations, appears from the returns to have declined in recent years. These returns are not very trustworthy, but they are to some extent confirmed by the fall in the amount of bark exported from Madras from 3½ million lbs. in 1899-1900 to 1½ million lbs. in 1902-03. But the export has varied very widely in earlier years.

On the Government cinchona plantations of the Darjeeling district in Bengal 180 acres were planted during 1902-03. A severe and continued drought, beginning in October 1902, delayed planting at the new extension at Munsong, and it was not possible to complete the programme which had been proposed for the year. Improved methods of cultivation have been introduced, and the trees are in a vigorous condition. In the early part of the year the rainfall was exceptionally heavy. The trees in the permanent plantations numbered over 3 millions. The quantity of dry bark harvested on the plantations was 235,600 lbs., and the purchases of bark from private plantations amounted to 84,300 lbs. The factory, which supplies Bengal, the Punjab, and Assam, used 392,200 lbs. of quinine-yielding barks, producing 11,927 lbs. of sulphate of quinine, and 84,800 lbs. of mixed *succirubra* and hybrid barks, from which 4,343 lbs. of cinchona febrifuge were extracted. The issue of quinine rose to 10,950 lbs., and that of cinchona febrifuge to 4,505 lbs., owing chiefly to the increased demand from Government medical depôts; but there was also a larger demand for the febrifuge on the part of the general public. The quinine supplied to the public is sold at post offices in five-grain packets; the febrifuge is sold at the factory; but a large part of the issues are made to Government officers for dispensaries and medical depôts.

The season in the Madras Cinchona Gardens was not altogether favourable, the early part of the year being unusually wet, followed by abnormally dry weather. The year's crop amounted to 144,300 lbs. of bark, taken entirely from sickly or dying trees, besides 289,200 lbs. purchased from private plantations. The amount of bark worked up in the factory was 528,000 lbs. consisting in about equal proportions of grown and purchased bark, the former giving the larger percentage of yield. The produce was 15,711 lbs. of sulphate of quinine and 6,606 lbs. of cinchona febrifuge. The new machinery installed during the preceding year worked well, and has effected a considerable reduction in the cost of manufacture. From this factory are supplied the requirements of Madras, Bombay, the United Provinces, the Central Provinces, Ajmere, Burma, Coorg, Berar, and Mysore; the issues during the year were 13,179 lbs. of quinine and 3,113 lbs. of the febrifuge. The sale of quinine at post offices in the Madras Presidency showed a satisfactory increase in the year under report. Quinine was issued to local fund and municipal dispensaries at the rate of Rs. 16 per lb., and the febrifuge was sold to the public at the rate of Rs. 12 per lb.

In Bengal, where nearly the whole of the jute crop is grown, the season was not unfavourable, and about 80 per cent. of a normal out-turn is estimated to have been secured in the season 1902. The area under jute in the province is returned as 2,106,300 acres, or nearly 10 per cent. less than the normal area, which is stated as 2,339,100 acres. The total yield, in bales of 400 lbs., is estimated at 5½ million bales in 1902, against 6½ millions in 1901, and an average of 5½ millions in each of the last five years. It has since been discovered, however, that the estimates from which these figures are taken understate the area in the Mymensingh district by about 150,000 acres. The fluctuations of the jute export trade during recent years have been as follows:—

Year.	Raw Jute.		Jute Manufactures.	Total Exports.
	Quantity.	Value.	Value.	Value.
	Cwts.	£	£	£
1883-84	7,018,000	3,062,000	890,000	3,952,000
1891-92	8,532,000	4,566,000	1,675,000	6,241,000
1897-98	15,023,000	6,754,000	3,954,000	10,708,000
1898-99	9,865,000	4,628,000	3,866,000	8,494,000
1900-01	12,415,000	7,245,000	5,243,000	12,488,000
1901-02	14,755,000	7,865,000	5,807,000	13,672,000
1902-03	13,036,000	7,418,000	6,013,000	13,431,000

Of the raw jute exports in 1902-03, nearly 43 per cent. went to the United Kingdom, 19 per cent. to Germany, nearly 14 per cent. to the United States, and nearly 13 per cent. to France; of the manufactured jute, 10 per

AGRI-  
CULTURAL  
PRODUCE.  
INDIGO.

cent. went to the United Kingdom, 35 per cent. to the United States, and 9 per cent. to Australia.

The area under indigo in the four indigo growing provinces, as reported, is given in the margin. It will be seen that there was again a very general fall. To the bad prospects of the industry caused by the competition of synthetic indigo, there was added a further cause of contraction, in the unfavourable season. In Bengal the out-turn is estimated to have been only 50 per cent. of a normal crop for the province as a whole. In

—	Average of preceding Five Years.	1901.	1902.
	Acres.	Acres.	Acres.
Bengal	483,700	311,200	263,500
United Provinces	309,900	169,000	93,200
Punjab	102,900	71,600	42,000
Madras	503,500	239,400	186,000
Total	1,300,000	791,200	574,700

the United Provinces the estimate is somewhat higher. In Madras, though the village cultivation of the crop was on a very contracted scale, the yield was fairly good. The out-turn for the four provinces together is given as 73,900 cwt., compared with 112,800 cwt. in 1901 and an average of 162,000 cwt. for each of the preceding five years. The total exports of recent years have been :—

	Cwts.	£
1888-89	142,000	valued at 2,633,000
1890-91	118,000	" 2,049,000
1894-95	166,000	" 3,164,000
1895-96	187,000	" 3,570,000
1896-97	170,000	" 2,914,000
1897-98	134,000	" 2,038,000
1898-99	135,000	" 1,980,000
1899-1900	111,000	" 1,795,000
1900-01	102,000	" 1,424,000
1901-02	90,000	" 1,235,000
1902-03	65,000	" 804,000

Exports by sea, besides a small quantity annually exported across the land frontiers of India.

SUGAR.

The area under sugar in India is estimated as follows for the provinces mentioned :—

—	Area in Acres.			Out-turn in Tons.	
	Average of Five Preceding Years.	1901-02.	1902-03.	1901-02.	1902-03.
Bengal	849,000*	661,200	664,700	676,400	672,700
United Provinces	1,212,000	1,228,700	1,159,800	976,200	904,100
Punjab and North-West Frontier Province.	363,000	376,200	336,100	435,700	367,500
Madras	52,000	51,100	46,100	1,094,000	934,000

\* Three years only.

Besides these amounts, however, there is a certain amount of sugar cultivation in most of the other provinces, and the total area under sugar in 1901-02 is given as nearly 2½ millions of acres. It is estimated that the annual yield from this area amounts to three millions of tons, or possibly more, of unrefined sugar. In the year under report the crop was considerably inferior to that of 1901-02, owing to deficiency of water at the time of planting and to the injury of standing crops by frost. The imports of sugar, including confectionery and molasses, during recent years are given as follows, the figures representing for the most part refined sugar :—

—	1896-97.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
From Austria-Hungary	Tons. 5,775	Tons. 53,187	Tons. 38,891	Tons. 66,065.	Tons. 112,897	Tons. 44,401
" Germany	37,940	20,698	3,026	20,100	28,857	7,284
" Mauritius	74,442	105,205	88,667	124,476	109,158	118,309
" China	6,965	9,284	15,850	24,372	9,138	28,430
" Java	4,873	8,125	12,909	11,262	16,033	28,683
" other Countries	4,125	6,776	8,700	17,565	21,654	74,686
Total	134,120	203,875	168,043	263,840	297,737	273,110

The legislation under which countervailing duties were imposed on bounty-fed sugar has been noticed in a former chapter under the head of "Customs."

AGRI-  
CULTURAL  
PRODUCE.

CIVIL VETERINARY DEPARTMENT.

The improvement of the breeds of horses, ponies, mules, and cattle, the prevention of horse and cattle disease, and veterinary instruction, are in charge of the Civil Veterinary Department, aided by a considerable number of veterinary assistants who are being organised into subordinate veterinary establishments. Operations are carried on throughout India, but chiefly in Northern India, which is most favourable for horse-breeding; their objects are, on the one hand, the provision of remounts and mules for military purposes, and, on the other, the preservation and improvement of native breeds of horses and cattle. For the first of these objects the Government of India imports and maintains horse and donkey stallions, and registers are kept of mares suitable for producing useful remounts. For the second object stallions are kept by provincial governments, local authorities, and private individuals; investigations into cattle and equine diseases are carried on, both locally and at the Imperial Bacteriological Laboratory at Muktesar; and numerous veterinary dispensaries are maintained by the provincial governments. The following paragraphs give some particulars for the year under various heads:—

HORSE-  
BREEDING.

Horse-breeding is carried on chiefly in the Punjab, the United Provinces, and Baluchistan. In addition to the 349 horse and 18 pony stallions maintained by the Government, there were in the year 1902-03 some 57 horse stallions owned by district boards, chiefly in the United Provinces, and 152 pony stallions, of which the greater part are in the Punjab. These covered more than 11,000 mares, the number of the produce being reported as 2,831; but the result of the covering is unknown in a considerable proportion of the cases. Less attention is given by the local authorities to mule-breeding, and the number of district donkey stallions was only 31. The number maintained by the Government, for breeding mules for military purposes, was 492. There was, however, a good increase in the number of donkey mares covered by the district donkey stallions, and it is hoped that this may have a good effect in the course of a few years on the indigenous breed of donkeys.

Horse and  
mule breed-  
ing.

With a view to improve native breeds of cattle, the local authorities in many provinces procure young bulls of indigenous breeds, and after rearing them well turn them out among the herds. Proposals have been made, and were under consideration at the end of the year, for the establishment of bull-rearing runs throughout India, by which it is believed that the recognised breeds could be improved or maintained. At present, the most important centre of cattle-breeding is the Hissar Cattle Farm, which was taken over by the Civil Veterinary Department for a seven years' period in 1898-99. The farm contains 18 herd bulls and 779 cows, selected with great care as good specimens of the Harriana and Nagore breeds. Seven bulls only were supplied to the districts during the year; but the young stock which is coming on is reported to be very satisfactory, and the first batch of 80 bull calves selected from the best herds are well grown and true to type, and will be of immense value when issued to the districts containing Harriana and Nagore cattle. Under the scheme laid down for the working of the farm, it will take two years before all demands can be met. At the end of that time, the farm will be able to supply fifty to one hundred true bred bulls annually to the districts at prices ranging from £10 to £13. Mule and donkey-breeding operations were also carried on at the farm; and the cultivation has been greatly improved. Though no animals but those which were supernumerary were sold during the year, the finances of the farm showed a small profit.

Cattle-  
breeding.

Reported cases of glanders and farcy were exceptionally few during the year. An outbreak which occurred in Kashmir was promptly suppressed, and arrangements were made for the inspection of all animals coming from the State. The cases reported there numbered 21; of the remaining 79 cases, 66 were in Bengal. Inspections of horse-boxes and cattle-trucks were more frequent, and are reported to have been productive of much good.

Horse and  
cattle  
disease.

**HORSE-BREEDING.**

Among cattle, a considerable number of deaths from rinderpest were reported in Bengal, Burma and Madras, and great progress was made with preventive inoculation in each province. This practice is being introduced whenever possible, and it is generally found that villagers have no objection to it when its advantages are explained to them. An equally satisfactory account is given of the extension of inoculation against anthrax. Except in Burma and the Punjab, where subordinate veterinary establishments are in existence, there are no trustworthy statistics of deaths from the chief cattle diseases. When other provinces have a similar organisation, a proper system of registration will become possible. Veterinary dispensaries, attended by veterinary assistants, have been established in most provinces, but there are still no dispensaries of the kind in Madras. The number of veterinary assistants in all provinces was 322. At the Imperial Bacteriological Laboratory at Muktesar, as elsewhere throughout India, experiments on rinderpest and other diseases were in progress, and a large quantity of serum for inoculations was prepared. A valuable note by two officers of the Veterinary Department, published during the year, established the existence of the "dourine" disease among horses in India.

**Veterinary instruction.**

The total number of students who passed out from the various veterinary colleges and schools was 101, of whom 32 had gone through a three years' course, the remainder having taken the salutri's two-year course at Bombay or having passed through the Ajmere College. The question of amalgamating the latter with the Punjab College was under consideration. Arrangements were completed during the year for the establishment of a veterinary college in the Madras Presidency: There is a great demand for veterinary graduates and assistants, and good men find no difficulty in getting suitable employment. But this is not the case with men who have only gone through a two-years' course. The amalgamation of the Punjab and Ajmere Colleges would involve the disappearance of the two-years' course in force in the latter.

**MINES AND MINERAL RESOURCES.****MINERAL RESOURCES.**

In the development of Indian mineral resources recent years show a decided advance, although no new kinds of mineral wealth have been discovered, with the exception of the deposits of manganese ore on the east coast of Madras and in the Central Provinces, the development of which may be said to have been begun in 1893. Putting aside salt, the production of which is dealt with elsewhere, the chief mining resources of India, with the estimated value of the output in 1902, may be stated as follows:—Gold, £1,970,000; coal, £1,460,000; clay, £280,000; petroleum, £220,000; saltpetre, £190,000; and mica and manganese, about £27,000. Other mineral products which exist in India in more or less workable quantities include rubies, tin ore, jade, copper ore, alum, gypsum, and plumbago.

**COAL.**

The output of coal in India for the last three years is contrasted below with the amount produced 10 years ago. The figures are taken from the Financial and Commercial Statistics published by the Government of India:—

	Coal produced in			
	1892.	1897.	1901.	1902.
	Tons.	Tons.	Tons.	Tons.
Bengal	1,920,000	3,142,000	5,488,000	6,259,000
Central Provinces	132,000	132,000	192,000	197,000
Assam	164,000	186,000	254,000	221,000
Punjab	66,000	93,000	68,000	55,000
Baluchistan	13,000	12,000	25,000	34,000
Burma	4,000	11,000	12,000	13,000
Rewah State	89,000	125,000	164,000	172,000
Nizam's Dominions	150,000	365,000	421,000	456,000
Rajputana (Bikanir)	Nil	Nil	12,000	17,000
Total	2,538,000	4,066,000	6,636,000	7,424,000

At the end of 1902 there were 329 coal mines in operation, of which 306 were in Bengal. These include some very small mines. There are some important mines in Assam, and two, including the Government mine at Warora, in the Central Provinces; the largest of all the mines are the East India Railway Company's mines near Giridli, which produced 614,000 tons, and the Singareni mine in Hyderabad, which produced 455,000 tons of coal during the year. The number of persons employed in the coal-mining industry in 1902 was 98,300, of whom 27,200 were women and 4,600 children. A great expansion of the coal-mining industry has taken place within the last few years, and the imports of coal, coke, and patent fuel, which amounted to 258,000 tons only in 1902, bear an insignificant proportion to the consumption, and are, in fact, overbalanced by the exports (430,000 tons in 1902). Much the greater part of the coal produced is consumed in the country, and the extension of the market for Indian coal depends on the development of the industrial resources in India. The fuel is abundant and widely distributed, and can be raised for Rs. 2 per ton in Bengal. Its price at Calcutta varied during 1902 from Rs. 6½ to Rs. 7½ per ton, according to quality; quotations for 1903 were about a rupee per ton lower. The Indian railways used 2,120,000 tons of Indian coal in 1902, against 1,970,000 in 1901; and only 2 per cent. of the coal used by them came from other countries. Bengal sent 556,000 tons of coal by sea to Bombay, this being considerably less than in the preceding year.

MINERAL RESOURCES.

The iron ore produced in India in 1902 is stated to have amounted to 85,200 tons, a larger figure than that of any previous year, but insignificant in comparison with the future possibilities of this industry. Almost the whole of the output comes from Raniganj in Bengal, near the coalfields. The question of the utilisation of the coal and iron supply of India in the establishment of a steel industry has received much attention of late. At present the only iron works in India are those at Barrakur, in Bengal, the operations of which are being extended by the laying down of a steel-manufacturing plant. The well-known iron deposits at Chanda and Jubbulpore in the Central Provinces are, however, being prospected, and there is a possibility that the Indian iron industry will receive further development at the hands of another company. There is also a small local iron industry in other parts of Bengal and in the Central Provinces, but as now produced the iron is unable to compete for cheapness with imported metal, although it is of good quality.

IRON.

The production of crude petroleum from the principal oilfields has been returned thus:—

MINERAL OIL.

Produced in	Average of Three Years 1896-98.	1899.	1900.	1901.	1902.
Burma	Gallons. 17,369,000	Gallons. 32,309,000	Gallons. 36,974,000	Gallons. 49,442,000	Gallons. 54,849,000
Assam	336,000	624,000	753,000	631,000	1,757,000
Punjab	2,000	1,000	2,000	2,000	2,000
Total	17,707,000	32,934,000	37,729,000	50,075,000	56,608,000

The output of oil in the Yenangyaung and Yenangyat oilfields in Upper Burma continues to increase. The new Singu oilfield in the Myingyan district has turned out to be very promising, though no oil was exported from it during the year, pending the arrival of a distilling plant. In Lower Burma very little oil was taken from the Akyab and Kyaukpyu oilfields. There is a noteworthy increase in the output of Assam oil. Although the production of petroleum has expanded very largely, it is still insufficient for the requirements of the Indian market, which are met by the importation of oil, for the most part from Russia. Imports of American oil, which had shown a rapid decline, recovered considerably in 1902-03. Particulars for

MINERAL  
RESOURCES.

the last four years are shown below; but it must be remembered, in comparing these quantities with those given in the table above, that the Burma output is given in crude oil, which may be taken to represent only about half the quantity of kerosene.

	1899-1900.	1900-01.	1901-02.	1902-03.
<b>Kerosene:</b>	<b>Gallons.</b>	<b>Gallons.</b>	<b>Gallons.</b>	<b>Gallons.</b>
From United States -	12,732,000	5,102,000	5,768,000	9,229,000
„ Russia - -	57,658,000	67,351,000	84,478,000	71,125,000
„ elsewhere - -	50,000	149,000	1,221,000	1,097,000
Other sorts - -	4,519,000	8,187,000	7,419,000	7,422,000
<b>Total - -</b>	<b>74,959,000</b>	<b>80,789,000</b>	<b>98,886,000</b>	<b>88,873,000</b>

The value of the oil imported during 1902-03 was about £2,310,000, and that of the locally-produced crude oil is estimated at about £220,000 for the year 1902.

## GOLD.

The out-turn of the Indian gold mines in 1902 was not quite so large as in 1901, though above the output of previous years. The industry is chiefly dependent on the quartz reefs at Kolar. Fifteen companies are at work, of which five are paying dividends and five others producing gold. The Cauvery electric scheme, for providing 4,000 H.P. from the falls in that river, was completed during 1902. A scheme for a water supply was being considered.

	Oz.
1896 - -	323,500
1897 - -	390,600
1898 - -	418,900
1899 - -	456,000
1900 - -	513,000
1901 - -	532,100
1902 - -	527,200

CHAPTER XI.

PUBLIC WORKS.

PUBLIC  
WORKS.  
General.

During the year under review the Public Works Department was represented in the Council of the Governor-General by Mr. A. T. Arundel, C.S.I. The post of Public Works Secretary was held throughout the year by Mr. A. Brereton.

The engineer establishment of the Department, including Bombay and Madras, but excluding the now separate Military Works Department, was maintained at a strength slightly above that of the preceding year.

The following statement shows the composition of the superior engineer establishment, as it stood on the 30th June in 1902 and 1901 :—

	Government of India List.	Government of Madras List.	Government of Bombay List.	Total.
Royal Engineer officers - - -	57	5	3	65
Other military officers - - -	8	—	—	8
<i>Civil Engineers :</i>				
Appointed from Europe - -	308	56	44	408
Europeans appointed in India -	144	3	6	153
Natives appointed in India -	71	22	26	119
Total for 1902 - - -	588	86	79	753
Total for 1901 - - -	582	84	83	749

The upper subordinate engineering staff is largely composed of natives. The numbers of this establishment in the three Presidencies were as follows :—

	India.	Madras.	Bombay.	Total.
Europeans - - - - -	181	54	23	259
Natives - - - - -	348	123	176	647
Total - - - - -	529	177	199	905

The engineering branch of the Department is divided into two services, Imperial and Provincial, the former of which is recruited in England and the latter in India. The pay, and leave and pension rules, of the two services are different, but in other respects there is no distinction between the members of the two divisions, and the highest posts in the Department are open to both. The civilian element of the Imperial service is recruited from the Royal Indian Engineering College at Cooper's Hill; the Provincial service draws its recruits from students of the Indian colleges who are natives of India, and from upper subordinates of the Public Works Department.

The operations of the Department deal with three kinds of works, viz., Railways, Irrigation, and Buildings and Roads. The Railway Department is an Imperial service under the direct control of the Government of India; the establishment employed on irrigation, and on buildings and roads, is subdivided into different Provincial services, controlled by the local



PUBLIC  
WORKS

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 railway 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 1902-03 is compiled from the Finance and Revenue Accounts of the year:—

RECEIPTS.		£	
Railways	-	20,133,900	
Irrigation	-	2,768,990	
Buildings and Roads	-	486,941	
TOTAL		£23,389,831	

  

EXPENDITURE.		Charged to Revenue.	Not Charged to Revenue.
<i>Railways:</i>		£	£
Construction		54,659	4,564,001
On Revenue Account		19,904,951	
<i>Irrigation:</i>			
Construction		115,922	564,191
Ditto from Famine Relief Grant		94,742	—
On Revenue Account		2,459,322	—
<i>Buildings and Roads:</i>			
Military Works		1,096,669	—
Civil Works		4,145,779	—
TOTAL		£ 27,872,044	5,128,192

The expenditure charged against revenue includes the following items of "Interest on Debt":—

Railways	£ 4,295,369
Irrigation	969,105

On the 31st of March 1903, £117,878,719 of permanent public debt had been incurred on account of railways, and £24,830,745 on account of irrigation.

The amount paid under the head of "Annuities in purchase of railways," which is included in the Railway Revenue Account, is £2,999,218, of which £1,268,582 is in respect of the Great Indian Peninsula Railway, purchased in 1900.

RAILWAYS.

RAILWAYS.

A full account of the results of railway operations in India is given in the Railway Administration Report annually presented to Parliament, and the aim of the following section is merely to give a short summary of the chief facts. As the accounts of the several railways had not been finally closed when the following statistics for the year 1903 were prepared, the figures must be accepted as only approximately correct.

In the financial year 1902-03 there was a surplus of revenue over expenditure amounting to £228,948. The table below is taken from the Finance and Revenue Accounts of the Government of India for 1902-03 :—

Financial result to the State.

	Imperial.	Provincial and Local.	England (sterling converted at £1 = Rs. 15).	TOTAL.
<b>REVENUE.</b>				
Railways—	£	£	£	£
State railways—(Gross traffic receipts).	19,109,403	28,023	230	19,137,656
Guaranteed companies—(Not traffic receipts).	946,182	—	—	946,182
Subsidised companies—(Repayment of advances of interest).	32,192	—	17,870	50,062
<b>TOTAL</b>	<b>20,087,777</b>	<b>28,023</b>	<b>18,100</b>	<b>20,133,900</b>
<b>EXPENDITURE.</b>				
Railway Revenue Account—				
State Railways—				
Working expenses	9,810,888	16,323	—	9,827,211
Interest on debt	3,151,866	—	1,143,504	4,295,370
Annuities in the purchase of railways.	—	—	2,999,218	2,999,218
Interest chargeable against companies on advances.	171,575	3,293	218,884	393,752
Interest on capital deposited by companies.	17,174	3,090	1,150,225	1,170,489
Guaranteed companies—				
Surplus profits, land and supervision.	82,558	—	—	82,558
Interest	8,326	—	1,026,892	1,035,218
Subsidised companies—				
Land, &c.	42,073	140	—	42,213
Miscellaneous railway expenditure -	52,640	6,283	—	58,923
<b>TOTAL</b>	<b>13,337,100</b>	<b>29,129</b>	<b>6,538,723</b>	<b>19,904,952</b>
		<b>Net gain</b>	<b>£</b>	<b>228,948</b>

In the figures of expenditure are included all charges falling on the Government for management and working expenses of railways, for interest on their 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 land required by the companies, for control, and for miscellaneous items, such as headquarters establishment and surveys.

2. The statistical results of working of the various classes of railways during 1903 are given in the following table. The aggregate net earnings of all Indian railways amounted to 5.59 per cent. of the total capital outlay on open lines, including steam-boat service and suspense items, but

Statistical results of working.

RAILWAYS. excluding other indirect charges, against 5.41 per cent. in the previous year:—

Class.	Length of Line Open on the 31st December 1903.	Total Capital Outlay on Open Lines to the 31st December, including Steamboat and Suspense.	Total Number of Passengers Carried.	Total Weight of Goods Carried.	Gross Earnings, including Steam-boat Service.	Working Expenses, including Steam-boat Service.	Net Earnings, including Steam-boat Service.	Percentage of net Earnings on Capital Outlay on Open Lines.
<i>5' 6" Gauge.</i>								
State lines worked by companies	Miles. 6,793.17	£ 82,426,905	No. 84,373,687	Tons. 19,522,179	£ 9,781,768	£ 4,362,540	£ 5,419,228	
State lines worked by the State -	4,730.87	49,971,940	33,125,426	9,625,958	4,937,120	2,410,929	2,526,191	
Companies' lines guaranteed under old contracts.	1,165.26	17,447,267	22,006,951	2,862,519	1,947,000	1,022,300	924,700	
Companies' lines guaranteed under modern contracts.	23.04	189,467	221,100	51,100	17,600	10,125	7,475	
Assisted companies' lines -	845.55	3,674,735	4,949,921	749,542	378,304	176,311	202,000	
Lines owned by Native States and worked by companies.	709.92	4,741,304	2,124,746	1,076,426	341,522	139,265	202,257	
Lines owned by Native States and worked by State railway agency.	201.63	796,720	1,972,589	325,848	22,100	45,867	27,233	
<b>TOTAL FOR 1903</b>	<b>14,665.05</b>	<b>189,227,038</b>	<b>130,670,420</b>	<b>34,276,870</b>	<b>17,492,316</b>	<b>8,098,526</b>	<b>9,393,790</b>	<b>5.40</b>
<b>TOTAL FOR 1902 (a)</b>	<b>14,310.24</b>	<b>155,158,774</b>	<b>122,880,876</b>	<b>33,262,660</b>	<b>16,442,208</b>	<b>7,882,281</b>	<b>8,559,927</b>	<b>5.21</b>
<i>2' 6" Gauge.</i>								
State lines worked by companies	7,306.28	42,048,270	51,680,762	2,572,222	4,045,926	2,194,582	1,851,344	
State lines worked by the State -	619.18	4,266,700	4,904,400	924,120	510,687	265,000	245,687	
Companies' lines guaranteed under modern contracts.	59.27	185,027	420,200	52,220	16,440	8,867	7,573	
District Boards' lines -	99.46	216,282	1,487,000	161,000	26,522	12,267	14,255	
Assisted companies' lines -	1,207.09	6,118,067	12,712,046	2,221,127	924,962	390,422	534,540	
Lines owned by Native States and worked by companies.	724.78	5,008,221	2,446,262	622,790	226,222	127,209	100,013	
Lines owned and worked by Native States.	1,222.04	2,784,611	2,920,217	547,620	282,562	141,419	141,144	
Lines in foreign territory -	72.61	1,004,566	707,221	242,266	32,224	18,222	14,002	
<b>TOTAL FOR 1903</b>	<b>11,412.84</b>	<b>69,627,124</b>	<b>79,240,275</b>	<b>12,710,074</b>	<b>6,078,922</b>	<b>3,127,709</b>	<b>2,951,313</b>	<b>4.88</b>
<b>TOTAL FOR 1902 (a)</b>	<b>10,900.15</b>	<b>55,646,950</b>	<b>70,269,792</b>	<b>11,912,742</b>	<b>5,000,267</b>	<b>2,142,226</b>	<b>2,857,922</b>	<b>5.14</b>
<i>Special (2' 6" and 2' 0") Gauges.</i>								
State lines worked by companies	120.74	242,222	(b)	(b)	7,200	4,022	3,178	
State lines worked by the State -	20.25	60,220	122,222	11,722	6,022	4,222	1,800	
Assisted companies' lines -	209.94	1,622,222	2,222,222	172,222	122,222	71,222	51,000	
Lines owned by Native States and worked by companies.	276.19	422,422	822,222	102,222	21,222	22,222	2,000	
Lines owned by Native States and worked by State railway agency.	22.60	22,222	120,000	22,222	2,122	2,707	2,422	
Lines owned and worked by Native States.	24.26	122,222	222,222	12,222	12,222	10,222	2,000	
<b>TOTAL FOR 1903 (c)</b>	<b>875.08</b>	<b>2,822,222</b>	<b>3,914,061</b>	<b>402,691</b>	<b>127,222</b>	<b>122,222</b>	<b>74,222</b>	<b>2.42(c)</b>
<b>TOTAL FOR 1902 (a), (c) and (d).</b>	<b>688.51</b>	<b>1,421,222</b>	<b>2,421,219</b>	<b>222,690</b>	<b>174,617</b>	<b>102,222</b>	<b>62,222</b>	<b>4.41</b>
<b>TOTAL OF ALL RAILWAYS FOR 1903 (c).</b>	<b>26,922.87</b>	<b>221,622,424</b>	<b>212,224,756</b>	<b>49,240,222</b>	<b>22,722,022</b>	<b>11,222,222</b>	<b>12,222,222</b>	<b>5.29</b>
<b>TOTAL OF ALL RAILWAYS FOR 1902 (a), (c) and (d).</b>	<b>26,222.90</b>	<b>212,222,120</b>	<b>202,222,427</b>	<b>48,224,222</b>	<b>22,212,112</b>	<b>11,122,222</b>	<b>11,421,222</b>	<b>5.41</b>

It will be observed that, with an increase of 1,054.07 (f) miles or 4.07 per cent. in the open mileage, as compared with 1902, the gross earnings and working expenses show increases of £1,149,987 or 5.08 per cent., and of £246,728 or 2.22 per cent., respectively, resulting in an increase of £903,259 or 7.87 per cent. in the net earnings.

There was an increase of 17,176,269 in the number of passengers and of 2,805,342 tons in the weight of goods carried as compared with the previous year.

(a) As corrected from later information.  
 (b) Included with the 5' 6" gauge.  
 (c) The decrease in this percentage as compared with that of 1902 is due chiefly to the inclusion of the capital outlay of £948,667 on the Kalka Simla Railway, which was opened to traffic on the 9th November 1903. Excluding the transactions of this line, the percentage of the total net earnings of 2' 6" and 2' 0" gauge railways on capital outlay is 3.91.  
 (f) The difference between this figure and the total length shown as opened during 1903 in paragraph 4 is due to the inclusion of the Parikimedi Light Railway, 24.68 miles, in the year under review and to minor corrections in the mileage of open lines.  
 (e) Excluding the Thaton-Duyinsalk Light Railway.  
 (d) Excluding the Parikimedi Light Railway.

3. The transactions of the original guaranteed lines are illustrated by the following table. In this table the rupee is converted into sterling at contract rates:—

RAILWAYS.  
Guaranteed  
railway  
transactions.

