

EAST INDIA (PROGRESS AND CONDITION).

STATEMENT

EXHIBITING THE

MORAL AND MATERIAL PROGRESS AND CONDITION

OF

I N D I A

DURING THE YEAR 1888-89.

TWENTY-FIFTH NUMBER.

(PRESENTED PURSUANT TO ACT OF PARLIAMENT.)

*Ordered, by The House of Commons, to be Printed,
14 August 1890.*

LONDON:
PRINTED BY HENRY HANSARD AND SON;

AND
Published by EYRE and SPOTTISWOOD, East Harding-street, London, E.C.,
and 32, Abingdon-street, Westminster, S.W. ;
ADAM and CHARLES BLACK, North Bridge, Edinburgh ;
and HODGES, FIGGIS, and Co., 104, Grafton-street, Dublin.

TABLE OF CONTENTS.

	PAGE		PAGE
I. SUMMARY	3	LX. FORESTS	110
II. ADMINISTRATION AND LEGISLATION :		X. AGRICULTURE AND MINERAL RE- SOURCES :	
Administration	24	Agriculture	118
Legislation	25	Crop Forecasts	125
III. MUNICIPALITIES, LOCAL GOVERN- MENT, AND SANITATION :		Wheat	125
Municipalities and Local Boards	33	Cotton	126
Sanitation	34	Tea	127
IV. CRIME, POLICE, JAILS, AND JUSTICE :		Coffee	127
Crime and Police	37	Chinchona	128
Criminal Justice	41	Jute	129
Jails	46	Mineral Resources	129
Civil Justice	49	XI. PUBLIC WORKS :	
V. REGISTRATION :		Public Works	132
Registration	54	Railways	133
Joint Stock Companies	56	Guaranteed Railways	136
VI. FINANCE :		Irrigation	136
Finance	57	Buildings and Roads	145
Capital Outlay on Public Works	64	Military Works	145
Debt	68	Civil Works	147
Savings Banks and other De- posits	69	XII. POST OFFICE AND TELEGRAPHS :	
Cash Balances	69	Post Office	158
Coinage and Paper Currency	69	Telegraphs	159
Opium	70	Indo-European Telegraph De- partment	161
Salt	71	XIII. EDUCATION AND LITERATURE :	
Excise	75	Education	163
Stamps	84	Literature and the Press	163
Customs	86	XIV. EMIGRATION AND MIGRATION :	
Provincial Rates	86	Emigration	171
Income Tax	87	Migration	172
VII. SURVEYS AND SETTLEMENTS :		Pilgrimage to Arabia	174
Surveys	90	XV. TRADE AND MANUFACTURES :	
Settlements and Cadastral Sur- veys	93	Trade for 1887-88	175
VIII. LAND REVENUE (INCLUDING FISH- ERIES, CAPITATION TAX, &c.) AND GOVERNMENT AND WARDS' ES- TATES :		Trade for 1888-89	176
Land Revenue	99	Manufactures	177
Government and Wards' Es- tates	107	XVI. NATIVE STATES AND FRONTIER RE- LATIONS, ARMY, AND MILITARY OPERATIONS :	
		Native States	181
		Frontier Relations	202
		Army	208
		Military Operations	209
		XVII. AFFAIRS IN UPPER BURMA	211

India Office,
18 August 1890.

A. Godley,
Under Secretary of State for India.

I.

SUMMARY.

[The denomination Rx. which is used throughout this Statement means tens of rupees.]

THE five Councils for making laws sat, as usual, for a part of the year. The important enactments of the year were, the Merchandise Marks Act; a consolidated Ports Act; two Acts affecting the procedure in respect of estates and debts of deceased persons; two Acts amending the Punjab and Burma Courts Acts; and a new Municipal Act for Bombay City. The other laws enacted during the year were for the consolidation or amendment of existing Acts, or concerned matters of local or temporary interest. No Act was passed by the Council of the North Western Provinces during the year. LEGISLATION.

There was no material change in the constitution of the regular police; but the strength of the ordinary police was reduced by over 1,000 men, while the strength of the military police was increased in Upper Burma. The total strength of the police force, at the end of the year 1888, was 382 superior officers, 16,412 subordinate officers, and 125,943 constables, of whom 2,653 were mounted. These constitute the regular police; they do not include the police of Upper Burma, numbering 17,880 men, or the village watchmen, of whom there may be over 500,000 in all. Of the regular force, 52,700, besides the men in Upper Burma, carry fire-arms, the rest having either swords or batons. The police of each district are commanded and directed by one or more superior officers, who have no magisterial power or duties; the military police in Upper Burma have a stronger staff of officers, European and Native; all the police are, subject to certain limitations, under the orders of the magistracy. About 37,000 officers and men, or nearly one-third of the Indian force, were employed in guarding or escorting prisoners and treasure. The total cost of the regular police during the year was Rx. 2,383,287, as against Rx. 2,417,976 in the previous year, besides Rx. 740,000 spent on the police of Upper Burma. In Upper Burma the military police did excellent work; elsewhere the police did fairly well, though there is still much room for improvement in their dealings with serious crime. POLICE

As compared with the previous year's figures, there was a considerable increase in the number of reported cases of murder, and other serious offences against the person; but there was a satisfactory decrease in the cases of dacoity or gang robbery, and cattle theft. The chief decrease in dacoities occurred in Lower Burma, where the disturbances following on the war had abated. The extent to which the police succeeded in dealing with crime may be seen from the following figures, which represent the "totals" for British India under the respective heads:— CRIME.

		Murder.	Other Serious Offences against the Person.	Dacoity.	Cattle Theft.	House-breaking.
* Number of cases reported	1887	2,155	25,890	2,308	27,827	103,462
	1888	2,450	27,036	1,876	26,863	130,006
* Number of cases in which conviction was obtained	1887	750	10,548	463	6,562	12,202
	1888	934	11,083	386	7,428	13,746

* These figures do not include statistics for Upper Burma.

SUMMARY.

The preventive provisions of the criminal law, under which persons of evil repute and without honest means of livelihood can be called upon to give security, or imprisoned in default, were successfully put in operation against 13,081 persons, of whom 8,106 belonged to the Punjab and 1,984 to Lower Burma.

ADMINISTRATION OF JUSTICE.

On the superior courts, which exercise both appellate and original jurisdiction, sit 450 judges. The total number of magistrates exercising jurisdiction in India during 1888 was about 5,500, of whom one-half were honorary magistrates. There were about 1,700 civil judges under the superior courts. These figures do not include the village officers, who in Southern India exercise petty magisterial and civil jurisdiction; but in some provinces the same officers exercise both criminal and civil jurisdiction, and in such cases are shown twice over. Nearly all the civil judges, and the great majority of the magistrates, in the courts of original jurisdiction, are natives of India. The proportion of natives of India sitting in the appellate courts continues to increase; it is now considerable in the older and more advanced provinces, such as Bengal, Madras, and Bombay. There was no considerable change in the judicial staff during the year. The number of persons coming before the magistrates during the year 1888 was 1,433,189, or about 5 per cent. above the total in 1887; 50 per cent. of these persons were convicted or committed to the Sessions Courts. Of the convicted persons, 129,320 (or 10,000 more than in the previous year) appealed; and of these, 19,555 persons procured a reversal of their sentences. There were 474 capital sentences passed; 1,831 sentences of transportation, 156,723 of imprisonment, 511,034 of fine, and 15,488 of whipping. Of the total fines, Rx. 264,785, or 80 per cent. of the whole, were realised; and only 11 per cent. of the fines were over 10 rupees. Out of the sentences to imprisonment, 72 per cent. were for terms under six months. There was a considerable increase, as compared with 1887, in the number of capital sentences, and a reduction of 296, or 14 per cent. in the number of persons sentenced to transportation; for the rest, the totals of 1888 are much the same as the corresponding figures for the previous year.

The total number of civil suits coming before the courts was 1,938,332, or 2 per cent. less than in the previous year, involving claims valued at Rx. 21,137,096. Out of all the suits, 64 per cent. were either withdrawn or settled without contest; 11 per cent. were pending at the close of the year; about 25 per cent. were contested; and of the contested suits, 68 per cent. went in favour of the plaintiff, and 32 per cent. in favour of the defendant. In 11,437 suits, as against 8,504 in the previous year, the parties consented to have their disputes settled by arbitration.

PRISONS.

Besides the convict settlement at the Andamans, which contained in 1888 an average of 11,961 transported prisoners, there were in British India 35 central gaols, 190 district gaols, and 511 subsidiary gaols, which contained an average of 79,338 prisoners, or 7,921 more than in 1887. The low figure for 1887 was due mainly to the release of 22,918 prisoners on the occasion of the Jubilee of Her Majesty's accession, in February 1887. The number of women prisoners has been decreasing for nine years, and was 2,694 at the end of 1888. The death-rate among convicts in prison was somewhat lower than the previous year. The death-rate for all India among convicts has been:—

In 1880	- -	55 per mille.	In 1885	- -	37 per mille.
" 1881	- -	44 "	" 1886	- -	34 "
" 1882	- -	41 "	" 1887	- -	36 "
" 1883	- -	34 "	" 1888	- -	33 "
" 1884	- -	32 "			

In the Punjab, the Central Provinces, and Berar, there were notable decreases, and in Bengal only was there a serious increase in the death-rate, as compared with 1887; but there were small increases in Burma, Madras, and the

and North West Provinces. The number of offences or breaches of rule committed by prisoners was 75,102, or 3,296 less than in 1887; and the number of cases in which the punishment of whipping was inflicted for such offences was 1,891, against 2,427 in the previous year, and 21,933, the number of whippings awarded in Indian gaols ten years ago. The average gross cost of each prisoner was Rs. 62½ a year, as compared with Rs. 63½ in 1887; the decrease was due mainly to the reduction in the cost of the establishment, and partly to the larger daily average of prisoners.

SUMMARY.

The Registration Law requires the registration of all documents affecting immoveable property valued at Rx. 10 or upwards, and permits the registration of other documents. Copies are kept in public offices of all registered deeds; and small fees are charged for registration and search. The number of registration offices open in British India at the end of the year was 1,786, or 12 more than in the previous year; the total number of documents registered was 1,982,811, an advance of 3 per cent. during the year. The number of registrations has increased year by year for a considerable period. The total receipts from registration fees were Rx. 330,000, and the cost of maintaining registry offices was Rx. 202,000.

REGISTRATION.

The number of new joint stock companies registered during the year was 125, with a nominal capital of Rx. 1,950,000. At the end of the year the number of registered companies in operation was 895, with a nominal capital of Rx. 31,339,000, and a paid-up capital of Rx. 22,997,000, or about half-a-million above the total of the previous year.

The financial results of the Indian Treasury during the year 1888-89, compared with the three previous years, stood thus:—

FINANCE.

	1885-86.	1886-87.	1887-88.	1888-89.
	Rx.	Rx.	Rx.	Rx.
Total Receipts - - - -	74,464,000	77,337,000	78,759,000	81,696,000
Total Expenditure - - - -	77,266,000	77,159,000	80,788,000	81,659,000
Surplus - - - -	—	178,000	—	37,000
Deficit - - - -	2,802,000	—	2,029,000	—

Of the increase of Rx. 2,937,000 in the year's receipts, Rx. 1,005,000 were due to the enhancement of the salt tax, while the remainder was due to the growth of revenue in Upper Burma, and to the progress of revenue under ordinary heads, especially under forests, income tax, and excise. A further fall of more than a halfpenny in the exchange value of the rupee almost countervailed the reduction of 475,000 £ in India's sterling expenditure in England; the previous year's expenditure had been swelled by an outlay of Rx. 1,091,000, due to charges connected with the conversion of 49 millions of India 4 per cent. stock into 3½ per cent. stock. The army and defensive works cost Rx. 216,000 more than in the previous year; there was a reduction of Rx. 843,000 in special army charges for Upper Burma, and an increase of Rx. 374,000 on account of the Sikkim and other expeditions; and the railway revenue account was worse by Rs. 111,000. No surplus was available as a reserve against famine outlay in future years.

A loan of Rx. 2,000,000 was raised in India at 4 per cent., mainly for public works; in England, 7,206,000 £ of 3 per cent. stock were created for the purchase of the Oudh and Rohilkund Railway, and 4,030,000 £ of 4 per cent. stock were replaced by 3½ per cent. stock. The capital outlay of the year on public works was Rx. 9,157,000 on State and guaranteed railways and Rx. 539,000 on irrigation works. Of this total, Rx. 1,638,000 were supplied from loans, Rx. 102,000 were debited against the revenue of the year, and Rx. 7,418,000 were spent by guaranteed or subsidised railway companies.

6 STATEMENT EXHIBITING THE MORAL AND MATERIAL

SUMMARY.

companies. The total debt and liabilities of India at the end of the year were :—

Permanent debt in India	- - - - Rx.	100,879,000
Permanent debt in England	- - - - £.	95,034,000
TOTAL Permanent Debt - - - Rx. & £.		195,913,000
<i>Add</i> ,—Saving banks deposits and other obligations, less by loans to municipalities and Native States - - - - Rx.		5,902,000
TOTAL Debts and Liabilities - - - Rx. & £.		201,815,000

The permanent debt may be classified thus :—

	Rx. & £.
On account of railways - - - -	91,822,000
On account of irrigation works - - - -	26,450,000
For other purposes - - - -	77,641,000
TOTAL - - - - Rx. & £.	195,913,000

The foregoing figures do not include the capital on which guaranteed interest is paid by the Government to railway companies, which capital stood at 75,965,000*l.* During the year 1888-89 a balance of 4½ million sterling of the 4 per cent. stock held in England was replaced by 3½ per cent. stock. The 3 per cent. sterling stock created during the year in England fetched 99*l.* 11*s.* 1*d.* per cent.; and the 4 per cent. rupee loan issued in India fetched 99.93 per cent.

The value of the silver coined at the two Indian mints during the year was Rx. 7,282,000, or one-third less than in the previous year; the amount of currency notes in circulation at the end of the year 1887-88 was Rx. 16,424,380, and on the 31st March 1889 the circulation had fallen to Rx. 15,737,814; against the note circulation were held Government securities to the value of six millions, besides silver coin and bullion to the value of Rx. 9,755,810.

SURVEYS.

Triangulation for survey purposes was completed over the whole of India some years ago, and has now been begun in Upper Burma. On the ground-work thus furnished have been based the topographical and revenue surveys directed by the Surveyor General of India, and the revenue surveys of Madras and Bombay. Good geographical material has now been obtained, and maps have been issued for all parts of India. The tracts still to be surveyed consist of the greater part of Burma, a small area in the south and in the north of Madras, and a part of Baluchistan. In 1888-89 surveys were in progress, mainly for geographical purposes, in Baluchistan, Southern Madras, and in Canara. Important topographical information was obtained by survey officers in Upper Burma, who have in three years mapped 52,290 square miles of hitherto unknown country. Of regular topographical survey 9,002 square miles were accomplished. The strength and cost of the topographical parties have been further reduced; and the main strength of the Survey Department is being concentrated on cadastral work connected with the resettlement of the land revenue. Except in parts of Madras and Burma, where the regular cadastral survey has not yet reached, the work of the professional survey parties is being more and more confined to traverse work, which serves as a basis for, and check upon, cadastral surveys and remeasurement; while the detailed work is effected by the village staff, and costs about one-third of a regular professional re-survey. In districts belonging to every province in the empire, except Oudh and Berar, professional parties were at work preparing or correcting cadastral maps and information on which settlements or resettlements of the land revenue were to be based. The Marine Survey carried on observations at many points of the Indian coasts and adjacent islands, besides taking deep-sea soundings. The Geological Survey

Survey continued the examination of the auriferous formations of South India; of the supposed diamond field near Bellary; of coal sources near Rajmehal in Chota-Nagpore, and in Upper Burma. They further investigated the petroleum sources of Baluchistan and of Upper Burma, and the tin mines of Burma. A large area of good coal was verified in Afghanistan to the left of the road from Peshawar to Cabul, and about 60 miles from the former city.

The total land revenue collections of India were 23,687,000 *l.*, as compared with 23,792,000 *l.* in the previous year. The decrease was due to the vicissitudes of the season, which in some provinces was unfavourable to the crops.

The total includes *Rx.* 1,312,000 of credits on account of Upper Burma revenues, capitation tax, fisheries, and miscellaneous sources, and *Rx.* 22,375,000 of land revenue proper, of which there is paid by—

	<i>Rx.</i>
Permanently settled estates - - - - -	4,310,000
Temporarily settled estates,—	
held by proprietary brotherhoods or large proprietors - - - - -	10,345,000
held by petty proprietors on what is called ryotwarce tenure - - - - -	7,720,000
TOTAL - - <i>Rx.</i>	22,375,000

The land revenue on permanently settled estates was fixed nearly 100 years ago in perpetuity; so no appreciable increase in the public income takes place under that head. Since the revenue was settled there has been a great increase in the area of cultivation, and in the value of the produce. At the present time the land revenue demand on permanently settled estates falls, approximately, at the rate of 10 annas (one shilling at the present rate of exchange) per acre of cultivated land, and represents one-fifth to one-fourth of the gross rental on these estates.

The land revenue on temporarily settled estates is fixed periodically at intervals of 12 to 30 years; the longer period being the more common. For estates held by proprietary brotherhoods or large proprietors the revenue is assessed on the cultivated area of a whole village or estate, with an average area of about 800 acres, and no additional revenue is demandable on account of extensions of cultivation during the term of the settlement. Thus, increases of revenue from such lands accrue only on the occasion of periodical revisions of the assessment; these revisions are called "settlements." The revising officer takes into consideration the extensions of cultivation, the variation of prices, and the change in rents since the last settlement. On lands held by petty proprietors, that is, on ryotwarce tenures, the State obtains yearly increases of revenue as cultivation extends; a settler usually enjoys his grant revenue-free for a few years where the cost of clearing the land is heavy. At periodical settlements on ryotwarce lands the rates of revenue per acre are revised in some proportion to the change in prices since the previous settlement. At present the incidence of the land revenue on temporarily settled lands ranges, according to the fertility and advantages of the soil, from six annas (7 *d.*) on poor, dry soils, to six rupees (9 *s.* 6 *d.*) per acre on rich, irrigated lands; and the average incidence is, approximately, 26 annas (2 *s.* 7 *d.*) per acre for all temporarily settled lands. This rate represents something less than half the gross rental of such lands as are let to tenants. A large area, especially where the land belongs to proprietary brotherhoods, is cultivated by the proprietors themselves.

In the year 1888-89 settlements of the land revenue were in progress in 64 districts, in all provinces except Oudh. The new system, described in a previous summary, whereby revisions of settlement are more expeditious and less expensive than formerly, has been adopted in all districts of the Punjab, the North Western Provinces, and the Central Provinces, in which settlements have recently been begun. It is being adopted in Bombay,

SUMMARY.

where the resettlements will soon be completed ; but it is not applicable to Madras or Burma, where regular settlements and cadastral surveys are being made for the first time. The increase of revenue due to resettlements effected during the year was, approximately, Rx. 79,000.

The harvests were in several provinces below the average ; the wheat crop was short ; while the millet and cotton harvests were mostly good, save on the north coast of Madras, where all crops were deficient. The number of writs of demand and other processes for collection of arrears were slightly more numerous ; while the uncollected arrears at the end of the year were smaller than in the previous year, except in Burma, where collections were postponed over a great part of Arakan.

Litigation between landlord and tenant is rife only in Bengal, the North Western Provinces, and Oudh. The total number of applications and suits under the rent laws increased by 3 per cent. in Bengal and by 10 per cent. in the North Western Provinces, as compared with the previous year ; in these two provinces the rent-law litigation reached a total of 416,000 cases. In Oudh the new Tenancy Act had caused a very great decrease in this class of business ; 93,451 ejectment suits had been instituted by Oudh landlords in 1886, before the new law came into force ; the number of such suits in 1887 was 49, and in the year 1888 was 2,040, affecting an area of 23,386 acres out of nine and a-half million acres under the plough. The Bengal Tenancy Act, which has now been in force for 3½ years, has not led to any serious increase in the litigation between zemindars and ryots.

WARDS' ESTATES.

The number of estates belonging to minors or incapable persons, and of encumbered estates, that were under the management of Government revenue officers during the year, was 1,294, with a total rental of Rx. 2,229,000. In the case of solvent estates, considerable sums out of the rental were spent on roads, irrigation works, hospitals, schools, and other improvements, while a part of the surplus was invested against future needs. In certain large estates aggregating 1½ million acres, under the Bengal Court of Wards a regular cadastral survey and settlement is being effected on behalf of the owners, in order to place the relative rights and responsibilities of landlords and ryots in a clear and satisfactory position. On encumbered estates the surplus is devoted to paying off debts, while in some cases advances at a low rate of interest are made from the public treasury to clear off more pressing demands or loans at high rates of interest. Debts to the amount of Rx. 315,000 had been liquidated during the year. The number of estates released free of debt or restored to the owners on majority during the year ranged from four in Madras to 12 in the North Western Provinces, all of them being free of debt. The wards were educated under the supervision of the Court.

OPIMUM.

The net Indian revenue from opium of 1888-89 was Rx. 5,964,000, as compared with Rx. 6,090,000 and Rx. 6,213,000 in the two previous years, and as compared with 8½ millions, the net revenue in the year 1880-81. The decrease in the revenue is due mainly to the fall of price in China, consequent on large extensions of opium cultivation in that country, and partly to the terms of the Chefoo Convention, under which the import duties on opium carried into China were increased. Nearly the whole of the opium revenue accrues on opium exported to China ; in 1888-89 nearly three-fifths of the net opium revenue was raised in Bengal under the monopoly system, and a little less than two-fifths in Bombay by levying a pass duty. Under the monopoly system certain cultivators are licensed to grow opium in selected districts of the Bengal Presidency ; and elsewhere the cultivation is strictly prohibited. All the crude opium grown by licensed cultivators, save a small quantity produced in the Punjab, is carried to two factories, where it is made into marketable opium, and whence it is sent to Calcutta. Opium from the stores is sold by auction once a month in quantities of which notice is published 15 months before.

The area of opium cultivation in Bengal was 518,930 acres in the year 1888-89 ; steps have now for two years been taken to reduce the area, because the good opium harvests of the past few years had yielded more than was required to supply the monthly sales and keep up the reserve. The opium harvest of 1888-89 was very short ; only 38,305 chest were made as compared with 69,500 chests in the preceding year, while 57,000 chests were exported to China. Bombay opium is produced in the Native States

States of Central India and Rajputana ; and it pays a pass duty of Rx. 65 on each chest that is exported to China. The Native States have engaged so to manage their opium cultivation and production as to safeguard the British revenue ; and in exchange for this service they receive either money compensation or other concessions. The amount of Bombay opium entering British territory from Native States during the year was 33,800 chests, or 4,662 less than in the previous year. The total number of chests of opium exported from India during the year was 90,096, of which 85 per cent. were consigned to China, 14 per cent. to the Straits Settlements, and 1 per cent. to other countries.

The salt duty, which had for some years stood at 2 rupees a maund of **SALT.** 82 lbs. for all India, and at 3 annas a maund for Burma, was raised on the 19th January 1888 to 2½ rupees a maund in India, and to 1 rupee (16 annas) in Burma. The enhancement of duty reduced the consumption of salt during the year 1888-89. For the year 1888-89 the total consumption was 31,474,000 maunds, as compared with 33,667,000 in the preceding year. The check to the growth of salt consumption appears to have been only temporary, for in 1889-90 the consumption of salt has again risen to over 33½ million maunds, or about the same as before the duty was enhanced in 1888. If it be reckoned that 242 millions of people in British India and Native States consumed duty-paid salt, then the average consumption per head was 10¼ lbs. per annum in 1888-89 and 11½ lbs. in 1889-90. The rate of consumption varies widely in different provinces from nearly 18 lbs. per head in Southern Madras to less than eight lbs. per head in parts of Northern India.

The salt revenue of the year was Rx. 7,675,000 as compared with Rx. 6,670,000 in the preceding year.

The stamp revenue of the year was Rx. 3,927,000, or 1½ per cent. above **STAMP REVENUE.** the previous year. In the year 1887-88 the growth of this revenue had been 3½ per cent. The proportion of the stamp fees on litigation is about two-thirds, and of stamp fees on commercial and other documents a little over one-third of the whole stamp revenue.

The excise revenue on liquor and drugs is raised partly by a still-head **EXCISE ON LIQUOR.** duty on spirit, partly by fees from shop licenses, and partly by the sale of the monopoly of manufacture and vend within specified areas ; in tracts where the last system is adopted the monopolist of liquor is allowed to maintain and work one or more stills and to open a fixed number of shops, at specified places, and his license covers the right to manufacture liquor for such shops. Licenses, especially monopoly licenses for fermented drinks like palm-tree juice and rice beer, and for the sale of narcotic drugs, are usually sold by auction for a year or for a term of years, so as to prevent jobbery and to obtain a full revenue from each license. The total excise revenue of 1888-89 was—

	Rx.
From licenses and monopoly fees for spirits and fermented liquors - - - -	2,249,000
„ Still-head duties and fees - - - -	1,196,000
„ Duties on narcotic drugs - - - -	439,000
Duties on opium consumed in India - -	762,000
Upper Burma revenue, fines, &c. - -	59,000
TOTAL - - - Rx.	4,705,000
TOTAL for 1887-88 Rx.	4,534,000

The charges of the Excise department were Rx. 138,000, leaving a net revenue of Rx. 4,567,000, against a net revenue of Rx. 4,407,000 in the year 1887-88. This total is exclusive of the customs duties on imported wines, beer, and spirits, which yielded Rx. 548,000 in the year. The increase of excise revenue continues, but it is claimed that most of this increase is due to improved administration, whereby more of the liquor that is consumed pays a higher duty than before. It is certain that, over the greater part of

SUMMARY.

British India, spirits are now much dearer than they were some years ago. The import duty on foreign spirits was raised 25 per cent. in 1887, and has again been raised by 20 per cent. in 1890; in part of Bombay the still-head duty on Indian spirits has during the past few years been raised from R. 1 per gallon of proof spirit to Rs. 3½ per gallon of spirit 25 per cent. below proof; in five-sixths of the Madras Presidency, where all liquor pays a still-head duty, the year 1888-89 shows a decrease of 6 per cent. in the consumption of spirits and an increase of 5 per cent. in the revenue therefrom, as compared with the year 1887-88. There has also been an enhancement in the duty charged on opium and other narcotic drugs that are consumed in India. The number of liquor shops has been considerably reduced in most provinces. Much attention is now being given to excise management; the areas under the farming or outstill system are being restricted; effort is being made to restrict or not to promote increase of consumption, while at the same time rates of duty are raised.

CUSTOMS.

A duty of half an anna per gallon (about 3 per cent. *ad valorem*) was imposed in February 1888 on all petroleum imported into India. During the year 1888-89 the customs duties were unchanged, that is to say, duties are levied on imported liquors and exports of rice; a duty is levied on fire-arms, rather for police than revenue purposes; all other exports and imports, save opium and salt, are free of duty. The gross yield of the import duties was Rx. 692,000, as compared with Rx. 564,000 in the previous year; and of the rice duties was Rx. 615,000, or Rx. 143,000 less than in 1887-88. The petroleum duty yielded Rx. 13,000 in the seven weeks of 1887-88, and produced Rx. 117,000 during the 12 months of 1888-89, without retarding the increase in the growth of the trade in this oil.

INCOME TAX.

The income tax remained at the same rates of incidence as in the previous year, namely, at 2 and 2½ per cent. respectively on incomes of Rx. 50 and Rx. 200 a year or upward. The net receipts increased from Rx. 1,411,000 in the previous year, to Rx. 1,504,000 in the year 1888-89. Objections were freely made and promptly heard; in only a small fraction per cent. of the assessments was it necessary to sell up the property of defaulters.

FORESTS.

The forest lands of India belong mainly to the State, except in parts of Lower Bengal; and the efforts of the Forest Department are directed to selecting the best and most remunerative forest areas, to marking off these areas as reserves, to conserving them and securing reproduction of timber, and to working the produce of the reserves to the best advantage. Outside the reserves there are in some provinces very large forest or waste areas, which are accessible to the people, and can be reclaimed for cultivation when need arises. The reserves, however, will always be retained as State forests, to be conserved and worked according to the best principles of scientific forestry for the good of the neighbouring populations and the advantage of the public treasury. The Forest Department is manned by European officers, who have been trained at forest schools in Germany and France, or at Cooper's Hill College, and also by Indian and other officials trained in the forests or at the Indian Forest School established at Debra in the North West Provinces. Timber and other forest produce in the reserves are worked out in rotation, or on other scientific principles; so as to prevent exhaustion of the supply. Natural reproduction is safeguarded by the exclusion of the yearly fires which used to devastate most Indian forests; and artificial reproduction is effected by systematic plantations. Forest revenue is raised by selling or giving permits for timber, for firewood, for charcoal, for bamboos, for grazing, and for other minor forest produce, with due regard to the claims and comfort of neighbouring rural populations. The extensive State forests and wastes outside reserves are worked so as to produce revenue and to meet local demands, with such rough and inexpensive conservancy as may be practicable. Private forests, wherever demand for timber exists, are being worked without regard to reproduction; and this circumstance makes the careful conservancy of public forest property all the more important. Forest conservation began in some parts of India 40 years ago; but systematic conservancy under regular forest laws began under the forest administration of Dr. (now Sir Dietrich) Brandis several years later.

There

There are now in British India 55,000 square miles of reserved forests, of which 1,000 square miles were reserved during the year 1888-89. Most of these reserves have been properly demarcated, and in all of them full investigation and settlement of private rights has been completed or is in progress. Systematic fire protection was in 1888-89 carried out over varying proportions of the reserved forests in the several provinces, with the result that fire was absolutely excluded from about 88 per cent. of the protected area. Regular plantations of the best timber-bearing trees cover 84,584 acres, of which 4,894 acres were added during the year. The total forest revenue of British India was Rx. 1,349,000, against an expenditure of Rx. 792,000, leaving a surplus of Rx. 557,000, as compared with a surplus of Rx. 404,000 in the preceding year. The totals of revenue and of surplus have increased mainly by reason of the yield from the forests of Upper Burma. The chief surplus provinces are Burma and Bombay. About one-half of the gross revenue was yielded by timber operations, and the remainder by firewood, charcoal, grazing dues, bamboos, rubber, and other minor forest produce. A good deal of teak timber and cutch (a substance extracted from the heartwood of the acacia catechu, used for tanning, for dyeing, and for preserving nets) is sent from Burma to Europe; and a small quantity of rubber, of forest gums and fibres, of bamboos, of canes, and of wild silk, are exported from India. But the great bulk of the yield of the forests is consumed, and most of the forest revenue is paid, by the people of India.

SUMMARY.

The rainfall of the season was either deficient or unseasonable in all provinces except Burma and Assam; the millet and cotton crops were on the whole good, except in North India; the rice crop was short, except in Burma; the spring crops of Northern India were fair; in Ganjam and some other tracts of Madras there was a partial failure of the food crops, and severe scarcity in Ganjam; prices of food grains on the whole ruled higher than in the previous year. The exports of cotton were larger and of wheat were smaller than in the previous year.

AGRICULTURE.

The agricultural departments in the several provinces devote their energies primarily to improving the village cadastral maps and land records, which are prepared annually. The village accountants and the officials charged with this business are gradually qualifying in surveying and account keeping, so that improvement is manifest. At page 145 of the Statistical Abstract for 1888-89 will be found details of the areas under different crops for a great part of British India; but no agricultural statistics are available for the provinces of Bengal, for the permanently settled districts of Madras, or for a small part of Bombay. Thus trustworthy information on this topic is wanting for more than one-third of British India and for the Native States. The increases on the cultivated area came to 4,805,000 acres; but of this 3,303,000 acres belong to Upper Burma, for which province approximate crop areas are now given for the first time. Bombay, the Punjab, and Lower Burma are the only provinces which show a considerable increase over the crop area of the previous year; the Central Provinces show a considerable decrease in the breadth of cultivated land by reason of the unfavourable character of the season. The abstract statement of crop areas for tracts equal to nearly two-thirds of British India, presented at page 12 of last year's Summary, stands thus for the year 1888-89:—

SUMMARY.