RAILWAYS.	Total Capital Outlay.	Net Revenue.	Guaranteed Interest.	Interest in Excess of Revenue.	Net Revenue in Excess of Interest.	Surplus Profits.
<b>HALF-YEAR ENDED THE 30TH JUNE 1903.</b>						
	£	£	£	£	£	£
Bombay, Baroda, and Central India.	10,896,750	361,215	239,485	—	121,730	123,110
Madras - - -	12,276,655	295,695	283,619	—	12,076	(a)12,822
Total -	23,173,405	656,910	523,104	—	133,806	135,932
<b>HALF-YEAR ENDED THE 31ST DECEMBER 1903.</b>						
Bombay, Baroda, and Central India.	10,938,644	194,072	241,876	47,804	—	—
Madras - - -	12,296,544	210,174	278,977	68,803	—	—
Total -	23,235,188	404,246	520,853	116,607	—	—
Total for the year 1903	23,235,188	1,061,156	1,043,957	—	17,199	135,932
Total for the year 1902.	22,937,198	1,061,204	1,032,840	—	28,364	(a)122,878

(a) Passed provisionally.

4. The total railway mileage on each gauge opened during the year and the sections opened were as follows:—

Mileage opened.

5' 6" Gauge—

	Miles.	Miles.	Miles.
<b>Bengal Nagpur—</b>			
Midnapur to Bhojudih - - - - -	114.50		
Bhojudih to Bhaga - - - - -	6.66		
Bhaga to Malkera - - - - -	8.79		
Southern section of the Malkera-Katrasgarh cross connection.	0.71		
Ramkanali to Chaurashi - - - - -	8.16		
Bhowra siding - - - - -	2.50		
		141.32	
<b>Bombay, Baroda, and Central India—</b>			
Godhra to Baroda - - - - -	—	44.00	
<b>Eastern Bengal—</b>			
Extension of Chitpore terminus - - - - -	—	0.68	
<b>East Indian—</b>			
Katrasgarh to Khanoodih - - - - -	7.23		
Jheria to Dhanbaid - - - - -	3.79		
Northern section of the Malkera-Katrasgarh cross connection.	0.67		
		11.69	
<b>Indian Midland—</b>			
Ait to Kunch - - - - -	—	8.85	
<b>Madras—</b>			
Tellicherry to Cannanore - - - - -	—	11.82	
<b>North Western State—</b>			
Malakwal to Sargoda - - - - -	—	46.25	
<b>Oudh and Rohilkhand State—</b>			
Partabgarh to Siwait - - - - -	25.00		
Chilbila to Sultanpur - - - - -	22.00		
Balamau to Madhoganj - - - - -	14.47		
		61.47	
			326.08
Carried over - - - - -			326.08

## RAILWAYS.

	Brought forward	Miles.	Miles.	Miles.
		—	—	326·08
<i>3' 3½" Gauge—</i>				
Ahmedabad-Dholka—				
Sabarmati to Dholka	-	-	33·50	
Assam-Bengal—				
Lakwa to Tinsukia	-	54·47		
Damchara to Lumding	-	100·74		
			155·21	
Noakhali (Bengal)—				
Laksam to Noakhali	-	30·46		
Noakhali to Sahibghatta	-	4·44		
			34·90	
Bengal and North-Western, Company's section—				
Phephna to Ghazipur Ghat	-	31·16		
Azamgarh to Shahganj	-	34·81		
			65·97	
Bengal Dooars—				
Chalsa to Madarihat	-	-	38·80	
Burma—				
Hsipaw to Lashio	-	50·94		
Letpudan to Tharrawa	-	23·07		
Henzada to Henzada Shore	-	2·46		
			76·47	
Vijapur-Kalol-Kadi—				
Kalol to Kadi	-	-	12·20	
Rohilkund and Kumaon, Lucknow-Bareilly section—				
Dudwa to Chandanchowki	-	-	5·87	
Tinnevelly-Quilon (Travancore) (British section)—				
Kallidaikurichi to Shencottah	-	-	30·88	
Tanjore District Board—				
Pattukkottai to Arantangi	-	-	28·35	
			482·15	
<i>Special (2' 6") Gauge—</i>				
Bukhtiarpur-Bihar Light—				
Bukhtiarpur to Bihar	-	-	18·50	
Gaekwar's Dhaboi—				
Padhra to Mhoba	-	-	9·20	
Bengal-Nagpur—				
Gondia to Neinpur	-	-	74·50	
Kalka-Simla—				
Kalka to Simla	-	-	59·44	
North-Western State—				
Kohat to Thal	-	-	62·03	
			223·67	
	TOTAL			1,031·90

## Mileage sanctioned.

## 5. The additional lengths sanctioned for construction were:—

	Miles.	Miles.	Miles.
<i>5' 6" Gauge—</i>			
Bengal-Nagpur—			
Jamadhoba to Balliary	-	5·50	
Eastern Bengal State—			
Moorshidabad to Jeaganj	6·00		
Jeaganj to Lalgola*	16·50		
		22·50	
East Indian—			
Mile. 170½ on the Jheria branch to Chandore	4·16		
Ondal to Sainthia or Ahmedpur	43·62†		
		47·78	
	Carried over		75·78

\* With a siding to a ghat station on the Ganges and a small flotilla.

† The mileage here given is to Sainthia.

	Brought forward	Miles.	Miles.	Miles.	RAILWAYS.
Madras—			75·78		
Salem to Attur			36·06		
North-Western State—					
Jech Doab extension, Sargoda to Shorkot Road		103·00			
Lower Sind extension, Hyderabad to Badin		61·00			
Southern Punjab Railway, Ludhiana <i>via</i> Ferozepore to McLeodganj		162·90			
			326·90		
Oudh and Rohilkhand State—					
Hapur to Meerut		19·50			
Phaphamau to Zafarabad		57·50			
			77·00		
				515·74	
<b>3' 3½" Gauge—</b>					
Bengal and North-Western—					
Company's Section—					
Kopaganj to Dhorighat		21·70			
Uska Bazar to Tulsipur		53·54			
Gaisanri to Jarwa		12·56			
Gorakhpur to Bagaha		60·94			
			148·74		
Tirhoot Section—					
Mansi to Bapthiahi		60·01			
Sihursa to Murliganj		18·61			
Bairagnia to Bikua Thori		79·55			
Bettiah to Bagaha		49·35			
			207·52		
Burma—					
Pegu to Martaban*			121·27		
Eastern Bengal State—					
Kaunia to Bonarpara			44·25		
Nilgiri—					
Coonoor to Ootacamund			11·50		
Rohilkund and Kumaon—					
Company's Section—					
Bareilly to Soron		56·00			
Moradabad to Ramnagar		47·00			
Lalkua to Kashipur		45·00			
			148·00		
				681·28	
<b>Special (2' 6") Gauge—</b>					
Baraset-Basirhat—					
Baraset to Basirhat			26·00		
Cutch—					
Aujar to Tuna			11·86		
Gaekwar's Dabhoi—					
Mobha to Kanjat			6·50		
North-Western State—					
Jullundur to Sultanpur†			28·82		
Tarakeshwar-Magra—					
Magra to Fribeni			2·15		
				75·33	
					1,272·35

\* With steam ferry to connect with the port of Moulmein.  
 † Question of gauge not yet settled.

RAILWAYS.  
Mileage  
under  
construction.

6. The total mileage under construction or sanctioned for construction at the close of the year, i.e., on the 31st December 1903, was as follows:—

	Miles.	Miles.
<b>5' 6" Gauge—</b>		
State lines worked by companies	490·05	
State lines worked by the State	482·75	
Companies' lines guaranteed under old contracts	4·65	
Assisted companies' lines	162·90	
		<u>1,140·35</u>
<b>3' 3½" Gauge—</b>		
State lines worked by companies	584·18	
State lines worked by the State	195·87	
District Boards' lines	5·53	
Assisted companies' lines	332·88	
Lines owned by Native States and worked by companies	180·80	
		<u>1,249·26</u>
<b>Special (2' 6" and 2' 0") Gauges—</b>		
State lines worked by companies	221·96	
State lines worked by the State	6·80	
Assisted companies' lines	344·02	
Lines owned by Native States and worked by companies	92·86	
Lines owned by Native States and worked by State railway agency	22·02	
Lines owned and worked by Native States	11·86	
		<u>699·52</u>
<b>TOTAL</b>		<u><u>3,089·13</u></u>

Important  
works com-  
pleted and  
in progress.

7. The following gives a brief abstract of the important works completed and in progress during 1903:—

*Bengal-Nagpur Railway.*—The work of doubling the main line between Bauria and Khargpur, 57·72 miles, is in progress and likely to be completed by the end of 1904.

The Midnapur-Bhojudih section, 114·50 miles, which includes a bridge (5 spans of 150 feet, one of 140 feet, and one of 40 feet) over the Damooda river, was opened for traffic on the 1st February 1903.

Of the Jheria colliery lines, the branch from Ramkanali to Chaurashi, 8·16 miles, the Bhojudih-Bhaga section, 6·66 miles, the Bhaga-Malkera section including the southern half of the Malkera-Katrasgarh cross connection, 9·50 miles, and the Bhowra siding, 2·50 miles, were opened for traffic on the 1st February, 1st September, and 14th May 1903, respectively.

The first section of the Jubbulpore-Gondia, 2' 6" gauge, extensions from Gondia to Neinpur, 74·50 miles, was opened for traffic on the 18th April 1903. It is expected that the line from Neinpur to Jubbulpore, and that from Seoni to Chindwara, 69·43 and 40·36 miles respectively, will be opened by the close of 1904, and the Neinpur-Seoni section, 47·13 miles, early that year.

*Bombay, Baroda and Central India Railway System.*—The Baroda-Godhra chord, 44 miles, was opened for traffic on the 23rd December 1903.

The Ahmedabad-Dholka Branch Railway was opened for traffic from Sabarmati to Bavla, 25 miles, on the 23rd February, and from Bavla to Dholka, 8·50 miles, on the 1st April 1903.

The section of the Gaekwar's Dabhoi Railway from Padra to Mobha, 9·20 miles, was opened for traffic on the 10th July 1903. The extension from Mobha to Kanjat, 6·50 miles, will, it is expected, be completed for opening early in 1904.

The remaining section of the Gaekwar's Vijapur-Kalol-Kadi railway from Kalol to Kadi, 12·20 miles, was opened for traffic on the 13th July 1903.

The construction of the Rewari-Phulera chord of the Rajputana-Malwa railway, 133·32 miles, is in progress. The line will be opened for traffic probably by June 1905.

The Jaipur Darbar have temporarily deferred the completion of the Jaipur-Siwai Modhopur railway.

*Eastern Bengal State Railway.*—In connection with the scheme for quadrupling the line between Ballygunge and Naihati, 27·85 miles, work is in progress on the Kankoorgachi-Dum Dum junction section, about 3·50 miles, which is expected to be completed during 1904.

A double line chord from Kankoorgachi to Gobra junction, 2·25 miles, is under construction and expected to be completed during 1905.

The Chitpore-Cossipore goods terminal works have practically been completed.

Work has been commenced on the Gauhati-Dhubri extension, 151·62 miles, and on the chord line between Kaunia, on the Assam section of the system, and Bonarpara, on the Brahmaputra-Sultanpur Branch railway, 44·25 miles. The chord is expected to be opened early in 1905.

Fair progress has been made with the Moorshidabad branch, 91·60 miles, which takes off from the main line at Ranaghat. It is expected that the branch will be opened for traffic by the end of 1904.

*East Indian Railway.*—Of the Jheria colliery lines, the Katrasgarh-Khanoodih extension, 7·23 miles, was opened for traffic on the 7th March; the Dhanbaid-Jheria chord, 3·79 miles, on the 1st May; and the northern half of the Malkera-Katrasgarh cross connection, 0·67 miles, on the 15th August 1903.

A portion of the third line between Asansol and Ranceganj, 3·72 miles, was opened for traffic on the 1st October 1903.

Work on the Gya-Hariharpur line, 99·79 miles, and on the Shikohabad-Furrakhabad branch, 65·82 miles, are in progress. Arrangements have been made to start work on the Ondal-Sainthia chord, 43·62 miles.

At Howrah, works in connection with the new station, the re-construction of the Buckland and Chandmari bridges, the foreshore wall of the goods yard, and the new locomotive and marshalling yard, are in progress. The remodelling of the stations and yards at Burdwan, Hooghly, and Delhi are also in progress.

*Great Indian Peninsula Railway System.*—On the Great Indian Peninsula railway, the strengthening and renewal of bridge girder spans under 30 feet are approaching completion. Arrangements are being made to start work on the doubling of the line between Khandwa and Itarsi, 110·42 miles. The rearrangement of the Bhopal station yard is approaching completion.

The line from Ait, on the Jhansi-Cawnpore section of the Indian Midland railway, to Kunch, 8·85 miles, was opened for traffic on the 7th December 1903. Work on the goods depôt at Belanganj, the business centre in Agra, to accommodate the traffic of the railways entering that city is well in hand; and the construction of the new Agra Cantonment station building has been commenced. The new goods depôt at Cawnpore is approaching completion.

The Agra-Delhi chord railway, 121·16 miles, which is under construction by State agency is expected to be opened for traffic by April 1904. The working of the line will be entrusted to the Great Indian Peninsula Railway Company.

The Gwalior-Joura section, 34·61 miles, of the Subalgarh extension of the Gwalior light railways, was opened for traffic on the 1st January 1904.

*Madras Railway System.*—The extension of the South-West line of the Madras railway from Tellicherry to Cannanore, 11·82 miles, was opened for traffic on the 20th May 1903. The remaining portion of the extension from Tellicherry to Azhikal, 4·65 miles, is approaching completion.

On the State line from Azhikal to Mangalore, 77·27 miles, which is under construction by the agency of the Madras Railway Company, the earthwork is well in hand and a commencement has been made with well sinking for bridges.

The construction on account of the State of famine feeder lines from Morrapur and Tirupattur on the South-West line of the Madras railway, to Dharmapuri and Krishnagiri, 18·37 and 26·46 miles respectively, is in progress.

The work of restoring damages caused to the North-East line (East Coast railway) by floods, and of providing additional waterway, is in hand.



## RAILWAYS.

*North-Western State Railway System.*—The Kohat-Thal section, 62·03 miles, of the Khushalgarh-Kohat-Thal branch, and the cable-way across the river Indus at Khushalgarh were opened for traffic on the 1st April 1903.

The Northern section of the Jech-Doab branch from Malakwal to Sargoda, 46·25 miles, was opened for traffic on the 1st May 1903. The construction of the Southern section, from Sargoda to Shorkot Road on the Wazirabad-Khaniwal section, 103 miles, is in progress.

The construction of the Quetta-Nushki branch, 82·50 miles, and the Hyderabad-Badin line, 61 miles, is in progress. The latter will eventually form part of a through route between Bombay and Sind.

The roadway and footways of the bridge over the Kabul river at Nowshera were opened for traffic on the 1st December 1903.

Work has been commenced on the Ludhiana-McLeodganj Road extension, 162·90 miles, of the Southern Punjab railway.

*Oudh and Rohilkhand State Railway.*—The Balamau-Madhoganj branch, 14·47 miles, was opened for traffic on the 20th December 1903.

The sections of the Allahabad-Fyzabad branch from Partabgarh to Siwait, 25 miles, and Chibila to Sultanpur, 22 miles, were opened for traffic on the 20th March and 10th April 1903, respectively. It is expected that the Phaphamau-Siwait, and Sultanpur-Fyzabad sections, 3·52 and 36·37 miles, respectively, will be opened shortly. The bridge (15 spans of 200 feet) over the Ganges and the connected line between Phaphamau and Allahabad, 8·40 miles, are expected to be completed by March 1905.

Good progress has been made with the Meerut-Hapur branch, 19·50 miles, and arrangements are in progress for the final location and staking out of the Phaphamau-Zafarabad branch, 57·50 miles.

*Assam-Bengal Railway System.*—The remaining sections of the Assam-Bengal railway from Lakwa to Bhojo, 12·75 miles; from Bhojo to Tinsukia, 41·72 miles; and from Damchara to Lumding, 100·74 miles, were opened for traffic on the 1st February, 1st March, and 1st December 1903, respectively. The extension of the jetties at Chittagong is nearing completion.

The Noakhali (Bengal) branch railway was opened for traffic from Laksam to Noakhali, 30·46 miles, on the 15th May, and from Noakhali to Shahebghatta (Ichakhali), 4·44 miles, on the 10th November 1903. The railway is worked by the Assam-Bengal Railway Company on behalf of the Branch line company.

*Bengal and North-Western Railway System.*—Of the lines under construction on the Company's section, the extension from Azimgarh to Shahganj, 34·81 miles, and Phephna to Ghazipur Ghat, 31·16 miles, were opened for traffic on the 14th February and 11th March 1903, respectively.

The extensions from Aunrihar to Jaunpur, 30·14 miles, and Kopaganj to Dhorighat, 21·70 miles, are expected to be opened by March 1904.

Arrangements have been made to start work on the Uska Bazar-Tulsipur connection, and branch thereof to Jarwa, 66·10 miles.

The encroachment of the river Ganges near the Kosi bridge (15 spans of 200 feet) on the Tirhoot section, has necessitated extensive works being taken in hand for the protection of the bridge. Good progress has been made with the repairs of bridges damaged by the floods of 1902 and in the works for the provision of additional waterway.

Arrangements have been completed to start work on the Mansi-Baptiahi chord and branch thereof to Murliganj, 78·62 miles, the Sakri-Jainagar branch, 30·47 miles, and the line from Bairagnia to Bikna Thori, 79·55 miles.

*Bengal Dooars Railway.*—The sections of the Eastern extension from Chalsa to Chengmari, 13·45 miles, from Chengmari to Dalgaon, 15·84 miles, and from Dalgaon to Madarihat, 9·51 miles, were opened for traffic on the 1st January, 23rd March, and 14th June 1903, respectively.

The line was considerably damaged by floods during the year, necessitating the suspension of traffic on the Chalsa-Chengmari and Chengmari-Madarihat sections from the 28th June to the 22nd October and 24th November 1903,

respectively. Repairs to flood damages and the provision of extra waterway RAILWAYS. are in progress.

*Burma Railways.*—The remaining lengths of the Letpadan-Henzada-Bassein extension from Letpadan, on the Rangoon-Prome section, to Tharrawa, 23·07 miles, and from Henzada to Henzada Shore, 2·46 miles, were opened for traffic on the 17th April 1903. A steam ferry has been provided for the crossing of the Irrawaddy river between Henzada Shore and Tharrawa.

The last section of the Mandalay-Lashio branch from Hsipaw to Lashio, 50·94 miles, was opened for traffic on the 1st March 1903. The work of doubling the line between Pazundaung and Thinangyun, 3·50 miles, and between Insein and Hlawga, 8·25 miles, has been commenced.

Sanction has been accorded to an estimate for the construction of an extension of the Burma railways from Pegu to Martaban, 121·27 miles, and the provision of a steam ferry service to connect the latter place with the port of Moulmein, but the commencement of work has not yet been authorised.

*Rohilkund and Kumaon Railway System.*—The extension of the Dudwa branch of the Lucknow-Bareilly State railway to Chandan Choki (the Mohan river), 5·87 miles, was opened for traffic on the 4th April 1903.

Work was started on the Company's line from Bareilly on the Lucknow-Bareilly State railway to Soron on the Rajputana-Malwa railway, 56 miles, which includes a bridge (20 spans of 100 feet) over the river Ganges at Kachla Ghat. The terms for the construction of this line provide for the free use of the existing bridge on the Oudh and Rohilkhand State railway, over the Ramganga river near Bareilly, and the sale to the Rohilkund and Kumaon Railway Company of the existing Kasganj-Soron branch, 9 miles, of the Rajputana-Malwa railway.

*Southern Mahratta Railway System.*—The construction on account of the State of famine feeder lines, from Bellary and Hospet, on the main line of the Southern Mahratta railway, to Rayadrug and Kottur, 33 and 38·10 miles, respectively, is in hand. It is expected that the lines will be opened for traffic by the end of 1904.

*South Indian Railway System.*—The remaining length of the British section of the Travancore branch from Kallidaikurichi to Shencottah, 30·88 miles, was opened for traffic on the 1st August 1903. It is expected that the Native State section from Quilon to Ponalur, 28·26 miles, and from Ponalur to Shencottah, 29·69 miles, will be opened in February and August 1904 respectively.

The remaining portion of the Tanjore District Board's Railway from Pattukkottai to Arantangi, 28·35 miles, was opened for traffic on the 31st December 1903.

*Baraset-Basirhat Light Railway.*—A commencement was made with the construction of this railway in November 1903.

*Bukhtiarpur-Bihar Light Railway.*—This railway, 18·50 miles, was opened for traffic on the 1st July 1903.

*Kalka-Simla Railway.*—This line, 59·44 miles, was opened for traffic on the 9th November 1903. The station yards and buildings are being rapidly pushed to completion.

*Morvi Railway.*—Fair progress has been made with the works connected with the conversion of this line from the 2' 6" to the 3' 3 $\frac{3}{4}$ " gauge.

8. The following were the principal events in 1903 :—

*General.*—The railway from Mettupalaiyam to Coonoor, 16·90 miles, Principal events. was purchased by the State from the Nilgiri Railway Company with effect from the 1st January 1903. The working of the line continues in the hands of the Madras Railway Company.

From the 3rd March 1903, the Tinsukia junction station of the Assam Railways and Trading Company was made over to the Assam-Bengal Railway Company for joint working, and through booking was introduced between the Dibru-Sadiya and Assam-Bengal Railways.

**RAILWAYS.** During the first half of 1903 the jetties at Chittagong were transferred to the Assam-Bengal Railway Company on certain conditions.

From the 15th November 1903, arrangements were made with the Bombay Steam Navigation Company for the through booking of goods between stations on the Morvi Railway and the Bombay Harbour *via* Navlakhi out-agency.

*Contracts executed for the Construction and Working of Railways.*—On the 1st July 1901 and the 6th November 1902, indentures were executed for the working and maintenance of the Powayan Steam Tramway by the Rohilkund and Kumaon Railway Company.

On the  $\frac{16\text{th}}{23\text{rd}}$  December 1901, an agreement was entered into between the East Indian Railway Company and the Administration of the Oudh and Rohilkhand State Railway, for the exercise of running powers by trains of the Oudh and Rohilkhand State Railway over the Ghaziabad-Delhi section of the East Indian Railway and for the interchange of traffic at Ghaziabad.

On the 26th August 1902, an Indenture was executed with the Barsi Light Railway Company for the construction, maintenance, and working of the Barsi Junction-Pandharpur and Barsi Town-Tadwalla extensions of the Barsi Light Railway.

On the  $\frac{6\text{th}}{10\text{th}}$  October 1902, an agreement was entered into between the Administration of the North Western State Railway and the Bombay, Baroda, and Central India Railway Company, for the working by the former of the joint stations, Goniana, Jaitu, and Kot Kapura, on the Bhatinda-Kot Kapura section of the Rajputana-Malwa Railway.

On the 31st December 1902, an Indenture was executed for the working by the Madras Railway Company of the Madras-Vizagapatam section of the East Coast State Railway.

On the 15th January 1903, an Indenture was executed for the construction and working by the Bengal and North-Western Railway Company of the Ghazipur-Ballia, Azimgarh-Shahganj and Aunrihar-Jaunpur extensions.

On the 15th June 1903, a revised agreement was executed for the working of the Cooch Behar railway by the Administration of the Eastern Bengal State Railway.

On the 23rd November 1903, an agreement was entered into between the Government of His Highness the Maharaja Gaekwar, and the Bombay, Baroda, and Central India Railway Company for the working by the latter of the Vijapur-Kalol-Kadi Railway.

*Report on the Working of Indian Railways.*—Mr. T. Robertson, C.V.O., who had been appointed by His Majesty's Secretary of State for India :—

- I. To inquire into and report upon the administration and working of Indian railways, whether controlled by the State or by Companies, with special reference to the system under which they should be managed in India in the future ;
- II. To report upon the feasibility of a systematic plan of railway development in India, to be worked up to by the Government over a series of years ;
- III. To advise as to the management and development of the traffic; the convenience of the public, and the improvement of the revenue ;
- IV. Generally to make such suggestions as he may think useful for any or all of these purposes, including the extension of branches and light railways as feeders of the main lines,

has submitted his report, which has been forwarded to the Secretary of State with the views and proposals of the Government of India.

*Indian Railway Conference Association.*—In February 1902 a Conference was held at Calcutta at which it was proposed to form a " Chamber of Indian Railways," or a Conference independent of Government. Rules defining the functions of the proposed Chamber were framed and submitted to the Boards of Directors of the several Railway Companies, who at a

meeting held in London in May 1903, agreed to the formation of an "Indian Railway Conference Association," independent of Government to—

- (i) elect annually a President from the representatives of the railway administrations composing it;
- (ii) appoint a paid Secretary, with the necessary office establishment;
- (iii) (a) to frame, by general agreement, regulations for the management of traffic interchanged between the railways, parties to the Association, subject to certain fundamental rules which were approved at that meeting;
- (b) to consider questions, submitted for opinion by the Government of India or by any railways represented in the Association, on matters not falling within the provisions of the railways' contracts with the Secretary of State;
- (c) to act as a Board of conciliation between its members.

Representatives of the several railways, parties to the original Railway Traffic Conference, accordingly assembled at Simla in October 1903 and formed the "Indian Railway Conference Association."

*Standardization of Locomotives.*—In connection with the question of the relaxation of the existing standard dimensions for Indian railways as regards fixed and moving dimensions and regulations regarding the strength of bridges and the axle loads and weight of rolling stock, the Government of India have issued revised rules for the design and inspection of railway girder bridges and for the corresponding amendments to the standard dimensions.

The Government of India have also received from the Secretary of State, standard designs by the English Engineering Standards Committee for a passenger and a goods broad gauge engine and standard designs for a passenger, a mixed, and a heavy goods metre gauge engine, and these are under consideration.

*Visit of Mr. Grant Burls, C.S.I., Director-General of Stores, India Office, to India.*—At the invitation of the Government of India, Mr. Grant Burls, C.S.I., was deputed to India, where he arrived in September 1903, to confer with the authorities in that country on the subject of ensuring a regular and timely supply of the stores required through the Stores Department of the India Office.

*Coal Loading Dépôt at Luff Point.*—In November 1903 a Commission was appointed by the Government of India to inquire into and advise upon the proposal for the establishment of a loading dépôt at Luff Point on the right bank of the Hooghly river for the accommodation and shipment of coal.

*River Training.*—Mr. F. J. E. Spring, C.I.E., Chief Engineer, was deputed to report on "River Training" in connection with the proposed bridge over the Ganges at Sara on the Eastern Bengal State Railway and other big existing bridges.

*Projects for New Lines.*—The promoters who were originally negotiating for the construction, on the 3' 3 $\frac{1}{2}$ " gauge, of the Kurnool Road (Dhone)-Kurnool Railway (Madras), 32 miles, and the Bezwada-Masulipatam Railway (Madras), 50 miles, have been permitted to include in their scheme the Guntur-Repalle line (Madras), 38 miles, and the Phirangipuram-Gurzala line (Madras), 50 $\frac{3}{4}$  miles, for construction on the same gauge, and have been allowed an extension of time up to 30th April 1904 for the formation of a company and for raising the requisite capital.

The scheme for the construction, on the 2' 6" gauge, of the Raichur-Wondalli railway (Hyderabad), 43 miles, the concession for which was granted to the Wondalli (Deccan) Gold Mines Company and the Hyderabad (Deccan) Company in June 1900, has not advanced any further.

Revised proposals, from the Promoters for the construction, on the 5' 6" gauge, of the Amritsar-Tarn Taran-Patti railway (Punjab), about 27 miles, are under consideration.

**RAILWAYS.** Negotiations which were stated in the last year's report to have been proceeding for the construction, on the 2' 6" gauge, of the Berhampore-Russelkonda railway (Madras), 49 miles, have not progressed, while those for the construction, on the 5' 6" gauge, of the Vizianagram-Raipur railway with Sointilla branch (Madras and Central Provinces), 359 miles, and on the 2' 6" gauge, of the Kangra Valley railway (Punjab), 87 miles, have been terminated owing to the inability of the Promoters to form a company on the terms offered. The proposals for the construction of the Baran-Ajmer-Marwar Railway (Rajputana), 213 miles, on the 3' 3½" gauge, have been rejected in consequence of the Promoters requiring a firm guarantee of 3 per cent. in sterling.

Negotiations are still in progress for the construction of the Rawalpindi-Murree railway (Punjab), 48 miles.

Proposals were received during the year for the construction of the following lines:—

	Gauge.	Miles.
(1) A light electric tramway from Sarai Kala via Abbottabad to the Kashmir frontier (North-West Frontier Province and Kashmir)	3' 3½"	80
(2) Railways from—		
(a) Mymensingh via Netrokona to Bara Ari with a branch to Gauripur	3' 3½"	36½
(b) Singhjani via Sherpur to Nalibari	2' 6"	25

The consideration of (1) has been postponed pending a decision on the Kashmir Railway scheme, while the promoters of (2) have been asked to renew their application in January 1904.

*North and South Line connecting Ceylon and Upper India.*—The Commission which, under the orders of the Government of India, assembled in Madras in February 1903, to collect evidence and information with a view to advising Government in regard to the best means of effecting a 5' 6" gauge connection between the Indian system of 5' 6" gauge railways and the Ceylon railways on the same gauge, and to report on certain connected questions, has submitted its report, upon which it has been decided that immediate action is not necessary. A project for extending the Pamban branch of the South Indian Railway on to Ramesvaram, and for making a ship canal through the island and establishing a coaling station there, and a similar ferry service across Palk Strait to Ceylon has, however, been prepared, and is under consideration.

*Branch or Feeder Line Terms.*—The question of the general revision of the terms for the construction, outside the Government of India "Programme," of branch or feeder lines of railway by private enterprise is in abeyance pending the consideration of the proposals made by Mr. Robertson, C.V.O., in his report on the working of Indian railways, while that of the construction of feeder lines by Local District Boards from taxes expressly levied for the purpose, and of the financing of such lines, is still under consideration.

## IRRIGATION.

## IRRIGATION

The nature of the climate and the inequalities of the rainfall will account for the great antiquity of the practice of irrigation in India. Many of the irrigation systems now administered by the officers of the Public Works Department are founded on the lines of old native works which have been restored and extended or re-modelled.

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 storage of water in tanks for the purpose of irrigation is very common in Southern India. In the Madras Presidency alone there are some 60,000 tanks. The works are for the most part of native origin; but much has been done under the British Government in repairing and improving old tanks, and in constructing new works in Madras, the Bombay Deccan, and in Ajmere-Merwara.

In size the tanks vary from the small works formed by earthen embankments thrown across local drainages, often of only two or three square miles in area, to the costly reservoirs constructed by the Imperial Government, such as the Periyar and Rushikulya Works, the reservoirs of which have surface areas of 6,395 acres and 7,900 acres respectively.

Canal irrigation, in which the water is drawn directly from a river, has been practised on the largest scale and with the most successful results in the United Provinces of Agra and Oudh, the Punjab, and the deltas of the large rivers in the Madras Presidency. Irrigation canals are of two descriptions, viz., "perennial" and "inundation." The former are furnished with permanent headworks and weirs, and are capable of irrigating large tracts of country throughout the year, independently of the local rainfall. The magnitude of some of the works of this class, which are almost entirely due to British enterprise and skill, may be judged by a few instances. The Upper Ganges Canal, which has been in operation since 1854, and has cost £2,027,755, comprises 459 miles of main canal and 4,476 miles of distributaries, and in the year under review supplied water to 871,862 acres. The Sirhind Canal in the Punjab, which was completed in 1887, has cost £1,643,482, and consists of 319 miles of main channels and 2,721 miles of distributaries. In Madras the great deltaic irrigation systems of the Godaveri, Kistna, and Cauvery have respective lengths of main channel of 503, 372, and 844 miles, and together irrigate upwards of 2,420,000 acres. The inundation canals, which are peculiar to the Punjab and Sind, are of a much simpler and less costly description than the perennial canals. They are for the most part simply earthen channels, made without the expensive machinery of masonry dams and sluices, and are supplied with water by the annual rise in May of the Indus and its affluents. They constitute a very useful class of irrigation works, and in some cases have produced most successful financial results. The irrigation from them is, however, to some extent precarious. If the annual flood, from the melting of the snows of the Himalayas does not sufficiently raise the level of the water in the river, it is impossible to pass the necessary volume of water on to the fields or even to give any water at all to many of them.