	Total Area under each Crop in 1887 over about two-thirds of British India.	Grand Totals.
	<i>Acres.</i>	<i>Acres.</i>
FOOD CROPS :--		
Rice - - - - -	26,811,000	
*Wheat - - - - -	19,170,000	
Millets, Pulses, and other Food Grains.	76,179,000	
Sugar - - - - -	1,854,000	
Tea, Coffee, and miscellaneous Food Crops.	3,782,000	
TOTAL - - -		127,796,000
NON-FOOD CROPS :--		
*Cotton - - - - -	9,215,000	
Oil Seeds - - - - -	7,382,000	
Other Non-Food Crops - - -	4,368,000	
TOTAL - - -		20,965,000
GRAND TOTAL - - -		148,761,000

Of this total, 14,158,000 acres yielded two crops in the year; and 26,343,000 acres, or 17 2/3 per cent. of the whole crop area was irrigated. The proportion of food crops was considerably larger than in the previous year. If estimated figures, with the same proportions, namely 14 per cent. and 86 per cent. respectively, be added for the rest of British India, which comprises a population of about 74 millions, and perhaps 70 million acres of cultivated land, the total crop area will stand thus :—

	<i>Acres.</i>
Under food crops - - - - -	188,046,000
„ non-food crops - - - - -	31,765,000
Total for British India, with a population of about 209 millions - - - - -	219,811,000

This total does not include fallows or grazing lands, but it includes the breadth of second crop. The areas under cultivation per head of the people vary greatly; thus in Bombay, over much of which province the soil and the farming are poor, there are 1 2/3 acres of crop land to every head of the population; while in the North-Western Provinces, where the land is rich, irrigation is common, and farming is high, there is only three-quarters of an acre of cropped land to every head of the population. Hardly any crops are grown exclusively for fodder; but the great millets, with straw 6 to 9 feet long, gave a great weight of fodder to the acre.

POST OFFICE.

There was further increase in postal facilities and in the work of the post office during the year. The number of post-offices and pillar boxes was increased by 3 1/4 per cent., and the length of postal lines by 1 1/4 per cent.; the number of letters, newspapers, and parcels passing through the

* N.B.—These figures in the table above for the wheat and cotton area are actually ascertained figures for a part only of British India; they, therefore, do not tally with the total figures of wheat and cotton cultivation given in the "Agriculture" section of this Statement. The latter figures include estimates of the cultivation for provinces, whence precise statistics are not obtainable.

the post-office was 287 millions, or $6\frac{3}{4}$ per cent. more than in the previous year. The parcel insurance and money-order business increased 10 per cent. during the year. At the postal savings banks the number of deposit accounts increased during the year from 261,157 to 311,001, and the balance at the credit of depositors rose from Rx. 5 millions to Rx. $5\frac{3}{4}$ millions. The postal receipts were Rx. 1,281,540, or 5 per cent. above the income of the previous year; and the *net* charge on account of the Post Office fell from Rx. 161,019 to Rx. 60,912. SUMMARY.

The length of telegraph line and cable in India is now 33,462 miles, of which 1,568 miles represent the extensions of 1888-89; the number of messages was 2,978,998, an increase of 176,699 over the previous year. The increase of messages was wholly under the head of "private messages," there having been a considerable decrease in the number of State or public service messages. The receipts were Rx. 632,247, yielding a surplus of Rx. 198,024 on the revenue account, equal to 4.45, as against 5.46 per cent. in the preceding year on the capital outlay; the decrease of receipts was due to the reduction in the number of State messages, especially in Burma. The additions to the capital expenditure during the year amounted to Rx. 174,362, or Rx. 60,593 less than in the previous year. TELEGRAPHS.

On the Indo-European telegraph line *via* Teheran the *net* revenue was 19,138 *l.*, equal to $1\frac{3}{4}$ per cent. on the capital outlay of 1,124,126 *l.*, but if the line be debited with the annuity of Rx. 18,027 payable to the shareholders of the late Red Sea Telegraph Company, the surplus of the year is reduced to Rx. 1,111.

The total State outlay on Public Works in India during the year may be thus stated:— PUBLIC WORKS
OUTLAY.

Capital Expenditure not charged to Revenue :	Rx.	Rx.
Railways - - - - -	1,178,111	
Irrigation - - - - -	459,890	
		1,638,001
Charged to Revenue :		
Railways : Construction - - - - -	22,401	
Railways : On Revenue Account - - - - -	17,754,088	
Irrigation (including Construction) - - - - -	2,693,501	
Military Works (including Special Defence Works).	1,897,801	
Civil Works - - - - -	4,202,526	
		26,570,317
GRAND TOTAL - - - Rx.		28,208,318

Against this expenditure may be set the receipts, from Railways, Rx. 15,520,696; from Irrigation, Rx. 1,900,718; from Buildings and Roads, Rx. 604,753; total, Rx. 18,026,167.

On the 31st March 1890 there were 16,108 miles of open railway in India, of which 869 miles were opened during the previous 12 months; 2,272 miles more were under construction. The chief extensions of the year were on the Bengal-Nagpur, the Indian Midland, and the Nizam's lines. The total capital outlay on railways up to the end of the year 1889 was Rx. 204,609,013, and the cost of the open lines averaged about Rx. 13,000 per mile, ranging from Rx. 1,843 on the Jodhpore Railway to Rx. 21,483 on the East Indian Railway. The gross earnings of all lines for the year 1889 were Rx. 20,493,664, or $\frac{3}{4}$ of a million more than in the year 1888; working expenses came to about $50\frac{1}{2}$ per cent. of the gross earnings; and the net revenue yielded 4.9 per cent., as against 5.42 per cent. per annum in the previous year, on the capital cost. This average dividend was slightly smaller than in the preceding year, in consequence of the large working expenses on new lines. Though the dividend on the total railway capital is RAILWAYS.

SUMMARY.

thus nearly 5 per cent., and though the Government is not liable for more than 5 per cent. on any guaranteed capital, or for more than 4 per cent. on State railway capital, still the Indian Treasury lost on its current railway transactions Rx. 2,267,800 in 1887-88, and Rx. 2,233,000 in 1888-89, and is estimated to lose Rx. 1,903,000 in 1889-90. The loss is thus growing smaller, though it is still serious. This loss in 1889-90 is explained partly by the fact that two guaranteed railways were entitled to one-half the surplus profits on their lines above 5 per cent.; or in 1889-90 a sum of Rx. 436,000 l., partly by the fact that interest on guaranteed railway capital has to be paid in gold, while the earnings of the lines are realised in silver, and partly by the fact that on three out of five guaranteed lines the net earnings fall far-short of the interest charge.

The fares and rates charged on Indian railways range from $1\frac{3}{4}$ pice to 3 pice per mile (less than one farthing on the average) for the lowest class of passengers, and from $2\frac{1}{4}$ pice to 8 pice (about one halfpenny per ton per mile on the average) for grain and coal. The total number of passengers travelling was 111 millions as against 103 millions, and of tons of goods moved 22 millions, or about the same figure as in the preceding year. The decrease in the wheat traffic, due to short harvests, caused a check in the normal increase of the goods traffic.

Among the more important railway works prosecuted during the year were the great bridge over the Chenab, at Sher Shah, which was opened for traffic on the 1st February 1890; and the tunnel, $2\frac{1}{2}$ miles long, through the Khwaja Anran range between Baluchistan and Kandahar, of which the headings met on the 17th April 1890.

IRRIGATION.

The areas of land irrigated by Government works were, for the year 1888-89—

	Acres.
In Madras - - - - -	4,897,000
In the Punjab - - - - -	2,614,000
In Sind - - - - -	2,118,000
In the North Western Provinces - - - - -	1,605,000
In Bengal - - - - -	592,000
In Bombay - - - - -	79,000
In Upper Burma - - - - -	193,000
TOTAL - - - - -	12,098,000
TOTAL of 1887-88 - - - - -	10,629,000
TOTAL for 1886-87 - - - - -	9,951,000

The irrigated areas in every province were larger than in the previous year. For irrigation works, which watered in 1888-89 an area of 8,543,000 acres, as compared with 7,590,836 acres in the year 1887-88, separate accounts of capital outlay, working expenses, and revenue yield, are kept. The works which water the rest of the irrigated area are chiefly in Madras, Sind, and the Punjab; they were constructed from revenue in past years, and they now yield large returns. The irrigation and embankment works, for which detailed accounts are kept, show the following results to the end of the year 1888-89:—

Capital outlay to end of the year, including capitalised land revenue of land occupied by canals, also pension or leave allowances - - - - -	Rx. 31,910,000
Gross irrigation revenue - - - - -	2,236,000
Working and maintenance expenses - - - - -	1,007,000
Percentage of net receipts on capital outlay - - - - -	3.8 per cent.

The total dividend is four-tenths per cent. larger than in 1887-88. The irrigation works of the Cauvery, Kistna, and Godavery deltas and of Sind, yield net returns of more than 10 per cent. on the capital outlay; and the

the great canals of Upper India, where they are complete, yield nearly 5 per cent. But the irrigation account is burdened with nine millions of capital expended on the Orissa, Kurnool, Sone, and Deccan Canals, of which the Orissa and Kurnool Canals were taken over from private companies, and none of which yield any appreciable dividend. SUMMARY.

Out of a total outlay of Rx. 1,898,000 on military works, a sum of Rx. 790,000 was spent on coast and frontier defences. Further progress was made with the defences at Aden, Bombay, Karachi, Calcutta, and Rangoon. MILITARY WORKS.

The outlay on public buildings was Rx. 944,000, most of which was devoted to repairs and maintenance. Rx. 3,259,000 were spent on roads and other public improvements. In some provinces the outlay was incurred chiefly in the maintenance and repair of existing roads, bridges, and navigable channels; but the construction of new roads was pushed in Upper Burma, and on the North West and Sikkim frontiers, while many short roads were under construction from railway stations to the country markets around. Much of the outlay on local roads is now managed by district boards in all provinces. Among the more important public improvements prosecuted during the year were the Calcutta and Bombay waterworks extension, the Calcutta Docks, and a dry dock at Bombay. CIVIL WORKS.

Exclusive of Government transactions, the foreign trade of India for the year 1888-89 stood in round numbers, thus:— TRADE.

	Rx.		Rx.
Value of exports of merchandise by sea - - - - -	97 millions.	Value of imports of merchandise by sea - - - - -	66½ millions.
Value of exports of merchandise across the external land frontier - - - - -	4½ millions.	Value of imports of merchandise across the external land frontier - - - - -	3½ millions.
		Net imports of treasure by land and sea - - - - -	12½ millions.
TOTALS - - Rx.	101½ millions.	Rx.	82½ millions.

The grand total of 184 millions exceeds the corresponding total of the previous year by 10½ millions, and the average yearly increase in the value of the total trade of India during the past ten years has been 5½ per cent.

The Secretary of State's bills paid during the year in India were Rx. 22 millions. The imports of merchandise by sea were 6½ per cent., and the exports were 8 per cent. larger than in the previous year. The chief items of the exports in the last two years were:—

	1887-88.	1888-89.
	Rx.	Rx.
Cotton - - - - - valued at	14,412,000	15,045,000
Opium - - - - - "	10,067,000	10,508,000
Oil-seeds - - - - - "	9,385,000	9,561,000
Rice - - - - - "	9,291,000	7,845,000
Wheat - - - - - "	5,562,000	7,522,000
Jute and jute goods - - - - - "	7,786,000	10,468,000
Tea - - - - - "	5,174,000	5,267,000
Cotton yarn and goods - - - - - "	5,227,000	6,374,000
Indigo - - - - - "	3,890,000	3,948,000

In all these articles except rice the exports showed an increase over the preceding year; in the case of jute, wheat, and cotton yarns, the increase was especially large. The export of cotton goods and cotton yarns from

SUMMARY.

Bombay mills into Chinese, Japan, and other markets again showed an increase of 24 per cent. on the previous year. The chief items of the import trade are :—

	1887-88.	1888-89.
	Rx.	Rx.
Cotton yarns and goods - valued at	27,506,000	30,906,000
Metals, apart from railway materials. valued at	5,313,000	4,054,000

The value of imported cotton goods increased 12 per cent., the value of imported metals decreased 24 per cent., and the value of sugar imports, after increasing for some years, showed a decrease of 15 per cent. The port of Bombay had a foreign trade valued at Rx. 78,855,000, while the Calcutta trade came to Rx. 63,757,000. Of the Indian imports, 80 per cent. came from the United Kingdom. Of India's total trade, exclusive of treasure, 55 per cent. was with the United Kingdom; 10 per cent. is with China; 5½ per cent. with France; and 4 per cent. with the Straits Settlements. The total shipping entered and cleared at Indian ports during the year was 6,983,000 tons, of which 82 per cent. was under the British flag.

The countries which have the largest land trade with India are :—

	1887-88.	1888-89.
	Rx.	Rx.
Nepal - with a trade valued at	3,035,000	2,643,000
Cashmere - " " -	1,223,000	1,307,000
Cabul - " " -	815,000	720,000

There was thus a considerable decrease in the trade with Nepal and Cabul, and a small decrease in the Cashmere trade as compared with the previous year.

Approximate figures for the trade of the year 1889-90 show that the commerce of India continues to increase; the value of the exports of merchandise was over 103 millions, and of the imports 66½ millions, while the net imports of treasure were 3¼ millions larger than in the year 1888-89. The imports of cotton goods were Rx. 1,637,000 below the corresponding total for 1888-89. Exports of raw cotton increased by 3½ millions; of rice by 2¼ millions; of jute by one million; and of cotton goods by one-third of a million; while wheat exports fell off by Rx. 1,730,000 in value. The exports of Indian tea show a further increase of 6¾ million lbs.

MANUFACTURES.

Once in ten years only are statistics prepared of the weaving, carpentering, and other, so to speak, household and village industries. With the greatly increased importation and production of machine-made yarns and cotton goods the weaving and spinning industries to some extent decline; but other employments are arising and extending. For instance, on the railways, the tea gardens, and the coffee estates, more than three-quarters of a million of people are employed, besides the labourers engaged in constructing railways. The returns of factories show that great industries of this kind are increasing. For the year 1888-89 there were—

108 cotton mills,	7 silk mills,
26 jute mills,	21 breweries,
9 paper mills,	26 coffee works,
47 rice mills,	9 large sugar factories,
47 saw mills,	15 pottery and tile factories,
47 iron and brass foundries,	

besides jute and cotton presses, oil-mills, soap, cement, lac, catch, ice, indigo, and other minor factories.

The

SUMMARY.
MINERAL
RESOURCES.

The out-put of coal from Indian collieries was 1,708,000 tons, or 9½ per cent. above the yield of the preceding year; the total imports of coal into India by sea were 833,000 tons. The Umeria colliery in the Rewa territory, the Singareni colliery in the Nizam's dominions, and coal workings in the Punjab salt range and in Baluchistan, were added during the year to the coal sources actively worked. The earth-oil industry in Lower Burma made little progress; but the company who are at present working the Upper Burma oil field have put down deep wells, and are beginning to make the business pay after several years of failure; the earth-oil of Baluchistan has not yet been successfully worked. Of the many gold mines opened in Southern India only three yielded gold in any quantity, and only one paid a dividend; and of these mines the out-put of gold was said to be 283,000 l. from 1883 to 1888; 304,000 l. during 1889; and at the rate of half a million a year during the first four months of 1890. The lessees of the Burmese ruby mines received charge of the mines after the end of the year.

EDUCATION.

Education continues to make progress in India, though the proportion of the total population able to read and write, and the proportion of children of school-going age under instruction are still very small in every province except Burma. The number of schools and colleges in British India fell from 133,125 at the beginning to 131,709 at the end of the year 1888-89, but the total number of scholars had during the same period risen from 3,460,844 to 3,544,257. Of this latter number 290,261, as against 278,201 in the previous year, were girls. It is estimated that in British India 20·3 per cent. of all the boys of school-going age attended school, but for girls of school-going age the per-centage was only 1·8 per cent. At the five universities, which hold examinations, grant degrees, and practically control higher and secondary education throughout India, there were 13,941 undergraduates studying at 124 colleges, among whom 76 were girls. The number of students who gained university degrees were,—

In Arts or Science - - - - -	1,366
In Law - - - - -	255
In Medicine - - - - -	83
In Engineering - - - - -	30

A large number of students obtained subordinate diplomas in medicine, engineering, and agriculture, who had not passed through the full university course. The number of boys and girls that presented themselves for the entrance or matriculation examination at the several universities was 18,746, of whom 5,257 passed. The candidates came—

	Candidates.	Passed.		Candidates.	Passed.
From schools under public management.	3,781	1,698	Other institutions - - - -	5,500	1,381
From aided schools - - - -	5,085	1,731	Private tuition - - - -	4,290	447

The number of scholars at secondary schools was 533,048, or 2¼ per cent. more than in the previous year; at primary schools the number of scholars increased from 2,911,599 to 2,979,310. The number of children that passed public examinations by standards below the university examinations were,—

	Boys.	Girls.
Middle school standard - - - -	15,400	463
Upper primary " - - - -	31,080	1,184
Lower primary " - - - -	74,809	3,603

SUMMARY.

There were 110 training schools for schoolmasters and 34 for school-mistresses; from these institutions 1,521 men and 343 women gained certificates as qualified teachers.

The number of technical schools in British India was returned at 15 medical schools, 17 engineering and surveying schools, four schools of art, 81 industrial schools, and two agricultural schools. The increase in the number of industrial schools was eight during the year; the most important technical schools are those maintained at the workshops of the great railways.

The year showed a satisfactory increase in the number of Muhammadans attending college and school, especially in Bengal, the total number of Mahammadan scholars having risen to 832,419 from 804,485 in the previous year; among other classes of scholars there were 2,413,588 Hindoos, 23,948 Europeans and Eurasians, and 74,376 Native Christians.

The total expenditure on education during the year was Rx. 2,700,232 as compared with Rx. 2,619,128 in the preceding year. The expenditure of the year came from various sources, thus:

From Public Funds:	Rx.	Rx.
Provincial - - - - -	739,787	—
Local - - - - -	478,447	—
Municipal - - - - -	131,419	1,340,653
From school fees - - - - -	—	768,582
From other sources - - - - -	—	591,047
TOTAL - - - - -		2,700,232

LITERATURE AND PRESS.

During the year 1888-89 there were 514 vernacular journals published in 16 different languages of India, but some of these are said to have issued for a short time only, or irregularly. The largest circulation of any daily journal was returned at 1,500, and of any weekly at 20,000 copies; both of these largely circulated papers are in Bengali.

The vernacular journals discussed general politics, local questions, science, social reform, the National Congress movement, the constitution of the legislatures, and alleged shortcomings of the Government and its officials. Some of them are conducted with ability and moderation; others are apparently edited and written by persons little fitted for the duty of guiding and instructing Native public opinion. Comic and illustrated papers are coming into more extensive circulation. There was no censorship on any of these journals, and no restriction beyond the general law against libel, against indecency, and against exciting sedition; but abstracts of articles and intelligence in vernacular newspapers are laid every week before the local and supreme Governments. The total number of books and publications registered during the year was 9,298, or eight per cent. above the number of the preceding year; about nine-tenths of these were in vernacular languages. The subject of the greater number of these works fell under the heads of language and school-books, religion, poetry, drama, and fiction; the number of books on history and biography was smaller than in the previous year.

MUNICIPALITIES.

At the end of 1888-89 there were in India 745 municipal towns, containing a population of 14½ million souls. These municipalities are of varying size, from Bombay city, with nearly 800,000 people and yearly receipts of Rx. 843,000, inclusive of loans, down to towns with less than 5,000 people and receipts under Rx. 200 a year. The municipalities are controlled by committees, which, under the law applicable to each province, can impose taxes, enact bye-laws, make improvements, and spend money; but the sanction of the local government is necessary in each case before new taxes can be levied or new bye-laws can be brought into force. In all larger towns, and in many of the smaller towns, the majority of members of committees are elected by the ratepayers; everywhere the majority of town committees consists of Natives, and in many committees all the members are Natives.

Members

Members of committees receive no salary or fee for the performance of their municipal duties, but the position of municipal member is considered honourable; from many sides it is reported that committee-men ordinarily attend regularly to municipal business and take increasing interest in local public duties. So far as can be seen, the tendency of the elected majority is stronger towards economy and restriction of expenditure than in the case of the governing bodies under the previous system; the elective committees are in favour rather of reducing local taxation than of increasing municipal burdens.

The total receipts and expenditure of the year for all municipalities in India were:—

RECEIPTS.		Rx.
Octroi duties	- - - - -	740,000
Other taxes	- - - - -	1,316,000
Sources other than taxation	- - - - -	750,000
Loans	- - - - -	579,000
TOTAL		3,385,000
TOTAL for 1887-88		3,457,000

EXPENDITURE.		Rx.
Cost of collection and administration	- - - - -	286,000
Public health	- - - - -	1,692,000
Public safety	- - - - -	317,000
Public convenience, including streets and roads	- - - - -	523,000
Repayment of, and interest on, debt	- - - - -	240,000
Miscellaneous	- - - - -	488,000
TOTAL		3,546,000
TOTAL for 1887-88		3,319,000

Municipal loans have been incurred only for large permanent improvements, such as waterworks and drainage works; sinking funds for the liquidation of such loans within a limited term of years are in every case established; and during the year no municipality failed to set apart the full sum required for the interest and sinking fund of its loans.

In some provinces the duties connected with schools, hospitals, vaccination, and such like matters committed to municipalities, are wider than in others. Everywhere municipal committees have the care of the roads, water supply, drains, markets, sanitation and improvement of their towns. So far as funds permit, the maintenance and improvement of towns are carried out; the large proportion of the funds that is devoted to purposes connected with public health, show that municipal bodies are not unmindful of sanitary needs; but funds are limited; elective municipalities are very loth to increase local taxation; and so improvement in all, save the great rich cities, must be very gradual. Waterworks, and water supply improvement were the most important of the great municipal undertakings of the year.

In a previous year's statement it was mentioned that the duties of district and local boards had been widened and their constitution amended under recent enactments. In some provinces the majority of members are elected. In Bengal and Madras the District Boards are of old standing and are said to be working successfully. In other provinces the Boards are gradually getting in good working order.

DISTRICT BOARDS.

SUMMARY.
HOSPITALS.

There were 1,581 hospitals and dispensaries open at the end of 1888, or 55 more than in the previous year. An increasing number of special hospitals for women, of women's wards, and of children's wards, are established or are being opened, partly by Native liberality, partly by missionary societies, and partly under the impetus given by an association which was founded by the Countess of Dufferin. An important impetus has been given also to the study of medicine and surgery by Indian women. During 1888 as many as 184 women and girls were under instruction at medical colleges and hospitals; at the Madras University an Indian woman obtained the degree of Bachelor of Medicine. From nearly every medical school women have obtained diplomas during the year; and an Inspector General of Hospitals reports that "the work in practice of women who had left the medical school was as good as we had ventured to hope." The total number of indoor patients treated was 254,000, and of outdoor patients, 11,538,245. The hospital death-rate was the same as in the previous year. The number of more important surgical operations was returned at 44,496, a slight increase on the total of 1887. In 25 lunatic asylums a total of 4,725 patients were under treatment, among whom the death-rate was somewhat higher than in the previous year. According to the latest return there were 23 leper asylums in operation under local bodies in the different provinces, with a total of about 2,100 inmates.

VACCINATION.

Ten more towns in Bengal, besides a few towns in other provinces, have voted the extension of the Compulsory Vaccination Act to themselves. Over the whole country the number of successful vaccinations was 5,640,967, as compared with 5,211,274 in 1887. The ratio of vaccinations to the total births ranged from 79 per cent. in Berar, and 58 per cent. in Bombay to 10 per cent. in Burma. About 2½ million of the successful operations were performed on infants under one year old. The proportion of successful vaccinations to total operations improved in every province except Coorg. The total reported deaths from small-pox rose to 93,568 from 65,757 reported in the previous year for all India; the chief part of the increase in mortality from small-pox occurred in Oudh. In the cities of Calcutta and Madras, where adequate protection has been given for some years, only 2 deaths and 36 deaths respectively were recorded as due to small-pox.

EMIGRATION.

So far as the movement of emigrant labourers from India and into India across the sea is observed, the returns for 1888 were as follows:—

Emigration and Migration.			Return Home.		
Province from which they mostly depart.	Destination of Emigration.	Number of Emigrants.	Place or Country whence they return.	Province to which they mostly return.	Number of returning Emigrants.
Bengal	West India Sugar Colonies and Guiana.	7,121	West India Sugar Colonies and Guiana.	Bengal	3,908
Madras	Mauritius and Natal.	2,186	Mauritius and Natal	Madras	1,047
Madras and South India	Straits Settlements.	20,809			
Madras	Ceylon	78,302	French Colonies	French Possessions in India.	1,340
Bengal and Madras	Burma	122,740			
Bengal	Assam	46,293	Burma	Bengal and Madras.	74,625
	TOTAL	277,451		TOTAL	80,920
	TOTAL of preceding year	221,056		TOTAL of preceding year	93,563

There is an immense deal of migration from district to district or from province for purposes of labour which is not registered. The emigration to the

the sugar colonies and to Assam is regulated by law, and the labourers are under contract for terms of years. For the rest emigration to other places is free; but emigration to the French colonies has been suspended. Emigration to the West Indies has decreased much of late years by reason of the decline of the sugar industry; such emigrants as go appear to keep their health and to do well; the 3,908 who returned to Bengal from the West Indies during 1888 brought back with them savings that averaged Rx. 14 per head; the emigrants returning to Madras from the Mauritius brought back savings averaging Rx. 4 a head, and the 838 returning emigrants from Natal had savings averaging Rx. 25 for each adult. The Indian labourers in the Assam tea districts now number 354,000 persons. Special instructions was issued during the year with a view to full inquiry into all complaints by coolies; it is reported that the relations of these people with their employers are, despite a few exceptions, on the whole good. The death-rate among labourers during transport to Assam and while on tea gardens as worse than in the previous year owing to the prevalence of cholera. The change in the law, which permitted so-called free emigration to Assam, opened a door to serious malpractices in the recruiting districts, and fresh legislation on this matter is under consideration. A proportion of the Indian labourers emigrating to Burma and the Straits settle in those countries, but the majority return home every year; the high wages there enjoyed enable the labourers to carry home considerable sums. The majority of emigrants go from the Madras Presidency, the North-Western Provinces, Oudh, and Chota Nagpore.

SUMMARY.

The actual strength of the Army in India on the 1st April 1889 was:—

ARMY

British Troops:

Artillery, 88 batteries	-	-	-	-	-	} 71,993 men.
Cavalry, 9 regiments	-	-	-	-	-	
Infantry, 53 battalions	-	-	-	-	-	

Native Troops:

Artillery, 9 batteries	-	-	-	-	-	} 149,765 „
Cavalry, 48 regiments and corps	-	-	-	-	-	
Infantry, sappers, 127 battalions and corps	-	-	-	-	-	

TOTAL - - - 221,758 „

The strength was thus greater by 3,101 men than in the previous year.

The force employed in Upper Burma at the beginning of the year 1888-89 was 19,574 men, and it was reduced by the end of the year to 12,483 men. Military operations were prosecuted during the year in Upper Burma, where the country is quieting down on all sides; on the Hazara border, where certain tribes belonging to the Black Mountain had been raiding, and were reduced to submission after a short expedition; on the Chittagong frontier, where the Lushai tribes had been attacking British subjects, and were punished; and in Sikkim, whence it became necessary to oust Thibet troops from a British dependency. The death-rate among European troops rose from 14.20 per mille in 1887 to 14.84 per mille in 1888; and among Native troops from 11.68 to 12.84 per mille. The rate of admissions to hospital and the daily sick-rate remained about the same as in the previous year among European, and among Native troops.

The number of volunteers enrolled at the end of the year was 20,665, of whom 17,515 were returned as efficient, showing an increase of more than 2,000 during the year under both categories; of the "efficient" 1,164 were mounted men, and 605 were artillery.

The net expenditure on the Army in 1888-89 was Rx. 19,239,000, or Rx. 117,000 more than in the previous year. This figure does not include a sum of Rx. 1,898,000 spent during the year on military works and defences.

Naval duties in Indian seas are undertaken by the Admiralty, who, for a payment of £. 39,000 from the Indian Treasury, maintained during the year

MARINE.

SUMMARY.

1888-89 a squadron of four ships in Indian waters. The Marine Department had at the end of 1888-89 eleven sea-going steamers, which were employed on carrying troops, on lighthouse work, on marine surveys, and for miscellaneous duties at Aden, at the Andaman Islands, in the Persian Gulf, and in other Indian waters; they had two turret ships for the defence of Bombay Harbour; and they had nine river steamers, besides flats, launches, and many smaller craft for pilotage work, for harbour torpedo service, for survey duties, and for inland waters in Bengal, Burma, Assam, Sind, and Turkish Arabia. Two Government dockyards are maintained at Bombay and Calcutta, at which all Government vessels are repaired and smaller craft are built. The cost of the Marine Department was Rx. 578,000 in 1888-89, as compared with Rx. 671,000 and Rx. 848,000 in the two previous years; in each year there were receipts of about Rx. 200,000 as a set-off against the cost of pilot establishments, lighthouses, and dockyards. The decrease of expenditure is due to a further reduction of outlay on the hire of troopships for Burma and on river vessels for Burma waters. The marine expenditure includes the subsidy to the Admiralty, the cost of troopships in Indian seas, and the cost of lighthouses and lightships round the Indian coasts; but it does not include a sum of above 200,000 L., charged under the head of "Army" on account of the great troopships which carry British soldiers to and from India.

NATIVE STATES.

The Indian States under Native administration comprise an area of about 700,000 square miles, with a population of about 62 millions of people. They yield to their Chiefs' revenues aggregating about Rx. 19,200,000, and they pay to the Indian Treasury tributes amounting to Rx. 745,000. These States are all under British political control; while the Indian Government has relations with trans-frontier and frontier tribes and States from Arabia on the west to Siam on the east. Afghanistan, Nepal, and Bhootan are reckoned as foreign and not as Indian States. Of the latter there are, besides the Shan States, in all 551 Chiefs whose States are not subject to the law of British India; the chiefships vary greatly in size and character from the Hyderabad State, with 81,000 square miles of territory and a population of ten millions, to the petty chief of a few villages with a population of three or four thousand. The States which possess revenues of more than Rx. 500,000 are:—

	Rx.
Hyderabad, with a revenue of	3,136,000
Baroda	1,532,000
Gwalior	1,433,000
Mysore	1,329,000
Cashmere	700,000
Travancore	711,000
Jaipur	619,000
Indore	610,000

A few other important States like Patiala, Ferozpur, Jodhpur, Udaipur, Bhartpur, Alwar, Kolhapur, and Bhavnagar, have large revenues, and are otherwise very important. Among the larger States, Gwalior, Rewah, Patiala, Jind, Kapurthala, Jhallawar, and Kolhapur, are at present governed by regencies, owing to the minority or incapacity of their rulers. Kashmir has also been placed under a council, during the temporary exclusion of the Maharaja from the administration of his State. Nearly all the States keep their expenditure within their income; many have large cash balances; some have spent and are spending large sums on railways, irrigation works, and roads for the improvement of their territories; many have established courts of justice, municipalities, schools and hospitals, after the model of British provinces; and a very few publish yearly or quinquennial accounts of their administration. For instance, Jaipur spent in 1888-89 on public works Rx. 87,000 out of a total expenditure of Rx. 493,000; and in several of the larger States colleges, schools and hospitals are being steadily increased. There was a satisfactory decrease in the number of gang robberies in the States of Rajputana during the year; but there was an increase of robberies in the territory of the Central India agency, where harvests were short and food

food was dear. The Gwalior reGENCY are devoting large sums to the construction of roads leading to railway stations. From Hyderabad some improvements in the internal administration are reported. The Indore State abolished obnoxious taxes to the amount of Rs. 42,000 a year, besides reducing excessive land revenue assessments and increasing the grants for education. In Bhopal important relief has been granted to the people by reductions in the land revenue and by the gradual creation of tenant right. From Rajputana good accounts come of the Jaipur, Alwar, and Jodhpur administration; matters have greatly improved in Tonk and Kerowli. In Jaipur the irrigation works, besides being beneficial to the people, are financially most advantageous to the State; while in Jodhpur the Maharaja's railway, which he is extending, yields a net profit of 8½ per cent. on its cost. Mandi and Suket in the Punjab; some few of the Bombay States; and sundry of the chiefships in the Central provinces continue to give cause for anxiety. For the rest, the Punjab States, the Rajputana States, Mysore, Baroda, Travancore, and the great majority of the many Native States in Bombay, were well governed, and the subjects thereof were contented.

SUMMARY.

Relations with Afghanistan as well as with the tribes and chiefs on the Baluch border were satisfactory during the year. The Derajat and Bannu borders were peaceful. On the Kohat frontier and in the Kuram Valley, affairs continued to be unsettled. On the Hazara border the Black Mountain Expedition of 1888 was quite successful; the offending tribes made unqualified submission; and that part of the frontier is now quiet. There was little trouble on the Peshawur frontier or on the Khyber line, where the local levies guard the marches. There was no anxiety on the border from Hazara round to Nepal. Sikkim, a vassal state between British territory and Thibet, which had been violated by Thibetan troops, has been freed from the enemy and is now at peace. There were signs of unrest among the Abors on the frontier of Assam, and a punitive expedition was conducted against the Mazungs who had perpetrated two very savage raids; but for the rest, the long Assam border, with its many hill tribes, was quiet. The punitive expedition against a Lushai tribe, which had raided into Chittagong, met with no opposition; punishment was inflicted upon the two offending villages, and an advanced post of frontier post was established at Lungich to safeguard the border villages not protected by the outpost at Demagiri.