The works to which the preceding paragraph applies, in most cases, take off 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. 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 the Bombay Presidency, where irrigation is largely dependent on storage works.

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.

The distinction implied in the words "major" and "minor" is not in complete correspondence with the facts, as there are some minor works which are of more importance than some major works. But, 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.

**IRRIGATION.** The following statement gives a general view of the results obtained from working the canals, for which full accounts are kept, for 1902-03, and the two previous years:—

	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 - - -	25,836,359	2,661,316	832,618	1,828,703	7.08	11,832,011
Minor Works - - -	3,311,944	340,810	139,747	201,063	5.27	2,256,177
Total for 1902-03 -	29,648,303	3,002,126	972,360	2,029,766	6.85	14,088,188
Total for 1901-02 -	28,907,836	2,780,923	936,835	1,844,088	6.38	14,076,999
Total for 1900-01 -	28,245,726	2,783,493	932,151	1,851,342	6.55	13,847,936

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 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 following table gives the mileage of the irrigation canals in operation in each province, with the area irrigated during the year:—

	Bengal.	United Provinces of Agra and Oudh.	Punjab.	Madras.	Bombay, including Sind.	Balu- chistan.	Rajputana.	North- West Frontier Province.	Total.
<b>MAJOR WORKS.</b>	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Main Canals -	719	1,509	1,929	2,091	1,821	Nil.	Nil.	22	8,091
Distributaries -	2,675	7,226	8,960	5,944	748	Nil.	Nil.	186	23,739
Area irrigated -	Acres. 795,810	Acres. 2,306,180	Acres. 4,473,814	Acres. 2,940,958	Acres. 1,184,259	Acres. Nil.	Acres. Nil.	Acres. 173,772	Acres. 11,824,788
<b>MINOR WORKS.</b>	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Main Canals -	24	—	813	1,359	2,081	7	—	—	4,260
Distributaries -	—	590	173	1,191	234	39	Tank irrigation.	—	2,227
Area irrigated -	Acres. —	Acres. 137,375	Acres. 235,087	Acres. 584,081	Acres. 832,767	Acres. 2,939	Acres. 26,199	Acres. —	Acres. 1,818,448

EAST INDIA (RAILWAYS AND IRRIGATION WORKS).

RETURN to an Address of the Honourable The House of Commons,  
dated 20 April 1904;—for,

“RETURN showing the ESTIMATED POSITION, as regards CAPITAL EXPENDITURE, of the several RAILWAYS and IRRIGATION WORKS under CONSTRUCTION in INDIA, on the 31st day of March 1904, and the PROPOSED EXPENDITURE thereon during 1904–05 (in continuation of Parliamentary Paper No. 137, of Session 1903).”

India Office,  
22 April 1904.

ARTHUR GODLEY,  
Under Secretary of State.

(*Mr. Price.*)

*Ordered, by The House of Commons, to be Printed,*  
*25 April 1904.*

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STATEMENT showing the FINANCIAL POSITION in respect of INDIAN RAILWAYS now in course of CONSTRUCTION, and likely to be UNDERTAKEN during 1904-1905.

	Length.	Estimated Total Cost.	Approximate Expenditure to 31st March 1904.	Liability outstanding on 31st March 1904.	Proposed Expenditure in 1904-1905.	Estimated Liability on 31st March 1905.
	Miles.	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Lines in the hands of the State—</i>						
Kaunia-Dhubri (Eastern Bengal)	51	63,31,500	61,71,300	1,50,000	1,50,000	—
Golaganj-Dhubri Extension (Eastern Bengal).	151	92,31,500	15,07,600	77,23,600	10,23,000	67,00,000
Kaunia-Bonarpara (Eastern Bengal) - Murshedabad Branch (Ranaghat to Jeeaganj) (Eastern Bengal)	44 81	21,69,500 82,66,000	8,50,000 46,97,400	13,19,100 49,57,600	10,00,000 35,29,000	3,19,100 14,28,600
Murshedabad Branch (Jeeaganj to Lalgola) (Eastern Bengal)	16	13,99,500	—	—	—	—
Khushalgarh - Kohat - Thal, including Indus Bridge.	92	67,58,000	58,68,900	8,89,700	62,000	8,27,700
Jech Doab (Northern Section) (North- Western).	51	25,70,000	19,00,400	6,69,600	—	6,69,600
Jech Doab (Southern Section) (North- Western).	103	71,60,000	8,68,000	62,92,000	20,00,000	42,92,000
Lower Sind Extension (Hyderabad Badin) (North-Western).	61	36,41,000	17,80,000	18,61,000	18,61,000	—
Quetta-Nushki (North-Western)	83	70,06,500	33,89,300	36,17,000	25,00,000	11,17,000
Allahabad-Fyzabad (Oudh and Rohil- khand).	97	1,17,09,500	1,01,52,600	15,56,800	10,75,000	4,81,800
Allahabad-Jaunpur (Oudh and Rohil- khand).	68	30,22,500	—	30,22,500	—	30,22,500
Agra-Delhi Chord (Oudh and Rohil- khand).	121	99,69,500	64,49,100	35,20,000	35,20,000	—
Balaram-Madhoganj Extension (Oudh and Rohilkhand).	14	3,87,500	3,84,600	3,200	—	3,200
Hapur-Meerut (Oudh and Rohilkhand)	19	5,75,500	4,25,000	1,50,200	1,50,000	200
Coonoor-Ootacamund	12	22,00,000	—	22,00,000	10,00,000	12,00,000
<b>TOTAL</b>	<b>1,054</b>	<b>8,23,76,500</b>	<b>4,44,44,200</b>	<b>3,79,32,200</b>	<b>1,78,70,000</b>	<b>2,00,62,200</b>
<i>Lines in the hands of Companies—</i>						
Assam-Bengal	743	12,02,38,500	11,71,20,500	31,18,000	20,00,000	11,18,000
Henzada-Kyangin (Burma)	66	54,59,000	—	54,59,000	—	—
Pegu-Moulmein (do.)	121	1,12,88,000	—	1,12,88,000	15,00,000	1,52,47,000
Latapadan-Henzada-Bassein (do.)	112	1,01,57,300	96,85,200	4,72,100	—	4,72,100
Azamgarh - Shahganj (Bengal and North-Western).	35	13,47,500	12,44,000	1,03,500	30,000	73,600
Ballia-Ghazipur (Bengal and North- Western).	31	19,48,500	17,02,000	2,46,600	16,500	2,30,100
Aonrihar-Jaunpur (Bengal and North- Western).	36	15,61,500	9,16,600	6,45,000	3,28,000	8,17,000
Kopaganj - Dohrihat (Bengal and North-Western).	22	6,43,000	3,98,400	2,44,600	1,14,000	1,30,600
Sakri - Jainagar (Tirhoot)	30	16,00,000	—	—	5,28,500	—
Balragnia-Shikarpur (do.)	58	28,50,000	—	—	13,19,500	—
Bettiah-Shikarpur-Bagaha (do.)	49	26,25,000	18,18,000	1,07,49,400	11,83,000	57,49,400
Shikarpur-Bikna Thori (do.)	21	4,90,000	—	—	3,97,000	—
Mansi-Baptiabi (do.)	60	38,82,000	—	—	11,82,000	—
Sihura-Murliganj (do.)	19	11,19,000	—	—	3,90,000	—
Sini to Calcutta and Cuttack (Bengal- Nagpur).	345	9,11,83,500	8,60,85,500	51,48,000	51,48,000	—
Khargpur-Midnapur-Jherria (Bengal- Nagpur).	122	2,15,84,200	1,91,23,200	24,41,000	24,41,000	—
Jubbulpur-Gondia (Bengal-Nagpur)	253	1,15,13,500	97,94,600	17,19,000	17,19,000	—
Ramkanali-Nodeeha (do.)	9	5,67,100	5,67,100	—	—	—
Colliery lines (do.)	25	28,24,000	27,17,200	1,07,000	1,07,000	—
Bujidih-Hariharpur (do.)	28	31,57,000	6,89,300	24,67,700	15,85,000	8,82,700
Gya-Katras (East Indian)	99	1,38,85,200	76,23,600	62,61,600	50,00,000	12,61,600
Colliery lines (do.)	14	9,87,000	8,54,900	1,33,000	1,33,000	—
Dehree-Daltonganj (do.)	78	76,55,000	64,69,400	11,86,500	—	11,86,500
Ondal-Saintbia (do.)	44	43,54,000	—	—	10,00,000	—
Khurja-Hapur (do.)	39	26,07,500	3,00,000	66,62,300	10,00,000	46,62,300
Shikarabad-Farakhabad (do.)	66	48,11,500	17,38,400	28,73,100	15,00,000	13,73,100
Ait-Kunch (Indian Midland)	9	1,94,500	1,94,500	—	—	—
Godhra-Baroda Chord	44	34,11,800	30,87,800	3,24,000	3,24,000	—
Rewari-Phulera	133	53,25,000	11,65,000	41,60,000	28,00,000	13,60,000
Bareilly-Boron (Rohilkhand Kumaon)	60	55,73,000	2,20,000	53,53,000	16,00,000	37,53,000
Moradabad-Ramnagar (Rohilkhand Kumaon).	47	18,80,000	7,900	36,73,000	4,00,000	32,73,000
Lalkua-Kashipur (Rohilkhand Kumaon)	45	18,00,000	—	—	—	—
Calicut-Baliapatam (Madras)	60	84,88,800	84,58,800	30,000	30,000	—
Azikhil-Mangalore (do.)	77	1,29,95,400	36,08,800	93,86,600	50,00,000	43,86,600
Morrapur-Dharmapuri (Madras)	18	7,05,000	2,97,300	4,07,700	3,96,000	11,700
Tirupatur-Krishnagiri (do.)	26	9,21,600	4,51,600	4,70,000	4,70,000	—
Bengal Dooars Extensions	122	85,41,000	81,83,800	3,57,200	3,57,200	—
Bellary-Rayadrug (Southern Mabratta)	33	9,29,400	8,80,400	40,000	40,000	—
Hospet-Kottur (do.)	38	16,24,200	3,24,200	13,00,000	13,00,000	—
Guntur-Repalli (do.)	38	17,34,000	—	17,34,000	—	17,34,000
Madura-Pamban (South Indian)	91	68,90,000	66,72,100	2,17,900	1,56,000	61,900
Tinnevely-Quilon (British Section) (South Indian).	50	45,06,100	39,58,000	5,48,100	3,06,000	2,42,100
Carried forward: Lines in the hands of Companies	3,416	39,56,43,200	30,63,16,200	8,93,27,000	4,18,00,700	4,75,26,300

\* Commencement of construction uncertain.

STATEMENT showing the FINANCIAL POSITION in respect of INDIAN RAILWAYS now in course of CONSTRUCTION, and likely to be UNDERTAKEN during 1904-1905—*contd.*

	Length.	Estimated	Approximate	Liability	Proposed	Estimated
		Total Cost.	Expenditure to 31st March 1904.	outstanding on 31st March 1904.	Expenditure in 1904-1905.	Liability on 31st March 1905.
	Miles.	Rs.	Rs.	Rs.	Rs.	Rs.
Brought forward - - -	3,416	89,56,43,200	30,63,16,200	8,93,27,000	4,18,00,700	4,75,26,300
<i>Lines in the hands of Companies—contd.</i>						
Tinnevely-Quilon (Native State Section) (South Indian).	58	1,12,65,700	1,07,05,100	5,60,600	3,30,000	2,30,600
Mutupet-Arantangi - - -	45	25,23,800	20,20,200	5,03,600	2,89,000	2,14,600
Kalka-Simla - - -	60	1,66,94,400	1,54,44,400	12,60,000	12,50,000	—
Southern Punjab Extensions (McLeod-ganj-Ludhiana).	163	87,13,700	19,70,000	67,48,700	48,00,000	19,48,700
Tadwala Extension (Barsi Light Railway).	27	12,26,300	—	12,26,300	*	12,26,300
Barsi Road-Pandharpur (Barsi Light Railway).	31	19,22,600	—	19,22,600	*	19,22,600
Amritsar-Tarn Taran-Sarhali - -	27	17,24,000	—	17,24,000	*	17,24,000
Ahmedabad-Dholka - - -	34	11,00,100	9,51,600	1,48,500	65,000	83,500
<b>TOTAL</b> - - -	<b>3,861</b>	<b>44,08,18,800</b>	<b>33,74,07,500</b>	<b>10,34,11,300</b>	<b>4,85,34,700</b>	<b>5,48,76,600</b>

\* Commencement of construction uncertain.

## GRAND TOTAL.

	Length.	Estimated	Approximate	Liability	Proposed	Estimated
		Total Cost.	Expenditure to 31st March 1904.	outstanding on 31st March 1904.	Expenditure in 1904-1905.	Liability on 31st March 1905.
	Miles.	Rs.	Rs.	Rs.	Rs.	Rs.
Lines in the hands of the State - -	1,054	8,23,76,400	4,44,44,200	3,79,32,200	1,78,70,000	2,00,62,200
" " of Companies - - -	3,861	44,08,18,800	33,74,07,500	10,34,11,300	4,85,34,700	5,48,76,600
<b>TOTAL</b> - - -	<b>4,915</b>	<b>52,31,95,200</b>	<b>38,18,51,700</b>	<b>14,13,43,500</b>	<b>6,64,04,700</b>	<b>7,49,38,800</b>

(Countersigned) C. W. HODSON,  
Offg. Secretary to the Government of India,  
Public Works Department,  
Railways.

R. N. BURN,  
Accountant-General,  
Public Works Department.

CALCUTTA,  
28th March 1904.

## STATEMENT showing the FINANCIAL POSITION in respect of MAJOR IRRIGATION PROJECTS in INDIA now in course of Construction.

	LENGTH.		Estimated Total Cost.	Approximate Expenditure to 31st March 1904.	Liability outstanding on 31st March 1904.	Proposed Expenditure in 1904-1905.	Estimated Liability on 31st March 1905.
	Main Canals and Branches.	Distributaries.					
	Miles.	Miles.	Rs.	Rs.	Rs.	Rs.	Rs.
<b>BURMA.</b>							
Mandalay Canal - - -	39½	120	51,71,010	50,07,010	1,64,000	1,64,000	—
Shwobo Canal - - -	77	193	46,28,060	30,21,300	16,06,760	8,86,000	7,20,760
Mön Canals - - -	54	75½	42,63,840	65,000	41,98,840	5,00,000	36,98,840
<b>PUNJAB.</b>							
Jhelum Canal - - -	115	426	1,57,10,890	1,30,13,890	26,97,000	26,97,000	—
<b>BOMBAY.</b>							
Dad Canal - - -	96	172½*	24,31,340	21,48,080	2,83,260	40,000	2,45,260
Naulakhi Canal - - -	53	105½*	12,17,940	5,400	12,12,540	—	12,12,540
Nasrat Canal - - -	83	50*	16,15,320	15,29,740	85,580	80,000	5,580
Mahiwah Canal - - -	57½	—	13,87,780	10,85,740	3,02,040	83,000	2,19,040
<b>TOTAL</b> - - -	<b>575</b>	<b>1,112¼</b>	<b>3,64,26,180</b>	<b>2,58,76,160</b>	<b>1,05,50,020</b>	<b>44,50,000</b>	<b>61,00,020</b>

\* These distributaries are described as Branches in the Estimates for the projects.

(Countersigned) SIDNEY PRESTON,  
Secretary to the Government of India,  
Public Works Department,  
Irrigation, Roads, and Buildings.

R. N. BURN,  
Accountant-General,  
Public Works Department.

CALCUTTA,  
23rd March 1904.

**EAST INDIA (RAILWAYS AND  
IRRIGATION WORKS).**

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**RETURN** showing the **ESTIMATED POSITION**, as regards **CAPITAL EXPENDITURE**, of the several **RAILWAYS** and **IRRIGATION WORKS** under **CONSTRUCTION** in **INDIA**, on the 31st day of **March 1904**, and the **PROPOSED EXPENDITURE** thereon during **1904-05** (in continuation of **Parliamentary Paper, No. 137, of Session 1903**).

*(Mr. Price.)*

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*[Price ½d.]*

Besides the works to which the preceding paragraphs apply, there is a large class of works, especially in Sind and Madras, for which capital accounts are not kept. IRRIGATION.

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 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 Irrigation Commission, which was appointed in 1901 to inquire into the state and extent of irrigation in India, and its value in affording protection against famine, concluded their investigations in the year under review. The report was issued on the 11th April 1903, and has been published separately as a Parliamentary Paper. It is now under consideration by the Government of India.

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 progress of irrigation on the three large irrigation works in Bengal, the Orissa, Midnapore, and Sone Canals, fluctuates from year to year. In 1902-03, 796,029 acres were irrigated, as against 841,126 acres irrigated in 1901-02. Bengal.

The general results for 1902-03 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.
1897-98 -	5,103,735	185,376	121,695	63,681	1·89	703,190
1898-99 -	5,112,735	163,335	129,362	33,973	0·66	712,221
1899-1900 -	5,112,400	164,864	127,453	37,411	0·73	727,026
1900-01 -	5,137,165	151,767	107,014	44,753	0·87	716,271
1901-02 -	5,167,553	147,136	103,432	43,704	0·84	844,024
1902-03 -	*5,220,323	168,431	95,703	72,722	1·39	800,440

\* Includes £40,404 and £10,039 expended on two abandoned projects, viz., Tirhut and Damodar projects.

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 with navigation, and the fourth (Hijili Tidal Canal) is purely a navigation work. The two protective works, viz., the Tribeni and the Dhaka Canals, were sanctioned in 1900-01, and are still in course of construction. The former will be about 60 miles long, passing through the Bettiah Subdivision of the Champaran District. The latter will be a small canal 3½ miles long, with two branches each 7½ miles long, also in the Champaran District. At the end of the year under review, sums of £41,749 and £13,461 had been spent on these two canals respectively.

IRRIGATION. The financial results obtained from the working of the Major and Minor works, excluding the Tribeni and Dhaka Canals, 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.
<b>MAJOR WORKS.</b>				
	£	£		Acres.
Orissa Canals - - - - -	1,768,068	976	0·05	224,998
Midnapore - - - - -	565,157	4,748	0·84	87,464
Hijili Tidal Canal - - - - -	174,344	319	0·18	—
Sone Canals - - - - -	1,782,721	58,268	3·27	483,567
Total Major Works, - - -	4,290,290	64,311	1·50	796,029
<b>MINOR WORKS.</b>				
Calcutta and Eastern Canals - - - - -	478,459	9,360	1·96	—
Orissa Coast Canal - - - - -	298,625	-767	—	—
Sarun Project - - - - -	47,295	-183	—	4,411
Total Minor Works - - -	*824,379	8,410	1·02	4,411

\* Excludes the sums spent on the Tirhut and Damodar projects.

The Orissa, Midnapore, Sone and Hijili Canals, although classed as productive works in the hope that they would prove directly remunerative, show as yet no prospect of fulfilling this expectation, which indeed is not likely to be ever realised. The working of the Sone Canals continues, however, to show an improvement on preceding years, the revenue in 1902-03 giving a return of 3·27 per cent. on the capital outlay.

The Calcutta and Eastern Canals, which up to the present year were the most profitable of the canal works in Bengal, are navigation works designed to maintain communication between Calcutta and Eastern Bengal, through the Sunderbunds. The Orissa Coast Canal, also a navigation work, forms, with the Hijili Tidal Canal, a complete line of communication between Calcutta and Orissa; and in the event of famine in the later district would be very useful as a means of importing food.

Besides the minor works mentioned in the foregoing statement, 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, which comprises about 470 miles of channel, is used for navigation purposes only. There was a considerable increase in the loss on working the Nadia rivers during the year under review.

In the following statement the traffic on the canals in Bengal in 1902-03 is shown in comparison with the traffic results of the previous year. The Nadia rivers are included in this statement:—

YEAR.	Length of Canal open for Navigation.	Receipts.	Maintenance Charges.	Net Receipts.	Estimated Value of Cargoes.	Number of Passengers.
	Miles.	£	£	£	£	
1901-1902 -	1,861	49,746	34,918	14,833	6,257,475	217,693
1902-1903 -	2,253	45,773	33,83	11,935	5,832,226	191,128

The steady decrease has been due to the competition by the Bengal Nagpur Railway, but it is hoped that the lowest point has now been reached. The Calcutta Steam Navigation Company withdrew their steamer service on the Midnapore Canal from 1st July 1902.

The capital expenditure for the year amounted to £2,552 on major works (excluding protective projects), £24,930 on minor works and navigation, and £25,288 on protective irrigation works.

In the United Provinces of Agra and Oudh, taking the revenue actually realised, the general results of the irrigation operations during 1902-03 are compared with those of the five previous years in the following statement :—

IRRIGATION.  
United Pro-  
vinces of  
Agra and  
Oudh.

YEAR.	Capital Outlay to End of Year.	Net Revenue.	Percentage of Net Revenue on Capital.	Area Irrigated during the Year.
	£	£		Acres.
1897-98	5,862,864	507,726	8.66	2,511,173
1898-99	5,806,936	391,626	6.59	2,253,832
1899-1900	6,026,379	431,137	7.15	2,829,794
1900-01	6,047,532	434,976	7.19	2,000,926
1901-02	6,088,391	326,564	5.36	2,616,105
1902-03	6,153,026	420,739	6.84	2,442,211

The area irrigated by all the canals (except the Tarai and Bhabar Canals which are under the Commissioner of Kumaon) was approximately 2,442,211 acres, or 173,899 less than in the preceding year, but 302,000 more than the average of the previous 12 years. The kharif area was below the average on account of the continued and well-distributed monsoon. The receipts from minor works were 70 per cent. greater than in the previous year, but fell short of those for 1900-01 by £4,217.

Excluding the Betwa Canal, which is a protective work, the major works earned a profit of 7.41 per cent. on their capital outlay. The individual returns from the five works were as under :—

CANAL.	Percentage of Net Revenue (actually realised) on Capital.
Upper Ganges	10.51
Lower Ganges	3.77
Agra	6.16
Eastern Jumna	24.97
Fatehpur Branch	0.12

The receipts from the Betwa Canal, the only "protective" work in these provinces, again fell short of the working charges of the year by £1,590. The loss is less than in the two preceding years, and a further improvement is anticipated from the construction of an additional reservoir in the Betwa river, the project for which is now under consideration.

The minor works comprise the Dún, Rohilkhand, and Bijnor Canals, and the Bundelkhand Lakes. The net revenue from these works amounted to £5,840, which gave a percentage of 2.76 on the capital outlay.

Of the total area irrigated, some 990,921 acres were under wheat, 44,196 under indigo, 284,065 under sugar cane, 167,921 under rice, and 205,264 under cotton. The area under cotton was the largest ever recorded, sugar cane has only once before been exceeded, and wheat was the third highest on record; this latter crop represented nearly 41 per cent. of the total irrigated area.

The capital expenditure of the year amounted to £64,635, and of this sum £15,507 was spent on the Agra Canal, £14,833 on the Ganges Canal, £12,261 on the Eastern Jumna Canal, £5,943 on the Fatehpur Branch, and £2,200 on the Lower Ganges Canal. Among minor works, the Rohilkhand Canals were responsible for an expenditure of £7,393 during the year. The Fatehpur Branch, with the exception of two distributaries and some small minor works, was practically completed at the end of 1902.

**IRRIGATION.** The navigation operations on the irrigation canals are not profitable. The figures for the last six years are given in the following statement:—

YEAR.	Excess of Working Expenses over Receipts.
1897-98	525
1898-99	612
1899-1900	724
1900-1901	1,943
1901-1902	625
1902-1903	1,077

In addition to the area irrigated by the canals under the direct control of the Irrigation Department, there were 130,900 acres irrigated during the year by the Tarāi and Bhābar Canals under the Commissioner of Kumaon.

Punjab.

In the Punjab, in the year under review, the gross direct income amounted to £1,061,185, which with the indirect revenue of £166,246 credited to the canals on account of enhanced land revenue, brings the total gross revenue of the canals to £1,227,431.

The general results of the year's operations for all works are shown in the following table in comparison with the records of the five previous years:—

YEAR.	Capital Outlay to End of Year.	Area Irrigated.*	Assessed Revenue.*
	£	Acres.	£
1897-98	5,956,888	4,803,203	1,004,566
1898-99	6,134,972	4,430,018	983,796
1899-1900	6,311,559	4,743,329	920,322
1900-1901	6,619,394	5,702,296	1,008,954
1901-1902	6,744,839	5,065,134	1,015,069
1902-1903	6,998,734	5,256,010	1,089,785

\* Includes Muzaffargarh Canals.

The above figures are exclusive of the Native States portion of the Sirhind Canal and Sirsa Branch.

Taking the actual revenue collected during the year, the following table compares the individual results obtained from all the works for which full accounts are kept:—

CANALS.	Length of		Capital Outlay to End of Year.	Net Revenue collected in Year.	Percentage of Net Revenue on Capital Outlay.
	Main and Branch Channels.	Distributaries.			
<b>MAJOR WORKS.</b>					
<i>Perennial Canals.</i>					
Western Jumna (including Sirsa Branch).	Miles. 347	Miles. 1,803	£ 1,150,100	£ 99,050	8.61
Bari Doab	369	1,579	1,305,712	167,934	12.86
Sirhind (British portion)	319	2,721	1,643,482	126,234	7.68
Chenab	426	2,224	1,833,955	387,461	21.13
Sidhuai	68	131	86,127	3,403	3.95
Jhelum	113	321	764,596	—7,469	—
<i>Inundation Canals.</i>					
Upper Sutlej (including Lower Sohag and Para).	322	384	113,434	7,116	6.27
<b>MINOR WORKS.</b>					
Indus	690	55	49,550	5,285	10.66
Shahpur (Imperial)	79	94	14,394	3,413	23.70
Ginaggar	44	24	22,836	—1,756	—
Lower Bari Doab	—	—	11,877	—	—
Upper Chenab Survey	—	—	2,671	—	—
<b>Total</b>	<b>2,777</b>	<b>9,336</b>	<b>6,998,734</b>	<b>790,671</b>	<b>11.30</b>

All the Punjab Canals earned over 6 per cent. with the exception of the Sidhnai, which suffered from a late and deficient rainfall, and the Jhelum, which is not yet in full working order. The Chenab Canal, the largest of all, gave a return of 21·13 per cent. on the capital cost.

On the Native States branches of the Sirhind Canal the area irrigated was 345,110 acres against 341,553 acres in the preceding year. The profit earned by these canals was 6·41 per cent. on the total capital expenditure incurred to the end of the year.

The capital outlay for the year on works for which full accounts are kept amounted to £252,556, of which £133,726 was expended upon the Jhelum Canal, £63,594 on the Chenab Canal, and £30,172 on the Bari Doab Canal.

The net revenue from minor works shows a decrease for the year of nearly 54 per cent., the great difference being chiefly due to the inclusion for 1901-02 of the figures relating to the Upper Sutlej Series of Inundation Canals, which have since been classed as major works.

The navigation operations on the Western Jumna Canal resulted in a profit of £5,678. The Sirhind Canal was worked at a loss of £134.

The following figures show the rapid development of irrigation since the Chenab Canal was first opened in 1892-93, when 157,197 acres were irrigated :—

YEAR.	Capital Outlay to End of Year.	Area Irrigated during the Year.	Net Revenue during the Year.	Return on Capital Outlay.
	£	Acres.	£	Per Cent.
1892-93	721,233	157,197	-4,084	-0·57
1893-94	878,034	270,405	3,552	0·40
1894-95	995,032	269,357	9,511	0·96
1895-96	1,174,781	369,935	51,632	4·40
1896-97	1,362,075	520,279	92,629	6·75
1897-98	1,512,916	810,000	111,041	7·34
1898-99	1,616,076	957,705	131,566	8·14
1899-1900	1,677,982	1,353,223	155,302	9·26
1900-01	1,725,676	1,830,525	241,812	14·01
1901-02	1,770,361	1,748,129	334,183	18·88
1902-03	1,833,955	1,829,169	387,461	21·13

This rapid development of irrigation has occurred in a tract the greater part of which was absolutely unpopulated in 1892, but this has all been changed by the highly successful operations by which colonies of settlers have been established in these crown wastes *pari passu* with the construction of the canal.

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 channels. Burma.

In Upper Burma there are only two major irrigation works, namely, the Mandalay Canal and the Shwebo Canal. The first was sanctioned in 1896, and provides for a canal to take off from the Madaya River, 39 miles long, with 86 miles of distributaries; it is expected to irrigate 80,000 acres of land. The total capital outlay on the Mandalay Canal amounted at the end of 1902-03 to £313,118, of which £41,034 was expended during the year. The canal is expected to cost £316,026.

The Shwebo Canal was sanctioned in 1900, and is estimated to cost £320,273. Up to the end of the year £133,839 had been expended upon it. The canal is designed to irrigate an area of 150,000 acres annually in portions of the Shwebo and Sagaing districts of Upper Burma, where the rainfall is so uncertain that rice cultivation is very precarious. The main and two branch canals will together be 77 miles long, and the total length of the distributaries 193 miles. Water will be drawn from the River Mu.

The minor works, with a capital expenditure of £230,288, show a profit on the year's working of £64,383 or nearly 28 per cent. The surplus revenue for the year, after paying interest at 4 per cent. on direct capital outlay, amounts to £55,430.



**IRRIGATION.** The working of the major works during the year resulted in a loss of £578.

**Central Provinces.** In the Central Provinces, one protective irrigation work, the Khyrbanda tank, is in course of construction. It is estimated to cost £11,815, of which £2,116 had been spent up to the end of 1902-03.

**Madras.** 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 Godaveri, 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 snows on distant mountain ranges.

In the year under review the season was unfavourable.

There are at present 9 "major" works and 32 "minor" works, for which capital and revenue accounts are kept, and numerous other irrigation and agricultural works, individually small, for which such accounts are not kept. Of the 32 minor works for which full accounts are kept, 28 are irrigation systems, and four are tidal canals intended for purely navigation purposes.

Of the works for which full accounts are kept the length of completed main canal was 3,766 miles, and of distributary channels 7,135 miles. The area irrigated during the year by these works was 3,525,034 acres, the crops grown being valued at £5,970,460.

Taking all the works for which full accounts are kept, the general results of the year's working compared with those of the four previous years will be seen from the following statement:—

YEAR.	Capital Outlay.	Area Irrigated.	Net Actual Revenue.	Percentage of Net Revenue on Capital.
	£	Acres.	£	
1898-99	5,988,198	3,339,379	445,812	7.44
1899-1900	6,057,431	2,928,463	398,531	6.58
1900-01	6,136,629	3,426,374	444,521	7.24
1901-02	6,207,041	3,550,036	485,945	7.83
1902-03	6,299,896	3,525,034	480,595	7.63

The net revenue recorded in the foregoing statement is that which has resulted from the outlay of Government capital. If the net revenue due to old irrigation be added, the total amount will be £726,641. The decrease of revenue during the year was due chiefly to larger remissions made on account of the unfavourable character of the season, and to late rains and freshes in certain districts.