FRONTIER TRIBES
AND TROUBLES.

A separate section of the present statement shows the progress made with the administration of Upper Burma to May 1890. The salient facts are that the military garrison has been reduced since 1886-87, from 26,000 to 12,000 men; that the only military operations now required are among the wild border tribes; that most of the districts are quiet, and the people have settled down to peaceful pursuits; that the executive and judicial administration are being systematised on the pattern of older British provinces; that the revenue has risen during the four years since annexation from 22 lakhs to 90 lakhs; that a railway, 220 miles long, has been made and is already yielding a net profit of over 5 per cent. on its cost; that another railway is being constructed; that over 600 miles of bridged and metalled road have been made, or are under construction; and that the old irrigation works are being repaired.

UPPER BURMA.

II.

ADMINISTRATION AND LEGISLATION.

- ADMINISTRATION.
India Office.
- IN the Home Administration Viscount Cross, G.C.B., continued to be Secretary of State, and Sir John Gorst, Q.C., M.P., to be Parliamentary Under Secretary of State. A vacancy in the Council, caused by the retirement of General C. J. Foster, C.B. on the expiry of 10 years' term of office, was filled by the appointment, on the 1st of January 1889, of Lieutenant General Sir A. Alison, Bart., K.C.B.
- The Marquis of Dufferin and Ava, K.P., G.C.B., G.M.S.I., G.C.M.G., G.M.I.E., retained the office of Governor General of India until the 10th of December 1888, when he resigned, and was succeeded by the Marquis of Lansdowne, G.M.S.I., G.M.I.E., G.C.M.G. Mr. Philip Perceval Hutchins, C.S.I., of the Madras Civil Service, and a Member of the Council of the Governor of Madras, was appointed Ordinary Member of the Council of the Governor General, in succession to Sir Charles Umpherston Aitchison, K.C.S.I., C.I.E., resigned. Mr. Hutchins assumed charge of his office on the 17th November 1888. Sir David Miller Barbour, K.C.S.I., whose appointment was reported in the last number of this series, assumed charge of his office on the 22nd November 1888.
- Bengal. Sir Stuart Colvin Bayley, K.C.S.I., C.I.E., continued to be Lieutenant Governor of Bengal, this being the second year of his administration.
- North Western Provinces and Oudh. Sir Auckland Colvin, K.C.M.G., C.I.E., continued to be Lieutenant Governor of the North Western Provinces, and Chief Commissioner of Oudh, during the year.
- Punjab. Mr. (Sir) James Lyall, who was created a K.C.S.I. on the 1st of June 1888, held the office of Lieutenant Governor during the year.
- Burma. Sir C. H. T. Crosthwaite, K.C.S.I., B.C.S., held the office of Chief Commissioner of Burma throughout the year.
- Central Provinces. Mr. A. Mackenzie, C.S.I., held the office of Chief Commissioner of the Central Provinces throughout the year.
- Assam. The office of Chief Commissioner of Assam was held by Mr. D. Fitzpatrick, C.S.I., during the year under report.
- Ajuere. Colonel Charles Kenneth Mackenzie Walter, B.S.C., was Chief Commissioner of Ajmere Merwara throughout the year.
- Coorg and Bangalore. General Sir Harry Prendergast, K.C.B., V.C., R.E., held the office of Chief Commissioner of Coorg up to the 15th January 1889, when he was relieved by Colonel Sir Oliver St. John, K.C.S.I., R.E.
- Madras. During the year 1888-89 the Right Honourable Lord Connemara, C.C.I.E., continued to hold the office of Governor of Madras. Mr. C. G. Master, C.S.I., Senior Civil Member of Council, resigned his seat on the 7th of January 1889, and the vacancy thus caused was filled by Mr. J. H. Garstin, C.S.I. Mr. P. P. Hutchins, Second Civil Member, resigned his seat as Second Civil Member on the 9th November 1888, on his appointment as Ordinary Member of the Council of the Governor General. He was succeeded by Mr. H. E. Stokes, who had already officiated as Member of Council during the absence on leave of Mr. C. G. Master.
- Bombay. The Government of the Bombay Presidency continued to be conducted during the year under review by the Right Honourable Lord Reay, LL.D., G.C.I.E. Mr. J. R. Naylor acted temporarily as Member of Council during the absence of Mr. (now Sir) Raymond West.
- Hyderabad and Berar. Mr. A. P. Howell, of the Bengal Civil Service, held the office of Resident at Hyderabad, with charge also of the Assigned Districts.
- Central India. Of the principal Native States, those of the Central India Agency were during the 12 months under the control of Mr. Frederick Henvey, of the Bengal Civil Service; Colonel Charles Kenneth Mackenzie Walter, B.S.C., was Governor General's Agent in Rajputana, as well as Chief Commissioner of
- Rajputana.

of Ajmere Merwara; the Residency at Kashmir was for the first half of the year in the hands of Mr. Trevor Chichele Plowden, of the Bengal Civil Service, who was succeeded in November, and for the remaining months, by Colonel Robert Parry Nisbet, C.I.E.; General Sir Oliver Beauchamp Coventry St. John, K.C.S.I., R.E., was Resident and Agent to the Governor General in Baroda till January, when he was appointed Resident in Mysore, and Chief Commissioner in Coorg. General Sir Harry North Dalrymple Prendergast, K.C.B., V.C., R.E., who had till January been acting in the latter post, was transferred to the substantive appointment of Resident and Governor General's Agent in Baroda, where he remained till the end of the year. Colonel Sir Robert Groves Sandeman, K.C.S.I., of the Bengal Civil Service, was Governor General's Agent in Baluchistan, and Chief Commissioner for British Baluchistan, during the whole of 1888-89. For the same period Colonel Edmund Charles Ross, C.S.I., B.S.C., held the post of Political Resident in the Persian Gulf, and the Political Residency at Aden was occupied by Brigadier General A. G. F. Hogg, C.B., of the Bombay Staff Corps.

ADMINISTRATIONS:
Kashmir.
Baroda and Mysore.
Baluchistan.
Persian Gulf.
Aden.

LEGISLATION.

During the year 1888-89 22 Acts, passed by the Council of the Governor General for making Laws and Regulations, received the assent of the Governor General. The first meeting of the Council at Simla, in 1888, was on the 11th of July, and the last on the 25th of October. The Council reassembled at Calcutta on the 21st December 1888. The total number of meetings of the Council during the year was 22, namely, nine at Simla and 13 at Calcutta.

LEGISLATION.
Governor General's Council.

Of the Acts passed, most of which dealt with unimportant amendments of the law, the more noteworthy were Act II. of 1889, to declare the imperial standard yard for the United Kingdom to be the legal standard measure of length in British India; Act IV. of 1889, the Indian Merchandise Marks Act; Acts VI. and VII., relating to succession, and probate and administration; and Act X., to consolidate and amend the law relating to Indian ports and port charges. Of the other Acts, No. IX. of 1888 repealed certain enactments relating to contagious diseases; Nos. XV., XVIII., XIX. of 1888, and No. III. of 1889, related to Burma; Act XIII. of 1888 amended the Punjab Courts Act of 1884; and Act IX. of 1889 related to Kanungos and Patwaris in the North Western Provinces and Oudh.

Bengal Council.

Four Acts were passed by the Council of the Lieutenant Governor of Bengal, and received the assent of the Governor General. The first Act provided for the sanitary protection, during their passage through Bengal, of emigrant labourers to Assam; Act II. made provision for the protection of the right of fishing in private waters; Act III. related to the municipality of Calcutta; and Act IV. enabled the Local Government to appoint a Muhammadan Burial Board for Calcutta.

North Western Provinces and Oudh Council.

No Act was passed by the Council of the North Western Provinces and Oudh during the year.

Madras Council.

Two Acts were passed by the Council of the Governor of Madras during the year 1888-89: Act I. of 1889, to amend the law relating to the courts of Village Munsifs, and Act II., to amend the Jails Act of 1869.

Bombay Council.

Six Acts were passed by the Council of the Governor of Bombay during the year, the most important being Act III. of 1888, consolidating and amending the law relating to the municipal government of the city of Bombay. By Act V. of 1888 the establishment of a port trust at Aden was finally effected.

III.

MUNICIPALITIES, LOCAL SELF-GOVERNMENT, AND
SANITATION.

(Detailed information regarding the Sanitation of British India being furnished in a separate Parliamentary Paper (shortly to be presented), a brief Review only is given at the close of the present Chapter.)

MUNICIPALITIES AND LOCAL BOARDS.

General.

IN every province of India the cities and larger towns manage their own local affairs through the agency of commissioners or committees appointed from among the citizens. 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 most places the majority of the commissioners or committees are elected by the townsfolk under precise rules, while in some minor towns all, and in all towns some municipal members are appointed by the Government. On almost every municipality one or more Government officials are members; but the number of Indian and non-official members everywhere 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 definite 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 are mainly :—

House tax.	Water rates.
Tax on rentals.	Conservancy rates.
Octroi duties.	Rents of public lands and pro-
Bazaar or market rents.	perties.
Carriage tax.	Public gardens and parks.

The objects on which municipal funds can be spent are, mainly, water supply, hospitals and dispensaries, streets and roads, vaccination, drainage and sanitation, education. Municipalities do more for the benefit of their citizens under these heads than was done before by Government officers; and the commissioners or committees evince for the most part diligence and public spirit in the performance of their honorary duties. The interest in the municipal elections, and in municipal affairs generally, is growing on the whole every year. It is reported that in every province municipal work is generally well done, and municipal responsibilities are faithfully performed, though occasional shortcomings and failures occur in particular towns. The tendency of these local bodies is to be slow in incurring new expenditure; and they are generally unwilling to impose new taxes even for purposes that are in themselves beneficial. In some towns there is a tendency to devote educational funds mainly to middle or higher education rather than to primary schools. The 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 more important totals of municipal statistics for British India are :—

Number of Municipal towns	- - - - -	745
Total population of ditto	- - - - -	14½ millions
Total income of ditto in 1888-89, inclusive of loans	- - - - -	Rx. 3,385,882
Total expenditure of ditto	- - - - -	„ 3,546,750
Yield of octroi duties	- - - - -	„ 739,908
Yield of direct taxes, or imposts other than octroi	- - - - -	„ 1,316,221
Amount of loans credited in the income of the year	- - - - -	„ 579,420

For

For the conduct of port and harbour affairs local bodies called Port Commissioners have been established at Bombay, Calcutta, Madras, Rangoon, Kurrachee, and some few smaller ports. Their income is raised partly by tonnage dues on shipping and partly by rates charged for the use of wharves, storehouses, and appliances for landing goods. Local merchants, Indian and European, sit on these port trusts, and on the whole give much satisfaction to the public and to traders. Their funds are spent on pilots, on port and harbour improvements, and port conservancy of all kinds: some of the port trusts have borrowed considerable sums for the construction of docks, wharves, and other permanent improvements. The yearly income of these trusts ranges from Rx. 440,000 in Bombay and Rx. 330,000 in Calcutta, to small sums in the case of minor ports; every trust pays its way and provides a sinking fund for its loans, while most of the port trusts have during the last 10 years materially reduced the rates of harbour dues on shipping and the rates of charge for wharves and landing facilities.

The local bodies charged with the administration of local funds and local undertakings in rural circles are of more recent creation than the municipalities and port trusts. In the older provinces there is a board for each district, the members of which are partly nominated and partly elected by local or subdivisional boards. These boards are charged with the expenditure and control of all funds available for local roads and bridges, local hospitals and sanitation, and in some provinces they undertake the control of educational affairs in their jurisdictions. In Madras and in Bengal these boards, or analogous bodies, have existed for several years, and are doing good work in a manner that is commended by the local authorities. Elsewhere the district and local boards are gradually establishing themselves as independent bodies, which conduct local affairs to the satisfaction of the people and the Government.

The year 1888-89 was the last year of the administration of the Calcutta Corporation, constituted under Act IV. (B.C.) of 1876, the new Act II. (B.C.) of 1888 having come into force after its close. The attendance of commissioners at general meetings, and also at committees, continued to be satisfactory. The works for doubling the water supply of the town, the most important of the schemes with which the commissioners were associated, were successfully completed during the season at a total cost of Rx. 617,560. Active arrangements were made for the extension of the supply to that portion of the suburban area which will, under recent changes, be dependent for its water on the Calcutta mains. The total income of the municipality was Rx. 327,327, and the expenditure was Rx. 318,713. No fresh loans were contracted; but Rx. 20,802 of debt was paid off, and the loan liability of the corporation reduced to Rx. 1,757,116. The assessors' valuation of the town rose to Rx. 1,448,648 from the figure of Rx. 1,298,517, at which it stood 10 years ago.

Calcutta.

Bengal.

The Bengal Municipal Act III. (B.C.) of 1884 was extended to six urban areas in the interior, and there were thus 147 municipalities constituted under that Act in these provinces at the close of the year, against 141 at its commencement, while 2,725,230 inhabitants of the total Bengal population of 66,691,456, as ascertained at the last census, enjoyed the benefits of municipal administration. The elective system has been introduced in all but 30 municipalities, in which the commissioners were appointed under Section 17 of the Act, and it appears, on the whole, to have worked satisfactorily. Considerable interest was taken by commissioners in the affairs of their respective municipalities, and in some cases much credit has been accorded them.

The total income of municipalities in the interior amounted to Rx. 304,977, and their expenditure to Rx. 304,290.

The provisions of the Local Self-Government Act were, at the close of the year, in force in 38 districts, in all of which district boards have been constituted. The total number of the members of these boards was 785, of whom 433 were nominated by Government and 352 elected by local boards, in conformity

formity with the law and the rules framed thereunder. No change occurred in the constitution of any of the district or local boards, and the proportion in which officials and non-officials, Europeans and Natives, were represented on them remained practically unaltered.

Financially the year opened with a balance at the credit of district boards of Rx. 181,204, which was at its close increased to Rx. 182,869. The income and expenditure thus almost balanced each other, the figures being Rx. 556,369 and Rx. 554,703, respectively.

On the whole, the working of district boards during the year, although by no means devoid of blemishes, is reported to have been satisfactory, and Government has recognised the interest taken by the members, and a praiseworthy desire on their part to aim at successful administration. There have been in some cases signs of timidity; in others of inexperience; in others of the undue subordination of public to private purposes; and in some an unwise tendency to excessive interference with the executive in professional questions. These drawbacks, however, it is considered, are more than counterbalanced by the advantage of entrusting the management of local affairs into the hands of those who are most permanently interested in its success, and the opinion of the Local Government is, that what is now chiefly required is more organisation and wider opportunities for the receipt of advice, encouragement, and, where necessary, supervision and control exercised by a higher authority, with large experience and observation of the working of boards throughout the whole province, and in other parts of India.

The number of municipalities in the North West Provinces and Oudh was 109, the same as in the previous year; 103 of which were administered under Act XV. of 1883, and the remaining six under the provisions of the older Act XV. of 1873.

The total municipal income realised amounted (in round numbers) to Rx. 296,600, against Rx. 294,100 in the previous year. Of the total, octroi duties contributed Rx. 190,200; taxation of other kinds produced Rx. 32,900; Rx. 41,700 were realised from rent of public lands, receipts from public gardens, &c.; Rx. 7,700 from grants-in-aid; and Rx. 7,400 from receipts under special Acts. The balance was made up of miscellaneous items. Octroi duties were in force in 82 municipalities; a compound and site tax in 27; a tax on professions and trades in 18; a tax on houses and lands in 11; and a tax on vehicles in 11. The all-round incidence of taxation per head of population was 11 annas and 1 pic, practically the same as in the previous year. The total expenditure amounted to Rx. 299,200, against Rx. 302,000 in the previous year. The credit balance at the close of the year was considerable, amounting to Rx. 420,000.

A very careful inquiry was made during the year into the conditions on which municipalities enjoy the income derived from intra-municipal Government property; and the conclusion arrived at, that only the usufruct of such property had been handed over, was placed on permanent record. It was directed that the proceeds of leases for terms of 30 years and upwards should be credited in moieties to provincial and municipal revenues, while the benefit of leases for shorter terms was allowed wholly to accrue to the municipalities concerned.

An important innovation during the year was the substitution of *maundage* for *ad valorem* rates in calculating octroi on cloth. The success of the measure could not be tested, as the rule was in operation for a short period only. A large number of municipalities abolished the octroi tax on tea.

Throughout the year the Government took every opportunity of assisting, as far as possible, the growth of local self-government through the agency of district boards. These are still, and for many years probably must remain, in their infancy. The local government consider that the immemorial habit of looking to the central authority of the district for the initiative and control of local measures; the distrust one of another which frequently characterises the members of local boards; and the tendency of district officers, on whom rests the pressure of ultimate responsibility, to gather the threads

threads of local administration into their own hands; all militate against the rapid growth of a desire for independence, or of a feeling of self-reliance on the part of these boards.

MUNICIPALITIES
AND LOCAL
BOARDS.

The subject of municipal taxation, and more particularly of the reform of the octroi tax, continued to engage the attention of the Punjab Government, and some progress was made with the work of preparing standard tables of the estimated local consumption of the various dutiable articles, for the better control of the octroi in the several municipalities. The number of octroi towns was reduced from 161 to 158 by the abolition of three petty municipalities in the Kangra District, and rules for the grant of refunds were either made or under consideration in the principal municipalities of the province.

Punjab.

An important extension of the scheme of decentralisation was effected by the establishment of the Provincial Loan Account, whereby the Provincial Government undertook the entire financial responsibility for State loans and advances to municipalities, agriculturists, and others, and has been empowered to grant such loans within a limited amount, to be fixed annually by the Supreme Government. The importance of the Loan Account lies chiefly in the opportunity which it affords for the carrying out of sanitary and other projects of local improvement in the large towns of the province. Municipalities had previously found it practically impossible to provide funds for the execution of waterworks and drainage and other schemes, because the Government declined to give them loans from the general revenues; and, on the other hand, the rate of interest charged for loans in the open market was so high as to be almost prohibitive. This difficulty has now been removed, and it is hoped that, by a judicious allotment of the grants annually placed at the disposal of Government for the purpose in the Provincial Loan Account, it will be possible to carry out some, at least, of the more important projects of local improvement in the near future.

The number of municipalities at the end of the year was 158, being three less than at the beginning. The income and expenditure of the several municipal funds amounted to Rx. 358,594 and Rx. 337,689, showing an increase of Rx. 29,022 in the receipts, and a decrease of Rx. 1,443 in the charges. Of the additional income, about Rx. 9,900 was obtained from octroi. The total net octroi collections amounted to Rx. 230,732; the incidence of the tax per head of the town population was Rs. 1. 2. 4.

During the year three new municipalities were constituted in Lower Burma, the number of municipal towns at the close of the year being 25, in all which a majority of the municipal members are elective. The income of the municipal funds amounted to Rx. 680,093, and the expenditure to Rx. 682,792. The large apparent increase in the income was due to the receipt of a loan of Rx. 175,000 by the Rangoon Municipality on account of drainage works. The financial condition of the municipal funds is, for the most part, satisfactory, and in most cases the funds were judiciously and economically administered. Some changes of importance in connection with the financial administration of municipal funds were carried out during the year, the excise, revenue, and the capitation tax, formerly credited to those funds, being withdrawn in consideration of fixed contributions from provincial funds. The object of these changes was to develop the principle according to which local expenditure is defrayed from revenue raised from local sources, and not from sources which properly appertain to the general revenues. Except the drainage works which were under construction in Rangoon, and are now approaching completion, no extensive public works were carried out in any municipality. The attention of the committees was directed to the maintenance of existing works and institutions, to the encouragement of education, and to other matters affecting the welfare of the towns entrusted to their charge.

Burma.

There are 16 municipalities in Upper Burma, constituted under the Upper Burma Municipal Regulation. The aggregate income of the municipal funds during the year amounted to Rx. 52,176, and the expenditure to Rx. 42,139. Municipal administration is an entirely new institution in Upper

MUNICIPALITIES
AND LOCAL
BOARDS.

Burma, and rapid progress in the development of the system is not to be expected. The attention of most of the committees was fully occupied in the consideration of the financial condition of the funds, and in the adjustment of current expenditure to the normal income. Provision was made for raising the funds required for the needs of the several towns, the chief sources of income being taxes on houses and lands (principally in Mandalay), and receipts from bazaars and slaughter-houses. Bazaar receipts at present constitute the most fruitful source of income in the majority of towns. The Mandalay Municipal Committee is alive to the necessity of providing for the needs of that important town, and has decided to raise a loan of Rx. 40,000, to be expended principally on the improvement of the water-supply and of streets.

Central
Provinces.

The number of municipalities in the Central Provinces was 58.

Model election rules framed by the Chief Commissioner have now been generally adopted. The effect of these is to place the franchise on a broad, simple, and uniform basis.

The total income from octroi fell from Rx. 59,976 to Rx. 58,496, a decrease of Rx. 1,480. The decrease was fairly general, and is, for the most part, attributed to bad harvests and consequently restricted consumption.

The administration of the octroi tax received the Chief Commissioner's careful attention during the year. The propriety of substituting some other method of taxation for octroi, in towns in which the cost of collecting this import duty is out of proportion to the income which it yields, was brought under the notice of the municipalities concerned; and in one or two instances a tax on the occupiers of houses has taken its place.

The transfer of the supervision of conservancy from the police to municipal committees has taken effect in several cases on the application of the committees themselves. The subject of sanitation in municipalities will probably receive fuller attention and attain more practical results now that the duties and authority of the sanitary commissioner have been more clearly defined. The increasing complexity of municipal administration has rendered it necessary to revise and extend the provisions of the Act of 1873, which gives to the municipalities of the Central Provinces their present legal status and powers. A Bill has accordingly been introduced into the Council which aims at supplying fuller and more exact definition of the powers and responsibilities of the municipal committees, and of the procedure which they should follow. It includes several necessary provisions for the protection of the public health; and transmutes into substantive law the various rules on the subject of nuisances which have from time to time been framed by municipal bodies under the imperfect authority of the existing Act. The Bill has been favourably received by the local public, the criticisms on its provisions being mostly confined to administrative details.

Assam.

The total receipts of the 14 municipalities in Assam decreased from Rx. 12,953 in the previous year to Rx. 12,453, the decrease being most noticeable in receipts on account of house tax in Sylhet, Gauhati, and Dibrugarh.

The total expenditure amounted to Rx. 12,949, against Rx. 12,124 in the former year, and a large proportion of this was incurred in connection with conservancy arrangements and sanitary works. The contributions made by the municipal bodies towards educational and medical objects, including vaccination, continue to show an increase. The closing balance to the credit of the municipal accounts at the end of the year was Rx. 1,687, as against Rx. 2,154 at the close of 1887-88. The elective system is in force in eight municipalities.

Madras City.

The receipts of the Madras Municipality during the official year 1888-89 were Rx. 151,174, which included an opening balance of Rx. 10,767, contributions from provincial funds of Rx. 2,922, and a loan of Rx. 15,759. The incidence of taxation was Rs. 1. 15. 9 per head of the population. The total expenditure was Rx. 135,437, inclusive of Rx. 12,031 for and out of capital account, and Rx. 17,454 under suspense. Excluding suspense items, the receipts were higher and the charges lower than in the preceding year.

The

The extension of the municipal office premises was practically completed, and the vaccination and registration building was finished. Nearly 16 miles of drains of all sizes were constructed, making a total of 66½ miles. Considerable additions were also made to the water supply system of the town, but the water from the Red Hills Lake has been pronounced, upon chemical analysis, to be tainted with impurities.

MUNICIPALITIES
AND LOCAL
BOARDS.

There were 55 minor municipalities administered under the District Municipalities Act IV. of 1884, against 54 in 1887-88, the town of Bozváda having been formed into a municipality with effect from 1st April 1888. On the 31st March 1889 the municipal councils of these towns consisted, in all, of 880 members, of whom 55 were members *ex officio*, 398 were nominated by Government, and 427 elected by the ratepayers. There were 203 official members, including the elected officials, and 677 non-official members. Classified according to race, 166 councillors were Europeans and Eurasians, and 714 Natives. Compared with the preceding year there was an advance in the proportion of members who were elected, and the non-official and native element was also increased. Each council held, on an average, 28 meetings, with an attendance of eight members. The elective system was in force in 34 towns, against 33 in 1887-88, and the average percentage of voters to population in these towns was 1.9. Elections were held for the purpose of filling up 240 vacancies on the councils; 183 elections were contested, and 52.3 per cent. of the voters on the registers recorded their votes. The right of electing their own chairman was enjoyed by 40 municipal councils, as in the previous year. The opening balances of the year amounted, in all, to Rx. 39,399, and the current receipts to Rx. 179,400, against Rx. 34,220 and Rx. 168,157, respectively, in 1887-88. The increase of Rx. 11,243 in the current receipts was spread over all the items except fines and school fees, but the advance was particularly marked under the heads of taxes on buildings and lands, tolls, endowments, and contributions from provincial and local funds. The average incidence of municipal taxation per head of the population was As. 12. 8. including, and As. 9. 2. excluding, tolls, and showed a slight advance upon the preceding year. The total expenditure of the year amounted to Rx. 178,999, against Rx. 162,950 in 1887-88, the increase occurring chiefly under public works, education, hospitals and dispensaries, conservancy, miscellaneous, and supervision and management. The closing balance was Rx. 39,799.

Madras
Presidency.

There was passed during the year the City of Bombay Municipal Act III. of 1888, a measure by which the previously existing laws relating to the municipal government of the city were consolidated, and their provisions brought into uniformity with the many requirements which have arisen with the growth of the city during the last 30 years. Before coming into operation the new law was, at the suggestion of the Government of India, subjected to certain alterations which were embodied in a separate Act, IV. of 1888. The passing of this new law marks an era in the development of the city of Bombay. In reforming and consolidating the provisions of the older laws which, in 30 years of prosperity, the city had outgrown, the new Code has introduced long-needed improvements in the regulations affecting drainage, waterworks, and other sanitary matters, has systematised the procedure relating to registration and assessment, has restricted exemptions from liability to taxation, and has conferred on the corporation in certain respects a somewhat larger measure of financial independence. Among constitutional changes, the number of members elected by the ratepayers has been increased from 32 to 36, the privilege of returning two members each has been accorded to the university and the chamber of commerce, and the conduct of elections has been precisely regulated. The town council has become the standing committee; and the chief officer of the municipality, formerly termed the chairman of the corporation, now bears, in conformity with the general custom in Indian cities, the official title of president.

Bombay City.

The revenue of the municipality in the year under review amounted to Rx. 496,619, thus falling short by about Rx. 20,000 of the receipts of the previous year, chiefly in consequence of a reduction of the town duties on grain, sugar and ghee, coupled with smaller importations of these and some other

32 STATEMENT EXHIBITING THE MORAL AND MATERIAL

MUNICIPALITIES
AND LOCAL
BOARDS.

other commodities. The receipts from the property rates, however, showed a satisfactory increase. The expenditure, exclusive of loan works, amounted to Rx. 520,126, or Rx. 61,143 less than that of the previous year, the decrease occurring principally in connection with municipal debt, under which exceptional disbursements were made in the previous year on account of repayments of certain loans, and payments of interest on others. New debt to the amount of Rx. 347,050 was incurred during the year, and the total debt at its close amounted to Rx. 2,362,064. The amount spent on the various loan works was Rx. 319,210, of which Rx. 249,579 were devoted to the Tansa waterworks.

Bombay
Presidency.

The number of district municipalities was, as in the previous year, 153. The number of municipal commissioners was 2,198, of whom 896 were elected and the rest nominated. The aggregate income, exclusive of balances, was Rx. 380,418, exceeding that of the previous year by about Rx. 32,462. The receipts from octroi decreased everywhere except in Sind. The aggregate expenditure amounted to Rx. 386,037, which was about Rx. 40,000 higher than that of 1887-88.

Berar.

The number of municipalities in Berar was seven as in the previous year; in only one town the Committee was elective; three-fifths of the members on all committees were non-officials. The municipal income was Rx. 15,590 or about the same as in 1887-88; 67 per cent. of the municipal expenditure was devoted to purposes connected with the public health.

On the following page will be found a statement showing the population, receipts and expenditure of municipalities in each province:

STATEMENT showing the Number of Municipalities in India, their Receipts and their Expenditure, for the Year 1888-89.

0.89.

B

	Bengal.		North Western Provinces and Oudh.	Punjab.	Burma.	Central Provinces.	Assam.	Madras.		Bombay.		Minor Provinces.	TOTAL.
	Presidency Corporation.	District Municipalities.						Presidency Corporation.	District Municipalities.	Presidency Corporation.	District Municipalities.		
Number of Municipalities - - - - -	1	147	109	158	40	56	14	1	55	1	153	19	745
Population according to the last census - - - - -	401,671	2,725,230	3,229,079	2,008,238	485,892	639,225	81,227	405,848	1,455,660	773,196	1,872,203	188,759	14,266,291
Receipts :	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Octroi - - - - -	-	-	190,157	233,873	-	51,204	-	-	-	101,258	143,117	20,299	739,908
Other Taxation - - - - -	309,794	222,119	32,928	16,042	106,070	5,958	6,851	75,286	113,616	335,385	90,050	2,122	1,316,221
Sources other than Taxation (excluding Deposits and Advances).	67,404	59,831	72,658	100,223	171,211	27,009	5,330	28,265	62,881	59,602	87,044	8,755	750,333
Loans - - - - -	-	5,000	-	8,350	175,000	-	-	15,000	2,500	317,050	26,520	-	579,420
TOTAL - - - Rx.	377,258	286,950	295,743	358,488	452,281	84,231	12,181	118,551	178,997	843,295	346,731	31,176	3,385,882
TOTAL (1887-88) - - - Rx.	562,302	270,857	293,920	329,896	293,748	79,984	12,127	111,267	168,576	946,224	355,443	32,763	3,457,197
Expenditure :													
Cost of Collection and Administration - - -	25,313	33,567	37,749	45,431	24,689	11,814	1,033	8,866	16,662	38,484	36,505	5,673	286,406
Public Health - - - - -	267,028	135,983	116,275	114,962	210,258	37,153	5,190	64,113	77,548	489,797	160,994	12,510	1,601,811
Public Safety - - - - -	59,432	23,966	52,237	56,264	20,941	1,322	716	2,095	8,274	66,102	22,194	3,651	317,094
Public Convenience, including Streets and Roads -	43,711	66,649	74,561	46,226	71,610	13,968	4,322	19,289	38,349	75,918	63,001	5,169	522,773
Repayment of and Interest on Debt - - - - -	84,418	1,140	986	14,035	18,713	2,358	69	10,421	965	98,557	7,921	571	240,154
Miscellaneous - - - - -	20,794	23,408	17,007	60,783	43,300	14,606	816	6,561	35,138	181,218	80,305	4,576	488,512
TOTAL - - - Rx.	500,696	284,713	298,815	337,701	389,611	81,221	12,746	112,265	176,936	949,076	370,920	32,160	3,546,750
TOTAL (1886-87) - - - Rx.	567,504	273,790	301,648	339,452	247,101	82,240	11,813	120,257	162,806	851,654	328,901	31,848	3,319,014

PROGRESS AND CONDITION OF INDIA, 1888-89.

SANITATION.

SANITATION.
European Troops.

The general health of the European troops on service in India during 1888 was less favourable than in the previous year. The admissions into hospital per 1,000 of average strength were 1,382 against 1,370, the daily sick-rate was 71 or one per thousand more, the invaliding rate 23, and the death-rate 14·84 against 14·20. The increase in sickness and mortality was attributed to the inclusion for the first time of the statistics of the troops serving in Upper Burma. No less than half of the total sickness was due to venereal affections and ague, the former contributing 26·82 and the latter 22·89 per cent. Enteric fever continued to rank first among the death causes, with a mortality of 3·75 per 1,000, a ratio almost exactly the same as that of 1887. Statistics continued to show the liability of young and unacclimatised soldiers to this fever; for, while among men under 25 years of age the death-rate from this cause was 5·46 per 1,000, among men between the ages of 25 and 29 it was 2·36; and while among men in their first and second year's service the mortality was 6·39 per 1,000, among those in their third to sixth years it was 2·77. Cholera prevailed to a greater extent than in 1887, the deaths having increased from 127 to 137, but the death-rate, owing to the average strength being greater than in the previous year, was identically the same, viz., 1·99 per 1,000. Of the total deaths from this disease, 90, or 66 per cent., occurred in the Bengal Army, and 40, or 29 per cent., in the Madras Army; of the latter number, however, only one occurred in the Presidency proper, the remainder having taken place among the troops serving in Burma.

The number of men invalided during the year was 1,557, or 22·71 per 1,000 of strength, against 1,443, or 22·57 in 1887. The increase was confined to Bengal, where the ratio rose from 18·67 to 20·43; for in Madras the proportion declined from 30·79 to 27·84 and in Bombay from 28·19 to 24·82. Of the total number invalided, 39 per cent. were discharged as unfit for further service. According to age the percentage of soldiers invalided under 25 years of age was 46·58; and with reference to residence, men between two and five years' service showed, as usual, the largest proportion of invalids, viz., 52·11 per cent.; while among men under two years' residence the percentage was 29·01, so that 81 per cent. of the invalids were men of not more than five years' Indian service.

Native Army.

The health of the Native Army of India during 1888 was on the whole favourable. On an average strength of 124,822, the admissions to hospital were in the ratio of 995 per 1,000, against 1,045 in 1887; the daily sick-rate was the same, 33 per 1,000; and the death-rate was 12·84, against 11·68 per 1,000. The chief cause of sickness was ague, to which were ascribed 44 per cent. of the total admissions. As usual, the Native troops suffered more than the European troops from ague and remittent fever, but less from simple continued and enteric fevers. Comparing further the fever statistics of the European and Native troops it is seen that, while 16 per cent. of the total deaths in the Native Army were from fevers, the percentage in the European Army was 30. "It would appear," the Sanitary Commissioner with the Government of India states in his report for 1888, "as if the Native " were actually less susceptible to enteric fever than the European, a circumstance more easily explicable on a climatic theory of causation than a " pythogenic one. No reason has ever been suggested why the Native " soldier should suffer less severely than the European from a filth disease. " But the Native soldier lives as he always has done since he was born, " whereas the European has been transported to a climate totally unlike " that in which he had hitherto lived, to an ardent climate, without a " corresponding change in his diet, and with a great deal of change of " habit and of adaptation to new surroundings to be gone through." The chief cause of mortality among the Native troops was, as usual, respiratory diseases, though the death rate was smaller than in 1887, being 2·68 per 1,000 against 3·08. On the other hand, cholera caused an increased mortality, the deaths having risen from 138, or 1·31 per 1,000, in 1887 to 267, or 2·14.

The

The health of the jail population of India during 1888 was not altogether satisfactory. Compared with the previous year there was more sickness, the ratio of admissions to hospital having risen from 947 per 1,000 to 1,004, and the daily sick-rate from 33 to 34 per 1,000. The proportion of admissions into hospital declined in Bengal and the Central Provinces, but it rose in every other province, and especially in the Punjab and Lower Burma. But though the general health-statistics were not so good as in 1887, the ratio of deaths was smaller than in that year, viz., 33·10 per 1,000 against 35·61. Of the total 2,617 deaths, 211 were from fever, 777 from bowel complaints, and 368 from cholera. In the previous year the cholera deaths numbered 325; there was, therefore, an increase of 43 in 1888. In Bengal there were 132 deaths from the disease as compared with 21 in 1887. By provinces the mortality varied from 12·78 per 1,000 of average strength in Berar and 22·94 in Bombay to 44·71 in Bengal and 44·88 in Lower Burma. The death-rate increased in Madras from 23·03 per 1,000 in 1887 to 25·50, in Bengal from 32·72 to 44·71, in the North Western Provinces and Oudh from 27·64 to 28·32, and in Bombay from 19·69 to 22·94; in all the other provinces it was lower.

The registration of vital statistics among the general population is still very imperfect in many provinces. The best results were again obtained in the Central Provinces and Berar, in both of which the birth-rate was above 40 per 1,000. In the North Western Provinces and Oudh and Bombay it exceeded 38 per 1,000, and in the Punjab it was above 37 per 1,000. In the remaining provinces the ratios were evidently defective, especially in Lower Bengal, where birth-registration is still confined to selected municipalities, in which the birth-rate of 20·63 was the lowest recorded, excluding only Coorg (16·61). The approximate death-rate for all provinces combined was 25·74 per 1,000 against 28·35 in 1887. The highest death-rate (30·08) was recorded by the North Western Provinces and Oudh, and next in order came the Punjab (29·89), Central Provinces (28·70), Bombay (28·44), and Assam (27·98); in the remaining provinces the mortality ranged between 24·7 and 17·30. In seven of the 11 provinces the death-rate was below that of the previous year, the most marked case being Berar, where it declined from 45·3 to 24·7. In all provinces except Bengal and Coorg the registered birth-rate exceeded the death-rate.

Of the chief diseases cholera was much less prevalent than in 1887, the deaths having fallen from 475,675, or 2·40 per 1,000 in that year to 269,862, or 1·36 per thousand. The decrease was confined to five provinces, and of these the most notable case was the North Western Provinces and Oudh, where the cholera death-rate declined from 4·54 to 0·42. Among the provinces showing an increased mortality from cholera, Lower Burma came first with a ratio of 4·37 against 0·73, Madras following with 2·1 against 1·01, and Bombay with 2·22 against 1·56.

Small-pox was considerably more fatal than in 1887, having given rise to 93,568 deaths, equal to 0·47 per 1,000 of population, against 65,757, or 0·33. The increase was shared in by all provinces with the exception of Bombay and the small provinces of Mysore and Coorg.

Fevers, though less prevalent than in 1887, accounted for 3,374,685 deaths, being in the proportion of 17·07 per 1,000 of population against 3,584,876, or 18·12. The diminished death-rate was due to a lower mortality in all the provinces except Bengal, Assam, and Lower Burma. The decrease was greatest in Berar and the Punjab, the death-rate from fevers in the former being 6·39 per 1,000 less than in 1887, and in the latter 3·62 per 1,000 less.

The mortality from bowel complaints was also lower than in the previous year, the number of deaths having fallen from 291,745, or 1·47 per 1,000, to 252,200, or 1·27.

Satisfactory progress was made in the work of vaccination during 1888. Omitting Mysore, the statistics of which were not available, the total successful vaccinations numbered 5,640,967, an increase of 438,372 on 1887. Of these, 2,473,599 were infants under one year of age, and 2,729,374 were children between the ages of one and six years. The proportion of population protected by the year's operations was greater in all provinces except Bengal and Coorg, the ratio ranging between 40·84 per 1,000 in the Punjab and 15·14 in the North Western Provinces and Oudh. As regards the vaccination

SANITATION.

vaccination of infants, the best work was again accomplished in Berar, where 79·4 per cent. of the births (estimated at 40 per 1,000 of population) were protected against small-pox. The next highest ratios were 59·4 in the Punjab, 58·0 in Bombay, and 46·8 in the Central Provinces; the remainder ranged from 17·9 in the North Western Provinces and Oudh to 10·0 in Lower Burma, and 8·5 in Coorg.

Sanitary Works.

Among the more important sanitary works which have been completed or were in progress or under consideration during 1888 were the following. In Bengal the works at Calcutta for doubling the water-supply of the town were completed, and the daily supply, which in 1885 was limited to 8,106,000 gallons, now exceeds 16½ million gallons. The Dinagepore drainage scheme was completed at a cost of Rx. 2,388. The municipalities of the province expended Rx. 113,118, equal to about one-third their income, on sanitary measures; in addition, a sum of Rx. 51,637 was spent on various sanitary works in the interior of districts. In the North Western Provinces and Oudh the supply of pure water to Dehra from the Nala Pani spring was accomplished at a cost of Rx. 1,200; at Allahabad drains were completed, a scheme for the better conservancy of the city by means of Shone's ejectors was in preparation, and plans and estimates for new waterworks, at an outlay of Rx. 154,000, were under consideration; at Benares water-supply and drainage schemes had been elaborated, and were estimated to cost 40 lakhs; at Sultanpur the main drainage of the town towards the Gumti was in course of construction; and at Fyzabad a scheme for supplying pure water to the city was under consideration. In the Punjab progress was made with the Gujranwala drainage scheme and the filling in of the Amritsar ditch; at Peshawur some new drains were constructed, and a project for supplying the city with Bara water, at an estimated cost of Rx. 31,400, was about to be taken in hand; at Delhi a conservancy tramway, at an estimated cost of Rs. 50,000, was about to be put into execution, a drainage project for the city was also under consideration, and sanction was given for the waterworks scheme at a cost of 10¼ to 11 lakhs of rupees. In Burma the only important sanitary work in hand was the Rangoon town drainage scheme, which was making good progress. In the Central Provinces more or less was done in every district to improve the sanitary condition of the large towns, and 185 new wells were constructed throughout the province. In Assam a water-supply scheme for Sylhet was in a fair way to be carried out, and at Dibrugarh a drainage project for the town was under consideration. In the Madras Presidency no sanitary work of any magnitude was carried out, but considerable additions were made to the water-supply and drainage system of Madras town. In the Bombay Presidency good progress was made with the extension of the water supply for Bombay. A scheme for the water-supply of Ahmedabad had received sanction, and a sum of Rx. 15,000 had been voted by the municipality for drainage works and a sewage farm; and at Nadiad and Karachi drainage schemes were under consideration. In Berar the most important work in hand was the extension of the Amraoti waterworks.

Sanitary Boards.

In pursuance of the policy laid down in the Resolution of the Government of India of the 27th July 1888, for the promotion of sanitary reform in India (*see* statement for 1887-88, p. 35), arrangements have been made by all the local Governments, except those of Bombay and the Punjab, for the establishment of Sanitary Boards. In these two provinces the matter is still under discussion.

IV.

CRIME AND POLICE, CRIMINAL JUSTICE, JAILS, AND CIVIL JUSTICE.

CRIME AND POLICE.

A BRIEF sketch of the organisation of the Indian Police was given in the 19th number of this series (for the year 1882-83). It is sufficient to say here that the Indian Police is a highly organised force, with a semi-military training under its own officers, subject to a general control by the magistracy and the Local Governments, and that it is charged with the maintenance of law and order and the detection of crime throughout the Empire. With slight local variations its head officers are Inspectors General, who are assisted by Deputies, and by District Superintendents, and Assistant District Superintendents. The constitution of the force effected in 1861 contemplated a European officer being placed at the head of the police in each district, with an assistant where necessary; and this practice, with few exceptions, has since been maintained. For some years after its constitution the higher grades of the force were largely recruited from the commissioned ranks of the army. Owing to various causes, however, this has ceased to be the case, and recruitment from sources other than the army, for the grade of Assistant District Superintendent, has become the rule of the service. In most provinces the recruitment of these officers is made by nomination, followed by a period of probation during which certain test examinations must be passed.

CRIME AND POLICE
Police Organisation.

Statement No. 30,* in the Annual Statistical Abstract relating to India, shows the strength, cost, distribution, and employment of police in each Presidency or Province.

Besides the regular or stipendiary police force, the ancient institution of village police survives almost universally throughout India. The village police are remunerated either by fixed salaries, as in the North Western Provinces and Bengal, or by grants of land or share of the crops, or by fees, &c.

In reference to the action of the police, crimes are broadly divided into "cognizable" and "non-cognizable." As defined by the Criminal Procedure Code of 1882, cognizable offences mean offences for which a police officer may arrest without warrant; and non-cognizable offences mean those for which he cannot arrest without a warrant. The former consist as a rule of grave offences against the person, property, or the State; and are mostly cases in which the magistracy are instructed ordinarily to issue a warrant in the first instance for the apprehension of the offender. The latter are minor offences, for which the magistracy are directed ordinarily to issue summonses.

Classification of
Offences.

In the Twenty-fourth number of the Statistical Abstract relating to India, a statement is given at pages 60 and 61 of the numbers of some of the principal offences reported to have occurred in each Province in 1888-89; and the total numbers of such offences for the whole of India are shown for a series of years.

The

* Pages 62 to 65 of the Twenty-fourth number of the Statistical Abstract.

38 STATEMENT EXHIBITING THE MORAL AND MATERIAL

CRIME AND POLICE.

The increase in crime (as indicated by the increase in the number of male convicts), which was noticed in the last two Reports, continued in 1888. The admissions of male prisoners into the jails, which had risen in 1887 from 345,727 to 352,702, showed a further rise to 364,883, the increase being distributed over all the larger provinces except the Punjab.

The proportion of the members of the different religions admitted into jail to the total jail admissions is thus compared with the proportion borne by them respectively to the total population in India.

	Ratio per Mille of each Class of Convicts admitted to			
	Total Convict Population.		Total for Population of each Class.	
	1887.	1888.	1887.	1888.
Christians - - - - -	14.4	12.2	1.9	1.6
Muhammadians - - - - -	274.9	270.8	0.9	0.9
Hindus and Sikhs - - - - -	617.3	631.9	0.6	0.6
Buddhists and Jains - - - - -	70.7	68.9	2.8	2.7
All other classes - - - - -	22.7	16.2	0.6	0.4

As regards the age of convicts the comparison between the four divisions in 1887 and 1888 is as follows :

	Number of Convicts admitted	
	1887.	1888.
Under 16 years - - - - -	2,117	1,978
16 to 40 years - - - - -	124,772	126,442
40 to 60 years - - - - -	25,065	24,681
Above 60 years - - - - -	2,675	2,542

The variations in the previous occupations of the convicted prisoners are on the whole not important, the most noteworthy being the increase from 10,902 to 12,938 in the number described as "persons in service or performing personal offices." There was a slight decline in the number described as "persons engaged in agriculture or with animals."

Bengal.

In Bengal cognizable crime increased by no less than 8,388 cases. The percentage of prosecutions for false cases, which was low in preceding years, fell from 22.4 in 1887 to 16.9. The proportion of persons charged with offences (generally) who were prosecuted to conviction in the courts of magistrates was higher, but that in the courts of session was lower than in any year of the preceding decade. In non-cognizable crime, the figures show an advance of 2,752 cases. In the town and suburbs of Calcutta, the total number of cognizable and non-cognizable cases reported during the calendar year was 63,663 as against 55,092 in the preceding year. The increase was under the former head, and due to more numerous prosecutions for nuisances and offences under the Hackney Carriage and Cruelty to Animals Acts, accompanied, however, by an appreciable decrease in the more serious forms of crime. Persons arrested and summoned numbered 69,377, as compared with 55,175 in 1887, and the number of convictions obtained advanced from 48,334 to 61,865. The value of property stolen aggregated Rx. 12,252 against Rx. 13,235 in the previous year. In the town of Calcutta six murders occurred as compared with two in 1887. The strength of the regular police in Bengal at the beginning of the year 1888 stood at 23,380 officers and men, and that of the village police at 169,523 men.

men. The conduct of the regular police was comparatively satisfactory, and punishments, judicial as well as departmental, were less frequent than formerly, and rewards more numerous. As regards the village police the reports received by Government were far from favourable.

CRIME AND POLICE

The number of cognizable offences reported in the North Western Provinces and Oudh during the year was (excluding sanitary offences and those punishable under special and local laws) somewhat less than during the previous year. The variations under the main heads of cognizable crime were unimportant. The decrease in robberies of all kinds from 727 to 613 was satisfactory, while the success of the police during the year and shortly after its close against the more notorious dacoits, was very creditable to them. The percentage of the cases investigated to cases reported, rose from 70 to 72. There was a slight improvement both in respect of detection of crime and of convictions in cases taken into court. In respect, however, of detection and prosecution, Oudh seemed to be still considerably behind the North Western Provinces. The incidence of reported crime was again much higher in Oudh than in the North Western Provinces, while the percentage of convictions obtained was probably as a consequence much lower.

North-Western Provinces and Oudh.

There were 136 dacoities in 1888, a larger number than was reached for many years. The increase, however, was mainly in the least important class. Energetic measures were taken for putting down the gangs in the Agra division, where a large proportion of the serious cases occurred. An inquiry instituted in 1887 showed that in certain districts in Oudh serious defects existed in the provisions in force for the remuneration of the village watchmen, and steps were taken during 1888 for re-arranging the circles so as to increase their pay.

A scheme for inducing the tribe of professional thieves known as Barwars to adopt a settled mode of life, has been tried with considerable success. Measures for the reform and repression of the criminal tribe of the Sausiahs were also taken into consideration.

The number of offences reported and admitted to have occurred in the Punjab still further increased. During the year 85,984 cognizable offences were reported, or 6,380 cases more than in the previous year. A satisfactory feature, however, was the decline by 57 cases in the number of murders. A large number of bad characters were required to give security to be of good behaviour during the year. The number of cases disposed of under the Frontier Crimes Regulation increased considerably, and to the working of this Regulation the decrease in the number of murders is mainly ascribed. It is proposed to extend the system of special Government prosecutors, which has worked well in the Peshawar division. Measures are in contemplation for increasing the number of police, by providing an adequate reserve in each district, and legislative proposals have been made to the Supreme Government for the surveillance of habitual offenders.

Punjab.

The criminal tribes of the Punjab, who are subject to Act XXVII. of 1871, are the Minás, Tágús, Bilúchís, Hárnís, Bauriahs, Sásís, Pakhiwárs, and Mahtams.

In October 1888 the police forces of Upper or Lower Burma, which had hitherto been separately administered, were amalgamated under one Inspector General, assisted by two deputies, one for civil, and one for military police.

Burma.

The condition of the police in Lower Burma was carefully inquired into during the year. The strength of the force was almost the same as in the previous year. There were indications of improvement in discipline. With the restoration of order in almost every district, it was found practicable to reduce the strength of the military police in Lower Burma. There was a slight increase in the total number of cases reported; but it is a satisfactory indication of the progress made in the restoration of order that there was a large decrease in the more serious crimes against the person and property, namely, murders by dacoits, dacoities, and robberies. There was an increase in the number of crimes of a less serious nature, and the statistics of the detection of crime show that there is much room for improvement in this branch of police work.

CRIME AND POLICE. The most important part of the work of the police in Upper Burma, having been the breaking up of organised gangs of dacoits, the military police occupied the most prominent position in the Upper Burma force. The organisation of the force remained unchanged. The actual strength of the military police was increased during the year from 13,244 to 17,880, and additional European officers were attached to the several battalions. The police were frequently engaged in action with the dacoits, and their conduct in the field was uniformly good, while their attitude towards the people of the country and the discipline of the force left little to be desired. The Shan States are now entirely garrisoned by military police. The important experiment of raising an indigenous body of military police was continued with promising results during the year. The civil police in Upper Burma have hitherto played a subordinate part. But little progress was made during the year in organising this branch of the force, the attention of district and police officers being mainly devoted to the suppression of organised crime.

Central Provinces. In the Central Provinces there was a decrease in offences of all important classes. Burglaries and thefts were much fewer than in the previous year. The number of murders (140) exceeded the total of the previous year by 32. The police were more successful in dealing with dacoities, convictions having been obtained in 32 per cent. of the cases. The percentage of cases convicted to cases investigated, improved considerably, the figures for 1887 and 1888 being respectively 47.02 and 52.93; and the percentage of cases convicted to cases tried, rose from 77.51 to 79.56. The working of the police was thus on the whole satisfactory. Various measures have been taken during the year for improving the police administration of the Central Provinces.

Assam. At the close of the year the military police force of Assam was for the first time up to its sanctioned strength, and a steady improvement as regards drill and discipline is reported. There were two expeditions during the year in the Naga Hills, and a third was undertaken at its close, in all of which excellent work was done by the military police. There was practically no change of importance in the strength or distribution of the civil police. The cognizable offences reported in the Plains districts during the year were 10,428 in number, 1,508 less than in 1887. The proportion of persons convicted to persons sent up for trial was 59.6 against 60, and the percentage of cases in which convictions were obtained was 67.2 against 69. The number of cognizable offences reported in the Hill districts increased, and indeed in such backward tracts may naturally be expected to increase for some years to come, in proportion as the people understand better how to resort to the courts for redress.

Ajmere-Merwara. Owing to the high prices of food grains that prevailed during the first half of the year there was a slight increase of crime in Ajmere. Nine murders were reported, of which seven were successfully traced. The police are reported to have generally worked well.

Coorg and Bangalore. In Coorg there was a considerable increase of crime under the heads of hurt, mischief, criminal trespass, and criminal intimidation. Such crimes arise largely from quarrels among Coorg families, and are the outcome of the joint family system. It is proposed to enlarge the police force in Coorg and revise its organization. In Bangalore the number of cognizable cases increased from 1,269 to 1,630.

Madras. In Madras 107,239 cognizable offences under the Indian Penal Code and special and local laws were dealt with, being an increase of nearly 5,000 cases over 1887. Of these 68 per cent. were prosecuted to conviction. More than 160,000 persons were arrested, and of these 57.9 per cent. were convicted, showing a decline in convictions when compared with 1887. Of 12½ lakhs of property lost, about 2½ lakhs were recovered. There were 581 cases of murder reported, the largest on record since 1878. Of these 24.1 per cent. were prosecuted to conviction, and in 70 cases the murderers committed suicide. Dacoities numbered 211, or 42 more than in the previous year, and robberies 301 against 262 in 1887. The number of house-breakings was 6,534 against 6,300 cases in 1887, detection falling from 35 to 31.2 per cent. The increase in dacoities, robberies, and house-breakings, was partly due to an extraordinary

traordinary outburst of crime which accompanied the scarcity in the Northern Circars. The strength of the police force was 23,197 at the close of the year, and the total cost was a little more than 35½ lakhs, or about half a lakh below the figure of last year. There was a decrease in the number of departmental punishments, but 186 or 87 per cent. of the whole force were convicted by magistrates and courts against 72 in 1887, the principal offences of which they were found guilty being negligently allowing prisoners to escape, offences under the Police Act, assault and wrongful confinement. CRIME AND POLICE.

The various police forces of the Bombay Presidency, including Aden, were maintained during the year at a total strength of 22,168 men. Of the Mofussil police 34 per cent. could read and write, and of the Bombay City police only 24 per cent. possessed the rudiments of education. The working of the police engaged the special attention of the Bombay Government during the year, and several important changes were introduced in connection with the annual returns of crime, which it was sought to render more valuable as tests of police efficiency. In the whole Presidency, including Aden, 55,667 cognizable offences were reported to the police as compared with 62,704 in 1887, the decrease being due to magisterial discouragement of petty prosecutions under local Acts in the City of Bombay. In connection with cognizable offences the police arrested 63,768 persons, of whom 67 per cent. were convicted on trial. In the previous year the percentage of convictions was 72. The value of the property reported stolen within the Presidency during the year was Rx. 125,224, as compared with Rx. 132,679, and the value of the portion recovered was Rx. 56,128, or nearly 46 per cent. The police of the City of Bombay were on the whole the most successful in dealing with cognizable crime, obtaining conviction of 93 per cent. of the persons arrested by them. The Aden police were successful in obtaining the conviction of 84 per cent. of the persons arrested, but the proportion of stolen property recovered by them did not exceed 38 per cent. The police of the various railways in the Presidency secured the conviction of 68 per cent. of the persons arrested, and recovered nearly 62 per cent. of the property stolen. The police of the Mofussil, who work under greater difficulties than any other force, secured the conviction of only 57 per cent. of persons arrested. Bombay.

In Berar the total number of cognizable cases reported during the year was 8,061 as compared with 7,803 in 1887, the increase being attributed to a rise in the price of food grains and consequent pressure on the poorer classes. The total strength of the police force employed in the Province was 2,787 men against 2,822 in the previous year. Berar.

CRIMINAL JUSTICE.

Criminal Justice is administered in India by (1) the High Court, the Chief Court, the Recorder's Court, or the Court of the Judicial Commissioner, as the case may be; * (2) the Courts of Session; and (3) the Courts of the Magistrates (of the various classes). CRIMINAL JUSTICE. Administration.

The principal Court of Appeal and Revision is :-

In Bengal and Assam,	In Bombay, } In North Western } Provinces,	The High Court.
In Madras,		
In the Punjab, the Chief Court.	In Guj. } In Hyderabad, } The Judicial Commissioner.	The Courts of Session; and (3) the Courts of the Magistrates (of the various classes).
In Sind,		
In Central Provinces,		
In Burma, the Recorder's Court and the Judicial Commissioner.		

In the presidency towns the High Court on its original side tries (usually by a single judge), with a jury, all cases committed to it by the presidency magistrates, and also certain other cases in which the accused are European British subjects and are committed for trial by magistrates in the interior. On its appellate side the High Court (usually by a bench of two or more judges) disposes of appeals in respect of convictions on trials before a court of session. It revises, of its own motion or upon reference from sessions judges or magistrates, the decisions of inferior courts when error in matters of law is suggested; and it confirms, modifies, or annuls all sentences of death passed by sessions courts, such sentences requiring by law confirmation by two judges. The High Court itself may pass any sentence authorised by law. The Judicial Commissioners exercise within their own provinces the same powers as High Courts, except in some points regarding the trial of Europeans. The courts of session are presided

CRIMINAL
JUSTICE.

over each by a single judge, who tries, with the aid either of a jury or of assessors (as the case may be), all cases committed to him by magistrates, and decides, sitting alone, appeals from the decisions of magistrates of the first class. The sessions judge may pass any sentence authorised by law; but every sentence of death is subject to confirmation by the High Court. The assistant sessions judge cannot pass sentence of death, or of transportation, or of imprisonment for more than seven years; and any sentence passed by him of imprisonment for more than three years is subject to confirmation by the sessions judge. The powers of a magistrate of the first class extend to sentencing offenders to imprisonment, either rigorous or simple, up to two years, including solitary confinement, and to fine to the extent of Rx. 100, or to both combined; also to whipping as a separate or as an additional punishment for certain offences. The magistrate of the district always exercises first-class powers; and he also hears appeals from magistrates of the second and third class within the district. This last-mentioned jurisdiction may likewise be exercised by any magistrate of the first class duly empowered by the Local Government. A magistrate of the second class can award imprisonment up to six months, fine up to Rx. 20, or both, and also whipping, if specially empowered by the Local Government. A magistrate of the third class can only imprison up to one month, or fine up to Rx. 5, or combine these punishments. All magistrates, whether members of the covenanted Civil Service or not, are formally placed in one or other of the three classes. The "district" magistrate, the "joint" magistrate, and the "assistant" magistrate, are commonly members of the covenanted Civil Service. Besides these there is a large number of "deputy" magistrates, "tehsildars" and other officers exercising magisterial powers who are not members of the covenanted Civil Service. But to whatever branch of the service an officer may belong, his magisterial powers depend entirely upon the class in which he is placed for the time being.

Nature of
sentences.

Statements Nos. 26 and 27 of the Statistical Abstract* relating to British India show the general results of criminal trials, and of appeals and revisions in criminal cases, in the various provinces of India during a series of years. The following table shows the nature and length of the sentences of imprisonment, and sentences of death, passed during the years 1885 to 1888:—

	NUMBERS.			
	1885.	1886.	1887.	1888.
Not exceeding 1 month - - - - -	55,225	57,312	56,562	56,674
Above 1 month and not exceeding 3 months -	29,885	30,837	31,818	31,700
Above 3 months and not exceeding 6 months -	24,486	25,649	26,578	26,925
Above 6 months and not exceeding 1 year - -	15,917	16,854	18,162	18,678
Above 1 year and not exceeding 2 years - -	9,868	9,000	11,494	11,534
Above 2 years and not exceeding 5 years - -	4,983	5,427	5,826	6,034
Above 5 years and not exceeding 10 years - -	1,402	1,821	1,702	1,680
Exceeding 10 years - - - - -	49	147	74	43
Transportation :				
(a) For life - - - - -	796	1,631	1,062	942
(b) For a term - - - - -	409	967	926	790
Sentences of death - - - - -	460	463	425	503

Of the 155,643 convicts sentenced in 1888, 133,977 were sentenced to less than a year's imprisonment, a fact which may, on the whole, be taken as indicating that the great bulk of crime is not of a very serious character. The

* Pages 52 to 55 of the Twenty-fourth Number of the Statistical Abstract.

CRIMINAL
JUSTICE.

The variations in the preceding figures call for no comment except the decrease in the number of sentences of transportation, and the increase in the number of death sentences. The former result is accounted for by the fact that, owing to the country having become quieter, 659 convicts were admitted into the jails in Lower Burma under sentences of transportation in 1888, as compared with 889 in 1887. In 1888 there were in Bombay 56 sentences of death against 27 in 1887, in the North Western Provinces and Oudh 133 against 86, in the Central Provinces 59 against 22, and in Lower Burma 102 against 56. Of the persons convicted in 1888, 19,926 were ascertained to have been previously convicted, as compared with 19,226 in 1887. The ratio per cent. of those known to have been previously convicted to the total number convicted rose from 12·4 to 12·8.

The High Court in its criminal jurisdiction tried 156 persons in 1888, against 169 in the previous year; and 91 of these were convicted, of whom 22 were sentenced to death. On the appellate side the Court dealt with the cases of 3,322 persons, and in 1,316 instances the appeals preferred were simply rejected, while 840 sentences were upheld in their entirety, 220 modified, 600 reversed, and 7 enhanced. Before courts of session in their original jurisdiction, 3,454 persons were under trial, against 3,155 in 1887. Convictions were obtained in 1,635 cases. All offences under the Indian Penal Code against public tranquillity, public justice, affecting the human body, against property, and relating to documents and trade and property marks, were tried by jury in the districts of Burdwan, Dacca, Hooghly, Patna, and the 24 Pergunnahs; and of the total number, 305, of the cases so tried the verdict of the jury was concurred in by the judge in 240 cases, rejected in 39, and partially dissented from in 26. Out of 25 cases of references to the High Court when the judge disagreed with the jury, the verdict of the jury was reversed in 13, upheld in 11, and modified in one. In other districts, and with regard to all offences other than those specified above, sessions judges sat with assessors.

The total number of criminal appeals and applications before Sessions Courts was 10,415: and in 2,689 cases the order passed was one of rejection. The original sentences passed on 4,165 appellants were confirmed; they were modified with regard to 1,049, and reversed in the cases of 2,003. The aggregate number of persons whose appeals or applications were disposed of in the course of the year was, 9,997. In the courts of magistrates outside the jurisdiction of the Presidency courts at Calcutta, 194,369 persons were tried, of whom 115,245 were convicted. The total number of persons put on trial before the Presidency Magistrates' courts rose from 45,397 in 1887 to 54,124, of whom 40,035 were convicted. The punishment of whipping was awarded (under judicial orders) in only 953 instances, a much lower figure than those of the previous five years. The number of European British subjects brought to trial fell from 239 in 1887 to 209,—of whom 133 were convicted and 72 acquitted. The offences with which they were most commonly charged were breaches of local and special laws. Charges of criminal force and assault were preferred against 30, of criminal trespass against 16, and of hurt against 10. No claims were made for trial by jury or by assessors of special nationalities.

The total number of cases brought to trial in the North Western Provinces and Oudh in 1888 was 144,055, and the number of persons under trial was 189,719, of whom nearly 51 per cent. were acquitted or discharged. The honorary magistracy, sitting in benches of two or more or singly, continued to afford very valuable assistance to the administration, disposing of no less than 37,457 cases, an excess of more than 12,000 over the number disposed of by the same class four years previously. The number of accused persons dealt with by them was 26 per cent. of the total number brought before all classes of magistrates. The participation of the natives of the country in the administration of justice as assessors or on juries continued to work satisfactorily. In Oudh the judges agreed with the jury in every case, and with the assessors in four out of every five cases referred to them. In the North Western Provinces the judges agreed with the finding of juries in 120 out of 131 cases, and with the finding of assessors in 1,012 out of 1,349. It is reported by Government that the Courts of all classes in the North Western Provinces and Oudh perform their duties with promptitude and efficiency.

North Western
Provinces and
Oudh.

CRIMINAL
JUSTICE.

Punjab.

In the Punjab in 1888, 86,445 cases and 187,593 persons were brought to trial. The percentage of persons convicted, committed, or referred, was 43, of those discharged or acquitted for want of prosecution, 26, and of those discharged or acquitted on other grounds, 31. District magistrates have done an increased amount of work; the number of persons tried by them having been 8,517 compared with 7,762 in 1887. The percentage of convictions is highest in cases tried by European officers (namely district magistrates, cantonment magistrates, and canal officers) and lowest in courts of honorary magistrates and Naib Tahsildars. The average duration of trials in magistrates' courts was seven days for the whole province. Death sentences numbered 80 compared with 97 in the previous year; sentences of transportation for life, 160 compared with 227, and for a term of years, 44 compared with 24. There was an important increase in the number of persons called upon to find security. The number of sentences appealable to district courts was 48,125 and the number of appellants was 9,687. Thirty per cent. of the appeals were rejected; in 35 per cent. the sentences were confirmed; in 9 per cent. the sentences were reduced or altered; and in the case of 24 per cent. the sentences were reversed, proceedings quashed, or new trial ordered.

Lower Burma.