The results of the year's working for the major works in operation are shown by the following figures:—

WORK.	Area Irrigated.	Capital Outlay.	Net Revenue.	Percentage of Net Revenue on Capital.
	Acres.	£	£	
Godaveri Delta	810,634	891,667	164,185	18.41
Kistna Delta	627,850	959,777	151,796	15.81
Ponnér Anicut	163,641	417,457	20,926	5.01
Kurnool-Cuddapah Canal	60,154	1,450,403	7,532	0.52
Barur Tank	5,325	28,751	412	1.43
Cauvery Delta	982,356	204,680	58,264	28.46
Srivaikuntham Anicut	44,526	100,108	6,143	6.13
Periyar Project	154,068	599,171	21,839	3.64
Rushikulya (Protective Work)	92,399	326,491	1,993	0.61
Total	2,940,953	4,978,505	433,090	8.70

The minor works for which full accounts are kept irrigated an area of 584,081 acres, and earned a net revenue of £47,505, equivalent to a percentage of 3.60 on the capital expended on them. The purely navigation works were in each case worked at a loss. IRRIGATION

Besides the works referred to in the foregoing paragraphs there is a large class of small works in Madras, partly maintained by the Public Works Department and partly by the Revenue Department, for which distinct capital and revenue accounts are not kept. The total irrigation revenue derived from these works in 1902-03 was £609,234, the net revenue being some £368,389 and the area irrigated by them was 3,436,651 acres. A plan for the systematic repair of some of these works has now been in progress for some years under the title of the "Tank Restoration Scheme," and is about one-third completed. Up to the end of the year an expenditure of £495,434 had been incurred under this scheme, and approximately 52,286 square miles had been investigated.

The capital expenditure for the year on the major works amounted to £60,731. This expenditure was incurred chiefly on the Kistna, Penner, and Cauvery works.

In the Bombay Presidency, excluding Sind, the water system does not admit of the construction of large irrigation works. The rivers or streams are 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." Of the 39 works for which full accounts are kept, 13 are classed as major works, among the most important being the Nira and Mutha Canals in the Poona District, and the Mhasvad and Ekruk tanks. Bombay,  
excluding  
Sind.

During the year, operations were commenced in connection with the Gokak, Krishna, and Godaveri surveys. Progress was also made with the construction of the Bokh Reservoir, and the work for the provision of automatic gates for the Lake Fife waste weir on the Mutha Canals was commenced.

The total area irrigated in 1902-03 was 100,496 acres against 129,377 acres in the previous year. The gross revenue fell from £49,888 in 1901-02 to £49,826.

A comparative statement of the results from those works, for which full accounts are kept for 1902-03 and the preceding five years, is given in the following table:—

YEAR.	Capital Expenditure to End of Year.	Area Irrigated.	Revenue Realised.	Working Expenses.	Net Revenue.
	£	Acres.	£	£	£
1897-98	1,772,069	126,516	42,386	26,926	15,460
1898-99	1,780,253	103,849	46,451	22,453	23,998
1899-1900	1,798,204	104,624	48,371	23,643	24,728
1900-01	1,821,283	124,394	34,967	27,834	7,123
1901-02	1,856,289	129,377	49,888	26,872	23,016
1902-03	1,886,089	100,496	49,826	22,728	27,098

The net revenue realised for the year represents a return of 1.43 per cent. on the capital expenditure, a percentage which compares favourably with the corresponding percentage of the previous year, viz., 1.24 per cent. The increase was chiefly due to a reduction in working expenses.

The major works in operation produced a net revenue equivalent to 1.90 per cent. on the capital of £1,336,614 expended on them. The most important of these major works, judged by the amount of capital expenditure, is the Mutha Canals System with the Lake Fife Reservoir, which in 1902-03 irrigated an area of 8,101 acres, and yielded a net revenue of £10,872 or 2.39 per cent. on the capital outlay. The Krishna Canal, with a capital expenditure of £57,659, yielded the highest return for the year, viz., 3.69 per cent.

The revenue realised by the minor works during the year under review amounted to £1,848, equivalent to 0.35 per cent. on the capital outlay.

## IRRIGATION.

The capital outlay during the year on the major works amounted to £22,597, and on the minor to £7,203, the principal works in progress being the Mutha and Nira Canals, and the Shetphal and Maladevi tanks. On the former the expenditure was chiefly on the work of providing a set of automatic gates for the waste weir of Lake Fife, with a view to increasing the storage.

The minor class of works, for which only revenue accounts are kept, yielded a gross revenue of £34,397, and a net revenue of £7,237; the class for which neither capital nor revenue accounts are kept were worked at a loss of £18,778.

## Sind

In Sind the success of the irrigation operations is dependent on the regular rise of the River Indus. In the year under review the inundation was very much below the average, the river in August 1902 being lower than in any of the past 40 years except 1899.

The results of the working in 1902-03 of those works for which full accounts are kept are given in the following table:—

WORKS.	Capital Expenditure to End of Year.	Area Irrigated.	Revenue Realised.	Working Expenses.	Net Revenue.
	£	Acres.	£	£	£
Major . . . . .	1,596,124	1,072,001	123,586	52,372	76,214
Minor . . . . .	278,028	794,530	80,083	23,171	56,912
Total . . . . .	1,874,152	1,866,531	208,669	75,543	133,126

The foregoing results represent a return of 7·10 per cent. on capital expenditure. In Sind the existence of cultivation depends upon irrigation, and there is a constant demand for water from the canals. This fact, and the comparatively inexpensive nature of inundation canals, account for the favourable results obtained from the working of irrigation canals in Sind.

During the year the re-modelling of the Desert Canal and the Mahiwah project were practically completed, and two Rajwahs were constructed on the Sukkur Canal. The cadastral survey of lands in the Khelat territory, settled on the Desert and Begari Canals, was in progress, and the contour survey of the Ghar Canal was finished. The widening and improvement of the Nasrat Canal was also carried on.

The amount of capital expenditure during the year on works for which full accounts are kept was £128,041. The area irrigated by all classes of works in Sind was 2,625,671 acres against 2,586,366 in the previous year.

The minor class of works for only revenue accounts are kept yielded a gross revenue of £104,563, and a net revenue of £44,884; the class for which neither revenue nor capital accounts are kept were worked at a loss of £18,162.

## North-West Frontier Province.

The only "major" work in the North-West Frontier Province is the Swat River Canal, a protective scheme with a length of 22 miles in the main and branch channels and 186 miles in distributaries. The capital outlay to the end of the year under review amounted to £277,750, and the net revenue for the year was £29,388, giving a return of 10·58 per cent. on the capital cost. The total area irrigated during the year formed a record, being 173,772 acres or 15,943 acres more than that of 1901-02.

The "minor" works in operation are the Kabul River Canal with a capital expenditure of £31,915, and the Bara River Irrigation Works for which the figures of cost are not available. The results of working for the year show a net revenue of £7,324 on the Kabul River Canal, equivalent to a return of 22·95 per cent. on the capital outlay. In the case of the Bara River Works, there was a loss of £190. No figures are available with regard to the area irrigated by these works.

## Baluchistan.

There are no "major" works in Baluchistan. The class of "minor" works is represented by two schemes now in operation, viz., the Shebo Canal, and

the Khushdil Khan Reservoir, the former of which has cost £45,118, and the latter £66,274.

In the year under review the net revenue from the Shebo Canal was £12, or 0·09 per cent. on the capital outlay. The working of the Khushdil Khan Reservoir resulted in a loss of £675, no water being available for cultivation.

The area irrigated by the Shebo Canal was 2,939 acres, as compared with 7,712 acres by the two works in the preceding year. The value of the crops raised was £1,182.

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 two divisions, viz., Military and Civil Works. The military works are executed entirely from Imperial funds. The expenditure on Civil Works is chiefly met from provincial and local resources. The classification of the expenditure for 1902-03 under the heads referred to is shown in the following table:—

	Imperial.	Provincial.	Local.	Total in India.	Expenditure in England.	Grand Total.
Military works - - - -	£ 1,034,062	—	—	£ 1,034,062	£ 62,607	£ 1,096,669
Civil Works - - - -	480,070	2,347,103	1,211,044	4,038,217	107,562	4,145,779
Total, 1902-03 - - - -	1,514,132	2,347,103	1,211,044	5,072,279	170,169	5,242,448
Total, 1901-02 - - - -	1,372,692	2,012,935	1,107,219	4,492,846	139,788	4,632,634
Total, 1900-01 - - - -	1,002,395	1,846,511	1,087,293	3,936,199	133,343	4,069,542

This statement does not include the outlay from Imperial revenues recorded under the head of Special Defence Works, which amounted to £6,864 in 1900-01. In 1901-02 and 1902-03 no expenditure occurred under this head.

The greater part of the expenditure from local funds is absorbed by the maintenance and extension of roads. A portion of this expenditure is under the direct control of the Public Works Department, but the larger part of the local funds outlay under the head of Buildings and Roads, as well as a small portion of the provincial outlay, is under the management of the Civil Department, and is not controlled by the Public Works officers.

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 have recourse to the professional skill of the Public Works officers.

The following detailed account of Civil Works for the year under review is given under the heads of the different provinces in which the expenditure was incurred.

In Bengal the expenditure for the year on Civil Works was as follows:— Bengal.

	£
Imperial - - - - -	81,349
Provincial - - - - -	381,346
Local - - - - -	313,739
Total - - - - -	<u>£776,434</u>

**BUILDINGS  
AND ROADS  
(CIVIL).**

In addition to the works in connection with the proof-range at Chandipur and the combined Foreign and Military Secretariats at Calcutta, the only important Imperial work in progress was the construction of a temporary check station at Barrackpore in connection with the Magnetic Survey of India.

Among provincial works, additional accommodation was provided for several of the Civil and Criminal Courts in the province. Considerable expenditure was incurred on jail buildings, and a few new buildings were erected for the police. Extra accommodation was provided for several educational institutions. The new buildings for the Presidency General Hospital and the Lunatic Asylum at Berhampore were almost completed. A large number of residences were constructed for munsifs; and a fair beginning was made in the matter of providing residences for Government officials in stations where it is becoming difficult to secure accommodation.

As regards communications, special repairs were carried out on the Tista Valley road and the Darjeeling Hill cart road. Feeder roads to the South Behar Railway in the Monghyr district were under construction, and steps were taken for connecting the south-western portion of the Ranchi district with the native State of Gangpur.

**United  
Provinces of  
Agra and  
Oudh.**

In the United Provinces of Agra and Oudh the outlay under the different heads of service was as follows:—

	£
Imperial	21,107
Provincial	310,950
Local	213,837
Total	<u>545,894</u>

The chief works completed during the year were the Judicial Commissioner's Courts at Lucknow and the police station at Benares. Among the important building works in progress were judges' courts at Fyzabad and Aligarh, additions to the Colvin Hospital at Allahabad, and large improvements to the Government Press buildings. On roads, the most important work started was the construction of a bridge over the Chota Gandak in Gorakhpur. Road communications in Bundelkhand and the trans-Jumna tract of the Allahabad district and in Gonda also received special attention. The usual dredging of the Ganges channel was carried out.

The total mileage of metalled road maintained by the Public Works Department and by local authorities during the year was 5,647 miles. One hundred miles of new metalled road were constructed.

**Punjab.**

In the Punjab the expenditure for the year on Civil Works was as follows:—

	£
Imperial	67,954
Provincial	269,363
Local	53,554
Total	<u>390,871</u>

During the year under review, the new Imperial Civil Secretariat offices at Simla were in active progress, and will probably be ready for occupation in July 1904. The expenditure to the end of the year was £44,133. Designs for a new General Post Office at Lahore, estimated to cost £19,797, were sanctioned in August 1902, and work was commenced in the following month. The telegraph office at Lyallpur, and the combined post and telegraph offices at Sargoda and Mianwali, were in progress, and meteorological observatories at Serain and Kalabagh, in the Simla district, were completed.

Under the head of Provincial Civil Works, the principal buildings in progress were those required for the new Headquarters Civil station of Mianwali, and those at Sargoda, the chief town of the new Jhelum Canal Colony. A new Treasury, with quarters for the guard, in Lahore Fort, was constructed, in order that the Moti Masjid might be vacated and maintained as an archaeological monument. An estate at Kasatli was also purchased, and alterations were put in hand to render it suitable for the Pasteur Institute. The Kangra Valley cart road improvements were steadily proceeded with, and various other repairs of roads and bridges were carried out. The

operations at Dera Ghazi Khan for training the River Indus, as a protection against floods, promise to be fairly successful, although considerable damage has already been done to the hurdle dykes, two of which were washed away. Boat bridges were maintained on the important through lines of communication, and the usual steam ferry continued to be worked over the River Indus at Dera Ghazi Khan under the management of the North-Western Railway.

BUILDINGS  
AND ROADS  
(CIVIL).

In addition to the ordinary work of the Department, considerable stress was laid on the establishment of the local Buildings and Roads branch by the important share in the construction works of the Coronation Darbar which devolved upon them. Not only were these works of some magnitude, involving as they did an expenditure of about 15½ lakhs, but they had to be pushed through with remarkable promptitude, and several of them presented many novel features and difficulties.

The comparative expenditure on civil buildings and communications were as follows :—

	Original Works.	Repairs.	Total.
	£	£	£
Civil Buildings	73,910	16,497	90,407
Communications	14,026	37,616	51,642

Including station roads, the total road mileage at the end of the year was 22,754 miles, viz., 2,024 miles metalled and 20,730 unmetalled. An Imperial grant of £53,333 was available for Famine Relief Works in charge of the Public Works Department, but the rainfall over the unprotected areas of the province was favourable, and no relief works were found necessary.

In Burma the total expenditure on Civil Works for the year was :—

-Burma.

	£
Provincial	582,290
Local	85,397
Total	<u>667,687</u>

Among the works completed during the year were forest offices at Maymyo and Myitkyina, a combined post and telegraph office at Taikkyi, post offices at Maymyo and Kampetlet, a telegraph office at Myitkyina, a jail at Mergui, and a new lighthouse on Green Island. The works under construction included a new jail at Mogok and a lighthouse on Beacon Island.

At the end of the year there were 1,678 miles of metalled roads and 7,903 miles of unmetalled roads in the province.

The amount of the expenditure for the year was :—

Central  
Provinces

	£
Imperial	1,651
Provincial	172,166
Local	21,492
Total	<u>195,309</u>

No Imperial works of any importance were undertaken. Owing to the failure of the rice crop, it was found necessary to open famine works on roads in the Raipur district, but the expenditure so incurred was not great. The development of road communications in these provinces has been very rapid, the total length of metalled roads now maintained being 1,374 miles, and of unmetalled roads 3,805 miles. District, Tahsil and Secretariat offices, together with circuit-houses, were responsible for an expenditure of over £23,300 during the year. Good progress was made in the construction of the Nagpur Technical Institute and Memorial Hall.

The output in the Warora Colliery during the year was 150,339 tons, being only a few tons short of the record output of the preceding year. The net profit amounted to £16,532, equal to a return of 16·24 per cent. on the capital expenditure, a most satisfactory financial result.

**BUILDINGS  
AND ROADS  
(CIVIL).**

The total expenditure in Assam for the year was as follows :—

		£
Assam.	Imperial	1,716
	Provincial	121,541
	Local	38,572
	Total	161,829

Of the Imperial expenditure, £666 was spent on original works (Civil buildings) and £712 on repairs to buildings. The only original work of importance was the construction of a telegraph office at Dinapur. Of Provincial Civil Works, the most important buildings in hand were the new Government House at Shillong and offices and court-houses at Sylhet. The chief work in connection with communications was the metalling of the Nichuguard-Manipur road, for which an estimate of £16,850 has been sanctioned.

**Madras.**

In Madras the expenditure for the year on Civil Works was as follows :—

		£
	Imperial	5,648
	Provincial	213,364
	Local	318,500
	Total	537,512

In the classes of buildings and roads 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.

In the districts, the buildings under construction were of the usual type of taluk offices and cutcherries, court-houses, and other buildings required by the different branches of the Administration. The newly-built tower of St. Mark's Church, Bangalore, collapsed in December 1902, and steps will shortly be taken for its restoration.

Under the head of Communications a few important roads are in the hands of the Provincial Public Works Department, and the Tellicherry-Coorg road was taken over during the year; the cart road from Salem to Yercaud and the Anamalai ghat road was also completed and opened for traffic. The greater portion of the road system in Madras is, however, in the hands of the local boards, whose expenditure is not under the control of the Public Works Department. They maintain their own engineering establishments, though in some cases they employ the agency of the Public Works Department for particular works. In the year under review 23,777 miles of road were maintained by public authorities, apart from roads and streets within municipal limits.

An important feature in the Public Works of the Madras Presidency, owing to the length of its coast-line, is the maintenance of its harbours and lighthouses. The scheme for the better illumination of the coasts and the dangerous rocks and shoals in their vicinity, drawn up some six years ago, was this year practically completed at a cost of £40,787. Part of this sum will ultimately be recovered by the levy of light dues on shipping.

An iron screw pile jetty at Cocanada was completed, and at Madras a sum of £1,533 was spent on an experimental attempt to keep open the mouth of the Cooum River by means of a groyne composed of iron piles sunk by water jet, and plank shutters.

**Bombay.**

The expenditure on Civil Works in the Buildings and Roads branch in the Bombay Presidency for 1902-03 was as follows :—

		£
	Imperial	29,615
	Provincial	296,082
	Local	149,736
	Total	475,433

The principal buildings under construction during the year were the new Magnetic Observatory at Alibág; the Lord Harris Primary School at Bombay; an Orphanage and Training School at Poona; High Schools at Sholapur and Bijapur, court-houses at Nevása, Násik, Belgaum, Vita and Rohri; a new jail at Karachi; police lines at Pandu, Sadra, Poona, Sholapur, Sukkur, and in the Násik, Kanara, and Upper Sind districts; the Byramji Jijibhoy Hospital at Matheran, and six dispensaries.

BUILDINGS  
AND ROADS  
(CIVIL).

The Provincial lines of communication on which expenditure was incurred during the year included a number of new metalled and unmetalled roads in all divisions, but the cost of these original works was only £23,125 as compared with an outlay on repairs of £51,227.

The total mileage of roads, not within municipal boundaries, maintained by the Public Works and local authorities amounted in 1901 to 3,669 miles of metalled and 12,836 miles of unmetalled road. The figures for the year under review are not available.

The Local Fund works consisted of roads, school-buildings, and miscellaneous water-supply works carried out through the agency of the Public Works Department.

The expenditure on Civil Works in the Hyderabad Assigned Districts was Berar. as follows :—

						£
Imperial	-	-	-	-	-	27,962
Local	-	-	-	-	-	8,303
						£36,265
						£36,265

The greater part of the year's outlay was upon the extension and repair of the road system.

The expenditure on Civil Works in Coorg was as follows :—

Coorg.

						£
Imperial	-	-	-	-	-	14,738
Local	-	-	-	-	-	2,097
						£16,835
						£16,835

Of the Imperial expenditure, a large portion was for materials for the construction of barracks at Mercara for the 11th Coorg Infantry. A boarding-house to the Mercara High School, and extensions to the district jail were also completed. Of the total expenditure for the year, about three-fifths related to communications. The Madapur bridge was practically completed, and some progress was made with the new road connecting South Coorg with the Malabar-Wynad.



## CHAPTER XII.

## POST OFFICE AND TELEGRAPHS.

## POST OFFICE.

Post  
Office.

The receipts and charges of the Post Office for the last three years, as shown in the Finance and Revenue Accounts, are given in the following statement:—

YEAR.	Receipts.	Expenditure.	Net Revenue.
	£	£	£
1900-01	1,357,124	1,222,161	134,962
1901-02	1,383,709	1,280,624	103,085
1902-03	1,429,935	1,346,778	83,157

The above figures include the charge on account of district post establishments, which is entirely met by grants from district post funds (only a very small portion of which is credited to the Post Office in the Finance and Revenue Accounts), and they exclude certain indirect charges in respect of the rent of Government buildings, cost of pensions, &c. If the figures for the year were recast on this basis, the surplus for 1902-03 would be £102,400.

The extent of the sphere of operations of the Post Office, and its develop-

YEAR.	Post Offices.	Letter Boxes.	Village Postmen.	Length* of Postal Lines.
	No.	No.	No.	No.
1900-01	12,970	25,669	7,936	123,285
1901-02	13,845	28,902	7,944	136,954
1902-03	14,736	31,071	8,135	139,314
Increase in 1902-3 over 1901-1902	891	2,169	191	3,860

\* Including the Bombay-Aden line, which had been omitted in previous reports.

YEAR.	Letters (including Postcards).	Newspapers.	Book and Pattern Packets.	Parcels.	TOTAL.
	No.	No.	No.	No.	No.
1900-01	469,309,482	37,091,400	22,302,761	2,679,109	532,282,742
1901-02	495,692,031	31,560,053	39,712,480	2,991,304	569,945,847
1902-03	520,558,122	32,562,182	32,708,771	3,472,338	589,297,416
Increase in 1902-03 over 1901-1902	24,866,091	4,004,441		481,034	29,351,566

The general correspondence returns, of which a summary is given above, show an increase of over 57 millions of articles (excluding money orders) carried by post in 1902-03, as compared with the figures for 1900-1901. Of this increase over 35 millions were due to postcards, the total number of which exceeded that of paid letters.

The total number of articles received for delivery, including money orders, was over 604 millions, of which 97·84 per cent. were delivered against 97·85 in the preceding year. The net receipts of postal articles (other than money orders) at the dead letter offices for disposal were 4,774,440; of this number 1,171,432 articles were disposed of by being re-directed, and then

ment during the last three years, are shown in the tables in the margin. These include the figures for the district post, of which the Post Offices number 1,750; the letter-boxes 5,045, and the village postmen 2,889.

Of the total length of postal lines, 35,776 miles belonged to the district post and 1,259 miles were political lines administered by the Imperial Post Office. The increase was greatest under the head of "runners and boats," which was chiefly due to the opening of new lines in the Punjab and North West Frontier Province. There was also an increase of 777 miles under railways.

delivered to the persons to whom they were addressed, while 2,414,975 were returned to the senders, and 1,538,106 could not be disposed of. This last figure is under 0·3 per cent. of the total number of articles given out for delivery, and a large proportion of the articles not disposed of were from their nature not capable of delivery.

A large amount of valuable property was, as usual, found in letters and other articles posted without addresses, or with addresses so incorrect and incomplete that the covers had to be opened in order that the senders might be traced. In articles opened in the five more important dead letter offices were found cheques, hundis, bills of exchange, currency notes, coins, and other property, of the nominal value of Rs. 546,030.

The sale of British penny postage stamps for the purpose of prepaying replies from England and of making up broken amounts of British postal orders was introduced in February 1901 at Simla and Rangoon. As there proved to be a demand for these stamps, the system was extended in July to all the important offices in India.

The letters and postcards despatched from India to the United Kingdom in 1902-03 are estimated at 4,504,674 against 3,912,481 in 1901-02, or an increase of 15·14 per cent. Those received in India from the United Kingdom are estimated at 5,446,218, against 4,707,466 in the previous year, or an increase of 15·69 per cent. This very large increase is attributed to the continued effects of the cheapening of rates for letters in 1898 and to the increasing use of pictorial postcards.

The newspapers, book packets, and samples despatched home from India showed an increase of 13½ per cent., and the number of such articles received in India from the United Kingdom showed a decrease of 2½ per cent.

The statistics of correspondence exchanged between India and foreign countries and colonial administrations used to be taken once in three years, alternately in May and November, and were last recorded in May 1896. The total number of letters and postcards exchanged with such countries was over 4½ millions, and that of newspapers and book-packets nearly 3 millions. Under the terms of the Principal Convention of Washington, no further statistics are to be taken during the currency of that Convention.

The number of parcels exchanged with the United Kingdom rose from 201,668 in 1901-02 to 233,957—an increase of 16 per cent. This formed over 61 per cent. of the whole foreign parcel traffic. They were mostly sent *via* Gibraltar, but about a tenth were sent by the quicker Brindisi route. In the exchange of parcels with other countries there was again a satisfactory development of the traffic in both directions, an addition of 13·9 per cent. having been made to the number of parcels. The increase in the number of parcels sent to non-European countries is again to be attributed in great measure to the steady growth of the parcel post with Ceylon, to which inland rates apply, but there was, at the same time, a distinct development of the traffic with Egypt, Natal, and the Cape Colony.

The receipts from the insurance of letters and parcels were £16,930, as compared with £16,475 in the preceding year. There was an increase of 10·52 per cent. in the number of articles insured and of 2·76 per cent. in their value.

The average value for which each article was insured was, in the case of letters, Rs. 232, as compared with Rs. 238 in the previous year, and in that of parcels, Rs. 254, against Rs. 279 in 1901-02.

The number of claims for compensation preferred in respect of insured articles was 45, as compared with 17 in the preceding year. Thirty-eight claims were admitted, which involved the payment of £657 or 3·88 per cent. of the total amount realised from insurance fees, against a percentage of 1·38 in the preceding year; of the claims admitted, the loss was due in 20 cases to fraud or negligence on the part of the servants of the Post Office, in 14 cases to the loss of vessels at sea, and in the remaining four cases to highway robbery of mails in British territory. Of the seven claims not admitted, one was definitely rejected, and six were pending at the close of the year. In the former case, in which compensation was refused, the insured letter had been delivered in good condition, with all the seals intact, and under a clear receipt.

Post  
Office.

The business of the value-payable past continues to show each year an increased rate of progress. The number of articles sent was 3,339,097, and the amount declared for recovery by the Post Office from the addressees was over £2,667,000, the commission on which was £39,634. There was an increase of 17·28 per cent. in the number of articles, and of 13·94 per cent. in the value specified for recovery. The commission realised shows a decrease owing to the reduction in the commission on money orders not exceeding Rs. 5. Calcutta was responsible for nearly one-third of the entire business. The number of value-payable articles posted at the Calcutta General Post Office and its town sub-offices was nearly 1,100,000; and this department realised on the delivery of these articles a sum in excess of one crore of rupees.

The value-payable system has not been introduced between India and any country other than Ceylon. During the year under review 47,948 value-payable articles were dispatched from India to Ceylon, as compared with 41,799 articles in the preceding year.

The average value of each article, taking all classes of articles together, was Rs. 12. 3. 3, as compared with Rs. 12. 8. 11 in 1901-02.

The reduction in the commission on money orders not exceeding Rs. 5 has had a marked effect on the money order business: the number and value of inland money orders issued in India, including telegraphic money orders, but excluding transactions with Native States, increased respectively from £13,581,928 and £17,896,744 in 1901-02 to £15,311,955 and £18,547,845 in 1903-03; the commission realised has, on the other hand, owing to the same cause, fallen from £225,797 to £219,811. The average value of an inland money order was Rs. 18. 2., against Rs. 19. 7. in the previous year. This continual fall in the average price of money orders and value-payable articles is considered satisfactory, as showing that both systems are becoming popular among a poorer class. The circles of Bengal, the United Provinces, and Madras are responsible for about half of the total money order business.

The above figures include the special classes of money order for payment of revenue, rent, and miscellaneous Government dues. These show an increase in most of the provinces where they are employed.

Revenue orders are employed in Bengal, the United Provinces, the Central Provinces, the Punjab and the North-Western Frontier Province. The amount issued under this head rose from £613,000 in 1901-02 to £638,000 in 1902-03.

Rent money orders are employed in Bengal, the United Provinces, and Central Provinces: the issues under this head rose from £150,000 to £158,000.

Orders for miscellaneous Government dues are employed in Bengal, the United Provinces, the Punjab, the North-Western Frontier Province, Madras, and Burma: the amount issued rose from £218,000 to £240,000.

In the money order transactions with Native States the number and value of the issues in those States were respectively 63,504 and £106,571, against 58,212 and £114,089 in the previous year; and the number and value of payments in the States were 105,554 and £157,770, as compared with 88,826 and 149,410 in 1901-02. The excess of the issues by the States over the payments is again mainly due to the large issues of the Gwalior State.

The number of telegraphic money orders issued in 1902-03 was 181,016 for £1,293,881, as compared with 176,382 orders for £1,290,718 in the preceding year. The average value of a telegraphic money order was Rs. 107. 3. 5., against Rs. 109. 12. 0. in 1901-02. The postal commission amounted to £13,452, in addition to £12,068 charged for the telegrams and credited to the Telegraph Department. For the preceding year the figures were £13,372 and £11,759 respectively.

The foreign money orders for and from the United Kingdom, most of the British colonies and possessions, foreign European countries and most of their colonies and possessions, and Egypt, are issued in sterling, payments being made by the remitters and to the payees in India. The number of such orders issued by India rose from 91,695 in 1901-02 to 98,896 in 1902-03, and the value increased from £323,622 to £330,330, while the orders paid in India increased in number from 67,174 to 79,581, and in

amount from £402,228 to £519,297. In 1901-02 of the total sterling money order transactions, viz., £725,850, no less an amount than £671,077 was with the United Kingdom and British colonies, and in 1902-03 the corresponding figure was £791,118, out of a total of £819,627. There was an increase of over 7,000 in the number of remittances sent by money orders to the United Kingdom, and of nearly £13,000 in the value of remittances from the United Kingdom to India.

The average value of a sterling money order issued by India was £3 6s. 10d. as compared with £3 10s. 7d. in 1901-02, and that of a sterling money order paid in India was £6 10s. 6d., as compared with £5 19s. 9d., the average in the preceding year.

The money order transactions between India and China, Japan, Ceylon, and some British and foreign colonies in Africa and the East, are advised in Indian currency. The amount of such orders issued by India fell from £65,370 in 1901-02 to £63,029 in 1902-03, and the orders paid by India, from £551,996 to £476,982. The decrease is chiefly due to the return of Indian labourers from East Africa: the Straits Settlement and Hong-Kong show a great falling off both in payments and issues: the interchange with Ceylon, however, continues to increase.

Including inland and foreign money orders, both ordinary and telegraphic, the total of the money orders issued by the India Post Office in 1902-03 amounted to £19,047,775, against £18,399,825 in 1901-02, and the total of payments to £19,673,430, against £18,993,530 in the preceding year.

At the close of the year there were 7,075 offices performing savings bank business, against 7,053 in the preceding year. The number of accounts in the Post Office savings banks rose from 866,693 to 922,353, the deposits, exclusive of transfers from one post office to another, from £2,771,778 to

Class of Depositors.	Average Number of Deposits.		
	1901-02.	1902-03.	Increase.
I. Professional -	291,238	308,262	17,024
II. Domestic -	151,204	161,346	10,142
III. Commercial -	32,065	34,123	2,058
IV. Agricultural -	12,387	15,065	2,678
V. Industrial -	27,450	30,928	3,478
IV. Indefinite -	352,349	372,629	20,280
Total -	866,693	922,353	55,660

£2,897,347 and the withdrawals from £2,549,945 to £2,621,097; and the interest rose from £204,078 to £216,704. The balance at the credit of depositors at the close of 1902-03 stood at £7,614,370 against £7,121,416 at the close of 1901-1902. The average balance at the credit of each depositor was Rs. 123·83, as compared with Rs. 123·25 in the previous year. The table in the margin shows the number of depositors in different classes for the years 1901-02 and 1900-03.

During 1902-03 the total amount invested in Government securities by savings bank depositors through the agency of the Post Office was £25,500, against £25,300 in the preceding year; and the balance of securities in the hands of the Comptroller-General at the close of the year was £78,000, compared with £73,600 on the 31st March 1902.

The arrangements for the sale of quinine through the agency of the Post Office are now in force throughout India, and in the aggregate the sales show an increase of 1,061,540 packets over the previous year.