The number of persons tried by magistrates in Lower Burma was 63,828, or slightly less than in the previous year. In Sessions Courts the numbers increased from 1,573 to 2,020, and the proportion of successful prosecutions in those courts increased by 4 per cent. The principal differences between the statistics of 1887 and 1888 were in the number of cases disposed of by honorary magistrates and in the number of cases disposed of summarily outside Rangoon. The number of cases of the latter kind was 4,075 in 1888 against 2,901 in the previous year. The proportionate increase in the number of summary trials was due to the diminution of serious crime. The increase in the number of cases tried by honorary magistrates took place entirely in Rangoon where the bench tried 7,971 persons against 4,086 in 1887. The work of the courts was on the whole promptly performed, and there was a decrease of 6 per cent. in the number of successful appeals. This may be taken as an indication that criminal cases were more effectually tried and punishments better apportioned to the gravity of offences than in the previous year.

Upper Burma.

The criminal law in force in Upper Burma during 1888 was the same as in the previous year. In the course of the year the operation of the Criminal Justice Regulation, 1886, which would otherwise have expired at the end of 1888, was extended to 31st December 1890. This step was taken because it was considered that Upper Burma was not yet ripe for the introduction of a criminal procedure similar in all respects to that prevailing in the rest of India. The most remarkable feature in the statistics of the year is the large increase in the number of persons placed on trial and in the number of persons convicted in the northern and eastern divisions. The increase was probably due to the restoration of tranquillity, which enabled police officers to devote more time to the detection and punishment of comparatively petty crime.

Central Provinces.

The total number of persons brought before the magisterial courts in the Central Provinces was 38,479 against 39,267 in the previous year; and of these 57.8 per cent., as against 60.3 per cent. in 1887, were convicted. The magistrates who tried the greater number of cases were the Tahsildars. Honorary magistrates took a large share in the disposal of criminal work, new benches having been established at fifteen places and the number of magistrates having been increased by 82. The assistance given by these native gentlemen is stated to have been real and widespread. While there was a decrease in the number of cases before the magistrates it is not a little curious that the number of appeals increased in all classes of Appellate Courts. At the same time the percentage of appeals rejected increased in the Court of the Judicial Commissioner and in the Sessions Courts, while it declined in the Courts of District Magistrates.

Assam.

In Assam the number of persons brought to trial was 18,249 (in 11,186 cases) as against 19,798 (in 11,875 cases) in 1887: and the number convicted was 10,680 against 11,753, the percentage of convictions being 61.1 as compared with 62.09 in the previous year. Of the cases returned as true 14,065 were offences

offences under the Penal Code and 4,956 offences under special and local laws, the largest proportion falling under the Cattle Trespass, Inland Emigration, Municipal, and Police Acts. The average duration of cases was, as compared with the previous year, shorter in the Surma Valley, and longer in the courts of district and stipendiary magistrates of the Assam Valley; but in no courts was there undue delay in the disposal of cases except in trials before the honorary magistrates of Sylhet.

In Ajmere during 1888 there were 5,646 cases involving 11,135 persons tried in the Courts, against 5,527 involving 10,634 persons during the year 1887. The average duration of each case in the Sessions Court was 18.12 days, and in the Magistrates' Court 6.88 days. CRIMINAL JUSTICE

In Coorg 2,588 cases were brought to trial. The percentage of convictions decreased from 33 in 1887 to 31 in 1888. There were 67 appeals before the District Magistrates' Court and 13 appeals before the Court of Session; of these appeals, sentences were confirmed in 46, reduced or altered in six, and reversed in 17 cases. In Bangalore the percentage of convictions was 62.44 and of discharges and acquittals 37.19, against 64.56 and 35.05 respectively in the year before. Ajmere.

In Madras the courts which exercised criminal jurisdiction in the Mofussil during 1888 were 7,080 village magistrates', 191 third-class magistrates', 436 second-class magistrates', and 124 first-class magistrates' courts, and 20 courts of Session, and in the city of Madras one coroner's, two Presidency magistrates', and one Police Commissioner's court, and the High Court. The offences returned as true numbered 206,793 as against 191,772 in 1887. Of 714 cases affecting life 269 were cases of murder. The total number of persons under trial was 363,481 as against 332,545 in 1887, and of these 136 were European British subjects. The total number of original cases before the courts was 211,203, of which the Presidency town contributed 40,905 cases. The total number of appeals preferred was 6,332. The Sessions Courts disposed of original cases affecting 2,395 persons, the percentage of conviction being 41.6 as against 42.1 in the previous year, and they disposed of 614 appeals affecting 1,003 persons. There were 620 appeals instituted in the High Court as against 437 in 1887. The percentage of Sessions Courts' sentences confirmed on appeal in the High Court was 74.1 while the percentage of sentences of magistrates confirmed by Sessions Courts was 70.5. There was a striking increase in the number of cases instituted in the Presidency Magistrates' Courts, namely, 40,860, as against 34,174 in 1887, due chiefly to charges made under the Madras City Police Act. Coorg and Bangalore.

The number of cases brought to trial in Bombay was 100,089 and the number of persons involved was 172,812, of whom, 66,835 were convicted. Of those convicted, 8,616 appealed or applied for revision. On comparison of these statistics with those of the previous year it appears that in the year under review the number of persons brought to trial decreased by 1,310, but that the proportion convicted fell from 43 to 38 per cent., and that the number of convicts who resorted to the higher courts increased by 1,861, while the proportion of those who did so with more or less success fell from 31 per cent. to 28 per cent. Of the total number of persons brought to trial 4,024 were placed before village officers, 3,349 before special magistrates, 6,406 before honorary magistrates sitting singly, 134,468 before stipendiary magistrates other than district and subdivisional magistrates, and 2,011 before benches of magistrates. There were 1,731 persons brought to trial in the courts of Session, and 144 before the High Court and the Sadar Court in Sind,—as compared with 1,294 and 75 respectively in the previous year. In the courts of Session 1,873 persons were tried, the percentage of acquittals being 52. The magistrates of the various classes had before them under trial 166,978 persons. The percentage of acquittals in the cases finally disposed of was 61.29, as compared with 56.21 in the previous year. The prevalence of graver crime during the year was indicated by the fact that the number of persons punished by imprisonment was somewhat larger, and the number punished by fine was considerably smaller than in the previous year. The aggregate amount however of the fines inflicted was much greater. The punishment of whipping, especially in the case of juvenile offenders, was more frequently resorted to than in previous years. Madras.

CRIMINAL
JUSTICE,
Berar.

In Berar there were altogether 13,884 criminal cases for disposal, affecting 22,965 persons, and of these 13,797 cases were disposed of. The percentage of convictions was 46·7. The average duration of trials before the magistracy was 5·1 days. There were 443 appeals for disposal by Deputy Commissioners, of which 440 were heard, the average duration being 9·8 days.

JAILS.

Excluding Upper Burma there were in 1888, 737 jails and lock-ups in British India : and the number of central jails was increased by one, and that of district jails reduced by two. The year opened with a jail population of 75,922, as compared with 76,738 in 1887. The total jail population of the year was 459,953 (438,264 males and 21,689 females), as compared with 448,741 (426,686 males and 22,055 females) in 1887. The number of prisoners discharged, which was 372,819 in 1887, was 377,718 in 1888 : and the number in jail on the 31st December 1888 was 82,235 (79,543 males and 2,692 females), as compared with 75,992 (73,381 males and 2,541 females) on the 31st December 1887. The daily average number of prisoners was 79,200 in 1888, against 70,879 in 1887.

Taking convicts only, the year 1888 opened with 69,468 in the jails, as compared with 70,594 at the beginning of 1887. The number of male convicts confined in 1888 was 146,552 as compared with 145,179 in 1887 : but the number of females declined from 9,407 in the latter, to 9,060 in the former year. The aggregate number of convicts in confinement was thus 225,080 in 1888 and 225,180 in 1887. In 1888, 2,817 males and 63 females were transferred to work out their sentences of transportation beyond the seas, as compared with 1,848 and 114 respectively in 1887. The number of convicts released on appeal was 10,313 in 1887 and 10,205 in 1888 ; the number released on expiry of sentence rose from 107,660 in 1887 to 128,198 in 1888 ; and the number released under the remission rules from 7,675 to 8,265. The number released by order of Government, which, in 1887, owing to the releases at the Jubilee, amounted to 26,150, fell in 1888 to 423 ; 69 convicts, as compared with 55 in 1887, were transferred from jails to lunatic asylums ; 105 escaped as compared with 76 ; 396 were executed as compared with 229 ; and 2,444 died in jail as compared with 2,353. There thus remained in jail 75,765 convicts (73,324 males and 2,441 females) on 31st December 1888 as compared with 69,468 (67,200 males and 2,268 females) on 31st December 1887. The daily average of convicts was 64,189 in 1887 and 72,554 in 1888.

The average number of convicts sentenced to labour was 69,156 in the year under review (working days alone being taken into account) as compared with 60,820 in the previous year. Of this number there were on the average 2,512 on the sick list, and 3,416 convalescent or infirm ; the balance available for labour being 63,227 as compared with 56,082 in 1887.

These 63,227 convicts were thus employed :—

On unremunerative labour - - - - -	1,786
As prison officers - - - - -	3,087
As prison servants - - - - -	6,921
On gardening - - - - -	4,346
In preparing articles for consumption in jails - - - - -	8,532
On jail repairs - - - - -	3,208
On jail buildings - - - - -	4,753
On manufactures - - - - -	28,610
Under the Public Works Department - - - - -	1,766
Under municipalities, &c. - - - - -	1,166

The number and character of offences committed by convicts in the year Jails. under review and the previous year are thus compared.

	1887.	1888.
Criminal offences - - - -	279	254
Smoking or being in possession of forbidden articles.	9,385	9,115
Offences relating to work - - -	42,980	40,842
Other offences against prison discipline.	25,754	25,145
TOTAL - - -	78,398	75,356

In Bengal the number of offences declined from 35,824 to 29,064: in the North-Western Provinces and Oudh from 6,185 to 5,330; and in the Central Provinces from 3,567 to 2,701. In Lower Burma the number of offences rose from 8,331 to 12,938, and in the Punjab from 15,209 to 16,511. The ratio of punishments to the daily average of convicts was 103·8 in 1888 compared with 122·1 in 1887. It varied from 234·7 in Bengal, to 25·9 in the neighbouring provinces of the North Western Provinces and Oudh. The figures for Bengal shew a very great reduction from those for the last and preceding years. The vexed question of the recording and punishment of offences against jail discipline was investigated by a Jail Committee. A considerable variety in practice was discovered, leading in some places to a large record of offences, in others to an undue reduction in the reported numbers.

The number of cases in which corporal punishment was awarded showed a satisfactory decline from 2,430 to 1,891. The percentage of prisoners whipped to the total number of male prisoners was only 7, and the proportion per cent. of whippings to total punishments, only 2·5. These figures, as well as the total number of whippings administered, are lower than any recorded in previous years. Solitary confinement by itself was imposed in 6,385 cases in 1888 as against 5,160 in 1887, reduced diet by itself in 6,297 cases as compared with 6,874, and these two punishments were combined in 9,493 cases as compared with 5,877.

The number of convicts released during the year, who came under the operations of the mark system, was 8,280 as compared with 7,696 in 1887. In that year 22 failed to gain any release: but this number was, in 1888, reduced to 15. The system continues to work satisfactorily. The daily average of convicts under instruction was 3,501 in 1888, as compared with 3,112 in 1887: and 5,228 who had been under instruction in jail were released as compared with 5,193 in 1887. Of these, only 753 were able to read and write well, 2,415 could read and write a little, and 2,060 were unable to read or write at all. These results appear to indicate that little advantage is gained from the system of instruction at present pursued in jails.

The gross expenditure on jails in 1888 aggregated Rx. 492,399 (Rs. 62-2-9 per head) against Rx. 458,477 (Rs. 64-9-10 per head) in 1887.

The chief items of expenditure are thus compared for the two years:—

	1887.		1888.	
	Total Cost	Cost per Head of Average Strength.	Total Cost.	Cost per Head of Average Strength.
	Rx.	Rs. a. p.	Rx.	Rs. a. p.
Rations - - - -	171,069	24 6 5	192,155	24 6 10
Establishments - - -	18,548	26 2 3	186,490	23 8 9
Police guards - - -	30,608	4 5 -	27,119	3 6 9
Hospital charges - - -	13,223	1 13 9	14,217	1 12 8
Clothing - - - -	17,927	2 8 10	24,844	3 2 6
Contingencies - - -	38,216	5 6 2	45,499	5 11 10

JAILS.

There was a satisfactory decline in the cost of rations in Madras from Rx. 28,391 (Rs. 39-8-9 a head) in 1887 to Rx. 22,824 (Rs. 30-2-9 a head) in 1888, owing to the introduction of a better system of purchasing supplies for jails. In the Punjab the cost per head fell from Rs. 25-4-8 to Rs. 24-5-4. In Lower Burma the expenditure under this head rose from Rx. 21,648 (Rs. 28-2-10 a head) to Rx. 29,487 (Rs. 33-12-1). In Bombay the rise was from Rs. 25-2-1 a head to Rs. 27-11-10, in Bengal from Rs. 20-5-0 to Rs. 21-10-11, in the North-Western Provinces and Oudh from Rs. 18-0-0 to Rs. 18-7-7. In the latter provinces the figure for jails was Rs. 17-12-0, but the charge in the magistrates' lock-ups (Rs. 20-12-11 per head), where there are not the same facilities for economy, raised the average to Rs. 18-7-7. The high price of the necessaries of life is stated as the principal cause for these rises. In the North-Western Provinces and Oudh alone, a saving of Rx. 1,768 was effected by storing grain instead of purchasing it at the market rate monthly: and there were 14 jails in those provinces in which the experiment has not yet been tried. It is reported that the loss from damp was very slight indeed; and it is evident that the adoption of the system generally affords an opportunity of effecting very material economies.

The aggregate cost of establishments slightly increased; but owing to the larger number of prisoners in jail the average cost per head was Rs. 23-8-9 as compared with Rs. 26-2-3 in 1887. The aggregate hospital charges were slightly in excess of those in 1887, but the expenditure on them per head both of average strength and sick was lower than in that year. The cost of clothing rose from Rx. 17,927 (Rs. 2-8-10 a head) to Rx. 24,845 (Rs. 3-2-6 a head). In each of the larger provinces there was a large increase in the aggregate, partly due to an increase in the number of convicts.

There was a large increase in the aggregate amount of contingent expenditure, and the cost per head of average strength rose from Rs. 5-6-2 to Rs. 5-11-10.

To calculate the net cost of maintaining the convicts the cash earnings must be deducted from the total cost. The cash earnings in 1888 were only Rs. 12-12-4 per head of average strength as compared with Rs. 14-4-2 per head in 1887. This result is very disappointing, and there has been a steady decline in the earnings since 1885. In that year 24,944 convicts were on the average employed on manufactures, and the earnings were Rx. 129,232; in 1886 the number rose to 25,903, while the earnings fell to Rx. 115,120; in 1887 there were again more convicts (25,116) employed on manufactures than in 1885, and the earnings were again less viz., Rx. 101,189. In the year under report the number of convicts employed was higher (28,610), and the amount of earnings lower (Rx. 101,178), than in any of the preceding four years. In some provinces the principles for regulating employment of prisoners in jails, which the Secretary of State and the Government of India have laid down, have not been properly acted up to, and legitimate opportunities of employing prisoners in productive labour are either neglected or not fully turned to account.

In the Madras Presidency the earnings rose from Rx. 2,038 to Rx. 5,726, but the average earnings per head of average strength was only Rs. 7-3-7. In the North-Western Provinces and Oudh the total earnings fell from Rx. 17,414 to Rx. 15,348, and the earnings per head from Rs. 8-13-4 to Rs. 6-14-7. In Bengal the fall was from Rx. 29,987 (Rs. 24-7-7 per head) to Rx. 26,690 (Rs. 19-6-11 per head): and in the Punjab from Rx. 13,055 (Rs. 11-3-7 per head) to Rx. 10,975 (Rs. 8-6-6 per head). In Lower Burma the earnings rose from Rx. 20,084 (Rs. 26-0-5) to Rx. 23,984 (Rs. 27-6-3), a specially satisfactory result in view of the fact that the earnings in 1886 were only Rx. 18,465. After deducting the cash earnings from the gross cost of maintaining the prisoners, the net cost of the jails in India in 1888 was Rx. 391,221 (Rs. 49-6-5 per head), as compared with Rx. 357,288 (Rs. 50-5-8 per head), in 1887. The average cost per head declined very sensibly, from Rs. 88-8-5 to Rs. 73-1-5 a head in Madras: and, with the reforms now in progress in the jail administration of that Presidency, a still further reduction may be expected. In Bombay, the North-Western Provinces and Oudh, the Central Provinces, Coorg and the Hyderabad Assigned Districts, the cost per prisoner declined to a less extent. It

increased

increased in Bengal and the Punjab, in each case to a considerable degree, Jails.
—and also in Bombay, Lower Burma, and Assam.

From the sanitary point of view the year was not altogether satisfactory. The number of prisoners admitted into hospital, which had been 67,065 in 1887, rose to 79,356 in 1888, and the daily average sick from 2,252 in the former to 2,612 in the latter year. The ratio of admissions into hospital per head of average strength, which was 9·46 in 1887, was 1,003 in 1888, and that of daily average sick 33 as compared with 31. The proportion of admissions into hospital declined in Bengal and the Central Provinces. It rose in every other Province, and especially in the Punjab and Lower Burma. The ratio of admissions into hospital was lowest in Bombay. The results of weighments of discharged prisoners were also slightly less favourable than in 1887. In the year under review 79,213 prisoners added to their weight in jail, while 38,810 lost weight: the corresponding figures in 1887 were 79,102 and 37,702.

But, though the general health statistics were not so good as in 1887, the ratio of deaths was proportionately smaller than in that year. The number of deaths from fever was 211 against 224 in 1887: those from bowel complaints 777 against 790: and those from cholera 368 against 325. The increase in mortality from the last-mentioned disease occurred in Bengal, where there were 132 deaths as compared with 21. The total number of deaths in 1888 was 2,617 as compared with 2,523 in 1887, and the ratio per mille of average strength 33·1 as compared with 35·6. This is the lowest figure since 1884. The ratio varied from 12·7 in the Hyderabad Assigned Districts, and 22·9 in Bombay, to 44·7 in Bengal and 44·8 in Lower Burma. It improved in the Punjab (from 44·5 to 30·7), in the Central Provinces (from 68·4 to 41·2), in Lower Burma (38·47 to 44·8), in Assam (28·0 to 26·9), in Coorg (63·4 to 41·5), and in Hyderabad Assigned Districts (from 26·6 to 12·7). The death-rate increased in Madras (23·0 to 25·5), Bengal (32·7 to 44·7), and the North-Western Provinces and Oudh (27·6 to 28·3).

CIVIL JUSTICE.

The whole expenditure entered in the Finance and Revenue Accounts for 1888-9 under the head of Law and Justice, was Rx. 3,528,435, against which were receipts amounting to Rx. 595,611. In the previous year the expenditure had been Rx. 3,422,280, and the receipts Rx. 571,850. The total charges under High Courts and Chief Court were Rx. 295,657, and under Civil and Sessions Courts were Rx. 1,184,608. The charges under the head of Criminal Courts were Rx. 901,767, and of jails, exclusive of the Andaman and Nicobar Islands, were Rx. 681,714.

CIVIL JUSTICE.
Receipts and
Expenditure.

Broadly speaking, there are two systems of civil justice administration in India, the one obtaining in Regulation and the other in Non-Regulation Provinces. In the latter, for the most part, the executive and judicial functions are united in the same hands; in the Regulation Provinces, on the other hand, the collector and judge are two separate persons usually in distinct departments of the service. In the Non-Regulation Provinces of the Punjab and Oudh, however, the system has to a large extent been assimilated to that of the Regulation Provinces. The Non-Regulation Provinces may be distinguished by the title of Deputy Commissioner, which takes the place of Collector in Regulation Provinces.

Systems of
Administration.

Taking Bengal as a typical Regulation Province, and tracing the system from the highest court downwards, the High Court, in respect of civil justice, exercises an appellate, and also an original jurisdiction. The functions which in England were, until recently, divided among different courts (*e.g.* "Common Law," "Chancery," "Ecclesiastical," "Admiralty," "Bankruptcy"), are there exercised in one court and by the same judges. Below the High Court are the District and Additional judges, the Small Cause Court and Subordinate judges, and the Munsifs. Of these officers all, except District judges, are purely civil judges. The jurisdiction of district and subordinate judges extends to all original suits cognizable by the civil courts, but does not ordinarily include the powers of a Small Cause Court.

Civil Justice.

The jurisdiction of a munsif extends to suits up to the value of Rx. 100. An appeal lies from the High Court to the Privy Council in England, if the value or amount of the subject-matter exceeds Rx. 1,000. Appeals from the decrees and orders of the district and additional judges lie to the High Court. Appeals from subordinate judges and munsifs lie to the district judge in suits up to Rx. 500, but in suits of higher value the appeals lie to the High Court. There is no appeal from the order of a Small Cause Court.

The supreme administration of civil justice in the various Provinces is vested in the same courts as that of criminal justice (*see* page 41). In the Central Provinces, which may be taken as an example of a Non-Regulation Province, the civil and criminal courts are controlled by a chief judge, under the name of Judicial Commissioner. Next to him come the Commissioners of Division, who are at the same time judges of the Court of Session, and the civil judges, to whom appeals lie in all causes decided by Deputy Commissioners and by Assistant Commissioners, when the subject-matter exceeds Rx. 100 in value. The original civil jurisdiction of the Deputy Commissioner is unlimited in amount, and he hears appeals from the Assistant Commissioners up to Rx. 100. Below the Deputy Commissioners come the Assistant and Extra-Assistant Commissioners, the tahsildars, and the munsifs, of whom the last-named discharge judicial functions only.

Statements Nos. 24 and 25 of the Statistical Abstract relating to India show the general results of the trial civil and revenue cases in courts of original and appellate jurisdiction in each presidency or province of British India for a series of years.

Bengal.

On the original side of the Calcutta High Court there were for disposal 920 suits against 964 in 1886, and 996 in 1887. The number disposed of was 472 as against 499, and 562 in 1886 and 1887 respectively. On the appellate side the judges disposed of 5,577 appeals and applications, and the proportion of work left undisposed of on this side of the court was 31 per cent. of the whole, against 35 per cent. in 1887, and 26 per cent. in 1886. The number of first appeals heard from original decrees was 291, and of second appeals, 2,524; and 301 miscellaneous orders were passed.

In the courts of the interior 468,942 original civil suits were instituted, 592,052 cases were under trial, and 474,288 were disposed of. In addition, 19,332 cases came before the revenue courts, and final orders were passed in 11,970 of these. The percentage of suits for money to the total amount of litigation in the regular courts fell from 48.6 to 46.7, while that of rent suits rose from 43 to 44.7. The work having fallen into arrears in several courts, 19 additional munsifs were appointed from 1st April 1887; and in the year 1888 three more subordinate judges and nine additional munsifs were appointed temporarily. In the Calcutta Court of Small Causes the decline in the number of suits instituted, which had been going on for some years, continued, the total number being only 25,997 as against 26,811 in 1887, and 29,216 in 1886. The decrease occurred almost entirely in the number of suits valued at not more than Rx. 5. The amount in litigation in the Court during the year was Rx. 200,844 as compared with Rx. 208,162 in 1887. In the Mofussil Small Cause Courts there was a decrease of 8,739 in cases instituted, and of 9,456 in the number disposed of. As regards Government litigation the percentage of cases decided in favour of the Secretary of State in the High Court rose from 97.5 to 100; but in the lower courts the results compare unfavourably with those of the preceding year, the percentage of decrees for Government having fallen from 82 $\frac{2}{3}$ to 57 $\frac{1}{2}$.

North-Western
Provinces and
Oudh.

The total number of original suits instituted during the year was 97,067 in the North West Provinces, 62,893 in Oudh, and 5,517 in Kumaun. The figures for Oudh and Kumaun show an increase on last year's totals. In the North West Provinces, however, there was a falling off, the number of suits instituted in 1887 having been abnormally large. The number of original cases disposed of was 97,443 in the North West Provinces, 57,667 in Oudh, and 5,614 in Kumaun. In the disposal of original work the courts of the North Western Provinces were more expeditious than those of Oudh, while the duration of appeals was similar in both. A large increase appeared in the appellate work in the Judicial Commissioner's Court. The total income of the courts was in the North Western Provinces Rx. 245,591 against Rx. 245,821 in the previous year, and in Oudh Rx. 62,510 against

against Rx. 61,821. There was an increase in expenditure in both the North Western Provinces and Oudh: leaving a surplus of Rx. 87,236 in the North Western Provinces and Rx. 16,127 in Oudh. The administration of civil justice in Kumaun resulted in a net loss of Rx. 1,671. CIVIL JUSTICE.

The number of civil suits in the Punjab instituted during the year was 257,975, a higher number than in any of the three preceding years. It was expected that the change in the revenue law of the province made towards the end of 1887, whereby certain classes of suits were transferred from the Civil to the Revenue Courts, would have the effect of reducing the litigation in the former. This expectation, however, has not been realized. The most noticeable increase occurred in suits affecting immovable property: but simple money suits otherwise than on bonds also largely increased. The courts subordinate to the Chief Court decided 268,174 suits. The returns show that year by year extra Assistant Commissioners and Judges of Small Cause Courts do a smaller, and munsifs a larger proportion of the civil work of the province. About 47 per cent. of the decrees, for the execution of which process issued, proved wholly infructuous. The question of improving the work of the Civil Courts in this respect is under special consideration. The number of appeals instituted in District Courts rose during the year, with the rise in the number of original suits instituted. On the other hand the number of appeals instituted in Divisional Courts fell somewhat, probably owing to the amendment of the law of appeal effected by the Punjab Courts Act, 1888. The amount of civil business before the Chief Court showed an increase, as compared with 1887-8, but was less than in 1886-7. The Court consisted of six judges for about eight months, and of five judges for the remaining four months of the year. Notwithstanding this increase over its normal strength the accumulated arrears had been but slightly reduced at the close of the year. Punjab.

The number of cases instituted in the Civil Courts in Lower Burma increased, a result which was partly due to the restoration of order, and partly to the reduction in the cost of litigation effected in 1886. In the number of cases tried by the Small Cause Courts at the seaport towns there was a decrease, which was attributed to the operation of the Debtors Act of 1888. The business of the courts was dispatched with greater promptitude than in the previous year; and there was a slight improvement in the percentage of decrees and orders confirmed on appeal. The restoration of tranquillity caused a large increase of civil litigation in Upper Burma. The increase was most noticeable in the Eastern Division, where the suppression of disorder had been most complete. The procedure of the courts was governed by the Upper Burma Civil Justice Regulation of 1886. A large majority of the suits heard in Upper Burma were tried by Myoòks, and it is probable that many civil disputes of kinds which in Lower Burma would have come before the courts were settled by the arbitration of village elders according to Burmese custom. Burma.

In the Central Provinces there was a slight decrease in the amount of litigation in 1888 as compared with the total of 1887,—the number of suits instituted having fallen from 111,855 in 1887 to 110,479 in the year under review. Suits between landlord and tenant were slightly more numerous, the number of suits for rent exceeding the previous year's figure by 389. Of the total number of suits 68 per cent. were disposed of by the Small Cause Courts, Naib—Tahsildars, and Munsifs. The work of Assistant Commissioners increased while that of Deputy Commissioners and Tahsildars diminished. Despite the decline in institutions, the number of appeals increased to a considerable extent. Judgment debtors were imprisoned in 351 cases only, as against 591 cases in 1887, and they were arrested but not imprisoned in 1,664 cases as against 2,801 in that year. The decrease in these figures is, no doubt, due to the operation of the Debtors Act of 1888, which came into force in March 1888. Central Provinces.

The number of civil suits instituted in Assam during the year fell from 24,592 in 1887 to 24,366 in 1888, the decrease taking place in all the "plains" districts of the province, except Sylhet, where there was a considerable increase of suits for money and for the recovery of rent, which had been kept in abeyance for the preceding two years in consequence of bad harvests and the impoverished condition of the people. The average duration of both contested and uncontested suits increased in all courts except in those of subordinate Assam.

CIVIL JUSTICE. subordinate judges, where the time taken to dispose of contested suits was slightly less. Appeals were preferred in 22·24 per cent. of the cases in which an appeal lay, as against 21·33 per cent. in 1887; but, except in the district of Sylhet, the results of the appeals were more favourable than in the previous year. The receipts from Civil Courts during the year amounted to Rx. 35,338 as compared with Rx. 34,986 in 1887, showing an increase of Rx. 351; and the expenditure was Rx. 22,377 as against Rx. 22,589, showing a decrease of Rx. 212,—the result being a surplus of Rx. 12,961 as compared with Rx. 12,397 in 1887.

Ajmere. In Ajmere-Merwara the total number of suits instituted during the year in the various courts was 11,364, being an increase of 194 on the preceding year. As usual, the majority of the cases were suits relating to money transactions. Including arrears from the previous year, the number of suits for disposal was 12,417, and of these 11,248 were disposed of.

Coorg and Bangalore. In Coorg the total number of suits instituted was 3,023, being 178 suits less than in the previous year. The average duration of suits disposed of was 69 days in contested, and 29 days in uncontested cases, against 60 and 28 days respectively in 1887. There were 139 appeals, of which 128 were disposed of. In Bangalore litigation has been yearly increasing for the last five years. The number of suits in 1888-9 was 2,394. The proportion of contested litigation was small, and the cases were for the most part claims of a simple character for money or moveable property.

Madras. The total number of original suits and appeals instituted throughout the Presidency of Madras during the year was 250,845 and 12,346 respectively, as against 248,817 and 10,266 in 1887. In the courts of Village Munsifs 57,103 suits were filed. Before the regular mofussil courts there were 167,098 suits compared with 160,020 in 1887, and of these 68,564 were ordinary causes and 98,534 were small causes. District Munsifs' Courts contributed to the total 145,328, or 86·97 per cent.; Sub-Judges' Courts, 13,856, or 8·30 per cent., and District Courts, 759, or 0·46 per cent. The number of appeals from decrees before the Sub-Judges and District Courts was the highest on record, being 10,179 compared with 8,658 in 1887. The number of suits and appeals disposed of by the regular mofussil courts were 170,211 and 9,105 respectively, as against 162,222 and 8,904 in 1887. Of appeals from original decrees 59·95 per cent., and of those from appellate decrees 75·65 per cent. resulted in confirmation by the superior courts as compared with 58·55 per cent. and 73·59 per cent. respectively in the previous year. In the Presidency Court of Small Causes 26,324 suits were instituted as against 26,259 in 1887. There was a slight increase, from 309 to 320, in the number of suits filed on the original side of the High Court. The number disposed of was 454 as compared with 247 in 1887-8. Taking all classes of appeals decided on their merits, the decisions of the lower courts were confirmed in 73·7 per cent. of the cases reversed or varied in 16·8 per cent., and remanded in 9·5 per cent. The Judicial receipts showed a surplus of Rx. 88,846 as against Rx. 82,558 in 1887-8. The salient features of the year may be summed up as (1) a continuance of the decrease of suits in Village Munsifs' Courts; (2) a general increase of original and appellate litigation in other courts; (3) a decrease in the disposal of suits by Village Munsifs; (4) a general increase in the disposals by other judicial officers, and (5) a falling off in the amounts realised in execution of decrees in the mofussil courts, probably due to the introduction of the Debtors Act in 1888.

Bombay. There was a considerable decrease in civil litigation in Bombay during the year under review. The number of suits instituted throughout the presidency was less by 8,824 than the number instituted in the previous year; a very large decrease occurring in suits on contracts both written and verbal, on accounts, and for money and moveables not specified,—counterbalanced to some extent by an increase in the number of suits for goods sold and for wages. There was a substantial increase in the number of suits filed before Village Munsifs. In 59 per cent. of the suits the claims did not exceed Rx. 5. Including suits in arrear from the previous year the courts disposed of 194,007 suits. This number was less by 6,797 than the number disposed of in the previous year; but the suits in arrear at the close of the year were less by 2,557 than the arrears in 1887-8. The average duration of suits increased in

in all classes of courts except the High Court. The number of appeals continued to increase in spite of the decrease of original suits. Owing to the operation of the Debtors Act of 1888 arrests and imprisonments of judgment debtors were much fewer than in the previous year. The Subordinate Judges were in general well qualified for their office ; but the work of many of the courts was said to be beyond the power of a single officer to keep pace with. The Dekkhan Agriculturists Relief Act of 1879 remained in force during the year in the four districts of the Dekkhan. The number of suits instituted under the Act declined, the decrease occurring both in what are termed agriculturist cases and in suits against non-agriculturists. The result of the work of the Judges and Conciliators in the trial of redemption suits was the settlement of mortgage debts of Rx. 19,369 for Rx. 15,211 ; the total debt so settled since the passing of the Act amounting to 31½ lakhs, which has been settled for a little under 22 lakhs. The amount of compounded debt actually paid in the same time cannot be accurately estimated but is probably not far short of 11 lakhs. The average duration and cost of suits increased during the year. There was a decrease in the number of Conciliators and of applications for conciliation, and the proportion of cases in which conciliation was successful fell from 28 to 25 per cent. The failures were mostly due to refusals of parties to attend. Inquiries into the working of the Act were being conducted by a special officer during the year and had not been concluded at its close.