The total number of Native army pensioners whose pensions were paid through the Post Office in the Punjab and North-West Frontier Province during the year was 29,328, and the amount paid to them was £138,791, as compared with 28,521 and £137,484 in 1901-02.

During the year under review 1,088 new policies of the aggregate value of £109,370 were granted by the Postal Insurance Fund, and of these 913 were Endowment Assurance Policies, of the total value of £92,060. Ninety-seven claims, amounting in all to £9,817, were paid on the death of insured persons. At the close of 1902-03 there were 7,110 active policies in existence (2,661 held by Post Office servants and 4,449 by servants of other Departments), and the aggregate sum insured was £737,380. Seventeen life annuities were purchased by local funds for their servants under Article 807 of the Civil Service Regulations.

Post  
Office.

During the year under review there were 32 cases in which the mails were plundered by highway robbers, of which 24 were in British territory, and 8 in Native States. The figures for the preceding year were 33 and 10 respectively.

The number of cases in which the servants of the Post Office were found guilty of offences punishable by the law was 392, of which 187 were dealt with departmentally, while legal convictions were obtained in the remaining 205 cases. The defalcations and losses amounted to £2,310, as compared with £2,368 in 1901-02 and £2,122 in 1900-01. A sum of £1,321 was recovered from the offenders or their sureties; £205 was charged against the Post Office Guarantee Fund; and £784 remained unadjusted at the close of the year. The subscriptions to the Guarantee Fund realised from Post Office and District Post Officials during the year amounted to £2,026, and the balance at the credit of the fund at the close of the year was £60,583.

The number of complaints made by the public was 28,284, against 26,731 in the previous year—an increase which was about proportional to the increase of Postal business. In 36·9 per cent. of the whole number the complaints were ascertained to be well founded; 38·09 per cent. were entirely groundless; and in the remaining cases, either the investigation of the complaints had not been completed at the end of the year, or no definite conclusion had been arrived at.

A Field Service postal establishment was sent to Somaliland in 1903; and in Northern China 2 base offices and 5 field post offices were maintained for the British Contingent.

The Postal arrangements of the Native state of Alwar in Rajputana were amalgamated with the Imperial Post in the course of the year.

Parcel Exchange has been established with Portuguese East Africa, the Dominican Republic, the French Post Office at Tripoli, the German and Austrian Offices in Turkey, the Japanese Offices in China and Korea, and certain islands recently annexed to New Zealand, and the parcel exchange with Portugal, Madeira, and the Azores, which had been suspended on account of quarantine restrictions, was resumed during the year.

A direct exchange of parcels between India and Mauritius, in supersession of the previously existing exchange through the intermediate agency of the Post Office of Ceylon, was introduced in the course of the year.

Mail communication was established with Persia across the Baluchistan-Seistan frontier, and arrangements were also made for direct mail communication between Burma and Yunnan.

The Coronation Durbar entailed extra postal expenses amounting to about £9,000, but it is estimated that the additional receipts on account of the Durbar amounted to £20,000.

The shortest time occupied in transit by the mail from London to Bombay was 13 days 7 hours and 54 minutes, while the average time for the year was 13 days 22 hours and 51 minutes. The quickest transit from Bombay to London was 12 days 23 hours and 7 minutes, while the average time for the year was 14 days 4 hours and 40 minutes.

#### 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 Tcheran and Fao, for which, as usual, a separate account is given. The system now consists of 56,830 miles of line, 200,267 miles of wire, and 267 miles of cable.

It is interesting to note that, during the year under review, the total number of paid messages exceeded those of any previous year by 266,549, and that, with the single exception of 1900-01, the gross receipts of the Department have been the highest on record. The working expenses were, however, also largely increased, with the result that the net revenue for the year shows a decrease as compared with that for the years 1897-98, 1899-1900, 1900-1901, and 1901-02. The reduction of the rates between India

(including Burma) and Europe, which took effect from 1st March 1902, has resulted in an increase of traffic of about 26 per cent. over that of the previous year. The loss in receipts from the reduction has not yet been ascertained.

TELE-  
GRAPHS.

During the year £328,612 was added to the capital expenditure, of which sum £104,986 was in respect of the Great Indian Peninsula Railway telegraph lines taken over by the Department. The greater portion of the balance was for buildings and new lines, the net additions to the system during the year comprising 1,003 miles of lines and 9,646 miles of wire including cable. The total capital outlay at the close of the year stood at £5,304,581.

The number of telegraph offices open to the public at the end of the year, including railway and canal offices, was 5,652, of which 4,353 were maintained by the Department. The net addition to the number of offices during the year was 360.

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

	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 1898-99 -	£ 4,195,764	50,306	154,824	264	1,634	2,788	4,422
During 1898-99 - - -	151,941	1,463	5,826	11	85	192	277
„ 1899-1900 - - -	*163,234	1,140	10,116	8	132	117	249
„ 1900-1901 - - -	217,289	2,146	11,117	13	88	142	230
„ 1901-02 - - -	247,741	772	8,721	-13	67	47	114
„ 1902-03 - - -	328,612	1,003	9,663	-16	45	315	360
To end of 1902-1903 -	5,304,581	56,830	200,267	267	2,051	3,601	5,652

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

A general view of the operations of the Department in 1902-1903, in comparison with the results of the four previous years' working, 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.
1898-99 - - -	5,448,600	£ 591,566	£ 427,549	£ 164,017	27.73	3.77
1899-1900 - - -	6,237,301	681,942	447,758	234,184	34.34	5.19
1900-1901 - - -	6,449,372	753,764	472,262	281,502	37.34	5.95
1901-02 - - -	6,475,545	730,395	503,338	227,057	31.08	4.56
1902-03 - - -	6,742,094	737,211	528,982	208,229	28.24	3.92

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.

The total number of paid telegrams sent in 1902-03 amounted to 6,742,094, as compared with 6,475,545 in 1901-02, showing an increase of 266,549 or 4.11 per cent. There was, however, a decrease in the value of these messages amounting to £4,462 or 0.77 per cent.

TELE-  
GRAPHS.

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.	1901-02.		1902-03.	
	No.	Value.	No.	Value.
Inland State - - -	802,988	£ 136,947	858,864	£ 143,574
Foreign State - - -	16,154	8,103	16,544	7,348*
Total State - - -	819,142	145,050	875,408	150,922
Inland Private - - -	4,763,963	278,106	4,981,794	291,339
Foreign Private - - -	892,440	156,290	884,892	132,722*
Total Private - - -	5,656,403	434,396	5,866,686	424,061
Total State and Private	6,475,545	579,446	6,742,094	574,983

\* These figures were affected by the opening of the South Africa direct cable route to Australia on 1st November 1901, the reduction of rates between India and Europe from 1st March 1902, and the opening of the Pacific cable (Vancouver to Australia, &c.) on 8th December 1902.

Inland private traffic shows an increase in the number of messages sent of 217,831 or 4·57 per cent. over the figures of 1901-02, the previous highest on record. The total value of these messages, however, although £13,233 or 4·75 per cent. in excess of last year's figures, is still below the value of the traffic for the years 1899-1900 and 1900-1901.

The following statement shows the development of the revenue from inland private traffic for the last 10 years :—

	£
1893-94 - - - - -	203,486
1894-95 - - - - -	214,398
1895-96 - - - - -	231,687
1896-97 - - - - -	249,228
1897-98 - - - - -	263,573
1898-99 - - - - -	244,915
1899-1900 - - - - -	294,485
1900-1901 - - - - -	294,071
1901-02 - - - - -	278,106
1902-03 - - - - -	291,339

Inland State telegrams, as compared with the previous year, show an increase of 55,876 or 6·95 per cent. in number, and of £6,627 or 4·83 per cent. in value. The increase in traffic under this head is principally due to the preparations for the Coronation Durbar at Delhi, and also to the despatch of troops to Somaliland.

In Foreign Private telegrams, which include press and all foreign transit traffic, there has been a decrease of 7,548 or 0·84 per cent. in number, and a decrease in value (Indian share) of £23,568 or 15·07 per cent. The great decrease in value is due to the reduction of the rates between India on the one side and Europe, America, Asiatic Russia, Asiatic Turkey, Persia and the Persian Gulf on the other; also to the opening of the Pacific cable between America and Australia, and to increased traffic being carried viâ the cable between South Africa and Australia, instead of passing viâ India as formerly.

Foreign State telegrams, compared with the previous year, show an increase of 390 or 2·41 per cent. in number, but a decrease of £755 or 9·31 per cent. in value. The decrease in value is due to the reduction of rates between India and Europe.

In press messages there has been an increase both in number and value, inland press messages showing an increase of 15·98 per cent. in number and 18·91 per cent. in value, while foreign press messages show an increase of

10.06 per cent. in number and 15.44 per cent. in value as compared with the figures of the previous year. These increases are principally due to the exceptional press traffic which took place during the Coronation Durbar period.

The gross receipts of the Telephone Companies during the year 1902 amounted to £31,831, an increase of £908 as compared with the previous year. Their average annual earnings during the past five years amount to £29,049.

The subscriptions to the Telegraph Department for telephone and similar services rendered during the same calendar year amounted to £11,390, being £587 more than the amount of the previous year. The average annual subscriptions for the past five years amount to £10,570. These results are the more satisfactory in view of the reduction by 25 per cent. from 1st January 1902 of the rate chargeable to the public for the rent of telephones.

Communication with Europe *viâ* Suez was maintained uninterruptedly during the year by the Eastern Telegraph Company. The Teheran route was interrupted for about 222 hours in all, as compared with 132 hours in the previous year, while the Turkish route was interrupted for 870 hours, as against 1,051 hours in 1901-02.

The proportion of international traffic to and from India, exclusive of transit traffic, over the several routes to Europe for the year 1902-03 was as follows :—

	Per cent.	
	No.	Words.
Indo-European :—		
<i>Viâ</i> Teheran	48.86	52.69
<i>Viâ</i> Turkey	1.23	0.87
Persian Gulf, <i>viâ</i> Karachi	1.26	1.31
Red Sea :—		
<i>Viâ</i> Suez	48.65	45.13
Total	100.00	100.00

The bulk of the transit traffic was, as usual, carried *viâ* Suez.

Telegraphic communication with the Cape by the East Coast of Africa was maintained without interruption throughout the year. The restrictions placed by the British Government at Aden, Durban, and Cape Town on messages for East and South Africa during the war were entirely withdrawn towards the close of July 1902.

As regards the East, communication with the Straits Settlements was maintained uninterruptedly during the year.

The land route to China *viâ* Bhamo was interrupted beyond the Indian frontier for about 59 days in the aggregate, against 106 days in the previous year. Within the Indian frontier there was only one interruption, lasting 23 hours.

Communication with Siam over the Moulmein-Bangkok line *viâ* Kanburi was interrupted for about 31 days, as against 46 days in the previous year. The line from Moulmein to Raheng *viâ* Myawaddy was interrupted for about 12 days, as compared with four days in the previous year. There were three interruptions, lasting 4½ days, within Indian limits.

Events of interest during the year were the reorganisation of the Superior Establishment to provide for an increase in the number of higher posts and Divisional charges, and so prevent a block in promotion; the reorganisation of the Signalling and Subordinate Establishment to improve the position and prospects of the staff; the decrease of International transit traffic, due to the opening of alternative routes from South Africa to Australia and from Queensland to Vancouver; the discontinuance of reduced rates for telegrams passing between the Expeditionary Forces in South Africa and China and their friends at home; the Delhi Coronation Durbar, necessitating special measures to meet the abnormal traffic arising therefrom; and the unveiling



TELE-  
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by H.E. the Viceroy of the Mutiny Telegraph Memorial, erected at Delhi to commemorate the services of the Department during the Indian Mutiny.

## 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 with the Indian telegraph system at Karachi is controlled by the Indo-European Government Telegraph Department. The system comprises two sections. The first, called the Persian Gulf Section, consists of various cables, 1,940 knots in length, running from Karachi to Bushire, Jask to Muscat, and Bushire to Fao, where a connection is made with the Ottoman Government line. It includes, also, the Mekran Coast land lines, 698 miles, with 1,392 miles of wire, running from Jask to Gwadur, and thence to Karachi.

The second section, called the Persian Section, consists of land lines, 693 miles with 2,079 miles of wire, running from Bushire to Teheran.

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

Under the terms of a Convention, dated 16th August 1901, between the United Kingdom and Persia, for extending the system of telegraphic communication between Europe and India through Persia, the construction of a line, known as the Central Persia line, from Kashan to the Baluchistan Frontier *via* Yezd and Kerman was commenced on 2nd December 1902, and 141.25 miles had been completed by 31st March 1903. Towards the end of the year work was somewhat delayed owing to material not arriving from the coast in time.

The administration of the Indo-European Department, which in 1888 was amalgamated with the general telegraph system of India, was re-transferred to London in 1893, and placed under the direct orders of the Secretary of State. It has been found convenient to maintain separate accounts for this Department, partly for the sake of comparison with previous years, and partly because the conditions under which the Indo-European lines are worked and the influences affecting the traffic are completely different from those prevailing on the Indian telegraph system generally.

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.
1898-99	£ 770,264	£ 97,722	£ 51,235	£ 46,487	6.03	52.43
1899-1900	768,736	102,541	56,234	46,307	6.02	54.84
1900-01	771,680	116,825	56,244	60,581	7.85	48.14
1901-02	818,747	121,936	57,310	64,626	7.89	47.00
1902-03	872,730	99,158	59,853	39,305	4.50	60.36

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

The increase of £53,983 in the Capital Account during the year under review is made up of an expenditure of £44,293 on the construction of the new Central Persia line, and of £9,690 spent chiefly on the purchase of stores for future needs.

The total earnings of the Department show a decrease of £22,778, as compared with the previous year. This is due principally to the reduction of the rates between Europe and India, and to the opening of the new Pacific cable, which has taken a good deal of the Australasian traffic from the Eastern and Indo-European routes. Owing also to a misunderstanding

with the Companies, the Department's share of the guarantee of the Government of India, in connection with the reduction of the Indo-European tariff (expected to amount to between £2,000 and £3,000), has not been included in the accounts for 1902-03.

The expenditure shows an increase of £2,543, due mainly to a larger expenditure on furlough allowances as compared with 1901-02, to the cost of the superior establishment employed on the construction of the Central Persia line, which has been charged in the accounts pending recovery from the Persian Government, and to a general revision of the General Service Clerks' Establishment.

The net result is a profit of £39,305, or 4·50 per cent. on the capital, against 7·89 per cent. realised last year. This decrease is partly due to the capital outlay on the Central Persia line, which is as yet wholly unproductive.

The number of messages forwarded during the year amounted to 178,250, being an increase of 17,172 or 10·66 per cent. over that for 1901-02.

Under the Joint Purse Agreement, the share of the Department was £19,621 less than last year, being £111,044 as against £130,665 in 1901-02. The amount paid into the Joint Purse for the year under review was £78,791.

Owing to the opening of the new Pacific Cable, the Australian traffic was considerably less than in the preceding year, the Department drawing out of the Australian Message Fund £6,289 as against £8,239. Notwithstanding this loss, the receipts for the year show an increase of £54 over those for 1889, before the Australian Message Fund Agreement was entered into.

The working of the Department for the year may be considered generally satisfactory. Delays and errors were not serious. A few faults were cut out of the cables, and great damage was done to the telegraph buildings at Manora by a cyclone. Acts of wilful damage were much more numerous during the year, involving a sum of Krans 16,456, of which Krans 50 were recovered locally, and the remainder claimed from the Persian Government.

## CHAPTER XIII.

## EDUCATION.

## EDUCATION, LITERATURE, AND THE PRESS

## EDUCATION.

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. :—

- (1.) 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.
- (2.) 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.
- (3.) Colleges, the students in which, having passed the matriculation examination of a University, are reading for the further 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.

During the year 1902-03 various changes, based upon the recommendations of the Educational Conference which sat at Simla in September 1901, were carried into effect in the different provinces. Some of the more important of these are noticed below. Since the end of the period under review the Government of India have published a Resolution (Nos. 199-211, of the 11th March 1904) covering the whole field of educational policy, and embodying their conclusions upon the subjects discussed at the Simla Conference.

The publication of the report of the Indian Universities Commission, which was dated 9th June 1902, was an event of the first importance in the sphere of collegiate education. The recommendations of the Commission, which cannot be adequately summarised here, have been the subject of much criticism and discussion. Since the close of the period under review, legislation has been undertaken on the lines suggested by the Commission, but further details respecting the Act may be reserved for next year's issue of this statement.

## Bengal.

The total number of institutions in Bengal was 63,629, with 1,754,655 pupils, as compared with 61,792 institutions with 1,667,661 pupils in 1901. The increase was in the number of public institutions, private institutions having decreased by 524 during the year. Of the total number of pupils, 1,637,800 were in public and 116,855 in private institutions. The proportion of scholars to population of school-going age decidedly increased, from 27·1 to 28·2 per cent. in the case of boys, and from 1·8 to 2·2 per cent. in that of girls. The total expenditure upon education from all sources was £903,119, against £816,698 in the previous year. This amount was contributed as follows :—Provincial revenues, 21·6 per cent.; district funds, 12·4 per cent.; municipal funds, ·8 per cent.; fees, 42·6 per cent.; other sources, 22·6 per cent. The most marked increase of expenditure was under

the head of primary education (boys), which received £231,814, as compared with £203,754 in 1901. Primary schools increased from 45,922 to 47,424, and their attendance from 1,212,356 to 1,286,726. The full effect of the large additional assignment of about five lakhs (£33,333), sanctioned for primary education during the year, would appear not yet to have made itself apparent. The figures for secondary education differed little from those for the previous year. All schools which were maintained or aided from public funds had adopted the system of education approved by the Government of Bengal, under which the medium of instruction is English in the first four classes, and the Vernacular in all lower classes. As regards University education, the number and percentage of passes showed a considerable decrease in the Entrance and Arts Examinations. The B.L. examination alone showed a very large increase in the number (337) and proportion (50·8 per cent.) of passes. The number of Arts Colleges was 45, or one more than in 1901, but their attendance fell from 8,150 to 8,030. The number of girls receiving collegiate education decreased from 55 to 29. The total number of girls under instruction rose considerably, from 96,050 to 116,169, the increase being largely due to the establishment of model primary schools for girls in the several districts. Muhammadan pupils numbered 489,615, as against 462,674. The increase is very satisfactory, and it is noteworthy that it is larger, proportionately, than the increase among Hindus. Training schools for primary teachers were established during the year in each sub-division of the Province, and the number of such schools increased as a consequence from 33 to 61. Night schools numbered 1,274, with 23,741 pupils, as against 1,082, with 19,516 pupils, in 1901. The increase was chiefly caused by the establishment of "continuation schools," by the aid of a special grant, in the Presidency Division.

There were in the United Provinces at the end of the year 15,013 institutions with 493,131 scholars, an increase of 653 institutions and 40,358 scholars upon the previous year. Public institutions increased by 1,224, and at the end of the year numbered 9,513, while the number of private schools decreased by 571, many being transferred from one list to the other. Primary schools showed the most marked advance. The increase in the number of pupils was mainly made up of Hindus, who contributed 39,294, while only 1,039 were Muhammadans. The percentage of children of school-going age who were under instruction was still low, being 12·76 for boys and 6·63 for girls. The total expenditure on education from all sources was £339,096. The increase, as compared with the previous year, was £35,133, an amount slightly in excess of the additional grant of 5 lakhs allotted by the Government of India. The most striking and satisfactory result of the year was the stimulus given to elementary education. Primary schools for boys at the end of the year numbered 8,408, with 371,448 pupils, the increase during the year being 1,158 schools and 48,448 scholars, mostly in the lower primary division. Secondary schools for boys increased by 8 to 503, and the attendance also rose to 22,759. The number of candidates appearing for the Entrance Examination of the Allahabad University, which fell considerably short even of the previous year's low figure, was very unsatisfactory, and steps have been taken which it is hoped will bring about an improvement. The state of the University's finances also gave cause for concern. Female education showed a considerable advance, there being 658 institutions for girls, with 21,887 scholars, as against 612 with 20,821 in 1901. This branch of education, however, is still backward, and the want of qualified teachers is specially felt. The Muhammadan population did not take its due part in the educational progress of the year. The number of college students fell from 460 to 437, and the numbers at secondary schools were almost stationary. The number of Muhammadan girls under instruction fell by nearly 6 per cent.

The total number of public institutions in the Punjab (including Native States) fell from 3,236 to 3,230, and their attendance from 196,070 to 193,529; private institutions increased from 4,709 to 4,825, and their attendance from 74,130 to 76,010. Although these figures show a slight fall in the number of pupils, the year was one of distinct progress. The total expenditure on education in British territory was

**EDUCATION.** £238,764, an increase of £21,842 as compared with the previous year. To this expenditure Imperial revenues contributed 3·5 per cent., provincial revenues 29 per cent., district and municipal funds 24·6 per cent., fees 26·4 per cent., and other sources 16·5 per cent. In Native States £12,133 was spent, 90 per cent. of which came from State revenues. There were 14 colleges in British territory and 3 in Native States, with a somewhat diminished number of students. The number of secondary schools in British territory also fell, from 385 to 332, and the number of pupils from 65,474 to 59,961. The decrease in the number of secondary schools is largely due to the introduction of revised rules for the recognition of schools, and the consequent non-recognition of many inefficient institutions: the decrease was entirely in Anglo-Vernacular schools. In Native States secondary schools increased from 49 to 51, and pupils from 7,521 to 7,604. Primary schools showed a total increase of 49, and the number of pupils rose by 2,833 to 121,831. The attendance at schools for special instruction increased considerably, to 2,356, showing the existence of a desire for something more than a literary education. The number of candidates appearing for the various Arts Examinations of the Punjab University was 885, as against 984 in 1901, and the percentage of passes also fell. There was a noticeable decrease in the number of students taking Law Examinations, and a corresponding increase in the number studying medicine. Female education showed an advance from 15,178 to 15,546 in the number of girls attending public schools, but the total number of girls under instruction fell from 26,580 to 25,309. The number of Muhammadans receiving instruction increased from 111,350 to 111,616. The numbers of Hindus and Sikhs, however, fell slightly, to 104,721 and 22,439 respectively. Practical education has been greatly encouraged by the introduction during the year of agricultural, clerical and commercial, and other similar courses, in certain secondary departments, and by increasing the attention given in primary schools to such subjects as map-drawing, mental arithmetic and elementary agriculture.

**Burma.**

In Burma, the statistics on the whole indicate progress. The total number of institutions, public and private, rose from 18,284 to 18,931, and the attendance from 316,250 to 331,525. More than a half of the pupils were in public institutions. The total expenditure rose considerably, from £119,711 to £151,600. Of this increase £1,219 was borne by provincial funds, £1,789 by local funds, £5,878 by municipal funds, £14,792 by fees, and £8,211 by "other sources." The Rangoon College showed an attendance of 160, as against 133 in 1901, and of its candidates 11 out of 17 were successful in the B.A. and 16 out of 58 in the F.A. Examination. There were in all 4,614 primary schools, with 135,743 pupils, and 374 secondary schools, with 35,249 pupils. These figures show in each case a considerable advance on 1901, and as regards primary education they are more satisfactory than for some years past, especially when the primary departments of secondary schools are taken into account. The opening of Government Model Primary Schools will, it is hoped, do much to advance this branch of education. Female education made good progress. The number of girls attending public institutions rose from 36,755 to 38,492, and 4,125 attended private institutions. As regards special races, Muhammadan education was said to be not very hopeful, and the Karens to need considerable stirring up. A beginning was made in the Shan States by opening a school for the sons of *Sawbwas* at Taunggyi, and a Government school was opened in the Chin Hills. Educational work among the Kachins promised well. The itinerant teacher system, which was introduced in 1893, continued to show very satisfactory results in the direction of extending primary education. At the end of 1902 there were 170 itinerant teachers, and more were said to be needed.

**Central Provinces.**

In the Central Provinces the year was one of considerable educational progress. The number of schools, including those in Feudatory States, increased from 2,563 to 2,587, and the number of scholars from 142,720 to 158,332, these figures being the highest yet attained. The increase is partly attributable to greater general prosperity, but was mainly due to the opening of infant classes in a large number of schools. The percentage of scholars

among all children of school-going age was 8·8, as against 8 per cent. in 1901. In British territory the percentage was 18·2 among boys and 1·1 among girls. The total expenditure in British territory was £81,415, as compared with £68,752 in the previous year. Of this, 33·7 per cent. was met from provincial funds, 34·7 per cent. from district funds, 7·6 per cent. from municipal funds, 10·7 per cent. from fees, and 13·3 per cent. from other sources. Different classes of education shared as follows :—Collegiate education, 4·9 per cent. ; secondary education, 19·9 per cent. ; primary education, 39 per cent. ; technical education, 5·3 per cent. Secondary schools decreased during the year by 3, and their attendance by 55. Primary schools, however, increased from 1,853 to 1,867, and their strength from 109,660 to 122,413. Special attention was given to the introduction and teaching in primary schools of agriculture and other practical subjects. The average number enrolled in colleges rose from 270 to 277, but owing to the closing of the colleges when plague became epidemic, the results of the University examinations were inevitably poor. The number of girls' schools, in British territory, fell from 175 to 173, but their attendance rose considerably. Important measures undertaken during the year were the provincialisation of girls' schools, which had been hitherto under the management of local bodies, and the establishment of a female normal school at Nagpur. Good progress was made in giving effect to the recommendations of the Simla Educational Conference. The conversion of Aided and Combined System Schools in rural tracts into Board Schools, and the improvement of the pay of primary teachers, have so far been attended with good results. The special grant of two lakhs (£13,333) made from Imperial revenues was largely spent in the erection of new school buildings and in carrying out much-needed repairs.

The number of public institutions in Assam was 3,101, and the number of pupils 101,097, as against 3,171 institutions, with 102,463 pupils in 1901. The decrease was mainly under primary schools, and was largely due to the closing of inefficient village schools. The attendance of private institutions increased from 5,557 to 6,792. The percentage of scholars among all children of school-going age was 11·5 ; for boys, the percentage was 20·8. The total expenditure during the year was £53,415, as against £50,874 in the previous year. Of this, £16,579 was borne by provincial revenues, £15,445 by local and municipal funds, £11,816 by fees, and £9,575 by private sources. Primary schools for boys numbered 2,722, with 81,191 pupils, as against 2,776 schools, with 83,214 pupils, in 1901. Secondary schools increased from 146 to 148, and their attendance from 14,027 to 14,567. The two second-grade colleges in Assam sent up 62 candidates for the First Arts examination, of whom 22, including six Muhammadans, were successful. At the close of the year the Syndicate of the Calcutta University removed a considerable disability from Assamese candidates by accepting the proposal for the inclusion of Assamese and Khasi among the subjects for the entrance examination. As regards female education, there was a marked decline ; the total number of girls under instruction fell from 8,496 to 7,355, and the percentage of scholars to girls of school-going age from 1·98 to 1·71. Instructions were issued, in accordance with the recommendations of the Simla Conference, that the Vernacular should replace English as the medium of instruction in high schools in all classes before the fourth. A scheme for the improvement of lower primary education was embodied in a Resolution promulgated in March 1903, the chief feature being the grant to competent teachers of fixed pay, supplemented by capitation grants, in place of the rewards formerly paid on the result of examinations.

In Berar the year was on the whole unfavourable to the progress of education. Bubonic plague prevailed in three out of the six districts, and the brisk marriage season at the end of the year also diminished the school attendance. The total number of schools rose from 1,150 to 1,178, and the number of pupils from 53,379 to 53,923, but the increase in the number of schools was confined to aided indigenous schools, and only District Board, aided, and unaided schools showed an improvement in attendance. The percentage of pupils among population of school-going age was 24·3 for boys and 1·4 for girls, as against 24·0 and 1·5 in the previous year. Of the whole number of pupils, 64·4 per cent. were in the lower primary stage, as

**EDUCATION.** compared with 65·1 per cent. in 1901. The total expenditure incurred during the year was £34,362, an advance of £2,629 on 1901; the increase was largely due to the construction of a number of new school buildings, and to the inclusion of the figures of expenditure on mission boarding houses. The total receipts from all sources amounted to £30,282, or £472 more than in 1901. There were 28 secondary schools, of which 26, with an attendance of 3,196, were under Government management. District Board schools for boys decreased from 568 to 547, although their attendance increased slightly, and Municipal schools remained stationary. The decrease of 21 schools was attributed to the lingering effects of the last great famine. Female education was still very backward. The number of primary schools for girls decreased from 48 to 46, though the total number of girls in these schools increased by 22 to 2,900. There were also five girls attending the Anglo-Vernacular schools. Muhammadan pupils numbered 7,621, against 7,736 in the previous year, the decrease being due to plague. The number of low-caste pupils in all classes of schools rose from 2,552 to 2,602, and the numbers examined and passed showed a substantial increase, to 1,126 and 712 respectively.

**Coorg.** Coorg had at the end of the year 85 public schools, with 4,216 pupils, the latter total being somewhat less than that for the previous year. With three exceptions, one normal and two secondary schools, all were primary schools. Private schools numbered 31, and their attendance was reported to be 546, a substantial increase. The percentage of scholars among the population of school-going age was 16·2 for boys and 4·7 for girls. The total expenditure was £2,786, or £121 more than in 1901, the additional outlay being devoted to primary education. Various changes were decided upon as a result of the Simla Conference, the most important being the substitution of examinations to be conducted *in situ* for the existing primary and lower secondary tests.

**North-West Frontier Province.** The number of public institutions in the North-West Frontier Province rose from 191 to 199, and of pupils from 12,955 to 13,468. The number of private schools continued to decrease, falling during the year from 927 to 727, and their attendance fell from 13,626 to 12,378. The decrease was entirely in the number and strength of schools teaching the Qurán by rote. The total number under instruction constituted 8 per cent. of the population of school-going age. The total expenditure was £10,844, an increase of £646. The income from fees showed a proportionate increase, from £2,069 to £2,193. The Edwardes Church Mission College at Peshawar had 20 students, as against 17 in 1901. Secondary schools fell from 28 to 26, but their attendance increased from 5,082 to 5,174. Primary schools for boys numbered 164, or 10 more than in the previous year, with an increased attendance of 7,681. The number of girls under instruction rose from 1,900 to 2,104. Of these 593 attended the eight primary schools for girls, the remainder being mainly in private schools.

**Madras.** The total number of educational institutions, public and private, of all grades, fell slightly during the year, the falling off being chiefly in lower primary schools, but the average number on the rolls, counting all classes of institutions, rose from 830,833 to 847,525. Of the total population of school-going age, 26·6 per cent. of the boys and 4·6 per cent. of the girls were under instruction. The proportion of scholars to population of school-age varied in different districts from 58·8 (Madras) to 7·4 (Vizagapatam), the general percentage being 15·4 as against 15·0 last year. The proportion of scholars in the lower primary stage was 83·5 per cent. of the total number, as against 84·2 per cent. last year. The expenditure on public instruction from all sources rose from £510,734 to £565,430, of which £176,141 was provided by Government, £59,629 by district boards, £17,630 by municipal councils, £166,114 from fees, and £145,916 from endowments and miscellaneous receipts. Of this expenditure 10·96 per cent. was devoted to collegiate education, 57·30 per cent. to general, and 6·79 per cent. to special school education. First grade and second grade colleges numbered respectively 41 and 29, as in 1901, but the number of students increased considerably. The three colleges specially intended for women had 17 students, while 24 women attended the men's colleges. The number of candidates admitted to degrees in the several faculties of the Madras University was 676, an

advance of 14 on 1901-02. For the M.A. examination 8 candidates out of 24 were successful. Upper secondary schools for boys increased by four, and the number of boys in this stage also rose from 18,762 to 20,129. In the lower secondary stage there were, in all classes of institutions, 39,791 boys, an increase of 3,000 during the year. There were 25 upper and 166 lower secondary schools for girls. The latter figure shows a decrease of six on the previous year, but the attendance at each class of school increased. The total number of girls in the secondary stage of instruction increased during the year from 4,066 to 4,213. The number of public primary schools fell somewhat, from 19,093 to 18,637 in the case of boys' schools, and from 782 to 769 in the case of girls' schools, but the attendance at these schools increased considerably. The fall in the number of schools was largely due to the stricter enforcement of the rules of recognition and to consolidation of existing schools. The total numbers of boys and girls in the primary stage of instruction were, respectively, 565,217 and 114,752, as against 558,613 and 112,933 in 1901. Technical, industrial, and art schools increased in number, but their strength decreased slightly. At the Government technical examinations there was an increase both in the number of candidates and in the proportion of successes. Training schools showed satisfactory progress, and over a thousand candidates qualified for the trained teacher's certificate. Steps were taken during the year to carry out such of the approved suggestions of the Simla Conference as were immediately feasible. The most important measures were the appointment of a Deputy Director of Public Instruction and the strengthening of the inspecting staff.

The educational record of Bombay for 1902-03 shows the effects of the more than usually severe visitation of plague during this year. Excluding private institutions, for which the returns are not entirely trustworthy, there was a decrease of nearly 40,000 in the total number of pupils at the close of the year. These figures, however, are somewhat misleading, as a large number of schools were temporarily closed, on account of plague, at the end of the year. That real progress was made is shown by an increase in the average monthly attendance and in the number of public institutions. The total number of educational institutions in Bombay and Sind was 12,218, with an attendance of 599,708, the figures for the previous year being 12,251 and 639,868; of these, 9,595 institutions, with 530,286 pupils, were public. The total expenditure from all sources rose from £518,498 to £547,785. There were 10 Arts Colleges, and 5 professional colleges, as in 1901, with a slightly increased total attendance of 3,068 students, of whom 657, including 46 women, were at the Grant Medical College. Technical schools and colleges generally showed an increased number of students. Night schools, however, further decreased in number from 107 to 100. Secondary schools for boys fell by 5 to 422, but primary schools increased from 8,219 to 8,260; the attendances in the two classes of school were respectively 41,239 and 428,782, a considerable fall in either case. The total expenditure on secondary education for boys was £115,087, and on primary education £205,400; to these sums, which are larger than the figures for 1901, provincial revenues contributed £23,330 and £60,905 respectively. The total number of girls under instruction during the year was 89,674, of whom 72,058 were in primary schools and 34,808 in the lowest stage. In Arts Colleges and other special schools there were 289 female students, 174 of whom were in training schools. The total expenditure on female education fell from £51,726 to £44,783, the contribution from provincial revenues being £8,331. The number of Mahomedans under instruction was 129,711, as against 131,809 in the previous year, of whom 96 per cent. were in primary schools. There was, however, a marked increase in the number of successes in the Matriculation and Intermediate Examinations. The Yeravda Reformatory School had an average daily attendance of 125. The general behaviour was satisfactory, and of the 25 boys discharged during the year 22 were found to be engaged in honest work. Among the objects on which was spent the assignment of £40,000, made to the Bombay Presidency for educational purposes as a result of the Simla Conference of 1901, were the appointment of two Inspectresses of schools, the building of a Vernacular training college at Poona, the creation of a college for training secondary teachers, and the provision of hostels in connection with several Government high schools.



## LITERATURE AND THE PRESS.

## LITERATURE.

	English.	Bi-lingual (English and another language).	Sanskrit.	Arabic.	Persian.	Urdu.	Hindl.	Bengal.	Punjabi.	Marebhi.	Gujarathi.	Tamil.	Telugu.	Burmese.	Kanarese.	Assamese.	Uriya.	Bi-lingual (Oriental) in a Classical and Vernacular Language.
Madras	350	61	128	3	—	7	—	—	—	—	—	322	237	—	24	—	12	
Bombay	67	80	34	1	3	22	40	—	—	128	266	—	—	—	16	—	—	70, mostly Sanskrit and Hindi or Gujarathi.
Bengal	353	117	76	—	5	27	126	1,201	—	—	—	—	—	—	—	—	37	177, mostly Sanskrit and Bengali.
United Provinces.	— Figures not available —																	
Punjab	73	17	14	27	23	52	66	—	350	1	—	—	—	—	—	—	—	72, including 29 Arabic-Urdu.
Burma	8	9	—	—	—	—	—	—	—	—	—	1	—	47	—	—	—	47 (Pali and Burmese).
Central Provinces.	4	2	2	—	—	—	21	—	—	10	—	—	—	—	—	—	—	
Assam	2	1	—	—	—	—	—	6	—	—	—	—	—	—	—	—	20	
Mysore	2	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	(Also 33 unclassified works in one or more Indian languages.)

Note.—The figures for Madras include 349 periodicals, and those for the Punjab 63 periodicals; in other Provinces books alone are shown.

The above table gives concisely the number of publications registered throughout India in European, Eastern classical and the principal Indian vernacular languages. The number of bi-lingual and polyglot works, however, makes classification difficult. In Madras the total number of works in more than one language was 144, but how this number was made up does not appear. Other languages in which books were published during the year were Malayalam (41), Tulu, Konkani, Sourashtra and Badaga (in Madras); Zend (in Bombay); Ao-naga, Lepcha, Mundari, Musalmani-Bengali (50), Nepalese, Santali and Tibetan (in Bengal); Kashmiri, Marwari and Pashto (14) in the Punjab; Pwo-karen, Sgaw-Karen, Shan, Kachin and Talaing (in Burma); Manipuri (in Bengal and Assam); Khasi (in Assam); Sindhi (in Bombay and the Punjab); and Pali (in Bengal and Burma).

## Bengal

The number of publications received in the Bengal library was 3,366, as compared with 3,069 in 1901. This total included 2,415 books, of which 2,111 were original, and 951 periodicals. As regards language, Bengali claims a large majority of publications, English coming next. The output in Uriya and Hindi was also considerable. As in the previous year, religion was the most popular subject, being represented by 440 original publications, and 139 republications and translations. Language, poetry, fiction and mathematical science followed next in order, and history and drama were also fairly represented with 90 and 76 original publications respectively. Among translations, a Bengali version of "King Lear" is noted. In the field of original drama there were few productions of merit, and the numerous "social farces" especially were of a low type. One of the latter, however, "Avatár" (Incarnation), a protest against the new pseudo-Vaishnavism, by Bahr Amrita Lal Basu, was said to be well written and to be calculated to serve a useful purpose. Fiction, with 126 original works, showed a considerable advance, but the average Bengali novel of the new school appears to be anything but elevating, and its influence is regarded with some apprehension. The perversion of western thought which is so frequently conspicuous was characteristically shown by the novelist who derived a bigamous hero from Schopenhauer, and justified his own indelicacies by quoting from Ruskin that whatever is fit for existence is also fit for art. The output of poetry consisted in the main of lyrics and sonnets, showing as a rule English influence.

## United Provinces.

The total number of publications in the United Provinces was 1,461, of which 1,034 were original works. The subjects most in favour were religion (384), language (213), poetry (198) and fiction (111). Some really scholarly work in Sanskrit was produced during the year, and Mahomedan scholars also did good work, chiefly in translation. The output of poetry, and of Hindi verse in particular, was of poor quality. The influence of Bengali literature upon Hindi literature and language was very marked, and is not regarded as altogether an influence for good. A noticeable feature of Urdu fiction was the tendency to introduce freely, in imitation

of English novels, the practice of courtship, in spite of its being altogether foreign to the customs of the country. The old-fashioned fairy-tale has been replaced by a form of fiction describing a state of society which has no existence in fact. A noteworthy production was Pandit Sudhakar Dwivedi's complete text, with commentary, of the *Brahmasphutasiddhanta*, the great astronomical work of the seventh century. Among other translations, an Urdu version of "Mrs. Caudle's Curtain Lectures" is recorded.

The total number of books and periodicals catalogued in the Punjab during the year was 1,233 (1,170 books and 63 periodicals), as against 1,204 in 1901. As in previous years, Urdu and Punjabi works largely predominated. As regards subject, poetry and religion, with 373 and 331 works respectively, accounted for more than half of the total output. Fiction (with 56 works as against 76 in 1901) and drama (with 11 against 33) both showed a decline. The year was marked by an increase in the proportion of books of real worth. Poetry, however, showed no improvement, and the drama continued to deteriorate. The novel is improving, but its motive is still often insignificant, and the characters are seldom lifelike. Of the periodicals, a majority (38) were devoted to legal subjects.

The total number of publications registered was 1,162, a decrease of four on 1901-02, but the number in English rose from 395 to 411. Of these publications 1,035 were original. Newspapers and periodicals numbered 349. Nearly one-third of the publications were of a religious nature, and 300 were educational in their aim. The number of Uriya works increased from 3 to 12, and books in the Sourashtra and Badaga languages appeared for the first time. The year's productions showed no marked improvement as regards literary merits, but a very noticeable feature was the increased number of works dealing with social reform and, in particular, with marriage customs and the position of women. There were numerous imitations or adaptations, in almost all cases weak and imperfect, of western works. Among the models chosen may be noticed "Comus," "Ivanhoe," and "Sherlock Holmes." "Kamala's Letters to Her Husband," a work which appears to owe much to "An Englishwoman's Love-Letters," was said to show literary merit, and was very favourably received. Other productions of interest were *Tani Pasura Togai*, which introduced a novel species of Tamil poetical composition known as "Kanji," similar in structure to the sonnet, and the "Boer Leader Series" by an anonymous writer with pro-Boer leanings.

The year's literary output in Bombay showed no feature of special interest. The total number of publications registered increased from 1,288 to 1,334, of which 701 were books. Of the latter, 67 were written in English, 266 in Gujarati, and 128 in Marathi. Among both books and periodicals, the greatest number of productions came under the head "miscellaneous"; poetical and religious works come next in order, considerably ahead of any other class. The number of works of fiction fell from 42 to 35. A "History of the Prakrit and Marathi Languages," by Mr. N. B. Pavgi, showed considerable erudition, and was expected to rank as a classic. Translations of Lubbock's "Use of Life" appeared during the year in both Gujarati and Marathi. They are said to be too literal, in one case so much so as to be hardly intelligible. A translation into Hindi of Bacon's Essays is also recorded: the translator omits the passages, including 22 entire essays, which he considers to be unsuitable for Indian readers.

In Burma 123 publications were registered, of which 57 were classed as "religious." As regards language, Burmese and Pali-Burmese, with 47 each, claimed the large majority. Assam produced altogether 37 books, as against 22 in the preceding year. Of these, 10 dealt with the subject of language. The publications in other provinces call for no comment: in Coorg none were registered.

## CHAPTER XIV.

## EMIGRATION AND MIGRATION.

EMIGRA-  
TION.

## EMIGRATION.

## Emigration.

Emigration from India, so far as it is brought under the cognisance of Government, is mainly regulated by Act XXI. of 1883 and the Rules issued under its provisions. Emigration to Ceylon, the Straits Settlements, and for employment under Government in East and Central Africa, is, however, excepted from the restrictions of the Act. By Section 8 of 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 for the protection of Indian immigrants. A similar protection was extended by Act X. of 1902 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. The Local Government is now empowered, before permitting such emigration, to impose such terms and conditions as it considers to be necessary in each case. Emigration otherwise than under contract to labour or work in one of the above capacities is not controlled by legislation.

## Calcutta.

Two new measures of some importance received the sanction of the Government of India during the year under review. These were the recruitment of Indian labourers, at an increased rate of pay and under approved regulations, for work in the Natal mines, and the extension of the system of indenture to female emigrants for Mauritius, in which colony it had hitherto been the practice to indenture only male emigrants.

There were seven emigration agencies at work during the year, six representing British Colonies and the remaining one the Dutch Colony of Surinam. Recruitment for Jamaica, which had been suspended during 1901, was resumed. The total number of labourers requisitioned fell from 11,290 in 1901 to 10,455 in 1902, the numbers required for Demerara and Surinam being less by one half. Natal, on the other hand, showed a greatly increased demand of 2,770, as against 770 in the previous year. The number of recruiting licences granted was 1,415, as compared with 1,283 in 1901; there was a satisfactory decrease in the number subsequently cancelled, which amounted to only 2·6 per cent. of the whole. The recruiters employed collected during the year 13,807 emigrants, this number being contributed by the different provinces in the following proportions:—United Provinces, 62·9 per cent.; Central Provinces and Ajmere, 17·3 per cent.; Bihar, 10·1 per cent.; Bengal, 6·8 per cent.; and Punjab, 2·9 per cent. Recruiting operations were extended to Ajmere for the first time, and 63 emigrants came from that district.

The number of emigrants admitted to the Calcutta depôts was 12,059. Of the remainder, 751 were rejected subsequent to registration as unfit to emigrate, while 463 were discharged as surplus. The general sanitary arrangements of all the depôts were satisfactory throughout the year, the agents showing, as usual, a welcome readiness to accept and act upon advice given them by the medical officers. The percentage of emigrants rejected as unfit for despatch to the Colonies, viz., 7·4, indicated that there was still room for improvement in the medical examination of emigrants in the mufassal. After deducting casualties of all kinds, there remained 11,179 emigrants available for despatch to the Colonies, of whom 10,882 were shipped during the year, as against 11,951 in 1901. They were distributed as follows: Natal, 2,907; Trinidad, 2,341; Demerara, 1,968; Fiji, 1,558; Surinam, 1,322; Mauritius, 786. The demand from Jamaica was met by the embarkation of 653 labourers in February 1903. The total number shipped included 7,176 men and 2,930 women. The number of returned emigrants who re-emigrated was 435. The death rate on the ships carrying emigrants was somewhat heavier than in 1901—1·19 as against 1·06 per cent., but there was no serious outbreak of disease.

The number of emigrants who returned from the several colonies was 4,236, their ascertained aggregate savings amounting to £51,652. The average

savings per head varied from over £18 in Fiji and Natal to £2 in Mauritius. Only two emigrants returned from Réunion and none from Surinam.

EMIGRA-  
TION.

The amounts remitted to India by emigrants resident in the Colonies again indicated a very high degree of prosperity among the Indian population in Natal, the average remittance per emigrant from that Colony having risen in 1902 to nearly 30s., Fiji coming next with an average remittance of less than 3s. The remittances from other colonies were, in comparison, insignificant.

The numbers of emigrants embarking from Madras for Natal and Mauritius respectively were 4,094 and 1,785, as against 6,576 and 3,599 in 1901. The falling off in numbers was attributed to the favourable character of the season. The bulk of the emigrants came from the North Arcot and Madras districts. There was no emigration to the French colonies during the year. Recruitment for Fiji began in November, 1902, but no emigrants embarked before the end of the year. Over £11,500 was brought with them in savings by 857 emigrants who returned from Natal.

Madras.

As regards non-regulated emigration, the decrease in the number of emigrants to the Straits Settlements which was noticed in 1901 continued during the year under review, when only 19,622 emigrants embarked, as against 27,950 in 1901. There was also a decrease in the number of passengers for Burma and Ceylon, but in these cases it was impossible to distinguish real emigrants from ordinary passengers.

General emigration from the port of Bombay was still prohibited during 1902, and, owing to the demand for Indian labour in East Africa having ceased with the completion of the Uganda railway, very few (117) emigrants left Karachi, while 7,117 returned. Only 61 persons left the port of Bombay under the Emigration Act, of whom 32 went to Buluwayo as waiters, and 14 to Chindi as artisans.

Bombay.

## MIGRATION.

Assam imports from the other provinces of India the greater part of the labour force employed on tea-gardens, in the oil refinery at Digboi, in coal-mines, and in a few saw-mills in Upper Assam. The total labour population directly dependent on these industries numbered 650,937 at the end of June 1903, the year for which labour statistics are tabulated now ending at this date. The number of labourers engaged under Act VI. of 1901 was 93,278, while 557,659 were classed as "non-Act" labourers. Of the total labour force in the province 60 per cent., including almost all of the "Act" labourers, were employed in the Assam valley, and the remainder in the Surma valley. Immigration from the Central Provinces showed a further increase during the year under review, but the bulk of the labour population still came from Chota Nagpur and the Sonthal Parganas. There was a large increase, however, in the number of immigrants, especially "non-Act" immigrants, from Bengal proper and Orissa. The total number of labourers and dependants imported during the year was 26,684, as against 26,223 in 1901 and 62,733 in 1900. The rate of immigration during the last two years was much below that of former years, and less than what is required to maintain an adequate labour force. The falling off in recruitment was no doubt due in large measure to improved agricultural conditions in the recruiting districts, but it was also attributed by planters to the stringency with which the provisions of Act VI. of 1901 had in some districts been applied. Although the tea industry had not altogether recovered from the recent depression, there was a general complaint of the shortness of the supply of labour. Statistics indicated a general tendency to abandon Act VI. of 1901 as a basis for labour contracts executed in the province, and to make use instead of agreements enforceable under Act XIII. of 1859.

Assam.

Of the 14,076 adults imported during the year under the Act, 7,988 were recruited by sardars and 6,088 by contractors. There was a rise from 4,340 to 6,097 in the number of sardars who were granted certificates, apparently due to the fact that managers anticipated considerable difficulty in recruiting coolies, and this method of recruitment proved ineffective and expensive, only four coolies being recruited on the average for every three sardars employed.

**MIGRATION.** There were 594 deaths among all classes of immigrants during transit by way of the Brahmaputra to the Assam valley, the large majority being due to cholera. Of the coolies imported into Sylhet and Cachar, rather more than a half were conveyed by the Assam-Bengal railway, the remainder by steamer. There were no deaths among the coolies in transit by railway, and only one death on the steamers.

The number of complaints of fraud and irregularity in recruitment fell from 63 to 48, owing probably to the more effective control exercised over recruiters under the provisions of the new Act.

The registered rate of mortality for the total labour force was practically the same as for 1901, viz., 25·4 per mille. The death rate among labourers engaged under Act VI. of 1901 rose from 37·2 to 40·3 per thousand.

During the year 666 complaints were preferred by coolies against managers, a large number alleging the application of pressure with the object of inducing coolies to renew their contracts. Complaints of assault numbered 20, five being compounded and two ending in conviction. The number of coolies sentenced upon charges of intimidation, assault or rioting, was 90, of whom nearly a half were concerned in a serious case which occurred in the Lakhimpur district in July 1902. Desertions among "Act" coolies decreased from 4,030 to 3,062.

**Central Provinces.** Emigration from the Central Provinces received a considerable impetus during the year, 6,709 emigrants and 8,580 dependants being recruited. Nine-tenths of the emigrants came from the Chhattisgarh Division. The census figures indicate that there has been little or no immigration into the Central Provinces of recent years.

**Burma.** The total number of immigrants entering the ports of the province was 142,824, 128,884 at Rangoon and 12,745 at Akyab. Emigrants numbered in all 135,035.

**Madras.** The number of passengers arriving at the several ports of the Madras Presidency was 229,169, of whom 111,222 came from Ceylon and 64,345 from Burma.

**Bombay.** There was practically no movement of people into the Bombay Presidency beyond the ordinary influx of temporary labourers for the yearly harvests. The Cutchis and Marwaris, who had invaded Sind in large numbers on account of the drought, nearly all returned to their native places.

CHAPTER XV.

TRADE AND MANUFACTURES.

TRADE.

(Detailed information regarding the Trade of British India being annually furnished in a separate Parliamentary Paper, a brief Review only is given in the present Chapter.)

TRADE.

THE total trade of British India with other countries by sea and land during the five years ending on the 31st March 1903, was valued as follows:—

	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
<b>BY SEA.</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>
Private Imports :					
Merchandise - - -	45,586,894	47,141,242	50,851,923	54,345,986	52,525,272
Treasure - - -	11,922,638	13,972,342	10,975,739	13,098,920	16,837,152
	57,509,532	61,113,584	61,827,662	67,444,906	69,362,424
Private Exports :					
Foreign Merchandise re-exported - - -	2,247,464	2,194,994	2,139,021	2,173,211	1,957,075
Indian Merchandise - - -	72,900,185	70,455,797	69,440,332	80,803,375	83,919,834
Treasure - - -	4,938,787	5,300,028	4,982,970	5,641,711	5,873,341
	80,086,436	77,950,819	76,562,323	88,618,297	91,750,250
Government Transactions :					
Imports { Stores - - -	2,480,791	3,061,745	3,077,803	4,841,047	4,687,504
Treasure - - -	7,771	10,115	5,408,769	635,304	41,727
Exports { Stores - - -	52,168	71,423	233,024	286,941	387,490
Treasure - - -	2,160	4,231	4,501,960	2,005,529	565,084
	2,542,890	3,147,514	13,221,556	7,768,821	5,681,805
<b>Total Trade by Sea -</b>	<b>140,138,858</b>	<b>142,211,917</b>	<b>151,611,541</b>	<b>163,832,024</b>	<b>166,794,479</b>
<b>BY LAND.</b>					
Imports - - -	4,053,886	4,692,714	4,732,855	5,167,463	4,580,068
Exports - - -	3,486,489	3,720,555	4,380,463	4,405,609	3,993,199
<b>Total Trade by Land</b>	<b>7,540,375</b>	<b>8,413,269</b>	<b>9,113,318</b>	<b>9,573,072</b>	<b>8,573,267</b>
Excess imports of treasure by sea -	6,989,461	8,678,198	6,899,578	6,086,984	10,440,454
Net excess of exports over imports of merchandise and treasure by sea, private and Government - - -	20,142,670	13,841,029	10,983,073	17,989,510	18,611,169
India Council Bills paid in India - - -	18,883,879	18,703,761	12,824,491	18,535,842	18,724,021*

\* As in previous years, the amount actually paid during the year in India is given in pounds, at Rs. 15 to the pound. The figures for the two last years include sums of £1,939,093 and £263,000 respectively drawn against the Gold Reserve Fund. The Bills drawn and the Telegraphic Transfers granted by the Secretary of State on India during the year 1902-03 yielded £18,499,947.

This summary shows an increase in the total seaborne trade amounting to rather more than £3,000,000, or nearly 2 per cent., as compared with the trade of the previous year 1901-02; but putting aside the Government

Foreign sea-borne trade.

TRADE. transactions, the private trade in merchandise and treasure amounted to £161,113,000, which is more than 3 per cent. above the 1901-2 figure. The total of imports and exports of merchandise on private account shows an increase of about £1,000,000 as compared with the preceding year; a result which is due to a considerable increase in exports, only partially balanced by a decrease in imports. So far as concerns exports these results are very satisfactory, in view of the fact that the year was not wholly favourable for some crops. The fall in imports is held to be due partly to the speculative import of cotton and other classes of goods in the preceding year in excess of the consuming capacity of the people, and partly to the effect of plague. There was no financial stringency, and the Bank rate, for the fourth year in succession, never rose above 8 per cent., at which level it remained only for about one month; while the exchange rate showed practically no fluctuation.

Imports. It will be seen from the figures relating to private merchandise which are given below, that the chief fluctuations in the import statistics were a heavy fall in cotton manufactures, after excessive imports in the previous year, a decline in yarns, and a smaller trade in woollens for the second year in succession. Fresh restrictive regulations directed against bounty-fed sugar, which were in force during nine months of the year, explain the fall under that head; the principal decrease among raw materials was of Chinese silks; silk manufactures, on the other hand, almost regained the high figure of 1900-01. The increase under the head of metals is due almost entirely to copper imports, which increase as the prosperity of the people grows, though they have not yet attained the figures recorded before the famines.

Imports.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
	£	£	£	£	£
Cotton woven goods -	16,459,000	18,001,000	18,231,000	20,165,000	18,766,000
Cotton yarns - - -	1,701,000	1,633,000	1,659,000	1,765,000	1,532,000
Silk, raw and manufactured	1,439,000	1,137,000	1,788,000	1,530,000	1,456,000
Woollen goods - - -	1,016,000	1,172,000	1,408,000	1,313,000	937,000
Metals - - - - -	3,453,000	3,121,000	4,288,000	4,599,000	5,331,000
Hardware and cutlery -	953,000	1,060,000	1,228,000	1,138,000	1,333,000
Machinery and millwork -	2,039,000	1,695,000	1,505,000	2,004,000	1,869,000
Railway material - - -	1,883,000	1,851,000	894,000	1,024,000	1,074,000
Liquors - - - - -	1,097,000	1,065,000	1,078,000	1,110,000	1,180,000
Provisions - - - -	1,021,000	1,125,000	1,317,000	1,323,000	1,227,000
Sugar - - - - -	2,678,000	2,251,000	3,770,000	3,901,000	3,303,000
Mineral oils - - -	2,163,000	2,120,000	2,306,000	2,558,000	2,310,000
Chemicals, medicines, dyes	1,147,000	1,065,000	1,230,000	1,306,000	1,333,000
Apparel - - - - -	920,000	976,000	1,026,000	1,129,000	1,088,000

Exports. The exports of Indian merchandise consist largely of raw agricultural products, and are therefore dependent to a large extent on the seasons. In the year 1902-03 there was great abundance of rice, and a remarkably large export, but the wheat crop of the spring of 1902 was not good, and the wheat exports, though exceeding those of the last three years, were only moderate in amount. The cotton crop was large, but jute was deficient, and the yield of oilseeds available for export was much below the figures for 1901-02. There was a considerable trade in cotton seed. The decline in tea and indigo is due to special causes noticed elsewhere. Cotton and jute manufactures had both shown a very notable increase in the last two years, and it is not surprising to find that the figures of the year under report are lower in the case of cotton and only slightly higher in respect of jute.

As regards cotton yarns, which also were exported in exceptionally large quantity in 1901-02, there was a decline, though the exports are still high.

TRADE.

Exports.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
	£	£	£	£	£
Raw cotton -	7,459,000	6,617,000	6,752,000	9,617,000	9,838,000
Cotton yarns -	4,402,000	4,601,000	2,780,000	6,211,000	5,693,000
Cotton piece goods, &c.	790,000	915,000	1,022,000	1,032,000	978,000
Raw jute -	4,628,000	5,381,000	7,245,000	7,865,000	7,418,000
Jute manufactures	3,865,000	4,176,000	5,243,000	5,807,000	6,013,000
Wool, raw -	835,000	904,000	602,000	529,000	777,000
Rice and rice flour -	10,543,000	8,731,000	8,813,000	9,280,000	12,597,000
Wheat -	6,480,000	2,606,000	20,000	2,171,000	3,010,000
Oilseeds -	7,898,000	6,733,000	6,009,000	11,186,000	9,922,000
Tea -	5,363,000	6,061,000	6,367,000	5,433,000	4,908,000
Coffee -	1,167,000	990,000	819,000	833,000	881,000
Opium -	4,751,000	5,460,000	6,304,000	5,682,000	5,345,000
Indigo -	1,980,000	1,795,000	1,424,000	1,235,000	804,000
Hides and skins -	4,966,000	6,975,000	7,655,000	5,487,000	5,623,000

The proportion of the total trade in merchandise on private account which was carried on directly with European countries was about 63½ per cent., omitting the trade with Egypt, much of which really goes to Europe; it includes 83½ per cent. of the imports and 50½ per cent. of the exports. The trade with the United Kingdom was about 64½ per cent. of the whole private merchandise trade with Europe, including 79½ per cent. of the imports from Europe; and it constituted 40½ per cent. of the total trade in merchandise on private account against 40½ per cent. in 1901-02.

The value of India's trade in private merchandise with some of the chief countries, imports and exports combined, has fluctuated as follows in the last six years:—

—	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.
	£	£	£	£	£
United Kingdom -	53,257,000	53,645,000	53,806,000	55,705,000	56,442,000
France -	5,905,000	5,127,000	4,750,000	6,848,000	7,047,000
China -	9,697,000	10,541,000	9,597,000	12,986,000	12,128,000
Germany -	6,655,000	6,144,000	7,882,000	8,810,000	8,225,000
Straits Settlements -	5,320,000	5,157,000	6,273,000	5,997,000	6,731,000
United States of America -	4,500,000	5,907,000	5,655,000	6,379,000	6,499,000
Russia -	1,455,000	1,683,000	2,059,000	2,266,000	2,064,000
Austria-Hungary -	3,017,000	2,733,000	3,904,000	4,216,000	3,847,000
Belgium -	4,620,000	3,514,000	3,994,000	5,161,000	5,371,000
Italy -	2,585,000	2,336,000	2,630,000	2,610,000	2,836,000
Ceylon -	3,341,000	3,273,000	3,799,000	3,663,000	3,489,000
Japan -	3,855,000	4,571,000	1,958,000	5,118,000	4,446,000



## TRADE.

The following figures show the proportionate share of each province and of the five chief ports in the private trade with foreign countries in merchandise only:—

	Imports (percentages).			Exports (percentages).		
	1900-01.	1901-02.	1902-03.	1900-01.	1901-02.	1902-03.
<b>PROVINCES:</b>						
Bengal	41.8	40.3	41.7	51.3	44.5	41.8
Bombay and Sind	40.5	42.6	41.6	28.4	37.5	36.0
Madras	8.7	9.5	9.1	10.9	9.5	10.2
Burma	9.0	7.6	7.6	9.4	8.5	12.0
	100	100	100	100	100	100
<b>CHIEF PORTS:</b>						
Calcutta	41.7	40.1	41.5	50.5	43.1	40.4
Bombay	34.5	34.7	35.0	25.3	30.4	29.8
Karachi	6.0	5.2	6.6	3.1	7.1	6.2
Madras	7.4	7.4	7.7	5.0	3.6	3.7
Rangoon	8.8	7.6	7.4	6.7	6.5	9.0

The foreign export trade of Bombay has made a considerable recovery in the last two years, after two years of great depression during the period of famine and the disorganisation of the mill industry. Nearly 74 per cent. of the trade in treasure belongs to Bombay; in merchandise Calcutta was considerably ahead of the port of Bombay, the former possessing £56,465,000 in 1902-03 and the latter £43,976,000 as the total value of their export and import trade.

The net imports of treasure were £10,440,500, or £4,353,500 more than those of the previous year. The balance of trade, or excess of seaborne foreign exports over imports of merchandise and treasure, both on Government and private account, was, as above stated, £18,611,200, or more than 3 per cent. above the figure of 1901-02.

## Land trade.

The frontier trade, after increasing steadily during recent years, received a set back in 1902-03 to the extent of £1,000,000, the decrease being most marked in the trade with Kashmir. Of the total of £8,573,300, about two-fifths crossed the north-west frontier, including trade with Kashmir, while the trade with Nepal, together with the small trade carried on with Thibet (about £200,000 a year in value) was rather less than the north-west frontier trade. The Nepal trade (value £2,562,000 in 1902-03) is carried on, not so much with the valley of Nepal as with the rice lands which skirt the southern face of the mountains. It is also to be observed, in respect of other portions of the frontier trade, that the figures include trade with tracts such as Kashmir and the Shan States, much of which cannot properly be regarded as trans-frontier trade. Trade with Kashmir declined, as did the trade with southern Afghanistan; that with Kabul again showed a satisfactory recovery. The new caravan route to Persia from Quetta, by way of Nushki, has not quite fulfilled expectations, and the trade with Seistan and the neighbouring regions was small (£36,000). The trade with Western China, so far as it is registered, returned to about the figures of 1900-01; but there is reason to believe that a large part, perhaps half, of the frontier trade of Burma escapes registration. Taking the frontier trade as a whole, the chief items were, among imports, food grains (value £911,200) and, among exports, cotton goods (value £1,433,500).