The number of Civil Courts open at the close of the year was 35, and the number of civil suits instituted was 26,974 against 24,491. The total number of cases disposed of was 27,767, of which 24·8 per cent. were contested. The aggregate value of the claims involved amounted to Rx. 298,265. There were 226 appeals, including those pending from the previous year, for disposal by Deputy Commissioners, and of these 249 were disposed of. In the Judicial Commissioners' Court there were 734 appeals, of which 151 were disposed of. The total number of second appeals for disposal in the Resident's Court as a High Court was 21. Berar.

V.

REGISTRATION.

REGISTRATION.
General.

IN the Statement for 1885-86 was given a short account of the Registration laws; it will suffice to say here that the law makes compulsory the registration of all non-testamentary documents affecting immovable property of the value of Rx. 10 or upwards, while it permits the optional registration of other documents. 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. At the end of 1888-89 there were in British India 1,907 registration offices; the total number of documents registered during the year was 2,087,235, or 8 per cent. more than in 1887-88. The total registration fee receipts of the year 1888-89 were Rx. 330,000, as compared with Rx. 316,000 in the preceding year; and the cost of the registration offices was Rx. 193,000. It is claimed for the Indian registration system that it operates to prevent fraud, as well as to secure and simplify titles.

Bengal.

The number of registration offices in Bengal increased from 301 to 304. The total number of documents registered was 783,462, or 9 per cent. more than in 1887-88. The increase occurred half under compulsory and one-third under optional registration of documents relating to immovable property; documents relating to moveable property are only 15 per cent. of all the documents brought for registration. The increase is said to have been partly due to the failure of the crops and consequent high prices of food. The number of registered transfers of holdings by ryots (tenants), holding at fixed rates and enjoying occupancy right, rose from 88,337 in 1887-88 to 97,745. The average area of a fixed-rent holding was 2.5 acres, with a price equal to 12.3 times the rental; while the average occupancy right holding had an area of 2.1 acres, and fetched 9.8 years' purchase of the rental. There was a reduction of 24 per cent. in the number of registrations under the Tenancy Act, and of 3 per cent. in the number of perpetual leases, and an increase of 9 per cent. in other leases. The number of ceremonies registered under the Muhammadan Marriage Act rose from 7,663 to 8,459, when; the Act is, as heretofore, in force in only 14 districts. The total fee receipts from all registrations were Rx. 109,347, or 7 per cent. larger than in the previous year. The expenditure increased from Rx. 57,926 to Rx. 59,917, mainly in consequence of the increase in the number of documents registered.

North-West Pro-
vinces and Oudh.

There was an increase of 2,539, or nearly 2 per cent., in the number of documents registered in the North-West Provinces and Oudh; the increase occurred under compulsory registrations; the number of other registered documents respecting both moveable and immovable property, showed a decrease. The number of registration offices open in the combined provinces at the end of the year was 347, or two in excess of the previous year; in Oudh all the sub-registrars are non-officials, and in the North-West Provinces efforts are being continued to substitute separate registrars for *ex-officio* registrars, who perform registration duties in addition to their other work. There was an increase of 3 per cent. in the registration fees. Out of 195,198 registered documents, not one document was discredited by the Civil Courts during the year. The number of mortgages registered was the same as in the preceding year; the number of leases, increased 9 per cent.; sales of land increased 5 per cent., and wills increased 9 per cent. Prosecutions for breach of the registration law fell from 18 to 4, and it seems that knowledge of the requirements of the law in this matter is becoming more general.

Punjab.

The total number of documents registered in the Punjab was 84,010, or nearly 3 per cent. above the previous year's total, while the fee receipts increased by 4, and the surplus by 6 per cent. The advance of business was entirely

entirely under the head of mortgages, sales and other documents relating to immoveable property. There was no increase in the number of registered documents relating to moveable property. The most noticeable feature in the Punjab registration returns is the increase of mortgages by the agricultural classes. These mortgages have gone up in number from 27,868 to 36,294, and in value of the land mortgaged from Rx. 1,601,000 to Rx. 2,200,000 in the past three years. REGISTRATION.

The number of registration offices in Lower Burma remained unchanged at 113; and the number of registrations increased from 8,676 to 9,430. The fee receipts rose from Rx. 2,940 to Rx. 3,281. There was an increase of Rx. 230,000 in the value of the property to which the registered documents referred, as compared with the value in the previous year. Burma.

A registration office was open at Mandalay in Upper Burma, at which 1,602 documents were registered, involving property valued at Rx. 106,380. The fee receipts were Rx. 417, and the expenditure Rx. 96.

The number of documents registered during the year in the Central Provinces was 27,383, or 1 per cent. less than in the preceding year. The value of the property concerned was Rx. 985,000. The decrease was in mortgages and leases of immoveable property. The cost of the Registration Department was 45 per cent. of the receipts, and the net revenue was Rx. 5,233 as compared with Rx. 4,029 in the preceding year; the increase was due to a small enhancement of the rates of fees. Central Provinces.

In Assam there were 21 registration offices, at which 24,220 documents were registered, showing an increase of 10½ per cent. over the total of the preceding year; of these 75 per cent. were compulsory registrations; and the increase was apparent in all classes of documents. The value of the compulsory registrations fell slightly, while that of the optional registrations increased considerably. The fee receipts were Rx. 3,211, and the expenditure was Rx. 2,236, leaving a surplus Rs. 975 or Rx. 20 above the preceding year. Assam.

The marriages registered under the Muhammadan Marriage Act were 152, as compared with 160 in the preceding year; while the registered divorces were 41 against 43 in 1887-88. The Act continues to be unpopular in Sylhet and Cachar.

The number of registration offices in Berar was 62, as at the end of the previous year; the number of documents registered was 28,151, or 7 per cent. more than in the year 1886-87. The value of the property registered and the fee receipts increased in a smaller proportion. The increase occurred mainly under the head of documents, whereof registration was compulsory. In Coorg there was a small increase in registration work, and the total number of deeds registered was 1,081, as compared with 1,038 in the previous year. Berar and Coorg.

One new registration office was opened in Madras, bringing up the total to 366. The number of documents registered was 686,376, showing an increase of 8 per cent. over the previous year. The increase was common to all classes of documents. Only six registered documents during the year were discredited by the civil courts. The registration receipts were Rx. 95,307; the expenditure was Rx. 75,010; and the surplus was Rx. 20,296, or 5 per cent. less than in the previous year. The ratio of optional to compulsory registrations remained the same as in the previous year. Among remarkable documents presented for registration in Madras were a deed relating to the sale of a girl, about four years old, for Rx. 10; a mortgage of a boy, ten years old, for Rs. 7 for an indefinite period; and several documents executed by people of the hills near Trichinopoly relating to money borrowed on the security of their unmarried girls. Madras.

The number of registry offices in Bombay was the same as in the previous year, namely, 242. The number of registrations was 146,304, or 8½ per cent. larger than in 1887-88. The increase took place mainly under the head of compulsory registration, which are 80 per cent. of the whole. The value of the property affected was Rx. 7,635,000. The fee receipts were Rx. 42,576. The registration surplus of the year, under all heads, was Rx. 18,401 as compared with Rx. 15,589 in the year 1887-88. Bombay.

REGISTRATION.

Under the special law for the protection of Dekkhan agriculturists in the four districts of Poona, Sattara, Ahmadnagar, and Sholapur, there were 101,620 registrations, or 22 per cent. above the total of the previous year. The increase was chiefly under the heads of sales, mortgages, leases, and deeds of gift of immoveable property. Of the registered sales and mortgages of land, more than half were between agriculturists on both sides, less than half being between agriculturists and money-lenders; to more than half of the registered leases of land, money-lenders were parties on one side. The aggregate value of property concerned in these special registrations was Rx. 541,000, or 26 per cent. more than in the previous year. There was a corresponding increase in the fee receipts; and the net deficit on these registration proceedings was Rx. 1,839 as compared with Rx. 2,492 in the preceding year.

JOINT STOCK COMPANIES.

JOINT STOCK
COMPANIES.

During the year 1888-89, for all provinces of India, the number of new joint-stock companies registered was 125, with a nominal capital of Rx. 1,950,000; and at the end of the year there were in operation 895 companies, with a nominal capital of Rx. 31,339,000, and a paid-up capital of Rx. 22,997,000. These companies work chiefly in the provinces of Bombay, Bengal, and Madras; in no other province did the aggregate paid-up capital of registered companies reach one million. The distribution of paid-up capital among registered companies for different classes of industry was somewhat as follows:—

	Rx. of Paid-up Capital.		Rx. of Paid-up Capital.
Banking and insurance	- 3,492,000	Mills and presses	- - 10,234,000
Navigation and communication	3,539,000	Tea and planting	- - 3,634,000
Mining and quarrying	- 793,000	Ice companies	- - 195,000
Brewery companies	- - 120,009	Miscellaneous	- - 1,527,000

The companies with the largest aggregate capital were for working up or pressing cotton, jute, wool, and silk, and two-thirds of these undertakings belonged to the Bombay Presidency.

Bengal.

In Bengal, 20 new companies were registered, with a capital of Rx. 370,000; of which five were trading companies, seven were miscellaneous companies, and eight were tea companies. Of 25 companies under liquidation eight, with a total registered capital of Rx. 123,000, were wound up. At the end of the year 1888-89 there were 233 registered joint-stock companies at work.

Madras.

In Madras, 32 new companies were registered during the year, with a nominal capital of Rx. 278,000. The companies wound up during the year were 110. At the end of the year 296 companies were still in existence, with a nominal capital of Rx. 3,728,000, and a paid-up capital of Rx. 1,679,000.

Bombay.

In Bombay, 30 new companies and societies were registered, of which 16 were for working mills and presses. Fourteen companies were in liquidation, of which six were wound up. At the end of the year 224 joint-stock companies were in existence, with a nominal capital of Rx. 13,486,000, and a paid-up capital of Rx. 9,874,000. Of these, 130 companies, with a paid-up capital of Rx. 6,959,000, were for working mills and presses.

VI.
FINANCE.

[The denomination Rx. means tens of rupees.]

THE gross revenue and expenditure of British India in 1888-89 may be thus compared with the figures for 1887-88 :—

	1887-88.	1888-89.	Increase.
Revenue - - - - -	Rx. 78,759,744	Rx. 81,696,678	Rx. 2,936,934
Expenditure - - - - -	80,788,576	81,659,660	871,084
Surplus or Deficit - - - - -	---	37,018	Better by Rx. 2,065,850

In the gross revenue are included very large receipts, amounting altogether to little less than one-third of the whole, which are derived from the working of the railways and canals, the operations of the Postal and Telegraph Departments, the interest received on loans to municipalities, landholders, &c., and on the investment by the Currency Department, the seignorage on coinage, the contributions by officers towards their pensions, the sale of stores, and the receipts of the various administrative departments, all of which are rather of the nature of a set-off against the corresponding charges than revenue proper; and, on the other hand, the expenditure includes the cost of collection of revenue, which is frequently enhanced by an increase of the cost incurred in the production of opium and the manufacture of salt, and the expenses of the public works, which necessarily increase as more works are brought into operation. The financial position of the Government can, therefore, be much better appreciated by looking at the net revenue and expenditure, a statement of which is always appended to the Financial Statement annually laid before Parliament.* The following is the comparison of the net revenue, that is to say, the gross revenue diminished by the cost of collection and other direct demands, with the net expenditure, that is, the expenditure reduced by the various departmental receipts :—

NET REVENUE.

REVENUE.*	1887-88.				1888-89.				NET REVENUE.	
	Gross Revenue.	Deductions.		Net Revenue.	Gross Revenue.	Deductions.		Net Revenue.	Increase.	Decrease.
		Refunds and Draw-backs.	Charges in respect of Collection.			Refunds and Draw-backs.	Charges in respect of Collection.			
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue - - -	23,180,202	42,466	3,486,686	19,660,141	23,016,404	41,745	3,513,967	19,460,702	—	199,439
Opium - - - - -	8,615,462	129	2,424,575	6,090,768	8,502,319	49	2,597,905	5,964,365	—	126,353
Salt - - - - -	6,679,728	34,461	410,704	2,225,563	7,675,934	45,337	412,979	7,217,318	991,756	—
Stamps - - - - -	3,878,398	44,302	163,414	3,668,682	3,927,088	43,461	154,172	3,729,465	60,873	—
Excise - - - - -	4,334,655	33,583	127,078	4,374,024	4,705,346	26,106	187,941	4,511,299	167,375	—
Provincial Rates - -	8,055,328	7,970	62,138	2,966,215	3,054,254	16,880	59,383	2,977,091	12,776	—
Customs - - - - -	1,348,837	32,076	134,391	1,181,670	1,332,784	30,923	133,897	1,167,964	—	13,906
Assessed Taxes - - -	1,431,436	19,349	28,079	1,382,808	1,520,940	16,298	27,126	1,477,614	94,706	—
Forest - - - - -	1,124,126	2,451	719,794	401,880	1,349,047	1,863	792,000	556,184	163,304	—
Registration - - - -	311,253	1,084	167,260	122,899	331,712	984	193,681	137,077	14,178	—
Tributes from Native States.	743,597	Upper Burma, 6,531	—	738,066	745,233	Upper Burma, 5,002	—	740,231	2,165	—
Deduct.—	54,781,066	223,982	7,746,218	46,811,806	50,220,761	228,618	8,093,043	47,969,100	1,157,294	—
Assignments and Compensations.	—	—	—	1,468,983	—	—	—	1,468,235	17,272	—
TOTAL NET REVENUE - - -	—	—	—	45,342,843	—	—	—	46,482,865	1,140,022	—

* See page 69 of Financial Statement for 1889-90 (Commons' Paper, 123 of 1889), and page 62 of Financial Statement for 1890-91 (Commons' Paper, 140 of 1890).

FINANCE.

NET EXPENDITURE.

EXPENDITURE.	1887-88.			1888-89.			NET EXPENDITURE.	
	Gross Expenditure.	Receipts.	Net Expenditure.	Gross Expenditure.	Receipts.	Net Expenditure.	Increase.	Decrease.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Interest - - - - -	5,441,754	746,355	4,695,399	4,712,359	841,823	3,870,537	—	824,762
Post Office, Telegraph, and Mint	2,265,820	2,229,546	36,283	2,146,511	2,244,826	98,315	—	124,598
Civil Departments - - -	12,806,364	1,495,742	11,410,622	13,013,543	1,507,961	11,505,582	94,960	—
Miscellaneous Civil Charges -	4,761,130	1,606,108	3,155,022	4,884,376	1,792,778	3,091,598	—	63,424
Famine Relief and Insurance -	91,408	—	91,408	76,336	—	76,336	—	13,072
Construction of Railways (charged against Revenue, in addition to that under Famine Insurance).	80,945	—	80,945	22,401	—	22,401	—	58,544
Railway Revenue Account - -	16,655,749	14,533,350	2,122,399	17,784,098	16,529,596	2,254,502	711,006	—
Irrigation - - - - -	2,461,546	1,714,274	747,272	2,622,904	1,900,718	722,186	—	28,126
Buildings and Roads - - -	5,451,949	592,338	4,859,611	5,310,782	601,788	4,708,994	—	152,782
Army - - - - -	20,417,934	1,060,815	19,357,119	20,301,841	1,062,363	19,239,478	—	117,641
Special Defence Works - - -	456,017	—	456,017	780,595	—	780,595	324,578	—
	70,979,822	23,978,736	47,001,084	71,636,646	26,475,917	45,160,729	—	940,356
Provincial and Local Surpluses -	—	—	370,591	—	—	295,118	—	85,473
TOTAL NET EXPENDITURE	—	—	47,371,675	—	—	46,445,347	—	926,328

Thus, there was an increase of the net revenue by Rx. 1,140,022, and a reduction of the net expenditure by Rx. 925,828, making a net improvement of Rx. 2,065,850. In the expenditure of 1887-88, however, there was an exceptional payment of Rx. 1,091,427 on account of the conversion of stock (as explained in last year's report), while in 1888-89 the charge on this account was only Rx. 236,136, so that the result of 1888-89 should be taken as being in other respects better than that of 1887-88 by Rx. 1,210,559.

The most important change in regard to the revenue was the increase of Rx. 991,755 in the net receipts from salt, the enhancement of the duty, which took effect on the 19th of January 1888, having been in force through the whole year, as compared with only 10 weeks in 1887-88. The Land Revenue was reduced by Rx. 199,439, chiefly in Madras, owing to the scarcity in Ganjam, and the postponement of the date of assessment in other districts. Under opium there was a reduction of Rx. 126,393, owing to the considerable decrease in the exports from Malwa, resulting in a diminution of Rx. 301,810, while in Bengal the net revenue improved by Rx. 171,256, and in other provinces by Rx. 4,161. Excise showed an increase of Rx. 167,275, principally in Madras, Burma, and Bombay; stamps gave a better result in almost all the provinces, the total increase being Rx. 60,873; assessed taxes improved by Rx. 94,706, of which nearly half was due to the levy of the income tax for the first time in Burma; forest by Rx. 153,304, owing to the restoration of order in Upper Burma, and to enhanced receipts in most provinces; while other heads were worse by Rx. 2,059.

Of the total reduction of the net expenditure by Rx. 925,828, no less than Rx. 855,291 is, as mentioned above, due to the diminution of the exceptional charge in connection with the conversion of India 4 per cent. stock, into similar stock bearing interest at $3\frac{1}{2}$ per cent. Apart from this, the net expenditure shows a decrease of Rx. 70,537 as compared with that of 1887-88. Under the head of Army there was a reduction of Rx. 843,700 in the special charges for Upper Burma; but there were payments of Rx. 374,300 on the Sikkim, Hazara, and Lushai Expeditions, an increase of Rx. 109,264 in the other effective charges, chiefly for ordnance stores, camp equipage, &c.,

for

for the mobilisation of the troops, and of Rx. 242,495 in the non-effective charges. There was also an enhanced charge of Rx. 333,578 for the special defence works in the harbours and on the north-west frontier. In the group of post office, telegraph, and mint, there was a net improvement of Rx. 124,598, owing mainly to the increase of revenue under the first head, and the reduction of charge under the second. The railway revenue account was worse by Rx. 111,006, as the improvement in the net receipts was swallowed up by an increase of Rx. 361,013 in the exchange on payments in England; but, on the other hand, there was a large increase of Rx. 206,982 in the gain by exchange on the capital transactions of the various companies, owing to their enhanced expenditure. The charge for civil superannuation was increased by Rx. 140,892 (more than half of this being due to the fall in the gold value of the rupee); on buildings and roads there was a diminution of Rx. 152,732; and on all other heads there was a net decrease of Rx. 54,060.

The exchange value of the rupee fell from 16·89*s* *d.* in 1887-88 to 16·379 *d.* in 1888-89. The consequence was that, although the net sterling expenditure was reduced by 475,428*l.*, the remittances from India to defray the charges were less by only Rx. 14,768.

In the following tables the net revenue and expenditure in India of the several provinces under the chief heads are shown for the years 1887-88 and 1888-89. The revenue and expenditure of Berar, forming as they do no part of the general finances of the Government of India, are not given in this chapter, but are referred to under Hyderabad in the chapter on Native States:—

60 STATEMENT EXHIBITING THE MORAL AND MATERIAL

FINANCE.

Bengal.

BENGAL.

NET REVENUE.	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue - - - -	2,845,308	614,304	—	3,459,612	2,628,752	657,288	—	3,286,040
Opium - - - - -	2,681,243	—	—	2,681,243	2,852,424	—	—	2,852,424
Salt - - - - -	1,863,095	6,584	—	1,869,679	2,272,969	6,897	—	2,279,866
Stamps - - - - -	333,261	999,781	—	1,333,042	333,050	1,000,891	—	1,333,941
Excise - - - - -	782,942	260,981	—	1,043,923	784,292	261,431	—	1,045,723
Provincial Rates - - -	—	388,933	381,648	770,581	—	383,891	379,203	763,094
Customs - - - - -	362,331	—47,106	—	315,225	337,063	—47,713	—	289,350
Assessed Taxes - - - -	168,936	179,427	—	348,363	197,707	188,082	—	385,789
Other Heads - - - - -	—18,425	906	—1,621	—19,140	—19,671	—11,794	—12,994	—32,665
TOTAL - - - - -	10,028,691	2,403,710	380,027	12,812,428	10,637,068	2,362,361	366,209	13,365,638
NET EXPENDITURE:								
Interest - - - - -	—87,204	—6,709	—5,099	—98,952	—79,368	—5,159	—5,672	—90,199
Post Office - - - - -	134,857	—	34,157	169,014	112,487	—	34,950	147,437
General Administration -	27,186	154,288	17,907	199,381	26,363	167,110	25,570	209,043
Law and Justice - - - -	—	798,695	—	798,695	—	838,297	—	838,297
Police - - - - -	2,948	447,343	—44,813	405,478	3,137	449,691	—41,328	411,400
Education - - - - -	—	172,756	106,798	279,554	—	184,032	100,061	284,093
Medical - - - - -	—	130,513	274	130,787	—	135,150	1,537	136,687
Territorial and Political Pensions	95,043	—	—	95,043	102,328	—	—	102,328
Civil Superannuation - - -	—16,889	—123,407	425	—106,948	—18,707	132,116	366	113,775
Stationery and Printing - - -	81,764	85,502	3,647	170,913	87,705	84,637	4,442	176,784
Railway Revenue Account - - -	—13,324	—218,859	—	—232,183	—95,092	—239,115	—	—334,207
Irrigation - - - - -	—	326,958	—	326,958	—	287,125	—	287,125
Buildings and Roads - - - -	64,131	252,401	306,746	623,278	66,480	354,932	329,994	751,406
Other Heads - - - - -	8,563	—20,000	—18,450	—29,887	11,903	—22,185	—16,094	—26,376
Provincial and Local Balances -	—	131,007	4,486	135,493	—	—65,732	3,382	—62,350
TOTAL - - - - -	307,046	2,277,604	406,133	3,090,783	217,225	2,267,343	441,327	2,925,895
Surplus - - - - -	9,721,645	26,106	—28,106	9,719,645	10,419,843	75,018	—75,018	10,419,843

NORTH WEST PROVINCES AND OUDH.

North West
Provinces and
Oudh

NET REVENUE	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue	4,190,693	796,134	-2,000	4,914,657	4,147,616	740,398	-2,000	4,886,014
Stamps	180,870	481,109	—	641,479	180,812	482,432	—	643,244
Excise	409,468	136,488	—	545,956	412,695	137,566	—	550,260
Provincial Rates	—	168,931	498,379	664,210	—	168,067	497,208	663,273
Assessed Taxes	111,233	105,753	—	216,986	113,326	107,471	—	220,797
Forest	20,929	20,940	—	41,879	30,936	30,997	—	61,933
Other Heads	37,432	-18,732	-500	18,200	40,612	-17,568	-393	22,651
TOTAL	4,929,960	1,617,528	486,879	7,043,367	4,906,067	1,646,362	494,813	7,047,232
NET EXPENDITURE:								
General Administration	22,210	126,114	8,842	157,166	22,379	130,279	8,661	161,319
Law and Justice	—	444,776	—	444,776	—	447,882	—	447,882
Police	2,541	348,970	245,794	592,305	1,848	341,673	247,590	591,111
Education	—	36,290	125,303	160,593	—	33,530	123,598	157,067
Medical	—	66,644	34,373	93,017	—	58,780	35,116	93,596
Territorial and Political Pensions	86,868	—	—	86,868	83,436	—	—	83,436
Civil Superannuation	-12,647	137,861	417	125,631	-13,162	146,590	382	133,790
Stationery and Printing	-992	42,820	251	42,079	-175	47,014	176	47,015
Construction of Railways	—	65,360	—	65,360	—	18,370	—	18,370
Railway Revenue Account	439	-2,007	—	-1,568	-151,202	-6,033	—	-157,235
Irrigation	-84,567	55,463	—	-9,104	-66,631	40,421	—	-26,210
Buildings and Roads	28,547	198,131	240,202	466,860	18,279	191,720	232,967	442,966
Other Heads	-7,271	1,949	2,948	-2,374	-12,837	-8,599	3,870	-17,566
Provincial and Local Balances	—	-53,090	-4	-53,094	—	45,949	1,200	47,149
TOTAL	65,148	1,455,281	636,126	2,184,555	-118,085	1,487,668	683,480	2,023,069
Surplus	4,874,812	162,247	-162,247	4,874,812	5,024,142	156,677	-158,677	5,024,142

62 STATEMENT EXHIBITING THE MORAL AND MATERIAL

FINANCE.

Punjab.

PUNJAB.

NET REVENUE.	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue - - - -	1,178,487	694,865	-102,307	1,770,245	1,315,082	600,700	-104,660	1,810,122
Stamps - - - - -	177,220	177,220	—	354,440	185,774	165,773	—	351,547
Excise - - - - -	67,163	67,164	—	134,327	69,510	69,516	—	139,026
Provincial Rates - - -	—	50,357	311,515	361,872	—	51,078	323,084	374,162
Assessed Taxes - - - -	61,362	47,723	—	109,085	64,421	61,054	—	115,475
Forest - - - - -	5,558	5,555	—	11,111	22,596	22,597	—	45,193
Other Heads - - - - -	14,937	818	-74	15,081	15,178	1,118	-23	16,273
TOTAL - - - - -	1,504,675	1,043,403	209,634	2,756,711	1,573,567	1,080,836	218,401	2,871,804
NET EXPENDITURE:								
General Administration - -	17,138	93,002	11,801	122,541	15,700	91,030	12,231	118,961
Law and Justice - - - -	—	300,351	-322	300,029	—	312,051	150	312,201
Police - - - - -	21,303	248,507	-2,175	268,040	23,818	248,515	-2,747	269,586
Education - - - - -	—	68,678	44,431	108,109	—	78,519	45,041	117,560
Medical - - - - -	—	48,072	25,942	74,064	—	51,682	27,321	79,010
Political - - - - -	68,890	—	—	68,890	68,940	—	—	68,940
Territorial and Political Pensions	42,076	—	—	42,076	39,628	—	—	39,628
Civil Superannuation - - -	-7,032	62,100	772	56,845	-7,432	68,145	146	60,859
Railway Revenue Account - -	-546,442	12,916	—	-533,526	-823,367	13,666	—	-809,701
Irrigation - - - - -	-194,816	-480	-224	-195,520	-203,059	-44	-102	-203,205
Buildings and Roads - - -	204,037	194,400	76,094	476,531	232,848	195,181	91,154	519,184
Other Heads - - - - -	-38,130	44,772	3,343	9,985	-12,278	35,090	8,018	30,830
Provincial and Local Balances -	—	12,440	7,654	20,100	—	32,142	-1,965	30,177
TOTAL - - - - -	-432,975	1,082,720	169,316	819,061	-667,340	1,119,990	179,247	651,897
Surplus - - - - -	1,937,630	-39,319	30,318	1,937,650	2,239,907	-33,154	33,154	2,239,907

FINANCE.

Burma.

BURMA.

NET REVENUE.	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue	767,678	632,154	706	1,390,638	761,828	511,808	1,144	1,274,578
Salt	41,018	—198	—	40,816	30,956	—219	—	30,737
Stamps	53,482	43,191	—	96,673	57,255	44,018	—	101,373
Excise	181,477	132,414	1,869	295,760	101,679	146,112	2,450	342,241
Provincial Rates	—	—	84,927	84,927	—	—	74,689	74,689
Customs	567,877	—14,522	—	553,355	473,854	—14,114	—	459,740
Assessed Taxes	32	—	—	32	50,161	—	—	50,161
Forest	76,890	59,313	—	136,203	148,564	69,074	—	217,638
Other Heads	18,398	—3,450	—361	9,567	34,228	—1,816	—113	52,299
TOTAL	1,731,947	748,912	87,211	2,538,070	1,748,325	756,661	76,170	2,563,356
NET EXPENDITURE:								
General Administration	42,352	52,084	3,411	95,827	38,236	60,832	1,643	100,711
Law and Justice	50,410	138,378	—	188,788	68,057	155,619	—	324,276
Police	690,445	278,750	29,111	998,306	772,768	266,375	31,082	1,070,245
Education	—	29,678	13,145	42,823	—	26,909	12,333	39,333
Medical	20,407	18,472	2,368	41,237	14,379	19,216	2,654	36,249
Stationery and Printing	1,617	23,123	—	24,740	—705	30,496	—	29,791
Railway Revenue Account	—	—45,724	—	—45,724	5,000	—13,341	—	—8,341
Irrigation	12,608	31,342	1,754	46,204	24,813	51,451	480	76,724
Buildings and Roads	678,038	112,513	23,231	813,882	495,086	115,592	35,110	645,868
Special Defence Works	14,438	—	—	14,438	31,410	—	—	31,410
Other Heads	18,699	34,338	1,113	53,950	114,157	34,872	—4,640	144,389
Provincial and Local Balances	—	77,028	6,563	83,596	—	11,560	—3,252	8,278
TOTAL	1,528,945	750,382	86,741	2,305,068	1,564,401	759,671	75,360	2,399,432
Surplus	173,002	—1,470	1,470	173,002	184,324	—2,810	2,810	183,024

FINANCE.

Central Provinces.

CENTRAL PROVINCES.

NET REVENUE.	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue	262,119	246,447	36,549	478,617	270,117	241,911	26,874	468,154
Stamps	37,341	112,922	—	149,363	38,204	114,812	—	152,816
Excise	169,541	50,614	—	226,056	177,883	59,296	—	237,178
Provincial Rates	—	16,675	58,448	75,123	—	16,859	68,577	80,419
Assessed Taxes	21,698	19,095	—	40,793	22,046	20,675	—	42,721
Forest	27,048	27,048	—	54,096	25,606	25,604	—	51,310
Other Heads	56,014	— 35	— 24	55,955	34,295	788	— 44	39,039
TOTAL	573,701	477,766	21,875	1,073,402	572,151	479,724	34,559	1,086,534
NET EXPENDITURE:								
General Administration	6,169	87,038	3,374	46,581	6,275	34,137	3,342	43,754
Law and Justice	—	83,126	—	83,126	—	84,698	—	84,698
Police	286	125,870	— 9,330	116,826	511	125,302	— 8,991	115,822
Education	—	31,670	18,081	49,731	—	31,513	16,512	49,025
Medical	—	26,477	8,903	30,440	—	25,411	4,032	29,443
Territorial and Political Pensions	29,158	—	—	29,158	26,985	—	—	26,985
Railway Revenue Account	— 70,577	—	—	— 70,577	— 31,739	—	—	— 31,733
Buildings and Roads	9,636	118,648	17,208	145,443	14,785	107,907	16,036	138,737
Other Heads	— 10,307	36,654	— 3,345	23,002	— 10,937	40,580	— 3,671	25,972
Provincial and Local Balances	—	13,148	— 2,922	10,226	—	22,583	16,093	38,676
TOTAL	— 35,585	472,631	27,010	464,056	5,896	472,031	42,352	520,379
Surplus	609,346	5,135	— 5,135	609,346	666,355	7,693	— 7,693	666,355

Assam.

ASSAM.

NET REVENUE.	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue	112,835	232,600	—	338,436	118,298	231,559	—	349,857
Opium	41,086	—	—	41,086	40,982	—	—	40,982
Stamps	18,879	56,635	—	75,514	17,377	52,133	—	69,510
Excise	157,330	52,462	—	209,648	162,192	54,063	—	210,255
Provincial Rates	—	—	40,747	40,747	—	—	54,637	54,637
Other Heads	9,868	12,406	— 201	22,063	12,866	14,816	— 90	27,583
TOTAL	338,844	345,303	49,846	734,693	361,665	362,571	54,538	758,774
NET EXPENDITURE:								
General Administration	4,683	20,151	—	24,834	4,430	19,360	—	23,798
Law and Justice	—	46,066	—	46,066	—	48,478	—	48,478
Police	—	89,648	— 4,452	85,196	—	91,660	— 4,584	87,116
Education	—	18,030	16,377	37,907	—	13,291	14,645	27,936
Medical	—	13,987	4,411	18,378	—	14,300	6,498	19,798
Construction of Railways	—	15,770	—	15,770	—	5,111	—	5,111
Railway Revenue Account	335	14,580	—	14,915	—	11,714	—	11,714
Buildings and Roads	16,348	54,734	81,110	152,186	22,098	59,537	75,104	157,639
Other Heads	6,750	20,331	4,232	31,213	3,722	23,977	2,653	30,352
Provincial and Local Balances	—	7,761	— 1,257	6,494	—	26,443	— 26	26,317
TOTAL	28,110	295,588	99,321	422,959	31,149	313,310	93,390	438,259
Surplus	311,734	49,715	— 49,715	311,734	320,516	38,762	— 38,762	320,516

INDIA GENERAL, *i.e.*, the Departments and Districts not administered directly by the Lieutenant Governors and Chief Commissioners of the Provinces previously enumerated.