## Coasting trade.

The combined import and export trade in merchandise and treasure carried on by coasting vessels is said to have represented a value of £46,000,000 during 1902-03, or about 8 per cent. less than the trade of 1901-02. It is to be observed that in this calculation each transaction is counted twice, and the value of the merchandise and treasure concerned

stands at about half the above figure, or 23 millions sterling. The only remarkable improvements are in the exports of mineral oils from Burma and in the transport of raw cotton, of which there was a very heavy crop.

TRADE.

MANUFACTURES.

MANUFACTURES.  
General.

The domestic industries of India, such as weaving and spinning, pottery, brass-work, iron-work, and art work of many kinds, continue to be practised after ancient methods all over the continent of India. But Indian fabrics and products, made on a small scale by workers at their homes, have for years past been giving way before the cheaper cotton yarn and fabrics, and the iron or steel products of British factories. Meanwhile, without any protection, favour, or advantage other than is afforded by cheap Indian labour and by the production of raw materials in India, manufacturing industries have been growing up, and steam power factories are at work, among which those for spinning and weaving cotton and jute are the most important, though a certain amount of employment is given by the mills for spinning and weaving silk or woollens, for making paper or sawing timber, by tile factories, printing presses, and so forth. Steam power is also largely employed in factories on tea gardens and indigo estates.

An Exhibition of Indian Art was opened at Delhi on the 30th December 1902 in connection with the Coronation Durbar. As its name implies, it was not intended to have an economic or industrial character; but the art manufactures of India have a very important place among her industries, and the exhibition must be mentioned here as being intended for their promotion and encouragement. An official catalogue, the value of which is attested by the name of its author, Sir George Watt, C.I.E., has recently been published under the name "Indian Art at Delhi," and contains much information of permanent interest regarding Indian arts and industries.

There were at the end of the year 1902-03 in British India and Native States 201 cotton mills containing 43,676 looms and 5,164,360 spindles, and giving employment on an average to 178,444 persons every day. The capital invested, so far as this information is given, was £11,698,000; but there is no statement of the capital of 13 mills worked by private proprietors. The total might be estimated at about 12 millions sterling. The industry dates from 1851, when the first mill was started. It is located, as regards 70 per cent. of it, in the Bombay Presidency, while there are 20 mills in the territory of Native States and in French possessions in India. The out-turn of yarn in recent years has been as follows in British India:—

Cotton mills.

	Counts above 20s.	Lower Counts.	Total.
	Lbs.	Lbs.	Lbs.
1897-98	60,867,446	392,791,900	453,659,346
1898-99	61,353,230	441,277,034	502,616,985
1899-1900	62,093,277	439,591,918	501,294,539
1900-01	70,005,109	272,772,438	342,777,547
1901-02	84,396,316	475,608,532	560,004,848
1902-03	95,779,659	463,032,381	558,812,040

The great decline in the low-count yarns in 1900-01 was due partly to the famine in India, which impaired the purchasing power of the people at the same time that it raised the price of raw material, and partly to the collapse of the Chinese market, which in turn was caused by over-supply from India and Japan, and by the political and military events in China. In 1901-02, with the passing away of these causes of depression, and a reduction in the prices of raw cotton following on larger crops, the mills resumed operations with great activity. In the year under review, the Bombay Presidency produced 75 per cent. of all the yarn, Bengal 8 per cent., Madras 6 per cent.,

**MANUFAC-** The United Provinces about 5 per cent., and the Central Provinces 4 per cent. The production of yarns of counts above 20s. continues to increase, and the Bombay mills now spin an appreciable quantity (20 per cent. of their output in 1902-03) of these higher counts. The out-turn of finer yarns, 31s. to 40s., in Indian mills increased from 11 millions of pounds in 1900-01 to about 12½ millions in each of the two later years. The Bombay mills also spin an appreciable quantity of yarns of No. 40 and upwards, using Egyptian or other imported cotton.

The production of woven goods by cotton mills in British India rose from 115,966,100 lbs. to 117,284,600 lbs., of which 86 per cent. came from the Bombay Presidency. There is hardly any weaving done by factories in Bengal; Madras and the Central Provinces contributed 4 and 6 per cent. respectively of the woven goods. These goods are mainly unbleached grey fabrics; only in Madras did any very large proportion of the weaving consist of finer goods, and there these fabrics constituted 58 per cent. of the production. It is to be observed, however, that there is a very decided tendency to increase the output of the finer classes of goods, which stood at 22,841,000 lbs. in 1902-03, or nearly 16 per cent. more than in the preceding year, the out-turn of grey goods being rather lower than the high figure of that year. The out-turn of mills in the Native States, in Berar, and in Pondicherry, is stated as follows:—1900-01, yarn 10,195,500 lbs., woven goods 2,903,000 lbs.; 1901-02, yarn 12,933,300 lbs., woven goods 3,684,500 lbs.; 1902-03, yarn 17,422,500 lbs., woven goods 5,489,400 lbs.

**Jute mills.**

The number of jute mills in 1902-03 was 36, containing 17,091 looms and 350,130 spindles, and employing a daily average of about 118,000 persons. All the mills, with the exception of one at Cawnpore, are in the province of Bengal, and most of them are in the vicinity of Calcutta. The capital employed by these mills is about £4,800,000, of which rather more than one-third is sterling capital. The rupee capital invested has nearly doubled in the last ten years. In 1901-02 the corresponding figures were 35 mills, 114,000 hands, 16,021 looms, and 329,298 spindles. There were four woollen mills at work at the end of 1902, containing 25,236 spindles and 669 looms, and producing goods valued at £187,600 in the year. Only two of the mills, those at Cawnpore and at Dhariwal, in the Punjab, are of great importance. The fabrics consist chiefly of blankets, serges, and cloths worn by the Army and the police, and an admixture of Australian wool is used. There is not much demand in India for woollen goods except for descriptions which could hardly be made profitably in India in competition with European mills, and any large expansion of the industry can hardly be expected. There are in various places factories for the weaving of carpets and rugs, but though these industries are in the aggregate extensive they are individually small, and the weaving is done in hand-loom.

**Paper mills.**

There were eight paper mills at work in India, employing a daily average of 4,865 hands, and producing in 1902 about 46½ million lbs. of paper, valued at £429,200. Most of the foolscap, blotting paper, notepaper, and envelopes used in Government offices is now obtained from the Indian mills; but there has been a depression in the paper-making industry in Bengal in recent years, owing to the importation in large quantities of cheap paper made from wood pulp, which is of more attractive appearance, if less durable, than paper made from grass, gunnies, and rags in the Bengal mills. Small paper works, making common paper without machinery, exist in several provinces, but for these petty industries no statistics are available.

**Other industries.**

In 1902 there were 27 breweries at work, which produced during the year 6,474,860 gallons of beer and porter. The Commissariat Department bought nearly half of this malt liquor for the use of European soldiers. The largest brewery was at Murree in the Punjab Himalayas, and the output of that concern was over a million gallons in 1902. The quantity of beer, porter, and cider imported into India was 3,820,000 gallons in 1902-03, or about two thirds of the quantity produced in the country.

There are a large number of cotton spinning factories or presses, indigo factories of all sizes and kinds, iron and brass foundries, &c. scattered

throughout the country, which are enumerated more or less roughly in the annual returns. But nothing illustrates better the present state of industrial development in India than the fact that, after the cotton and jute industries, and apart from the indigenous industries, there was only one of the manufacturing industries, strictly so called, namely the iron and brass foundries, in which as many as 20,000 persons are returned as having been employed during the year. In the preparation of agricultural staples for the market, employment is found for larger numbers; indigo factories, for instance, employed over 81,000 workers; cotton ginning, cleaning, and pressing mills over 65,000; jute presses 22,000. But of manufacturing industries properly so called, which are capable of expansion apart from the increased productiveness of the soil, the most important, after cotton and jute mills, are the iron and brass foundries (20,674 workers), silk filatures (10,652), tanneries (8,626), and others of still less importance. It must not, however, be forgotten that the returns upon which these figures are based are in most cases of very doubtful value. Omitting these untrustworthy returns of the minor industries, the following table gives some particulars as to industrial employment:—

MANUFACTURES.

	Average daily Number of Employés.			
	Men.	Women.	Children and young Persons.	Total.
Cotton mills (figures for 1902-03) -	111,539	36,325	29,766	178,444*
Jute mills ( " " ) -	77,114	20,253	20,699	118,066
Woollen mills ( " " ) -	—	—	—	2,854
Paper mills ( " " ) -	—	—	—	4,865
Coal mines ( " 1902) -	66,521	27,218	4,573	98,312
Other mines ( " " ) -	45,478	9,479	4,901	57,853

\* Details defective.

The average number of men, women, and children shown in a table below to have been employed in 1902 in the factories coming under the Factories Act is 541,634. If to these be added the figures given above for employment in mines, a total of 697,799 results. The total number of workers in large industries given in the General Census report is 688,352. The progress of the agricultural industries, such as the tea industry and the indigo industry, and also that of the coal industry, has been noticed in the chapter on agriculture and mineral resources, as is the usual practice in these annual Statements.

FACTORIES ACT.

FACTORIES ACT.

The present Indian Factories Act came into force on the 1st January 1892. The changes introduced into the previous law were, briefly:—

The law could be 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;

The minimum age for child labourers was raised from seven to nine years, and the maximum age from 12 to 14 years;

The maximum hours for child labour in any one day were reduced from nine hours to seven hours, and their employment at night-time was forbidden;

The hours of labour for women workers, which were unrestricted under the Indian Factory Act of 1881, were limited by the Act of 1892 to 11 hours a day, with intervals amounting to 1½ hours;

Hours of rest during work were prescribed for all labourers.

FACTORY  
ACT.

The reports of factory inspectors show the number of factories inspected, and the results of the inspections, to have been as follows:—

STATISTICS OF FACTORIES IN INDIA, INSPECTED UNDER THE FACTORY ACT  
DURING THE YEAR 1902.

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 from Sunday Stoppage.		Fatal.	Serious.	Minor.	Total.
Bengal	252	161,435	25,231	12,486	205,162	127	9	90	2	33	194	456	683
United Provinces	102	20,811	2,564	1,685	26,060	76	26	6	1	5	51	70	126
Punjab	162	14,630	2,052	768	17,450	106	48	10	2	7	16	124	157
North West Frontier Province.	1	10	12	—	22	1	—	—	—	—	—	—	—
Burma	169	27,890	527	100	28,517	164	1	4	5	3	102	60	165
Central Provinces	107	14,094	5,408	1,298	20,800	49	67	1	3	1	41	80	72
Madras	83	30,908	2,583	1,223	35,408	75	4	4	—	6	10	222	242
Bombay	400	131,227	22,118	6,779	160,224	222	114	2	2	27	71	1,421	1,699
Assam	10	1,225	407	97	1,729	10	—	—	—	2	—	—	2
Ajmere	1	558	45	3	606	1	—	—	—	—	—	4	4
Berar	202	2,379	6,829	223	16,496	100	102	—	2	—	10	12	22
Total, 1902	1,511	424,276	85,822	21,277	541,634	1,022	267	117	24	26	425	2,217	2,107
Total, 1901	1,222	402,960	78,503	22,462	514,216	915	302	120	22	27	442	2,422	2,226

The work of inspectors was well performed in most provinces. The sanitary condition of the factories is reported to be generally satisfactory, and the subject continues to receive the careful attention of the inspecting officers. A satisfactory account is also given of the health and general condition of the operatives, although in Berar they have suffered somewhat from the plague. There was no appreciable decline in the frequency of accidents. The increase in the number of factories and of employes is to be taken into account; but it appears that, while the number of accidents per factory was rather lower than in the preceding year, the proportion which they bore to the number of operatives was approximately the same, viz., 1 to every 174. Possibly the greater care taken in reporting accidents may conceal a tendency towards a decline in their number. Detailed statistics as to the wages of mill operatives are now collected, with a view to publication in the yearly volume "Prices and Wages," published by the Government of India. The wages compare favourably with those of agricultural labourers in all provinces.

CHAPTER XVI.

FRONTIERS AND NATIVE STATES.

FRONTIERS  
AND  
FRONTIER  
STATES.

The year under review was the first year of the new Provincial Settlement. The Imperial assignment for Baluchistan was £114,000, as against £86,000 in the past. The revenues of the Agency, including this allotment of £114,000, amounted to £172,000, and the total expenditure was £164,000.

Baluchistan  
and the  
Persian  
Frontier.

The season was generally unfavourable to cultivators. The drought of the previous year continued and the rainfall throughout the Province was deficient. The districts which suffered most from want of seasonable rain were Quetta-Pishin, Zhob, and Chagai. The grass crops failed in many places, and considerable mortality occurred amongst cattle and sheep. As was to be expected in such conditions the Land Revenue showed a further falling-off. The total receipts under this head were approximately £36,000 as against £53,000 in 1893-4, the best year, and £34,000 in 1899-1900, the worst year in the last decade.

The survey of a line of railway from Quetta to Nushki having been completed and the sanction of the Secretary of State having been obtained for the construction of the line, tunnelling was commenced, and a considerable amount of earthwork was completed. Though no new roads were initiated, the Musa Khel-Durg road was continued and the Nushki road was improved, while certain improvements were made in the Dāk bungalows and rest-houses, and wells were dug on the Nushki-Seistan Trade route.

The trade returns through Nushki showed a large falling-off, the total of the year's returns being only £70,000, of which the imports are represented by £39,000 and the exports by £31,000, as against £80,000 and £50,000 for the exports and imports in the previous twelve months. The falling-off is attributed chiefly to the prevailing scarcity in these regions. Southern Khorassan, as well as the valley of the Helmand, and the larger portions of the Governorship of Kandahar, in which are included the trans-frontier Afghan districts of Shorawak and the Registan, were devastated by the worst famine which has been recorded for 30 years or more. The new Persian tariff, which was recently brought into force, has had an adverse effect on trade by the Nushki route, whilst Russian competition, which is favoured by the new tariff, has also proved detrimental to British enterprise.

The appointment of a native assistant to the Political Agent in Kelat was sanctioned with a view to the exercise of better control over the Sarawan country. A new Levy Thana was also established in this district. The Jhalawan country was in an unsettled condition. Many cases of dispute were inquired into by the Political Agent in Kelat, and measures for the better control of the district were under consideration.

On the Mekran coast discontent prevailed amongst traders at Gwadar in consequence of steps taken by the Sultan of Muscat to assimilate the customs tariff at that port with the tariff in force at Muscat. It is not improbable that this will lead to a great deal of the Gwadar trade passing to Pasni, which is already showing signs of becoming a more considerable port.

The operations carried out by the troops under the Political Agent, Kelat in 1901-02, which ended with the capture of Nodiz fort, have had a good effect, and for the first time for many years Mekran was undisturbed. In accordance with arrangements made in 1902 the Political Agent, Mekran, met the Persian Governor-General of Kerman at Pishin, on the Persian side of the border, and settled pending border cases.

Mir Mehrulla Khan, the Nazim or Governor under the Khan of Kelat, is reported to have done good work in the district under his charge. He received the C.I.E. in January 1903.

FRONTIERS  
AND  
FRONTIER  
STATES.

The Budget estimates submitted by the Nazim show an estimated closing balance of £850.

Affairs in Las Bela and in Karan call for no special remark.

The western frontier of Baluchistan enjoyed complete rest and immunity from raids and disturbances.

Mahomed Umar, who for some time past has been a disturber of the peace on the Perso-Baluch frontier, passed with his armed followers into Afghanistan. He was reported to be in Kandahar, and the Amir has promised not to let him live near the British border.

With the exception of one or two frontier raids on a small scale, and some cases of petty thieving and robbery, attributable to the prevailing scarcity, the peace of the Afghan border was undisturbed.

In January 1903, Colonel McMahon, Revenue Commissioner, Baluchistan, was deputed to arbitrate between Persians and Afghans in a dispute regarding the Helmund water and other kindred matters, under the terms of the British Treaty with Persia of 1857.

The North-  
Western  
Province.

The excitement which not unnaturally prevailed along the border after the death of the Amir of Afghanistan in October 1901 gradually subsided. In April 1902 a great Durbar was held at Peshawur, at which the Viceroy met the Chiefs of the settled districts and the Jirgas of the trans-border clans and made a clear statement to them of the policy of the Government.

The inauguration of the Province in November 1901 had found the Mahsuds under blockade for a long series of offences. A merely passive blockade having failed to entirely achieve its object, active retaliatory measures were taken and columns despatched into the Mahsud country. The tribe then submitted and made the full reparation required. The blockade was raised in March 1902, and since then a satisfactory state of affairs has been maintained on that portion of the border.

Later in the same year, measures were taken to clear the Bannu and Kohat borders which had for years been harassed by gangs of outlaws, mostly Darwesh Khal Wazirs. The appearance of troops in their country was sufficient to induce the tribes to surrender most of these outlaws, who received long terms of imprisonment.

There were no disturbances in the Khyber. The construction of a camel road from Peshawur to Landi-Kotal through the Mullagar country was commenced.

At the close of the year under review the frontier enjoyed complete peace. There were no signs of unrest on the northern border and to the south the long succession of Waziri outrages had been checked.

A joint Commission was appointed to settle disputes between Afghan and British subjects on the Kurram and Waziristan borders.

By the construction of such works as the Nowshera-Dargai and Kohat-Thal Railways, the extension of the main line to Janrud, and the re-alignment of the Kohat Pass Road, not only was the military position strengthened, but the prosperity and trade of the settled districts were materially advanced; at the same time the introduction of methods of civilisation into the trans-border charges was continued by means of hospital schools and courts of justice.

In all the agencies the garrisons were reduced. The Kurram Valley is now held by militia alone. On the Samana and in the Tochi the military were withdrawn from several posts. The policy of concentrating the troops at points of military importance and entrusting the outposts of the province to the border military police was steadily carried out.

Dir, Swat  
and Chitral  
Agency.

The political relations with the chiefs and tribes of the Agency were on the whole satisfactory. There was no serious trouble from the preaching of religious agitators. The new Queen Victoria Hospital at Chakdarrā was completed during the year under review, and was handed over to the Civil Surgeon. It is likely to prove of value as a civilising and conciliating influence.

The Chitral road was maintained in good order. The bridge over the Panjkora river was completed in May 1902, and in March 1903 the permanent steel bridge over the Swat river at Chakdarra was opened.

The frontier trade returns for 1902-03 have not yet been furnished; but the returns for the previous year, both for exports and imports, were satisfactory; and the prospect of further development were encouraging. The Chief Commissioner's views were expressed in his report as follows:—

“The general improvement of trade with the territories beyond our border is a matter for satisfaction on political as well as economic grounds, as it gives the tribesmen who so largely profit by it an additional stimulus for maintaining the peace of the border, and also tends to promote internal harmony among them. The country is becoming more settled every year and less disturbed by faction fights and the raids of budmashes. Hence new and shorter routes are being opened up, and trade that before came by the Malakand from Swat and Chitral now comes direct through the Shakol and Morad passes, and from Bajaur by the Totai road. The fact that the registration port for this trade is in the Malakand explains the comparatively slight increase shown in the returns of the Bajaur trade.”

The Hill Bhitanis hitherto under the political control of the Political Agent, Wana, were transferred as a matter of convenience to the control of the Deputy Commissioner Dera Ismail Khan and his assistant in the Tank sub-division.

No events of political importance occurred in Kashmir in 1902-3. The figures in regard to trade, revenue, &c., are given in Chapter XV. Kashmir.

The Nipal Durbar continued to give the same facilities as in the past for the recruitment of Gurkhas for the Indian army. 1,790 men were enlisted for Gurkha Regiments and Military Police Battalions during the year. The relations of the Durbar with China and Tibet remained friendly, and no cause of friction arose during the year under report. Nipal.

The full trade returns for 1902-03 are not available at present, but for the eleven months ending 28th February 1903 the exports amounted to £1,470,000 and the imports to £885,000. The figures are somewhat lower than those for the corresponding period of the previous year.

The total value of trade between Sikkim and Tibet *viâ* Yatung amounted to £127,000 as against £110,000 in the previous year. Sikkim and  
Bhutan.

Steps to protect the boundary north of Ghaogong—between Sikkim and Tibet—were necessary during the year. An account of the action taken is given in the Papers relating to Tibet, presented to both Houses of Parliament by command of His Majesty in 1904.

The country was swept by severe hailstorms in April and May, which did great damage to the crops; consequently the season was unfavourable for cultivators and the receipts were poor.

The cash balance of the State on the 31st March 1903 was about £2,000.

The Deb Raja of Bhutan died in December 1902.

Large numbers of Nepalese, estimated at 20,000 in number, from Sikkim, Nepal, and British territory, have lately settled on grants of land obtained from the Bhutan Government in the Bhutia Terai and lower slopes of the Himalayas in Bhutan.

In Manipur the rainfall was good and well distributed throughout the year, and the harvest plentiful. Manipur.

The revenue of the State amounted to £23,000 as against £26,000 in the previous year. There was a falling off in the Land Revenue, Hill House Tax, Fisheries, and Forests. The decrease of the Land Revenue was due to change in the system of collection, owing to which a considerable balance was left outstanding at the close of the year. It is expected that this will soon be realised.

The decrease under Hill House Tax was due to the exemption of Nagas living in the plains. Owing to heavy floods the profits of fisheries fell off.

The expenditure during the year was £24,000 against £30,000 in the previous year. The closing balance showed a sum of £15,000 at the credit of the State against £16,000 at the end of 1901-02.

Several cases of serious crime were reported among the hill tribes.



FRONTIERS  
AND  
FRONTIER  
STATES.ASSAM  
frontier.

The Assam frontier tribes generally behaved well; but the Daflas and the Passi Meyongs (Abors) caused some trouble; whilst the Naga tribes on the southern border engaged in sanguinary inter-tribal feuds, and measures were taken to restore order.

The little State of Cherra, in the Khasi and Jaintia Hills district, had been quiet since the confirmation by Government of U. Roba Singh as Siem, though many of the people still refused to submit to him. An inquiry was made during the year by the Deputy Commissioner in regard to the system of succession to the Siemship prevailing in each State. Complaints having been made of the unsatisfactory administration of justice by the Wahadadas of the Shella Confederacy, some changes were made in the rules laid down for their guidance.

The Chin  
Hills.

The Chin Hills proper enjoyed another year of prosperity and progress, and indications were not wanting of the gradual adoption of more enlightened ideas and methods of the tribesmen.

A raid by the Lasa Chins into the Upper Chindwin district resulted in the capture of a party of fishermen. These were released, but the affair still awaited final settlement.

In the Pakokka Chin Hills the year was generally uneventful. Tribute was collected with greater ease than ever before. There was, however, a serious raid by certain villagers from beyond the frontier, which necessitated a punitive expedition. Compensation was exacted and order restored.

Kachin Hills  
and N.E.  
Burma.

In the Kachin Hills district the tranquillity of the border was practically unbroken. Relations between the British and Chinese officials improved as a result of the Mauai agreement. Postal communication was established between Bhamo and Tengyueh. The stationing of an officer of the Chinese Imperial Customs' Service at the latter place has proved a valuable encouragement to the trade between China and Burma. There was a noteworthy decrease in the number of forays into British territory from the Chinese side of the border.

The Shan  
States and  
Karenni.

In the Northern Shan States the Hsipaw Sawbwa Hkun Saing, C.I.E., died in May 1902. His eldest son succeeded him, and has been recognised as Sawbwa.

Part of Northern Hsenwi was brought, for the purposes of revenue administration, under the direct control of the Superintendent.

There was no diminution in the amount of crime in the Northern Shan States during the year, and the chiefs showed very little energy in investigating it.

The year was an unfavourable one for the crops owing to the unsatisfactory nature of the rainfall; but garden cultivation increased, and more tea was grown than in the previous year. Trade was brisk, and exports by rail showed a large increase.

The State of Mong-Mit was being administered as a sub-division of the Ruby Mines district during the minority of the young Sawbwa.

In the Southern Shan States the period under review was on the whole a time of prosperity and tranquillity. A new school for the sons of Shan Chiefs was opened at TANGOJYI. It promises to be highly successful.

Disturbances in Northern Siam adversely affected trade between that country and the Shan States, but insurgents were prevented from crossing the border. Relations with the French officials across the frontier continued to be friendly.

There was no serious outbreak of crime during the year, and the working of the civil police was satisfactory.

The year was unfavourable to cultivators, the rainfall being generally inadequate.

The volume of trade with Burma decreased. It is seriously checked by want of any cheap means of transport between the Shan States and Burma.

Native administration in Karenni was on the whole satisfactory, and the chiefs continued to be on friendly terms.

NATIVE STATES.

NATIVE STATES.

The conditions under which the work of the three Agencies of the Thagi and Dakaiti Department in Rajputana, Central India, and Hyderabad was carried out remained unchanged during the year under review. Detailed reports for the year 1903 have not yet been furnished.

In the Rajputana Agency the relations of the Department with Native States was in every way satisfactory. The Central Criminal Identification Bureau was opened at Abu, and good results were obtained. The most important work accomplished during the year was the reduction to order of the turbulent Bhils on the Rewa Kantha border, who in 1901 showed signs of giving serious trouble. The measures adopted were successful. Two of the Bhil leaders were arrested and many of those implicated were brought to justice. In the Central India Agency sanction was obtained to the introduction of the system of identification of criminals by means of finger-marks, and measures were taken for the early opening of a Criminal Identification Bureau at Indore.

There was a decrease of crime in Central India and in Hyderabad. In Central India the decrease is shared by the great majority of the States, Indore and Gwalior being conspicuous in this respect. In Rajputana the state of crime remained practically the same as in the preceding year.

The number of cases is shown as follows :—

Year.	Dacoity in		
	Rajputana.	Central India.	Hyderabad and Berar.
1900	1,086	1,051	620
1901	845	627	222
1902	846	432	246

The Hyderabad Government does not publish an Annual Administration Report, and no further information is available in regard to the State than that which was included in last year's statement.

The most important event of the year, viz., the Agreement concluded with His Highness the Nizam which provided for the lease to the British Government in perpetuity of the Hyderabad Assigned Districts, was noticed in last year's Statement. Details connected with this Agreement are given in Parliamentary Paper Cd. 1321, 1902.

Information as to Dacoity in the State is given above.

The rainfall in the Mysore State was above the average for 30 years past. Whilst the season was favourable to cultivators and the retail prices of food grains were lower than in the preceding year, plague was severe, the returns showing a considerable increase, viz., 35,480 cases and 26,155 deaths, as against 21,976 cases and 16,083 deaths in 1901-02. Sanitary improvements were effected and measures were generally adopted to arrest the spread of the disease. The meeting of the Representative Assembly was again dispensed with on account of the plague in the City of Mysore.

The following regulations were passed during the year :—

"Weights and Measures Regulation," "Amendment of Excise Regulation," "Amendment of Law of Evidence with respect to Bankers' Books," "Mysore Registration Regulation." Other legislative measures were under consideration.

NATIVE STATES. The following are the principal figures in connection with Revenue and Expenditure of the State:—

REVENUE.		EXPENDITURE.	
Land Revenue -	£662,533	Land Revenue -	£123,066
Mining Royalty and leases	102,133	General Administration -	50,000
Forests -	100,533	Palace -	93,333
Excise -	245,866	Law and Justice -	66,933
Railways -	38,666	Police -	65,666
Canvery Falls Scheme -	79,000	Education -	47,133
		Allowances, &c. (including Tribute) -	255,000
Total (including other sources) -	£1,378,000	Military -	95,800
		Public Works -	179,333
		Plague charges -	7,066
		Railways -	48,733
		Canvery Falls Scheme -	52,733
		Total (including other sources) -	£1,344,000

The sum expended on Public Works, which is given in the Statement of Revenue of Expenditure as £179,000, was increased by assignments from municipal and other sources to £258,000.

The principal items of expenditure were £53,000 on communications, work and repairs; and £51,000 on irrigation. It may be noted here that the Cauvery Electric Power Scheme was completed during the year under review. Electric installations were successfully carried out, and electricity of about 4,000 H.P. was distributed to several mines on the Kolar gold fields. Expenditure on the undertaking, capital and revenue, amounted approximately to £53,000, and the earnings for the year were £79,000.

During the year under report the construction of no lines of railway was undertaken by the State. The length of open lines remained the same as in the preceding year, viz., 401 miles metre gauge, 10 miles standard gauge.

Some account of the gold production of the Mysore gold mines is given in Chapter X.

#### Baroda.

The rainfall, though late, was ample in the Baroda State. With the harvesting of the monsoon crops, the help which had been given to the people by the Darbar during the three preceding years of famine and scarcity was no longer considered necessary, and the famine was declared to be over on the 1st December 1902. During the eight months, April to November 1902, the sum of £95,751 was spent on various relief measures. Adding this sum to the amount spent during the preceding three years, the total amount spent by the Darbar on famine relief operations comes to, roughly, £680,000.

There were cases of plague in all the Divisions of the State. The Kadi Division suffered the least. Sporadic cases continued to occur till the end of November, and the epidemic assumed a serious form till the middle of December 1902. The returns for the whole State show 12,746 cases and 9,121 deaths, the highest number recorded in one year since the commencement of the plague in 1897. Endeavours were made to prevent the spread of the disease, and the usual precautionary measures were adopted. The people knew from past experience the advantages of leaving their homes when plague appeared, and therefore most of them evacuated infected localities of their own free will.

The new rules published by the Darbar for the suppression of traffic in contraband salt in Baroda, Kadi, and Naosari Divisions are reported to have worked well during the year.

Various railway schemes engaged the attention of the Darbar. It was decided amongst other things to defer the construction of the Miagam-Sinor line till the financial circumstances of the State improve. The regular construction of the Padra-Ranu-Dabka extension, and Ranu-Mobha-Kanjat extension, which are on the 2 ft. 6 in. gauge, was started by the Bombay.

Baroda, and Central India Railway Company on behalf of the Baroda Darbar in September 1902, and the work was approaching completion.

NATIVE STATES.

It may be noted here that up to March 1903, His Highness the Gaekwar had constructed 222·37 miles of rail in his territory at a cost of nearly £533,000, and the net earnings amount to about £23,000 per annum. Besides the above amount, His Highness has taken shares to the amount of £232,000 in the Tapti Valley and Ahmedabad Prantji Railways, as these lines pass through a portion of his territory, and he receives annually £13,000 as interest on the capital invested. Railways thus bring in about £36,000 a year to the State.

Figures in regard to the Revenue and Expenditure of the State for the year 1902-03 are not yet available.

The Administration Report of the Rajputana Agency for the year 1902-03 has not been received. Rajputana.

Scarcity, amounting in some parts to famine, continued in the Malwa and Bhopawar Agencies, and in the western tracts of the Gwalior and Indore States until the monsoon set in, when the rains were sufficient and evenly distributed throughout Central India. The public health continued generally good, and the Agency was free from any serious epidemic till October 1902, when plague, which had so long spared Central India, broke out in a village in the Indore State to the south of Narbada in the Bohopawar Agency, and in spite of all precautionary measures, spread rapidly, eventually finding its way to the capital and outlying villages of the Ratlam State. The disease was imported thence into the Indore City about the first week in February and continued until the close of the year. Central India Agency.

The total outlay on Imperial Public Works in Central India in 1902-03, amounted to £24,149, of which £8,317 was spent on communications and £4,797 on civil buildings. The total expenditure on public works in the Native States was £214,324. The operations of the Public Works Department in the Agency were greatly reduced by the transfer to the chief Native States of the care of the metalled roads in these territories. The total length of road communication maintained by the Imperial Public Works Department during the year under review was 799 miles as compared with 2,717 miles by Native States.