NET REVENUE.	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue	75,051	—	— 2,919	72,132	70,220	—	— 2,674	70,546
Salt	1,423,904	—	—	1,423,904	1,730,642	—	—	1,730,642
Stamps	80,069	—	—	80,069	92,641	—	—	92,641
Excise	86,904	—	1,062	87,966	71,214	—	1,446	72,660
Assessed Taxes	135,008	—	—	135,008	140,580	—	—	140,580
Tributes from Native States	225,286	—	—	225,286	213,424	—	—	213,424
Assignments and Compensations	— 304,439	—	—	— 304,439	— 308,776	—	—	— 308,776
Other Heads	— 4,643	—	7,201	2,558	— 11,553	—	7,044	— 4,509
TOTAL	1,731,980	—	5,344	1,737,324	2,007,302	—	5,816	2,013,208
NET EXPENDITURE:								
Interest	313,672	—	— 37	313,636	429,240	—	— 19	429,221
Telegraph	— 142,617	—	—	— 142,617	— 167,785	—	—	— 167,785
Mint	— 66,788	—	—	— 66,788	— 32,319	—	—	— 32,319
General Administration	421,400	—	24	421,424	415,212	—	21	415,233
Law and Justice	123,386	—	81	124,068	114,482	—	48	114,530
Police	46,620	—	1,082	47,682	51,329	—	919	52,241
Marine	260,167	—	—	260,167	178,812	—	—	178,812
Political	136,851	—	197	137,048	509,605	—	322	509,927
Scientific and other Minor Departments.	246,521	—	268	246,779	214,560	—	221	214,777
Territorial and Political Pensions.	122,297	—	—	122,297	68,040	—	—	68,040
Stationery and Printing	— 90,331	—	—	— 90,331	— 88,801	—	—	— 88,801
Exchange	— 744,471	—	—	— 744,471	— 951,453	—	—	— 951,453
Railway Revenue Account	— 4,568,857	—	—	— 4,568,857	— 4,588,478	—	—	— 4,588,478
Irrigation	568,826	—	—	568,826	583,564	—	—	583,564
Buildings and Roads	911,676	—	3,079	914,748	735,182	—	3,537	738,719
Army	7,176,977	—	—	7,176,977	8,147,319	—	—	8,147,319
Special Defence Works.	292,233	—	—	292,233	282,802	—	—	282,802
Other Heads	— 3,100	—	— 4	— 3,104	7,367	—	1,306	8,663
Local Balances	—	—	691	691	—	—	— 622	— 622
TOTAL	5,904,001	—	5,344	5,909,405	5,948,486	—	5,816	5,954,302
Surplus	— 4,172,081	—	—	— 4,172,081	— 3,941,094	—	—	— 3,941,094

FINANCE.

Madras.

MADRAS.

NET REVENUE	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue	2,362,599	1,093,181	— 274,165	3,741,615	2,706,652	1,129,101	— 227,547	3,608,206
Salt	1,301,794	14,438	—	1,316,232	1,457,124	13,654	—	1,500,778
Stamps	145,438	436,314	—	581,752	119,421	444,261	—	597,682
Excise	710,224	230,740	—	946,964	760,340	253,648	—	1,014,588
Provincial Rates	—	—	687,490	687,490	—	—	699,012	699,012
Customs	158,129	— 13,399	—	139,729	189,511	— 13,425	—	156,086
Assessed Taxes	90,044	74,758	—	164,797	92,705	74,806	—	167,511
Tributes from Native States	314,643	—	—	314,643	244,643	—	—	244,643
Assignments and Compensation	— 112,155	—	—	— 112,155	— 116,583	—	—	— 116,583
Other Heads	— 4,776	28,992	— 2,348	20,998	— 2,580	34,267	— 1,641	30,096
TOTAL	5,490,933	1,870,120	470,971	7,832,030	5,690,733	1,940,302	409,534	8,000,569
NET EXPENDITURE :								
Post Office	— 87,993	10,828	—	— 77,865	— 96,880	10,590	—	— 86,296
General Administration	27,766	96,420	10,781	145,973	26,596	95,949	22,048	144,593
Law and Justice	—	424,502	—	424,502	—	424,983	—	424,983
Police	2,727	343,071	—	345,798	2,782	337,326	—	340,108
Education	—	108,693	63,964	161,757	—	161,486	55,911	157,397
Medical	—	103,587	48,627	152,214	—	96,865	58,468	155,333
Territorial and Political Pensions.	103,656	—	—	103,656	96,656	—	—	96,656
Civil Superannuation	— 19,772	104,217	416	84,861	— 15,378	109,724	436	94,784
Stationery and Printing	28,592	80,903	—	109,585	19,465	71,902	—	91,367
Construction of Protective Irrigation Works.	32,957	—	—	32,957	26,072	—	—	26,072
Irrigation	— 335,471	252,716	—	— 82,755	— 374,098	318,350	107	— 55,641
Buildings and Roads	62,366	189,965	314,735	567,066	60,931	213,131	320,993	595,055
Army	3,921,426	—	—	3,921,426	3,191,309	—	—	3,191,309
Other Heads	14,671	40,678	467	55,816	— 17,825	30,409	1,351	22,935
Provincial and Local Balances	—	105,371	43,160	148,531	—	113,932	16,798	130,720
TOTAL	3,740,018	1,660,847	490,250	6,082,015	2,010,664	1,933,727	478,199	5,329,390
Surplus	1,760,015	2,209	— 9,273	1,760,015	2,671,179	6,575	— 6,575	2,671,179

FINANCE.

Bombay.

BOMBAY.

NET REVENUE.	1887-88.				1888-89.			
	Imperial.	Provincial.	Local.	TOTAL.	Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue	1,689,051	1,941,133	15,361	3,645,545	1,681,500	2,005,835	-7,209	3,680,126
Opium	2,207,717	—	—	2,207,717	1,965,907	—	—	1,965,907
Salt	1,581,901	5,020	—	1,586,921	1,717,433	3,800	—	1,721,233
Stamps	116,956	350,867	—	467,823	119,735	359,504	—	479,239
Excise	637,593	229,197	—	866,790	712,236	237,412	—	949,648
Provincial Rates	—	—	271,183	271,183	—	—	278,990	278,990
Customs	201,292	4,273	—	205,565	239,802	4,084	—	243,886
Assessed Taxes	158,145	156,470	—	314,615	191,300	157,174	—	348,474
Forest	54,845	54,845	—	109,690	57,070	57,968	—	115,038
Tributes from Native States	130,615	—	—	130,615	123,000	—	—	123,000
Other Heads	-39,553	-12,197	-762	-52,512	-34,639	-7,248	-788	-42,675
Assignments and Compensations	-78,006	-890,021	—	-968,027	-77,480	-904,877	—	-982,357
TOTAL	6,770,756	1,839,587	285,782	8,896,125	6,646,524	1,913,432	270,993	8,831,249
NET EXPENDITURE:								
Interest	-146,604	-5,223	803	-151,024	-138,730	-8,288	607	-146,411
Mint	-97,310	—	—	-97,310	-99,660	—	—	-99,660
General Administration	43,617	123,638	10,460	177,715	38,153	125,224	10,636	174,013
Law and Justice	—	440,382	—	440,382	—	441,540	—	441,540
Police	2,419	475,096	6,180	483,695	4,010	477,622	-15,963	465,669
Education	—	118,204	100,786	218,990	—	122,705	109,073	232,678
Medical	—	120,580	16,353	136,933	—	117,925	16,732	134,657
Political	83,064	—	—	83,064	45,011	36,624	—	81,635
Territorial and Political Pensions	77,169	—	—	77,169	84,382	—	—	84,382
Civil Superannuation	-21,072	119,733	114	98,775	-20,060	122,023	116	102,079
Stationery and Printing	12,538	50,702	389	63,629	14,138	51,852	1,033	67,023
Construction of Protective Irrigation Works.	42,271	—	—	42,271	36,509	—	—	36,509
Railway Revenue Account	-105,184	1,851	—	-103,333	-92,940	-638	—	-93,578
Irrigation	92,739	—	—	92,739	50,340	—	—	50,340
Buildings and Roads	98,512	329,750	170,486	598,748	130,182	203,694	105,553	439,429
Army	2,405,808	—	—	2,405,808	2,468,987	—	—	2,468,987
Special Defence Works	64,465	—	—	64,465	138,611	—	—	138,611
Other Heads	-31,422	30,474	-2,544	-3,492	-48,594	56,587	-2,905	5,088
Provincial and Local Balances	—	-24,574	41,128	16,554	—	18,322	43,501	61,823
TOTAL	2,620,756	1,786,816	344,354	4,751,926	2,624,280	1,855,142	329,283	4,808,705
Surplus	4,250,001	66,773	-58,772	4,257,999	4,022,244	68,290	-58,290	4,032,244

68 STATEMENT EXHIBITING THE MORAL AND MATERIAL

FINANCE.

CAPITAL OUTLAY ON PUBLIC WORKS.

Capital Outlay on Public Works.

The total capital outlay on railways and irrigation works, the expenditure in England being converted into Indian currency at the average rate obtained for the Secretary of State's bills during the year, was as follows :—

	1887-88.	1888-89.	Increase.	Decrease.
	Rx.	Rx.	Rx.	Rx.
Amount supplied by borrowing or from the Cash Balances, without being charged against the Revenue of the Year:				
State Railways - - - - -	2,251,776	1,178,111	—	1,073,665
Irrigation Works - - - - -	583,048	459,890	—	73,158
TOTAL - - -	2,784,824	1,638,001	—	1,146,823
Amount defrayed from Revenue:				
Provincial Railways - - - - -	80,945	22,401	}	72,817
Protective Irrigation Works - - - - -	91,006	70,537		
Other Irrigation Works* - - - - -	2,795	8,991		
TOTAL Direct Outlay by the State - - -	2,959,570	1,739,930	—	1,219,640
In addition to this, the outlay by companies guaranteed or subsidised by the Government was - - - - -	7,292,340	7,417,805	125,465	—
So that the TOTAL Outlay was - - -	10,251,910	9,157,735	—	1,094,175

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

The expenditure on construction in the two years was in reality larger on State Railways and less on Companies' lines by Rx. 1,308,000 in 1887-88, and by Rx. 1,406,656 in 1888-89, than is shown in the foregoing figures, in consequence of the transfer of certain railways constructed by the State to the Bengal-Nagpur and Indian Midland Railway Companies.

DEBT.

Debt.

The following sums were added to the debt in 1887-88 and 1888-89 respectively :—

	1887-88.	1888-89.	Increase.	Decrease.
In India - - - - - Rx.	5,495,799	2,788,780	—	2,847,019
In England - - - - - £.	— 88,029	10,893,462	10,981,401	—

In 1887-88 a loan of Rx. 2,000,000 was raised in India for public works, and a sum of Rx. 3,500,000 was borrowed from the Gwalior State at 4 per cent. interest ; in 1888-89 a loan of Rx. 3,000,000 was raised in India at 4 per cent., of which Rx. 211,220 was applied to the discharge of debt, mainly the balance of a 4½ per cent. loan, of which the greater part had been converted into debt at 4 per cent. In England, India 3 per cent. stock was created to the amount of 7,206,531 £, for the purchase of the Onde and Rohilkund Railway, and for the discharge of such of the Company's debentures as fell due in 1888, the Government at the same time assuming the liability for the remainder of the debentures, 3,030,300 £, and the debenture stock, 384,700 £ ; so much of the India 4 per cent. stock (4,030,678 £) as had not been converted into 3½ per cent. stock having been notified for discharge, a like amount of 3½ per cent. stock was created in lieu thereof, but at the close of the year 363,070 £ remained unclaimed ; the foregoing additions to the debt were, however, reduced in the course of the year by 91,139 £ through the operation of the sinking funds, &c.

SAVINGS BANKS AND OTHER OBLIGATIONS.

FINANCE.

The following table shows the amount received and paid on account of savings banks, loans to municipalities, and other obligations in India :—

Savings Banks and other Obligations.

	1887-88.	1888-89.
	Rx.	Rx.
Savings Banks, &c. (net deposits) - - - - -	884,715	942,585
Loans to Municipalities, Native States, &c. (net repayments) -	-396,944	-572,446
Other Obligations - - - - -	167,155	144,474
TOTAL - - -	654,926	514,613

CASH BALANCES.

The cash balances were increased or reduced to the following extent by the transactions of the year :—

Cash Balances.

Increase.	1887-88.	1888-89.
In India - - - - - Rx.	687,916	-578,512
In England - - - - - £.	619,868	-2,640,764

COINAGE AND PAPER CURRENCY.

The value of the coinage at the Mints of Calcutta and Bombay was :—

Coinage and Paper Currency.

	CALCUTTA.		BOMBAY.		TOTAL.	
	1887-88.	1888-89.	1887-88.	1888-89.	1887-88.	1888-89.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Silver - - - - -	4,705,226	1,047,456	6,083,199	6,234,799	10,788,425	7,282,255
Copper - - - - -	125,099	87,375	45,238	14,128	170,337	101,503
TOTAL - - -	4,830,325	1,134,831	6,128,437	6,248,927	10,958,762	7,383,758

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

	1887 88.	1888-89.
Receipts - - - - -	Rx. 251,464	Rx. 221,138
Expenditure - - - - -	94,001	99,967
Net Receipts - - -	157,463	121,171

On the 31st of March 1889, the amount of notes in circulation was Rx. 15,737,814, being Rx. 686,565 less than on the corresponding date in 1887-88. The reserve was, in silver coin Rx. 8,400,707, in silver bullion Rx. 1,355,103, and in Government securities Rx. 5,982,003.

OPIUM.

OPIUM.
General.

The opium revenue is raised partly by a monopoly of opium in Bengal, and partly by the levy of a duty on all opium exported from Native States.

Though the poppy grows freely in most parts of India, its cultivation in British territory is only permitted, as a Government monopoly, in a tract 600 by 200 miles in extent in the Ganges Valley. The cultivator receives 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 refined for the China market. The chests of manufactured opium 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 sold during each year is notified in the previous year. A sufficient reserve is retained to supply the deficiencies of bad seasons; and a small quantity is retained for the use of the Indian excise departments. In 1861 the average price of opium sold by auction for the China market was as high as Rx. 185 per chest of 140 lbs. weight, but since that year it has fallen. In 1886-87 the average was Rx. 112; in 1887-88 it was Rx. 106.; and in 1888-89 it was Rx. 112.

Opium is grown in many Native States of Central India, Rajputana, and Central India. These states have agreed to assimilate their internal opium arrangements to the British excise system, and to prevent contraband dealings. They levy heavy dues from opium exported from their territories for the China market, and such opium pays to the Indian Treasury a duty of Rx. 65 per chest on exportation.

The yield of the opium revenue for the past two years has been:—

	1887-88.	1888-89.
	<i>Rx.</i>	<i>Rx.</i>
Auction sales of monopoly opium - - -	6,037,967	6,383,948
Duty on Bombay or Malwa opium - - -	2,267,493	1,964,497
Issues of opium to the Excise Departments -	210,002	213,864
Total - - - <i>Rx.</i>	8,515,462	8,562,309
Opium expenditure chiefly in Bengal - -	2,424,575	2,597,905
Net Opium Revenue - - - <i>Rx.</i>	6,090,887	5,964,414

The number of chests of Bengal opium sold in each of these two years was 57,000; the number of chests of Bombay opium paying duty was 34,884 in 1887-88, and 30,222 in 1888-89. The quantity of opium issued to the excise departments of the Bengal Presidency was 6,078 maunds in the latter year; and the receipts shown above are outside the provincial opium duties of Rx. 761,660, shown in the excise section of this statement.

The net revenue from opium is now considerably below what it was in previous years; thus:—

Net Opium Revenue in		Net Opium Revenue in	
	<i>Rx.</i>		<i>Rx.</i>
1872-73 - - - -	6,870,423	1880-81 - - - -	8,451,276
1875-76 - - - -	6,250,860	1883-84 - - - -	7,701,518
1878-79 - - - -	7,700,671	1886-87 - - - -	6,213,913
1879-80 - - - -	8,251,670	1888-89 - - - -	5,964,414

The

OPIUM.

The fall in the Indian opium revenue is due to the increased quantity and the improved quality of the opium produced in China. The China production of opium has been variously estimated at from three to ten times the Indian importations. Consular reports from China show that in the northern and the inland provinces, Chinese opium is taking the place of the Indian drug. It is probable that the increased duties, imposed under the Chefoo convention on foreign opium entering China, have operated in favour of the consumption of the Native drug.

In pursuance of the policy of reducing the opium area, the land actually cultivated with opium in the Ganges valley was reduced to 518,930 acres, or 3 per cent. below the area of 1887-88, and 7½ per cent. below the opium area of 1886-87. The contraction of the opium area caused some dissatisfaction among the ryots, among whom the opium cultivation with its accompanying cash advances at a critical season of the year is popular. The yield of opium, in consequence of heavy rain and hail in January and February, was, on the average, only 12 lbs. an acre, as against an average of 18 lbs. an acre in the preceding year; and the total quantity of opium manufactured was only 38,305 chests as compared with 69,500 chests in the year 1887-88. The result was that the opium reserve at Calcutta, which had been excessive, was reduced; and a saving of about one million occurred in the expenditure on payments to the ryots for their opium, but this saving falls in the financial year 1889-90. The opium was, owing to the dry hot weather in March, of higher consistency than in any previous year; and the cost of the opium per chest averaged Rx. 41, as against Rx. 37 in the previous year. Prosecutions under the Opium Law were about as many as in 1887-88, and in 86 per cent. of these cases conviction was secured.

The number of chests of opium paying duty at Bombay was less by 4,662, or 13 per cent., than in the preceding year. The decrease is attributed partly to the increased poppy cultivation in China and the cheapness of the native drug there, and partly to the dearness of Bombay opium, caused by the partial failure of the rainfall in 1886 and 1887. Of the Malwa supply, one chest was exported to London, 18½ chests to Zanzibar, and 72 chests to Cochin and Allepey; while 118 chests were supplied to Native Chiefs in Guzerat and Kathiawar, and 1,090 chests were issued to opium farmers or to Native States. The licit consumption of opium in British districts of the Bombay presidency was 148,511 lbs., as compared with 140,527, and 150,657 lbs., in the two previous years. The number of ascertained offences against the opium law in British territory fell from 343 to 268, and the quantity of contraband opium seized fell from 1,284 lbs. to 496 lbs. during the last two years; much of this decrease is attributed to the strengthening of the preventive establishment on the Khandesh border. There was also a considerable decrease in the quantity of contraband opium seized in Native States. The percentage of convictions on the total number of cases brought to trial was somewhat larger than in the preceding year.

S A L T.

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 ½ a rupee in Burma to 3¼ rupees in Bengal per maund of 82 lbs.; during the year 1888-89 the rate was 2½ rupees over the whole of India except Burma where it was one rupee per maund. The Indian sources of salt supply are the coast, where salt is manufactured for the consumption of all southern and western India and part of Central India; the salt lakes of Rajputana, which supply the North-Western Provinces, Oudh, and a part of Central India; the salt mines of the Punjab, which supply that province and a varying area southward; 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 regions supplied from each source contract or extend, according to varying circumstances of the season, or of markets, or of means of carriage; for instance, when an unusually wet season limits salt production

SALT.

by solar evaporation on the coast, the inland source of supply sends salt to fill the gap; when the price of Liverpool salt was doubled in consequence of the Salt Union, inland salts at once penetrated further south-east into Bengal; when a railway was opened to the Punjab mines, salt therefrom made its way further to the south and west.

The SALT REVENUES and CHARGES in the year 1888-89, were as follows:—

PROVINCE	Price of Government Salt.	Excise on Salt made Locally.	Duty on Imported Salt from England.	Duty on Salt Imported from elsewhere.	Miscellaneous.	TOTAL.	Charges.	Net Salt Revenue.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Northern India - - - -	141,203	1,693,579	-	-	17,124	1,851,906	121,324	1,730,642
Burma - - - - -	-	4,358	26,115	-	133	30,956	219	30,737
Bengal - - - - -	-	-	1,870,705	402,074	8,810	2,281,689	2,122	2,279,666
Madras - - - - -	226,800	1,408,833	286	-	13,914	1,649,893	149,115	1,500,778
Bombay - - - - -	43,190	1,809,311	1,244	652	6,234	1,860,131	130,818	1,721,313
TOTAL, 1888-89 - - -	411,313	4,916,581	1,898,740	402,726	46,274	7,675,634	*412,979	*7,217,318
" 1887-88 - - -	467,421	4,264,775	1,498,469	338,211	44,952	6,670,728	*410,704	*6,225,663

The charges above shown do not include a sum of Rx. 301,000 paid under treaties to Native Chiefs who have assigned the management of their salt sources to the British Government. The increase of Rx. 1,000,000 in the salt revenue was due to the enhancement of the rate from Rs. 2 to Rs. 2½ a maund, which took place in January 1888, shortly before the end of the previous year. The alteration in the duty for the time checked consumption, which fell in 1888-89 below the average of the two previous years; but it has since recovered; thus—

In the Year	Total Actual Consumption of Salt in India, inclusive of Burma.
1885-86 - - - - -	32,289,000 Maunds, each maund being equal to
1886-87 - - - - -	34,330,000 82½ lbs. avoirdupois.
1887-88 - - - - -	33,667,000
1888-89 - - - - -	31,474,000
1889-90 - - - - -	33,520,000

} The rate of duty was raised in January 1888

The local salt consumed in Burma is not precisely known, but in the foregoing figures is estimated at 560,000 maunds in each year.

Northern India.

The North India Salt Department controls the salt sources of the Punjab and of Rajputana, whence are supplied the wants of the Punjab, Oudh, the North-Western Provinces, the northern districts of the Central Provinces, and the greater part of the Rajputana and Central India States. The sales of duty-paid salt at the north India salt sources amounted to 7,822,000 maunds, or 183,000 maunds above the sales of the previous year; the total consumption of 1888-89 is 510,000 maunds higher than the average consumption of the three years before the enhancement of the duty. The chief increase of consumption occurred at the Punjab mines, due mainly to the extension of the railway system, the bridging of the river Jhelum near the salt mines, and the reduction in rates of railway freight. Of the total consumption, the Sambhur salt lake supplied 3,591,000 maunds, the Punjab mines supplied 1,958,000 maunds, and the remainder came from minor salt sources. The gross receipts of salt revenue increased from Rx. 1,542,483 to Rx. 1,862,109, mainly on account of the enhancement of the duty; the charges came to 7 per cent. on the receipts, as against 7.69 per cent. in the previous year. Punjab salt made its way during the year, southward, to six new

* Including Rx. 78 and 381 for charges in England, in the years 1887-88 and 1888-89 respectively; the net totals also allow for refunds and drawbacks, Rx. 34,461 and Rx. 45,337, in the two years respectively.

new stations on the East India Railway and to five new stations on the Bombay and Baroda Railway system; and consignments of Punjab salt to Patna and Gya, in Behar, increased threefold over the previous year. SALT.

During the year 1888-89 the control of salt affairs in Orissa was entrusted to the Madras Salt Commissioner, under whose administration salt consumption and salt revenue has progressed satisfactorily in the adjacent coast district of Ganjam. No other change was made in the Bengal salt arrangements. Outside Orissa only 747,000 maunds of local salt were consumed in the seven coast districts; all the rest of the Bengal demand was met by imported salt. Importations into Bengal from the United Kingdom, Bombay, and Aden showed an increase, while importations from Germany and the Persian Gulf showed a decrease over the previous year. The total importations and manufacture of salt into and in Bengal reached a total of 10,725,000 maunds, or 775,000 maunds higher than in the year 1886-87, which had showed the highest previous figure of salt receipts. The amount of salt on which full duty was paid during the year was 9,770,000 maunds, 1 per cent. below the clearances of the previous year. The salt revenue realised was Rs. 414,674, or $21\frac{3}{4}$ per cent. over the previous year; this rate of increase was somewhat smaller than the rate of enhancement of the duty, which was raised 25 per cent. This diminution of 3 per cent. in the consumption of imported salt was due, not only to the increase of the duty, but also to the increase of price resulting from the action of the British Salt Syndicate; for the Calcutta price of Liverpool salt, which had ranged from 61 rupees to 72 rupees per 100 maunds up to January 1888, averaged 142 rupees per 100 maunds during the four succeeding months; and northern salts have found a wider market in Bengal by reason of the great rise in the price of Liverpool salt. There was an unusually large number of petty prosecutions for the consumption of illicitly manufactured salt; but the local officials have been instructed to direct their attention in future only to the cases where illicit salt is manufactured for sale. Of the salt dispatched from Calcutta into the interior, a little more than half was sent by railway; but the proportion so sent by the East Indian Railway was 6 per cent. less than in the preceding year, while the quantity sent by the Eastern Bengal line was 5 per cent. larger. Bengal.

In Burma the rate of duty on salt was raised in January 1888 from three annas to 16 annas (one rupee) per maund. A large quantity of salt came into Burma at the end of 1887-88 under the old duty; stocks were very large at the end of March 1888; importations of salt fish from Madras and the Straits Settlements checked the fish-curing industry in Burma; and the importations of salt into Burma fell from 1,931,000 maunds in 1887-88 to 314,000 maunds in 1888-89, while the estimated quantity of locally excised salt did not greatly increase. The fiscal result of the increase of the rate of duty by 400 per cent. was thus a decrease of Rs. 4,800, or about 13 per cent, in the salt revenue. The experience of the year 1889-90 has, however, confirmed the view that this result was due to the large stocks of salt that had been amassed under the old duty; for the salt importations of that year into Burma reached 1,150,000 maunds, or more than the total importations of 1885-86, besides 560,000 maunds of locally manufactured salt. Burma.

In last year's statement it was explained that Madras salt, which is made by solar evaporation on the coast, had been manufactured as a Government monopoly up to 1884; that from that year the business was gradually made over to capitalists who made salt under an excise system; that under the new arrangements the selling price of salt in bond had been nearly doubled, while the stocks of salt had fallen dangerously low for a country where a wet summer may reduce the output of all salt factories by one-half. Steps were taken to remedy this state of things; and the result of re-opening a limited number of Government factories is, that the selling price of salt has been reduced considerably in every district, the average price for the presidency in 1888-89 being $4\frac{3}{4}$ annas per maund of bonded salt, against an average of $6\frac{1}{2}$ annas per maund in the previous year; while the quantity of salt manufactured was larger than in any previous year, and the stocks of salt at the end of the year were "sufficient to meet 12 months' demand." The consumption of duty-paid salt was larger than it had ever been before; and the Board of Revenue reported that the enhancement of the salt duty from Madras.

SALT.

Rs. 2 to 2½ Rs. a maund in January 1888 had no effect on the consumption of salt in the Madras Presidency. The average yearly consumption of salt in Madras has been:—

Period.	Rate of Duty per Maund.				Average Yearly Consumption.
	Rs.	a.	p.		Maunds.
1861-65	1	5	-	-	6,372,000
1866-68	1	8	-	-	6,728,000
1869-75	1	13	-	-	6,509,000
1876-77 (famine year.)	1	13	-	-	6,363,000
1878-81	2	8	-	-	6,178,000
1882-87	2	-	-	-	7,459,000
1888-89	2	8	-	-	7,724,000

The consumption is thus 25 per cent. higher than it was in the previous era of the same rate of duty; namely, from 1878 to 1881. The consumption of salt by 28,000,000 of the population of South India, including Mysore, Coorg, and certain native states, came to 16.29 lbs. per head.

The gross revenue from Madras salt was Rx. 1,886,481, or Rx. 255,206 higher than in the preceding year; the increase was due to the enhancement of the rate of duty. The first year of the Madras Salt Commissioner's administration in Orissa was not successful, as the consumption and the revenue decreased.

The quantity of fish cured in bond continues to increase, and the increase was common to all fish-curing stations except one. The weight of cured fish was 41,611 tons, as compared with 37,495 tons, and 30,373 tons in the two previous years.

Bombay.

On the Bombay coast salt is made partly by boiling, and partly by solar evaporation at 435 factories, all but three of which are leased to private persons; nine new factories, or salt works, were opened during the year 1888-89. In the Goa territory 294 salt works were in operation, of which 47 were opened during the year. The amount of salt manufactured was 10,686,000 maunds, or 806,000 maunds more than in any previous year; of the total, 337,000 maunds came from works in Portuguese territory. The quantity of salt written off as wastage was 7 per cent. less than in the previous year. The amount of duty-paid salt retained for consumption in the Bombay presidency was 98,000 tons, or 10.96 lbs. per head of the population, as compared with 11.59 lbs. in the previous year. The trade in and consumption of salt during the latter months of the year were affected by a general belief that the rate of salt-duty would be reduced in March 1889. As a consequence, the gross salt revenue receipts reached only Rx. 1,804,155, or Rx. 89,879 above the total of the previous year. This increase was far below the ratio at which the duty was enhanced. The salt clearances rose rapidly after the groundless rumour concerning the reduction of the duty had abated; for, whereas the salt receipts of March 1889 were Rx. 51,000 below the receipts of March 1888, the receipts of April and May 1889 showed an increase of Rx. 71,000 over the same months in the preceding year. During the year the wholesale price of duty-paid salt ranged from Rs. 3. - 4. per maund in the cheapest district, Kaira, during April, the cheapest month of the year, to Rs. 4. 9. 9. in the dearest district, Dharwar, during August, the dearest month of the year. In most districts and at most seasons the increase of price over 1887 was little more than eight annas, while in some cases the increase was less than eight annas per maund, which was the amount by which the duty was raised.

In Sind the amount of duty-paid salt fell from 234,000 maunds to 228,000, and the salt revenue, by reason of the enhancement of the duty, rose to Rx. 63,220 or Rx. 7,592 above the receipts of the previous. The consumption of the year came to 8 lbs. 1½ oz. per head of the population, a considerable section of which probably consume illicit salt from across the Baluchistan border. The selling price of salt in Sind averaged Rs. 3. 7 per maund as compared with 5 rupees per maund in 1880-81, when the same rate of duty, Rs. 2½ per maund, last prevailed. In that year the total consumption of duty-paid salt was 4,500 tons as compared with 8,500 tons in 1888-89.

EXCISE.

The excise revenue of India is raised by duties upon, and by fees for licenses to sell, liquors and intoxicating drugs. Tobacco, which is grown in almost every village, and is consumed by nearly all men and by many women in the empire, is not subjected to any duty; tea and coffee, which are grown largely for Indian consumption and for exportation, are also free from all duties. Excise duties are raised, under legislative enactments, partly by selling periodically the monopoly of sale of specified excisable articles over defined areas; partly by a stillhead duty on all spirits manufactured at distilleries; partly by licensing the working of stills at specified places; and partly by fees on licenses to sell different kinds of liquors. The duties on intoxicating drugs and on fermented liquors are raised mainly by yearly sales of monopoly licenses. Over almost the whole of Bombay and the Punjab; over all the populous parts of Madras, the North Western Provinces, Oudh, and Burma; and over some parts of Bengal and the Central Provinces, a stillhead duty is levied on all Indian spirit according to its alcoholic strength. The duty ranges as high as five rupees per gallon of London proof spirit. The system of excise management followed in these provinces is called the central distillery system. Over the greater part of Bengal, and of the Central Provinces; over the whole of Assam and Berar; and over limited tracts in other provinces, revenue is levied on Indian spirit by leasing the spirit monopoly to the highest bidder, which is called the farming system; or by licensing the establishment of private stills, which is called the outstill system. The central distillery system is admittedly the best for preventing the spread and consumption of cheap liquor; and the Government of India have decided to extend that system, and to restrict the farming and outstill systems as narrowly as possible. The difficulty is that in sparsely-peopled forest tracts the materials for illicit distillation are everywhere available; the tribes addicted to drinking often live in such regions; an adequate and trustworthy preventive staff cannot be kept in such places; and illicit practices prevail, to the consequent demoralisation of the people, if weak liquor cannot be obtained in some lawful way. Licensed outstills are sometimes the only means of meeting the requirements of such exceptional tracts.