As reported in last year's statement, His Highness the Maharaja Sir Sivaji Rao Holkar retired on the 31st January 1903 from the Chiefship of Indore in favour of his son Tukaji Rao Holkar. The new Maharaja being a minor, the State is now administered by a Native Minister and Council of Regency. Amongst the administrative acts of the year was the conversion of the State currency into British coin. Measures with the object of ameliorating the condition of the *raiya*s were also introduced, and steady progress was made in survey and settlement work. Owing to the bad season the revenue amounted to only £270,000, while the expenditure was £385,000, leaving a deficit of £115,000.

In the Bundelkhand Agency His Highness the Maharaja of Panna, whose deposition was recorded in last year's Statement, was succeeded by his nephew Kunwar Jadvendra Singh. The young Chief was installed in March 1903. The administration of the State during his minority has been vested in a Diwan, assisted by a consultative Council under the general supervision of the Political Agent.

His Highness the Maharaja of Bijawar was entrusted on the 1st January 1903 with the management of his State, subject to certain conditions. His Highness the Nawab of Baoni was also invested with ruling powers, subject to certain securities for their proper exercise.

The affairs of Sikkim and Bhutan have been mentioned in the account of the Frontier States. See page 177. Beugal.

In Cooch Behar, though heavy rain caused some damage to the crops, the year was one of fair prosperity and the public health was good. The excise demand and land revenue were practically collected in full. The work of the police was satisfactory; and there was but little heinous crime.

## NATIVE STATES.

In the matter of education the State compares favourably with neighbouring districts in British territory, though the results of the examinations held during the year were not so good as in 1901-02.

In Hill Tippera the people suffered from failure of the cotton and oil seed crops; otherwise the year was a prosperous one. The administration of the year was generally uneventful. Nearly £20,000 was spent on public works; but of this amount the greater portion was expended in Agartala, the State capital.

The administration of Udaipur, Bonai and Kharsawan was carried on as in the preceding year by managers appointed by Government working under the supervision of the Commissioner of Chota Nagpur. Serious disturbances broke out in the Seraikela in connection with the resettlement made by the Raja; and it was found necessary to depute a European deputy collector with a body of police in order to restore order. The object of the deputation was achieved; and a fresh settlement by Government Agency as prayed for by the *raiyats*, has, since the close of the year, been decided on. The material condition of the people in the Tributary and Political States of Chota Nagpur during the year was satisfactory. Good crops resulted in a slight fall in the price of good grains, and there were no outbreaks of disease.

In most of the Tributary Mahals of Orissa prices were lower than in the previous year; and, though the year was an unhealthy one, the material condition of the people was satisfactory. Collections in the five States under Government management were good except in Narsingpur, which suffered to some extent from drought. In Nayagarh a failure of crops, following on a previous bad year, caused some distress, while a certain degree of scarcity was experienced in Daspalla and Boad.

## United Provinces.

The financial condition of the Rampur State was satisfactory; the year's revenue amounted to £220,000 of which £146,000 were from land and nearly £46,000 from interest on securities. The harvests of the greater part of the State are secured from drought, by a system of canals which bring the water of the various rivers and streams into use for irrigation. Elsewhere masonry wells were being constructed at the cost of the State, an experimental measure which will be further developed if success extends the action already taken. Increased attention was paid to education during the year under review. There was a good rainfall in the Tehri State in 1902-03, and scarcity which threatened the State in the preceding year was averted. The revenues of the State have increased by 56 per cent. since the present ruler assumed charge of the administration. They amounted in 1902-03 to over £23,000. The net income from forests was equal to that from land revenue.

## Punjab States.

In the Phulkian States of the Punjab, plague was prevalent during the year under review. In Nabha and Jind the disease was more active than in the preceding year. In Patiala it was less virulent, but the campaign against it in the hills was not so satisfactorily conducted as in the plains.

During the minority of the Chief of Patiala the affairs of the State continued to be administered by the Council of Regency, in the constitution of which there was no change. Satisfactory results were obtained under the new fiscal system. Settlement operations were impeded to some extent by the plague, and to a more serious extent by the hostility which had sprung up between landlords and tenants in connection with the question of tenant rights, which the absence of previous records rendered a difficult one. At the close of the year, however, the operations were in progress and a fair amount of work was completed.

In the States in the political charge of the Commissioner of Jullundur, the only event of political importance during the year under review was the death of Raja Bije Sen of Mandi in December 1902, and the succession to the Chiefship, in the absence of lawful male issue, of his illegitimate son, Tika Bhawani Singh.

Plague reappeared in Karputhala in October 1902, after a five months cessation, in the Phagwara Tahsil, to which for some time it was confined. Later, however, it spread to other tahsils, and finally became prevalent throughout the State. The disease also broke out in the Faridkot State

towards the end of December 1902. In other respects the health of the people in these two States was good.

NATIVE STATES.

In the Kalsia State, in the political charge of the Commissioner of Delhi, further steps were taken to associate the Chief, Sardur Ranjit Singh, who is now 20 years of age, with the administration of the State. His civil and criminal powers were increased, and it was arranged that he should work with the Council in executive matters.

The agricultural and financial condition of the Pataudi and Loharu and Dujana States showed but little improvement. In the latter State there was an outbreak of plague. Measures were taken to combat the disease.

In the Simla Hill States division, the State of Bilaspur was managed by Wazir Lala Hari Chand during the continued absence of the Chief.

In the Keonthal State, Raja Bije Sain, who had reached 26 years of age, having accepted the conditions required by Government, was granted full powers from 26th June 1902; and the manager, Mian Durga Singh, was removed.

Wazir Bhagwan Das, the last of the hereditary Wazirs of the Jubbal State, died during the year under review. The Chief of the State is a minor. The State was placed in the charge of a Native Manager, and a Council was appointed to assist him. The affairs of the remaining Hill States do not call for any special remark.

The administration of the State of Bahawalpur remained during the year under the guidance of Colonel Grey, C.S.I. The Nawab, who had attained 20 years of age, carried on the duties of Superintendent during the absence of that officer on five months' leave. The work of demarcating a fixed boundary between the State and the adjacent districts of Mooltan and Mazaffargarh was concluded, and similar work on the Dera Ghazi Khan boundary was practically completed.

In October 1902 the Raja of Chamba was attacked by a serious illness, which incapacitated him from attending to the affairs of the State. Pending his recovery the administration of the State was satisfactorily conducted by his brother. The year was not a prosperous one: the harvests were comparatively poor; cattle disease was very prevalent; and both crime and civil legislation increased. The State Hospital continued to do useful work.

Nothing eventful happened on that part of the North-Western Frontier which is under the control of the Punjab Government.

The system of administration in the 15 Feudatory States of the Central Provinces remained unchanged during the year, except in the case of the Sakti State, where the mismanagement of affairs was serious enough to necessitate the transfer of the greater part of the administration to a Diwan selected by the Chief Commissioner.

Central Provinces.

By the death of the Raja Bahadur Pratap Rudra Singh Deo in August 1902 the Sonpur State lost a capable and wise ruler, and the succession passed to his eldest son, who was installed by the Chief Commissioner in November 1902. The harvests of the year compared very favourably with those of the neighbouring Khalsa districts, and with cultivation and trade both steadily expanding, little difficulty was experienced in collecting the land revenue. Settlement work was pushed on vigorously, and the revised assessments recently introduced into several of the States worked very successfully. The year was healthy throughout, the price of food grains easy, and there was but little crime. There was marked improvement in the financial position of all the States, especially of those under direct Government management.

The season in the Travancore State was good, and the rainfall was above the average. Further progress was made in the survey and settlement. There was an increase of Forest settlement work, and a considerable increase in the quantity of timber removed by Government agency.

Madras.

There was an increase in imports and a decrease in exports. The decrease occurred chiefly in the exports of cocoanut products, pepper, and tea. The figures were as follows: imports £837,000, exports £1,057,000, as against £689,000 and £1,132,000 respectively, in the preceding year.

NATIVE  
STATES.

The total expenditure on Public Works was £175,000, of which £53,000 was spent upon communications and £24,000 on irrigation. The revenue of the State showed a further increase. Including debt heads it amounted to £683,000, of which land revenue and salt contributed £154,000 and £143,000 respectively. The balance (including debt heads) was reduced from £680,000 to £662,000. The police force was slightly increased. The admissions into the jails were the smallest during the past decade. Steps were taken to improve the sanitary condition of the jails, but the death-rate was again high. There was a considerable increase in the work of the Vaccination Department.

In the Cochin State the season was favourable to agriculture, and the rainfall was higher than in any of the three preceding years. The current demand of land revenue was £52,000, of which 99·0 per cent. was collected. The correct figures of the arrear balance are not ascertainable, as certain old-standing arrears do not appear in the accounts. The total receipts and charges of the year under service heads amounted to £181,000 and £167,700 respectively, as against £184,000 and £167,600 in the preceding year. The year opened with a cash balance in the treasuries of £20,600 and closed with £14,800. The expenditure on Public Works amounted to £18,000. As in the preceding year, 448 miles of road were maintained. The Cochin State railway was completed and opened for traffic during the year.

The financial condition of the Pudukkottai State was satisfactory. The season was generally favourable, and the prices of the principal food-grains fell. The current demand of land revenue rose from £47,900 in 1901-02 to £49,400 in the year under review. Expenditure on Public Works was £10,800, of which £3,600 was spent on irrigation and £2,800 on roads.

In Banganapalle the rainfall was sufficient and there was a good harvest. The survey and demarcation of the State was nearly completed. The receipts for the year, including the opening balance and a survey loan from Government, amounted to £11,900, and the charges to £10,900.

In the Sandur State the rainfall was untimely and unevenly distributed, and the season was not a good one. However, the extent of land under occupation increased, and prices of food grains fell. The total revenue of the State was £3,832 and the expenditure £3,880.

Bombay.

Out of the 363 Native States under the political control at the Bombay Government, 15 were under British administration at the beginning of the year under review. Of these the principal States were Navanagar, in the Kathiawar Agency; Radhanpur, in the Palanpur Agency; Chota Udepur, Balasinor and Sunth, in the Rewa Kantha Agency; and Sachin, in the Southern Gujarat. The Chiefs of all these States were minors. During the year the Jam Saheb of Navanagar and the Chief of Sunth attained majority and were duly installed.

The other administrative changes which were effected in these States during the year were the abolition of the Kandesh Political Agency, the Dángs coming under the control of the Political Agent, Surat; and the redistribution for administrative purposes of the sub-divisions of the Kathiawar Agency, so as to form three subordinate Agencies instead of four sub-divisions as heretofore.

There was a very marked improvement in the season generally, the rains being abundant though late, and in some places irregular. The rabi crops yielded good outturns in all the Gujarat States with the exception of the Palanpur Agency, where locusts did much damage. Heavy rains in December ruined the crops in two talukas of Sangli and in Kurundvad Senior, but on the whole the season was favourable throughout the Dakhan. Prices were generally easier than in the preceding year, and all famine relief works were closed at the end of the monsoon. Public health improved and the birth-rate rose everywhere; but there was a material increase in the number of deaths on account of plague, which in range and virulence surpassed the record of previous years. Palanpur and Savantvadi were the only States entirely free from the disease; all other States suffered from it more or less severely. The most seriously affected agency was that of the Kolhapur and the Southern Mahratta country, in the latter of which alone there were more

than 18,000 deaths from plague. The decrease in violent crime recorded in 1901-02 was fully maintained during the year under review; dacoity especially showed a very satisfactory diminution. Plague was responsible for a falling off in registration and civil legislation in the majority of States, as well as for a decrease in the number of schools and the attendance of pupils.

NATIVE  
STATES.

The aggregate revenue collections for the year amounted to £2,622,000, an increase of £11,500 over the preceding year, but still considerably below normal. The decline in the sea-borne trade of Cutch was arrested, but the customs revenues fell off slightly. The import trade of the Kathiawar maritime States showed a small reduction, but there was a further large increase of £50,000 in the export trade.

Leaving railways out of account, the amounts expended by the States under the control of the Government of Bombay on public works were generally small. In North Gujarat, the Cutch State expended £21,200 as against £14,600 in the preceding year; Palanpur, £3,515; and Cambay, £2,282. In the South Gujarat States, £6,740 was expended. In the Kathiawar States the outlay on public works, exclusive of famine works, amounted to £101,400; £2,600 was expended in Janjira; £5,100 in Savantvadi; £6,600 in the Satara Jaghirs; and in the Kolhapur State the expenditure amounted to £19,600, which was slightly in excess of that of the previous year.



## CHAPTER XVII.

## ARMY.

ARMY.

The sanctioned establishment for 1902-03 was as follows:—

British Troops	73,509
Miscellaneous Officers	907
Native Troops (including European Officers)	146,745
<b>Total</b>	<b>221,161</b>

Corresponding Total for 1901-1902 220,830

The Hyderabad contingent is not included in the above numbers.

The actual strength and distribution of the Army in India on the 1st April 1903 was as follows:—

	Number of Officers and Men.		Number of Officers and Men.
<b>PUNJAB COMMAND.</b>		<b>MADRAS COMMAND—cont.</b>	
<i>British.</i>		<i>Native.</i>	
Cavalry (8 regiments)	1,960	Cavalry (3 regiments)	1,721
Artillery (28 batteries and companies)	3,363	Artillery (2 batteries, and Native drivers of British batteries).	744
Engineers	9	Sappers and Miners (8 companies)	1,331
Infantry (14 battalions)	14,163	Infantry (24 battalions)	19,457
	19,495		23,258
<i>Native.</i>			37,028
Cavalry (15 regiments)	9,456		
Artillery (7½ batteries, and Native drivers of British batteries).	3,478	<b>BOMBAY COMMAND.</b>	
Sappers and Miners (2 companies)	391	<i>British.</i>	
Infantry (37 battalions)	35,588	Cavalry (1 regiment)	648
	48,913	Artillery (27 batteries and companies).	4,165
	68,408	Engineers	65
		Infantry (12 battalions)	11,989
			16,867
<b>BENGAL COMMAND.</b>		<i>Native.</i>	
<i>British.</i>		Cavalry (7½ regiments)	4,812
Cavalry (3 regiments)	2,033	Artillery (1 battery and Native drivers of British batteries).	1,188
Artillery (28 batteries and companies)	4,542	Sappers and Miners (9 companies)	1,206
Engineers	53	Infantry (28 battalions)	24,091
Infantry (17 battalions)	17,271		31,297
	23,899		48,164
<i>Native.</i>		<b>IN CHITRAL.</b>	
Cavalry (11 regiments)	7,079	<i>British.</i>	
Artillery (Native drivers of British batteries).	305	Engineers	2
Sappers and Miners (5 companies)	893		2
Infantry (31 battalions)	27,298		
	35,575	<i>Native.</i>	
	59,474	Artillery (½ battery)	85
		Sappers and Miners (1 company)	193
<b>MADRAS COMMAND.</b>		Infantry (1 battalion)	743
<i>British.</i>			1,021
Cavalry (2 regiments)	1,290		1,023
Artillery (14 batteries and companies)	2,360		
Engineers	51		
Infantry (10 battalions)	10,074		
	13,775		

	Number of Officers and Men.		Number of Officers and Men.
<b>HYDERABAD CONTINGENT* :—</b>		<b>GRAND TOTAL—cont.</b>	
Cavalry (4 regiments) - - -	2,025	<i>Native.</i>	
Artillery (4 batteries) - - -	522	Cavalry (40½ regiments) - - -	25,361
Infantry (6 battalions) - - -	4,907	Artillery (14½ batteries, and Native drivers of British batteries).	6,322
	7,454	Sappers and Miners (25 companies) -	4,014
<b>CORPS NOT UNDER THE ORDERS OF THE COMMANDER-IN-CHIEF IN INDIA.</b>		Infantry (127 battalions) - - -	112,179
Bodyguards (Governor General's and Governors').	268		147,876
Resident's escort, Nepal - - -	95	Officers on the staff - - -	671
	363		222,585
<b>GRAND TOTAL.</b>			
<i>British.</i>			
Cavalry (9 regiments) - - -	5,931		
Artillery (92 batteries and companies)	14,430		
Engineers - - - - -	180		
Infantry (53 battalions) - - -	53,497		
	74,038		

\* The Hyderabad contingent was placed under the orders of the Commander-in-Chief in India at the end of the year 1902-03. Early in 1903-04 the Artillery was disbanded and one regiment of Cavalry was broken up, each of its three squadrons being added to one of the other regiments. The Cavalry was then incorporated in the Bombay Command and the Infantry in the Madras Command.

The establishment\* was short by four battalions of Native Infantry remaining in China, and by the following Native troops in Somaliland :—

- One-third battery Artillery.
- One company Sappers and Miners.
- One battalion Infantry.

There was an excess of British Infantry owing to a battalion, which would otherwise have been relieved, having been specially detained at Aden.

The total of the Native Army Reserve in India on 1st April 1903 was 22,968.

The net expenditure on the Army in 1902-03 was £16,221,402. The total in 1901-02 was £14,786,342.

The number of Volunteers in the whole of India on 1st April 1903 was as under :—

Command.	Enrolled Strength.	Efficient.
Punjab - - - - -	2,147	1,962
Bengal - - - - -	14,372	13,620
Madras - - - - -	10,061	9,744
Bombay - - - - -	5,916	5,654
	32,496	30,980

\* The five battalions of Native Infantry regularly employed in the Colonies are not reckoned as part of the establishment.

ARMY.

On the 1st April 1902 the number of enrolled Volunteers was 31,397, of whom 29,479 were efficient. The number of Volunteers enrolled in the Reserve at the end of 1902-03 was 792.

The following changes in army organisation, &c. came into effect in 1902-03 :—

The Burma district was severed from the Madras command, and constituted a separate command under the direct orders of the Commander-in-Chief in India.

The Hyderabad contingent was placed under the orders of the Commander-in-Chief in India, and thus became a part of the regular Indian Army. (See note on preceding page.)

A brigade-division (three batteries) of field howitzers was added to the strength of the Royal Artillery in India; a corps of Native "Frontier Garrison Artillery" was formed, into which the existing Punjab Garrison Battery was absorbed; and the Ammunition Columns of the Royal Horse and Royal Field Artillery were reorganised.

The Submarine Mining Establishment was augmented and reorganised; a "Military Railway Company" was formed; and two service companies and a fortress company (for Aden) were added to the Bombay Sappers and Miners. Electrical engineer companies were attached to volunteer corps at various ports.

The establishment of the Hospital Assistant Branch of the Subordinate Medical Department was augmented; changes were made in the conditions of service of the Army Hospital Corps, the numbers of which were also increased; and the ambulance bearer service in India was reorganised, an "Army Bearer Corps" being formed.

Alterations were made in the class organisation, linking, &c. of several Native regiments. An addition of one British officer was made to the establishments of 64 regiments.

The designation of "Indian Staff Corps" was abolished on the 1st January 1903, the officers belonging to the corps being thenceforward designated "Officers of the Indian Army."

The pay of the British soldier serving in India was considerably increased.

On the occasion of the Coronation Durbar at Delhi the following favours and concessions to the Army in India were announced :—

The annual appointment of a limited number of Native officers as orderly officers for duty in attendance on His Majesty.

An extension of the system of the grant of honorary British rank to Native officers on retirement.

A temporary increase of the Order of British India.

The extension of the Order of British India to the Imperial Service Troops.

Extra "Meritorious Service" and "Long Service and Good Conduct" medals to the Native Army.

A money grant to all British and Native corps.

The release or mitigation of penalties of particular classes of military offenders in the British and Native armies.

In June 1902 a contingent of His Majesty's Indian Army and the Imperial Service Troops arrived in this country for the purpose of taking part in the Coronation ceremonies. It numbered 1,000 of all ranks, and included representatives of as many regiments as possible and of nearly all the various classes from which the army is recruited. It remained in this country for about two months, and during its stay the conduct and bearing of the troops were admirable. A small contingent of members of the Indian Volunteer Corps also took part in the ceremonies.

## MILITARY OPERATIONS.

In November 1902 it was found necessary to send a punitive expedition against certain sections of the Darwesh Khel Waziris. The force employed (nearly 3,800 strong, regular troops and militia) was under the command of Major-General C. C. Egerton, C.B., D.S.O. The work was successfully carried out, but not without some sharp fighting. Our casualties were five killed or died of wounds (including two British officers) and 15 wounded (including three British officers).

## MILITARY WORKS.

The total expenditure on military works amounted to £1,058,368 in 1902-03 against £917,140 in 1901-02. The expenditure in 1902-03 includes an outlay of £550,779 on new works and £242,834 on repairs. Under the head of new works additions to the barrack and hospital accommodation for British and Native troops accounted for over £200,000.

## MARINE.

The net expenditure on marine services amounted to £342,807 in 1902-03 as against £452,210 in 1901-02. 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, the subsidy to the Admiralty for manning and maintaining the Indian Government defence vessels, and charges for pilot establishments and vessels, coast lights, and other smaller items.

On the 1st April 1903 the Royal Indian Marine consisted of ten sea-going vessels, six inland and harbour vessels, three torpedo boats, a submarine mining flotilla, and a number of small steamers, launches, &c. There was an establishment of 89 executive officers, 71 engineer officers, and 60 warrant officers ; and the Native crews of the vessels (seamen, artificers, and others) numbered in all 1,747.

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APPENDIX.

TABLE showing the NET REVENUE and EXPENDITURE in the several PROVINCES of INDIA and in ENGLAND.

	Bengal.		United Provinces of Agra and Oudh.		Punjab.		Burma.		Central Provinces.		Assam.	
	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.
<b>REVENUE.</b>	£	£	£	£	£	£	£	£	£	£	£	£
Land revenue	2,698,407	2,712,066	4,194,480	4,162,690	1,652,159	1,427,409	2,204,210	2,220,093	576,204	524,945	408,984	427,991
Forest	85,796	83,730	114,068	134,672	96,498	105,656	390,938	448,843	74,234	100,950	34,115	38,590
Opium	2,600,712	2,076,375	85,199	36,710	4,369	4,874	20,961	29,467	13,364	16,034	27,323	28,378
Salt	1,720,136	1,776,221	—	—	—	—	101,073	120,416	—	—	—	—
Stamps	1,256,361	1,294,043	553,211	530,186	267,838	260,111	143,755	173,270	102,763	96,356	62,842	67,889
Excise	1,001,107	1,051,772	492,870	553,947	173,157	177,622	361,533	383,434	120,236	149,658	188,801	194,405
Provincial rates	650,519	671,580	693,684	703,511	320,909	270,373	108,978	111,969	104,030	77,580	44,133	45,521
Customs	1,218,292	1,174,040	3,975	4,066	—1,074	—1,144	638,288	850,533	7,182	8,006	—	—
Assessed taxes	881,514	894,352	172,061	174,987	108,912	106,101	83,008	82,598	28,122	24,464	20,472	21,211
Registration	111,086	112,308	32,086	29,793	14,023	14,203	7,258	9,264	6,423	5,807	3,670	4,719
Post office	—22,727	—23,872	—12,338	—12,539	—10,535	—9,477	—15,560	—13,380	—4,042	—3,012	—3,261	—3,357
Telegraph	—	—	—	—	—	—	—	—	—	—	—	—
Railways	714,859	711,276	734,314	765,240	1,351,203	1,145,637	291,722	317,968	314,563	335,595	21,146	11,934
Irrigation	—122,619	—155,508	111,354	793,323	705,868	758,603	—119,667	—94,610	—	—0,562	—	—
Other heads	71,204	49,613	—1,901	—0,373	29,268	12,685	41,316	9,581	28,466	31,162	1,711	—1,520
<b>Total</b>	<b>12,324,647</b>	<b>11,927,996</b>	<b>7,123,063</b>	<b>7,275,242</b>	<b>4,712,588</b>	<b>4,272,653</b>	<b>4,262,788</b>	<b>4,644,446</b>	<b>1,371,595</b>	<b>1,360,943</b>	<b>809,936</b>	<b>836,261</b>

	Bengal.		United Provinces of Agra and Oudh.		Punjab.		Burma.		Central Provinces.		Assam.	
	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.
<b>EXPENDITURE.</b>	£	£	£	£	£	£	£	£	£	£	£	£
Interest	—102,309	—102,512	42,359	46,693	4,084	10,757	—528	—577	—721	—278	—10	—50
Army	—	—	—	—	—	—	—	—	—	—	—	—
Military works	6,561	5,484	1,857	1,350	21,771	6,893	38,427	50,781	1,799	1,310	9,112	4,080
Collection of revenue	637,630	635,510	633,492	626,753	359,460	345,212	595,209	638,007	188,822	206,119	90,538	94,560
Civil works	720,530	704,103	402,012	484,221	285,113	338,604	592,529	635,755	145,003	187,700	149,787	168,402
General administration	160,621	185,059	119,450	129,031	88,991	90,423	87,734	104,944	40,973	45,798	22,929	27,327
Law and justice	681,589	681,754	411,742	402,110	262,395	256,173	210,119	202,524	78,050	79,579	44,485	45,286
Police	369,021	374,076	525,499	530,615	222,451	204,302	609,892	604,243	91,212	94,682	102,246	102,974
Marine	—15,779	—13,994	—	—	—	—	29,303	27,392	—	—	6,273	4,667
Education	232,560	271,528	134,860	153,138	88,147	94,468	67,509	71,615	39,492	53,630	26,474	27,207
Ecclesiastical	14,067	13,520	15,927	16,263	14,298	12,545	6,639	6,158	2,820	3,003	1,442	1,323
Medical	149,973	148,060	98,383	105,009	97,677	113,814	44,936	59,066	26,921	27,857	27,166	27,638
Political	2,905	4,683	9,511	8,064	127,621	46,805	28,378	25,119	2,663	2,870	13,044	11,406
Scientific and minor	38,502	27,370	24,478	17,363	19,462	15,157	16,350	13,888	9,417	6,989	3,745	2,853
Miscellaneous civil charges	465,278	489,330	248,237	249,765	123,184	116,334	71,833	78,019	48,876	47,559	14,193	15,035
Other heads	29,006	95,393	—35,413	16,670	126,180	78,466	58,775	—217,304	186,049	26,678	11,316	77,614
<b>Total</b>	<b>3,390,155</b>	<b>3,514,364</b>	<b>2,632,424</b>	<b>2,787,045</b>	<b>1,840,733</b>	<b>1,730,373</b>	<b>2,455,007</b>	<b>2,294,630</b>	<b>863,376</b>	<b>783,497</b>	<b>522,760</b>	<b>610,322</b>

TABLE showing the NET REVENUE and EXPENDITURE in the several PROVINCES of INDIA and in ENGLAND—continued.

	Madras.		Bombay and Sinl.		North-West Frontier Province.		Berar.*		India, General.		England.	
	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.
<b>REVENUE.</b>												
	£	£	£	£	£	£	£	£	£	£	£	£
Land revenue	3,355,520	3,543,294	2,296,001	2,015,629	57,187	109,557	466,662	90,489	79,317	—	—	—
Forest	167,916	172,869	158,395	154,849	860	6,735	811,146	31,006	36,989	—	—	—
Opium	—	—	540,697	659,293	181	451	—	—	—	—	—	—
Salt	1,242,098	1,323,140	1,544,258	1,596,626	—	—	—	1,066,426	1,115,530	—	—	—
Stamps	572,910	542,064	411,268	392,790	9,482	25,577	23,368	24,007	22,752	—	—	—
Excise	951,720	1,039,741	666,383	686,801	4,850	12,819	60,920	65,063	78,063	—	—	—
Provincial rates	580,451	601,134	214,602	188,608	10,960	22,969	37,541	9,181	10,663	—	—	—
Customs	297,698	316,275	1,569,513	1,476,635	—	—	597	643	869	—	—	—
Assessed taxes	201,680	208,000	263,813	272,088	2,899	7,606	8,057	99,745	103,218	—	—	—
Registration	96,473	95,668	39,202	35,003	719	2,047	2,680	1,143	1,167	—	—	—
Post office	—7,038	—6,989	—6,551	—6,853	149	—1,516	—	—	—	—	—	—
Telegraph	—	—	—	—	—	—	—	230,393	269,668	—95,077	—99,915	—
Railways	515,773	557,396	1,544,653	1,523,369	—	—	—	230,969	224,021	—287,046	—256,784	—
Irrigation	221,539	141,334	—19,593	—79,212	9,459	38,330	—	1,770,165	1,381,257	—6,411,782	—6,520,623	—
Other heads	319,348	319,570	25,040	—63,390	6,530	8,362	—101,023	155,816	119,675	—1,442	—1,917	—26,869
<b>Total</b>	<b>8,516,088</b>	<b>8,853,493</b>	<b>9,247,376</b>	<b>8,847,236</b>	<b>103,276</b>	<b>232,907</b>		<b>515,344</b>	<b>3,312,223</b>	<b>2,832,289</b>	<b>—6,818,025</b>	<b>—6,910,554</b>

	Madras.		Bombay and Sinl.		North-West Frontier Province.		Berar.*		India, General.		England.	
	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.	1901-02.	1902-03.
<b>EXPENDITURE.</b>												
	£	£	£	£	£	£	£	£	£	£	£	£
Interest	—27,547	—30,026	—89,791	—77,464	—356	—454	—1,055	—1,613,105	—1,720,084	2,926,631	2,846,068	—
Army	1,930,579	2,055,172	2,322,039	2,428,088	—	—	—	6,427,431	1,840,483	4,106,294	4,897,659	—
Military works	5,248	4,731	9,300	10,754	—	—	—	758	788,452	909,620	34,612	62,607
Collection of revenue	1,105,772	1,120,257	818,696	814,714	19,985	45,652	31,983	97,325	101,921	35,479	34,170	—
Civil works	401,580	443,455	315,015	402,065	48,752	127,045	25,276	99,052	111,730	76,527	78,883	—
General administration	108,423	126,831	139,591	155,244	6,457	16,317	12,535	328,474	370,631	259,112	251,474	—
Law and justice	319,917	316,146	332,381	332,925	11,211	30,304	9,424	93,371	104,636	1,317	275	—
Police	280,335	287,576	593,737	381,972	21,883	64,166	26,115	44,221	59,334	994	1,675	—
Marine	884	1,135	—905	—1,710	—	—	—	118,683	77,402	314,351	247,914	—
Education	160,206	202,661	194,030	211,083	1,846	5,037	9,643	11,220	13,527	2,734	1,882	—
Ecclesiastical	23,291	22,610	22,633	21,352	784	2,157	40	10,297	11,406	499	646	—
Medical	183,557	198,333	134,244	160,043	2,518	6,968	7,227	24,932	27,451	3,513	6,958	—
Political	6,153	6,339	60,550	72,193	72,058	139,858	—	359,163	494,879	7,028	7,249	—
Scientific and minor	21,866	14,548	25,342	17,987	530	1,374	1,086	216,954	253,543	30,732	32,926	—
Miscellaneous civil charges	216,701	225,703	264,214	268,596	4,451	14,569	14,200	—152,476	—157,493	2,254,623	2,283,141	—
Other heads	263,251	96,774	946,718	151,179	1,987	1,626	20,190	295,270	614,579	4,976	2,925	—
<b>Total</b>	<b>5,000,216</b>	<b>5,092,846</b>	<b>5,909,794</b>	<b>5,349,021</b>	<b>192,106</b>	<b>454,619</b>		<b>157,422</b>	<b>7,149,264</b>	<b>8,087,607</b>	<b>10,059,422</b>	<b>10,756,462</b>

\* The figures for Berar are from the 1st October 1902 only.