The following table gives the excise revenue of 1888-89 for each province under the different heads:—

	India, General.	Bengal.	North West Provinces and Oudh.	Punjab.	Burma	Central Provinces.	Assam.	Madras.	Bombay.	TOTAL.
License and Distillery Fees, and Duties for the Sale of Liquors and Drugs, viz.:	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
License Fees and Distillery Rent.	9,215	643,606	201,765	44,749	97,298	65,456	28,345	978,189	180,516	2,219,139
Distillery Fees	5,090	7,012	492	141	21,563	64,443	—	—	59,522	139,093
Stillhead Duty	47,309	139,641	213,956	46,512	12,090	22,726	200	—	574,835	1,067,065
Duties levied on Drugs	8,867	184,282	91,538	15,195	64,871	47,568	24,611	7,465	39,726	458,831
TOTAL	71,517	928,441	508,848	106,508	176,412	200,492	53,166	985,654	264,000	3,894,128
Duty on Opium consumed in India.	2,462	159,765	53,628	33,790	124,318	41,864	163,560	60,558	121,518	761,900
Acreage on Land cultivated with the Poppy.	—	—	—	4,082	—	—	—	—	—	4,082
Fines, Confiscations, Miscellaneous.	478	458	1,246	178	86	2,058	38	970	6,299	11,807
Upper Burma Excise Revenue	—	—	—	—	43,669	—	—	—	—	43,669
TOTAL Revenue	74,484	1,089,164	561,719	144,558	344,384	244,414	216,754	1,047,492	362,117	4,705,348
Charges	1,974	43,441	11,459	5,686	2,143	7,236	490	32,604	32,769	127,341
Net Revenue, 1888-89	72,510	1,045,723	550,260	138,872	342,241	237,178	216,264	1,014,888	329,348	4,578,007
Net Revenue, 1867-88	87,059	1,045,223	645,951	134,327	293,760	226,055	209,848	916,904	916,790	4,407,677

76 STATEMENT EXHIBITING THE MORAL AND MATERIAL

EXCISE.

To this total must be added the sum of Rx. 548,284 yielded by import duties on liquors and spirits imported into India during the year 1888-89; whereby the whole drink and drugs revenue of India is raised to about four annas (about 5 *d.*) a head on the whole population of British India. There has been considerable increase in the excise revenue during the past 20 years; but this increase, 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 doubled or trebled the rates of liquor duty, and has, at the same time, restricted the use of illicit intoxicants. The totals of the excise and customs revenues on liquors and drugs consumed in India during the past 20 years compare thus:—

	Rx.		Rx.
1869-70 - - -	2,533,855	1883-84 - - -	4,259,099
1871-72 - - -	2,604,087	1884-85 - - -	4,414,934
1874-75 - - -	2,633,369	1885-86 - - -	4,571,946
1877-78 (famine year)	2,817,407	1886-87 - - -	4,864,764
1880-81 - - -	3,515,062	1887-88 - - -	5,062,443
1882-83 - - -	4,030,089	1888-89 - - -	5,253,630

As some evidence of the measures taken to restrict the facilities for drinking during this period, it may be mentioned that in the single province of Bengal the number of licensed spirits shops, which was 8,937 during the year 1871-72, had been reduced to 4,539 in the year 1888-89.

Bengal.

In Bengal the total excise revenue of 1888-89 and the previous year was as follows:—

Receipts from	1888-89.	1887-88.	Average of five years to 1886-87.
	Rx.	Rx.	Rx.
Country spirits - - - - -	502,031	520,504	493,107
Foreign liquors - - - - -	29,430	32,186	31,507
Fermented local liquors, including toddy - - - - -	100,409	92,000	85,783
Opium and its compounds - - - - -	213,041	210,993	203,045
Gauja, Bhang, and their compounds - - - - -	230,378	228,085	208,577
Miscellaneous - - - - -	608	625	425
TOTAL - - - - -	1,088,897	1,086,203	1,022,534
Add duties on imported liquors - - - - -	148,051	134,205	132,307
GRAND TOTAL - - - - -	1,236,948	1,220,408	1,154,741

The excise arrangements for raising revenue from country spirits are in a state of transition in Bengal. For some years past outstills have been licensed over the greater part of the province; but in the populous districts the Government is now gradually abolishing outstills, and re-establishing the central distillery system. At the same time the remaining outstills are being more carefully regulated, with the result that the total number of outstills has fallen from 3,420 two years ago to 3,049 in the year 1888-89, and

EXCISE.

and the liquid capacity of these stills has come down from 73,216 gallons to 51,214 gallons. Further restrictions on the outstill system have since been carried into effect, and are expected to cause a net reduction of about Rs. 75,000 in the revenue. At the end of the year the central distillery system was in operation throughout the metropolitan districts of Calcutta, the 24-Pergunnahs, and Howrah; also in the Sonthal country; both central distilleries and outstills were licensed in 17 districts; while in the remaining districts outstills supplied all the country spirits that were consumed. In districts where the two systems exist together no outstill is licensed within a specified distance of any central distillery, and a minimum retail price is fixed for spirits. Out of the total revenue (Rx. 509,031) raised from country spirits, more than two-thirds (Rx. 313,636) was paid by outstills; of the remainder, Rx. 134,497 represented the stillhead duty paid at the central distilleries, at rates ranging from Rs. 1 $\frac{7}{8}$ to Rs. 5 per gallon of London proof spirit. It is not possible to say what is the total quantity of spirits consumed in Bengal, as the yield of outstills cannot be estimated. Of the total excise revenue, one-fifth was yielded by Calcutta and its suburbs, which pay Rs. 2 $\frac{1}{2}$ per head of the population; the rest of Bengal pays, on the average, about two annas per head, ranging from five annas per head in the metropolitan district of Hooghly, to one-sixth of an anna per head in the outlying district of Noacolly, where three-quarters of the population are Moslems. The number of licensed shops for the sale of country spirits was 575; as compared with 570 in the previous year, under the central distillery system, and 3,473 as compared with 3,534 and 3,775 in the two previous years under the outstill system.

The revenue from toddy increased Rx. 6,111, although the number of licensed shops was reduced from 19,056 to 18,467. The use of toddy juice by the owners of palm trees is permitted, if not more than one gallon is kept for drinking; for manufacture of palm sugar the possession of palm tree juice in any quantity is allowed. The number of shops licensed for the sale of ganja, a narcotic prepared from a species of hemp, was 2,926, as compared with 2,949 and 3,102 in the two previous years; while the amount of ganja consumed was 6,413 maunds, as compared with 6,550 and 6,040 maunds in the years 1886-88. The number of licensed opium shops increased from 2,320 to 2,376; but the quantity of opium consumed fell from 1,939 to 1,925 maunds.

The number of arrests for offences under the excise laws fell from 4,739 in the previous year to 3,879; 85 per cent. of the persons arrested were convicted; but only 241 persons were sent to prison, the remainder being punished with fine.

The latest excise report for the North Western Provinces and Oudh relates to the year ending in September 1888. For the last three years the excise revenues have been:—

North Western Provinces and Oudh.

Receipts from	1885-86.	1886-87.	1887-88.
	Rx.	Rx.	Rx.
Country spirits - - - - -	400,900	386,600	376,500
Foreign liquors and rum - - - - -	28,300	29,600	30,200
Opium - - - - -	69,800	70,300	70,800
Other drugs - - - - -	60,300	67,100	64,800
Toddy and miscellaneous - - - - -	10,900	11,000	11,800
TOTAL - - - - -	570,200	564,600	554,500

The total excise revenues fall at the rate of two annas per head on the population of the provinces, ranging from six annas a head in Lucknow and Benares to a little over half-an-anna in Bolundshahr.

Excise.

The decrease in receipts is attributed to the poor harvests and absence of agricultural prosperity during the past two years. The revenue from country spirits is raised :—

- (a) Rx. 317,461 under the central distillery system, which extends over districts inhabited by 35½ millions of people.
- (b) Rx. 38,428 under the outstill system, which extends over tracts containing 5½ millions of people.
- (c) Rx. 18,475 under the farming system, which extends over tracts containing three millions of people.

There were no changes of system during the year. The receipts of still-head duty were Rx. 7,892 less than in the preceding year; the total amount of spirit passed out of all central distilleries was 1,838,742 gallons, against 1,917,193 in the year 1886-87. The number of licensed retail spirit shops in the two provinces fell from 5,682 to 5,585 in the central distillery tracts, and rose from 1,612 to 1,632 in the tracts where outstill and farming systems prevailed. Altogether there was one spirit shop on the average to 5,946 people.

The number of shops licensed for the sale of opium and its compounds was 1,084, as compared with 1,086 in the previous year; and the amount of licit opium consumed fell from 1,510 to 1,483 maunds. The shops licensed for the sale of other drugs were 3,878, as compared with 3,857 in 1886-87. The number of toddy shops came down from 4,300 to 4,135.

Punjab.

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

	1888-89.	1887-88.	1886-87.
	Rx.	Rx.	Rx.
From country spirits	81,194	76,471	48,012
„ imported liquors and rum	21,010	20,290	7,591
„ opium	35,825	34,461	33,572
„ other drugs and miscellaneous	18,391	17,879	15,410
TOTAL	156,420	149,101	104,585

The central distillery system is in force throughout the whole province, save in a mountainous corner of the Kangra district. The rates of still-head duty are three rupees per gallon of proof spirit, 2½ rupees for spirit 25° below proof, and two rupees for spirit 50° below proof. Spirit is made in the Punjab from molasses. The total consumption of licit spirits was 31,084 gallons of rum, and 168,135 gallons of country spirit; the alcoholic strength of the former was 4° below proof, and of the latter 10° below proof. The number of licensed shops was 1,399 for country spirits, and 557 for rum. There was thus one spirit shop to 9,640 persons. The opium revenue consists of Rx. 4,056 from an acreage fee on lands growing the poppy, and Rx. 31,132 from licenses for the vend of opium. The number of licensed opium shops was 1,849, and the quantity of licit opium consumed was 1,196 maunds. The number of shops licensed to sell ganja and other drugs was 722, besides 1,068 opium shops, which also took out a drugs license. There is much liability to smuggling from the many Native States in the Punjab; but, on the whole, the chiefs co-operate cordially with British officers in excise affairs. In the central districts of the Punjab, where sugar is largely grown, and where the Sikhs and other races given to drinking mostly live, there is liability to illicit distillation. The principal change in the Punjab excise system during the year was the enactment of new opium rules, under which the acreage fee was raised from half a rupee to two rupees per acre, in order to check the production of small quantities of unexcised opium for home consumption. It is proposed also to close the chundoo shops, where prepared

prepared opium is smoked upon the premises, as the existence of these houses tends to "spread the vice of smoking opium, which is of recent origin in most parts of the Punjab." EXCISE.

In Burma the excise revenue was raised thus :—

Burma.

Receipts from	1887-88.	1888-89.
	Rx.	Rx.
Distillery and imported liquors - -	65,645	82,982
Outstills - - - - -	11,648	11,767
Toddy - - - - -	27,489	27,444
Other fermented liquors - - -	14,899	26,843
Opium - - - - -	172,865	187,397
TOTAL - - -	292,546	336,433
Add duty on imported liquors - -	90,838	89,582
Upper Burma - - - - -	21,048	43,343
GRAND TOTAL - - -	404,432	469,358

Most of the spirit consumed in Burma is imported liquor. The duty on locally-distilled spirit was raised during the year from three rupees to four rupees per gallon of London proof liquor; and this duty yielded Rx. 13,455, as compared with Rx. 8,974 in the previous year. The number of licensed outstills in Lower Burma was 51; and the total number of licensed spirit shops was 269. In Upper Burma the number of licensed spirit shops was 139. Most of the increase in the lower province was due to the keen competition for the shop licenses, which were sold by auction at Rangoon and elsewhere.

The number of licensed opium shops in Lower Burma was 16, and in Upper Burma 12; and the amount of opium passed into consumption was 1,278 maunds, or 73 maunds more than in the previous year. There were 905 shops licensed in Lower Burma for the sale of toddy, and 244 for the sale of rice beer and other fermented drinks. In the upper province no duties are levied on, and no licenses are issued for, the sale of toddy or other fermented liquors.

The number of persons arrested for drunkenness in Lower Burma was 2,895, as compared with 3,162 in 1887-88; of the former total 1,972 belonged to the city of Rangoon.

In the Central Provinces the excise revenues and charges of the past two years have been as follows :— Central Provinces.

Receipts from	1888-89.	1887-88.
	Rx.	Rx.
Country spirit - - - - -	148,820	140,808
Opium - - - - -	90,330	88,129
Ganja - - - - -	20,818	20,036
Toddy - - - - -	2,825	3,198
Miscellaneous - - - - -	2,882	1,853
TOTAL - - -	265,684	254,024
Deduct charges - - - - -	28,750	27,671
Net Revenue - - -	236,929	226,353

Excise.

The greater part of the country is supplied with spirits from outstills and contract stills, of which there were 2,942 at the end of the year; 44 contract stills were closed, and 285 additional outstills were licensed during the year. At contract stills a fixed daily fee is levied on each still actually in use, and care is taken that no still is used on any day for which the prescribed fee has not been paid. At outstills the restrictions on manufacture of spirit are the limitation of the number of shops to be supplied, and the limitation of the number and size of the vessels used for distillation.

The receipts on account of country spirits, so far as they can be distinguished, accrued—

	Rx.
From central distilleries - - - - -	60,099
„ contract stills - - - - -	25,027
„ outstills - - - - -	54,992

The number of licensed permanent liquor shops was raised from 8,021 in the previous year to 8,055. The increase of revenue was ascribed to the further substitution of outstills for contract stills and central distilleries. No information exists regarding the quantity or strength of the liquor made at outstills; so no estimate of the total liquor consumption can be offered; at most of the shops in the interior the liquor is usually of very low alcoholic strength. The material from which liquor is distilled is everywhere the flower of the mhowa tree.

The number of shops licensed for the sale of opium and its compounds was raised during the year from 1,162 to 1,228; and the quantity of Government opium sold to the licensed vendors rose from 47,498 lbs. to 49,993 lbs. The increase of 3 per cent. in the opium revenue accrued mainly in three districts, and was attributed to the success with which opium smuggling had been checked during the previous year. The number of shops for the retail sale of ganja and its compounds increased from 1,070 to 1,121 during the year; the quantity of ganja passed into consumption rose from 68,902 lbs. to 78,146 lbs.

There was a small decrease in the number of prosecutions, and an increase in the number of convictions, under the excise laws. Of 542 prosecutions under the Opium Act, 354 occurred in the Hoshangabad and Nimar, two districts which abut on the Native States of Central India; of the 602 prosecutions under the Excise Act, the greater number occurred in the sparsely-peopled forest districts, and 98 were cases of illegal manufacture of spirit.

Assam.

The excise demand of Assam for the year 1888-89 was raised thus:—

Receipts from	1888-89.	1887-88.	Average of Three Years to 1880-87.
	Rx.	Rx.	Rx.
Country spirits - - - - -	25,433	19,660	23,315
Imported spirits and liquor - - - - -	2,623	4,208	3,802
Opium and its compounds - - - - -	163,335	163,466	168,444
Ganja and its compounds - - - - -	23,778	22,357	24,068
Miscellaneous, including toddy, &c. - - - - -	199	185	193
TOTAL - - - - -	215,368	209,882	219,820

The collections of the year were Rx. 216,753. More than three-quarters of the revenue accrues from opium, of which drug the Assamese are very fond, and which used formerly to be produced in the province. The revenue from country spirits is raised entirely under the outstill system; the sites of

of shops are fixed ; and the right to have one still, and to sell spirits at each shop, is sold annually by auction. The number of licensed spirit shops is 249. The liquor sold is mostly weak ; much of it is weaker than 50° below London proof ; and such liquor sells retail at from eight annas to one rupee per quart bottle. Retail shops licensed to sell imported rum were 42 ; this rum is sold at from 12 annas to 1½ rupees per quart bottle of liquor watered down to 35° or more below proof. For toddy, seven licenses, and for rice beer, only 20 licenses, were issued. The number of licensed ganja shops was 328, or one more than in the previous year. The number of licensed opium shops has been gradually reduced from 1,283 in the year 1883-84 to 989 in the year 1888-89 ; and the quantity of licit opium consumed has fallen to 1,411 maunds, against 1,416 maunds in the preceding year, and 1,445, the average of the previous three years. Opium is issued to licensed vendors in Assam and Burma, at 32 rupees per seer, or 2,240 rupees per chest. No case of opium smuggling came to light in Assam during the year. The number of shops licensed for the sale of madak and chundoo, preparations of opium, were reduced from 49 to 41 during the year.

Excise.

The total number of persons arrested for offences against the excise laws was 508, of whom 379 were convicted ; in both cases the numbers were slightly lower than in the previous year. In Assam about the same revenue has been obtained from opium for several years past, without any apparent smuggling, notwithstanding the reduction in the number of shops, and the increase of the price of the drug ; and it is believed that the generation of Assamese now growing up will not be habitual consumers of opium to the same extent as their fathers.

In the Bombay presidency the central distillery system obtains everywhere, save in certain comparatively uncivilised tracts of Kanara, Ratnagiri, and the Panch Mehals. In several of the minor Native States the British system of excise management has been adopted ; in others the chiefs have engaged to manage their excise affairs so as to avoid competition with British excise arrangements. The main peculiarities of the Bombay system are, that spirit must be sold of specified maximum or minimum alcoholic strength ; that a licensed spirit dealer engages to pay duty on a specified minimum consumption of spirit, the object of this arrangement being to prevent a licensed dealer's selling illicit liquor under the cloak of his license ; and that in some districts tax is imposed on every toddy tree that is tapped for its juice. In last year's Statement mention was made of an experimental departure from the Bombay system that was tried in the districts of Thana and Kolaba ; but the experiment did not prove successful, and was stopped in July 1889. In the Bombay presidency spirits are distilled from fermented mowra (or mhowa) flower, from fermented toddy or juice drawn from incisions in the trunk of three or four species of palms. The general fiscal results of the excise management of the last two years were :—

Bombay.

Receipts from	1888-89.	1887-88.
	Rx.	Rx
Locally-made liquors, including toddy :	792,365	766,071
Licenses on foreign liquors - - -	13,742	15,077
Intoxicating drugs - - - -	24,632	23,488
Miscellaneous items - - - -	10,977	11,870
Total Excise - - -	841,716	816,506
Import duties on liquors - - -	151,892	148,260
Total Drink Revenue - - -	993,608	964,766

82 STATEMENT EXHIBITING THE MORAL AND MATERIAL

EXCISE.

So far as Bombay proper, apart from Sind is concerned the receipts from local liquors is divisible thus:—

Receipts from	1888-89.	1887-88.	Average of Five Years ending 1886-87.
	Rx.	Rx.	Rx.
Stillhead duty on local spirit - - - -	492,956	519,565	385,389
License fees on distillery spirit - - - -	85,186	48,213	34,916
Outstills and farming system - - - -	11,930	33,950	71,658
Toddy - - - - -	65,828	74,287	69,905

The rate of stillhead duty ranges from four rupees to 1½ rupees per gallon of London proof spirit; the average over the greater part of the presidency is three rupees per gallon. The rate of liquor revenue per head of the population ranges from three rupees per head in Bombay city to one anna ($\frac{1}{16}$ of the Bombay rate) in the Kaira district. The number of licensed spirit shops showed a small decrease over the preceding year, thus:—

	Shops licensed for the Sale of			
	Foreign Liquors.	Country Spirits.	Toddy and Country Spirits.	Toddy alone.
1887-88 - - - - -	411	2,371	291	1,742
1888-89 - - - - -	399	2,355	292	2,088

The large increase of toddy shops took place in the Thana and Kolaba districts, where the experimental system introduced in January 1888 proved unsuccessful, worked mischief, and was altered in July 1889. The total number of prosecutions under the excise laws were 2,150, or 508 cases more than in the preceding year; of this increase 82 per cent. belonged to the Thana and Kolaba districts, wherein 699 cases of "illicit distillation and possession of instruments for the same" occurred during the year.

The amount of licit country (*i.e.*, locally-manufactured) spirits consumed in the Bombay presidency proper has been, so far as statistics are available, in the year

1885-86 - - - - -	2,740,340 gallons.
1886-87 - - - - -	2,861,754 „
1887-88 - - - - -	2,607,752 „
1888-89 - - - - -	2,270,614 „

More than half of the great reduction in the last year occurred in the Thana and Kolaba districts, where illicit distillation became rife under the experimental system which has now been altered.

In Berar the excise revenue was raised in the last few years as follows :—

EXCISE.
Berar.

	1886-87.	1887-88.	1888-89.
	Rx.	Rx.	Rx.
Country spirit - - - - -	103,647	98,922	115,308
Opium and drugs - - - - -	30,063	31,075	30,382
Toddy - - - - -	4,768	4,546	4,643
Foreign spirits - - - - -	130	130	131
Miscellaneous - - - - -	296	298	243
TOTAL - - -	139,799	134,971	150,902

Of the total revenue, 76 per cent. accrues from country spirits; and is raised under the farming system, whereby a monopoly of manufacture and vend within a definite area is sold to the highest bidder, who is at liberty to make and sell as much spirit as he chooses. No statistics are available of the consumption of spirits; but the price fetched by the monopoly has risen 42 per cent. during the past 10 years, and it is the interest of the monopolist to sell as much liquor as he can. The authorities are considering the expediency of substituting the central distillery system, gradually, in most parts of the province. There are 68 separate excise circles, which are separately farmed, and 1,413 shops, or 52 more than in 1887-88, are licensed to retail spirits; there is thus one spirit shop to 1,852 of the population; and the total excise revenue comes to about nine annas per head. There were 604 licensed opium shops, at which 465 maunds of licit opium, or the same quantity as in the previous year, passed into consumption. The number of licensed toddy shops was 987.

The number of prosecutions under the excise laws was 122 in all, of which six were for illicit distillation.

The excise revenue of Madras was in the year 1888-89 raised thus :—

Madras.

Receipts from	Rx.
Country spirits - - - - -	465,151
Toddy and spirits combined - - - - -	80,376
Toddy alone - - - - -	395,560
Foreign liquor and miscellaneous - - - - -	31,215
Opium and other drugs - - - - -	67,755
Total for 1888-89 - - -	1,040,057
Add customs duties on imported liquors - - - - -	102,800
Grand Total for 1888-89 - - -	1,142,857
" " 1887-88 - - - - -	1,073,676
Average for 5 years ending 1886-87 - - - - -	879,391

Duties on country spirits are raised under the central distillery system over the whole presidency, except certain upland or wild tracts in the Ganjam, Vizagapatam, and South Canara districts. In these exceptional tracts, which are being still further restricted, the farming system obtains. In other parts of the Ganjam, Vizagapatam, and Kistna districts the central distillery system is modified, in so far that the exclusive privilege of manufacturing spirit, subject to a fixed stillhead duty, is sold by auction, whereas in

EXCISE.

other districts every licensed distiller may make spirits at an authorised distillery. Everywhere shop licenses are sold by auction in towns, and in most of the rural circles. In two districts and in parts of two others, where spirits are usually made from toddy, the spirit and toddy licenses are sold together. Over a gradually increasing area a tree tax is imposed on all palm trees tapped for toddy, while the shops for retail sale of toddy are sold by auction to the highest bidder. The rates of stillhead duty range from three rupees a gallon on spirit 20° below proof to one rupee per gallon on spirits 60° under proof. In the districts where a farmer holds the exclusive privilege of distilling, the duty is 1½ rupees a gallon for spirit 30° below proof. Much of the spirit consumed in the Madras presidency is made from sugar at large distilleries worked with modern appliances. The number of licensed retail spirit shops was 11,682, or 284 more than in the previous year. The total quantity of licit spirits issued from the distilleries was 2,328,817 gallons, of strengths varying from 20° to 60° below proof. All this spirit was computed to be equal to 1,377,232 gallons of London proof liquor, paying in stillhead duty and license fees a total revenue of Rx. 548,535, or Rs. 4. 15. 9. per gallon of proof spirit. In the preceding year the issues of spirits over the same districts were 2,429,937 gallons, equal to 1,446,181 gallons of proof spirit, paying a total revenue of Rx. 521,803, or Rs. 3. 9. 8. per gallon. There was thus a decrease of nearly 6 per cent. in the consumption, and an increase of 5 per cent. in the revenue.

The number of licensed toddy shops, including those licensed for spirits and toddy combined, was 20,975, against 20,212 in the previous year. The number of licensed shops for opium and drugs was 1,172, against 1,157 in the year 1887-88; and the total quantity of opium consumed rose from 66,824 lbs. in 1887-88 to 67,042 in the year 1888-89. The total excise revenue of Madras fell on the population at the rate of 4 annas 11 pie for spirits and toddy, and at the rate of 3¾ pie per head for opium and drugs, or about 5¼ annas per head in all. The number of persons prosecuted for offences against the excise laws was 9,284, of whom 7,950 were convicted; the number of cases of illicit distillation was 625, chiefly in the northern districts, while there were 3,995 cases of illicit manufacture of toddy; in the previous year these cases were 749 and 2,860 respectively. Cases of illicit distillation are said to be rare, except in the northern districts and in Malabar.

STAMPS.

STAMPS.

The following table gives the stamp revenue, province by province, for the year 1888-89 :—

	Bengal.	North Western Provinces and Oudh.	Punjab.	Enrma.	Central Provinces.	Assam.	India, General.	Madras.	Combr.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Sale of court fee stamps -	1,008,811	435,131	253,792	54,674	112,406	53,624	22,712	389,521	267,935	2,449,606
Sale of commercial and other stamps.	305,986	162,876	131,001	34,348	44,630	18,005	21,483	225,926	184,659	1,188,735
Fines and miscellaneous -	10,002	2,983	3,820	15,941	423	399	316	7,148	47,225	88,747
TOTAL Stamp Revenue of 1888-89 - - Rx.)	1,384,899	600,990	389,213	104,968	157,519	72,678	44,517	613,595	499,719	3,927,084
TOTAL of 1887-88 - Rx.	1,361,604	658,887	371,014	99,673	153,386	78,353	49,147	597,161	483,543	3,876,298

The refunds of the year were Rx. 43,461, and the charges of collection came to Rx. 154,172. The small increase of revenue is common to all provinces, except Assam, and comes to 1½ per cent., as compared with an increase of 3½ per cent. in the previous year, for the whole of India. The stamp revenue is leviable under Act VII. of 1870 (the Court Fees Act), which imposes fees on plaints, petitions, and other documents filed before civil, criminal, or revenue courts, and under Act I. of 1879 (the Stamp Act), which imposes

imposes duties on commercial transactions recorded in writing, such as conveyances, bonds, cheques, bills of exchange, receipts, and the like. The court fees yield about two-thirds of the whole stamp revenue, and general stamps yield something under one-third. The increase of Rx. 50,000 in the year 1888-89 accrued entirely under the head of general stamps; the court fees receipts remained at the same total as in the preceding year. Bengal and Assam showed a considerable decrease in court fees receipts, while the Punjab and the Central Provinces showed a large increase, compared with the preceding year; under "General Stamps" receipts increased in every province, and the increases were largest in Bengal, Madras, and Bombay.

At times representation has been made that the court fees press heavily upon litigation, and amount to a serious tax on, if not an impediment to, justice. A table has now been published showing for each province the receipts and charges connected with the administration of civil justice; the calculations on which this table is based are only approximately correct. The net result for all India is:—

CIVIL JUSTICE DEPARTMENT.

Receipts.		Charges.	
	Rx.		Rx.
Court fee stamps - - -	1,974,500	Salaries and pensions, or share thereof debitable to civil courts	1,972,300
Cash receipts - - -	43,100		
Excess of charges over receipts -	125,100	Stationery, and miscellaneous -	170,400
TOTAL - - -	2,142,700	TOTAL - - -	2,142,700

The receipts on account of civil justice thus cover 94 per cent. of the charges under that head for the whole of India. In the province of Bengal the receipts exceeded the charges by 25 per cent.; while in Bombay, Burma, the Punjab, and the North Western Provinces, the receipts fell far short of the charges. The growth of the Indian stamp revenue during the last 26 years has been as follows:—

	Gross Stamp Revenue.
	Rx.
1861-62 - - - - -	1,693,217
1864-65 - - - - -	1,972,098
1868-69 - - - - -	2,306,971
1872-73 - - - - -	2,610,025
1876-77 - - - - -	2,838,628
1880-81 - - - - -	3,250,581
1884-85 - - - - -	3,606,622
1888-89 - - - - -	3,927,088

The increase has been steady; and the stamp revenue has more than doubled since 1862.

CUSTOMS.

CUSTOMS.

No changes in the tariff were made during 1888-89. It will be seen from the following statement of the gross realisations from import duties that there was an increase under each head, notably under petroleum, the trade in which appears in no way to have suffered from the imposition of a duty as the beginning of 1888:—

GROSS RECEIPTS FROM IMPORT DUTIES.

	Arms, Ammunition, &c.	Liquors.	Opium.	Petroleum.
	Rx.	Rx.	Rx.	Rx.
1886-87 - - - - -	21,711	488,197	428	—
1887-88 - - - - -	22,370	527,792	255	13,709
1888-89 - - - - -	26,089	548,284	306	117,489

In consequence of a short rice harvest in Burma the gross collections of export duty on rice decreased from Rx. 756,498 to Rx. 612,673. The total customs revenue, excluding receipts on salt, was thus Rx. 1,304,841, as compared with Rx. 1,320,624 in the year 1887-88.

PROVINCIAL RATES.

PROVINCIAL
RATES.

Provincial rates are levied for the most part on the land. They are imposed under the law to meet charges for local roads, local schools, local sanitary work, local postal arrangements, and in Burma for village police. In the temporarily settled provinces the rates take the form of a percentage on the land revenue, and the revenue payers and tenants have to pay that percentage in addition to the land revenue. In Bengal the cesses are levied by a rate upon the rental, and are payable partly by landlord and partly by tenant. The total receipts under this head were Rx. 3,054,254 in the year 1888-89, as against Rx. 3,035,323 in the preceding year; about one-half of the whole pertains to the provinces of Bengal and Madras; in the latter province the system of local funds and local administration has been carried out successfully for many years. In Bengal about half of the rates belongs to the Provincial Government; in the North Western Provinces nearly one-quarter is similarly credited; in other provinces the whole, or almost the whole, of the provincial rates income is spent locally on local objects by local bodies. The provincial rates increase with the land revenue, and in Bengal the road cess may be increased by votes of the district boards within the legal maximum, or by alteration in the quinquennial valuations of the rental. The provincial rates are collected punctually with the land revenue and by the same agency.

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

PROVINCIAL RATES.

	India, General.	Bengal.	Assam.	North Western Provinces and Oudh.	Punjab.	Central Provinces.	Burma.	Madras.	Bombay.	TOTAL.
REVENUE.										
District Local Fund:	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Cess on Lands for expenditure on Roads, Schools, Hospitals, and general purposes.	2,159	579,711	51,948	432,654	292,511	27,887	73,911	442,514	256,318	1,368,213
Provincial:										
Cess on Lands for expenditure on Roads, Schools, &c.	—	379,787	—	32,266	—	343	—	—	—	412,413
Cess on Lands for Famine Assurance, Canals, and Railways.	—	—	—	182,152	67,724	13,102	—	—	—	242,978
Cess on Lands for District Post	—	36,495	—	3,587	294	3,294	—	—	—	43,170
Cess on Lands for Village Service and Panchayats.	4,349	—	—	—	129,273	56,190	—	271,963	28,327	439,196
Assessment on Wards' Estates for Establishment Charges.	—	3,087	—	—	444	—	—	—	—	9,481
Miscellaneous	2,099	—	—	32,297	936	—	3	5,437	—	40,801
TOTAL Receipts	7,594	795,430	54,948	662,942	392,246	80,416	73,914	690,912	283,645	3,054,254
Refunds	4	13,753	99	393	102	44	113	1,911	72	16,880
Net Receipts, 1888-89	7,594	781,677	54,849	662,542	392,144	80,372	73,801	689,371	283,917	3,037,374
Net Receipts, 1887-88	8,052	766,945	49,546	663,709	361,736	75,028	34,546	675,142	279,192	2,965,216

INCOME TAX.

There was no change in the Income Tax Law [Act II. of 1886] during the year, or in the rate at which the tax was levied. The Act was extended to Lower Burma with effect from April 1888; but it was not made applicable to Upper Burma. The principal provisions of the Act are, that incomes derived from salaries, pensions, and interest on securities, if amounting to Rs. 2,000 per annum, should pay five pie in the rupee (2½ per cent.), and if less than Rs. 2,000, four pie in the rupee (about 2 per cent.); that companies should pay five pie in the rupee on their net profits; and that income derived from other sources 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, as in other cases, five pie in the rupee. All incomes of less than Rs. 500 a year were exempted, and the tax was not levied on profits or incomes derived from agriculture (which were otherwise taxed under legislation imposed in 1877-78), or on military salaries of less than Rs. 500 a month.

INCOME TAX. General.

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

	Gross Collections.	Refunds.	Net Receipts.	Charges for Assessment and Collection.
	Rx.	Rx.	Rx.	Rx.
Bengal	400,763	4,141	396,622	14,974
North Western Provinces and Oudh	222,561	2,647	219,914	1,764
Punjab	117,303	2,204	115,099	1,828
Burma	51,680	125	51,555	1,519
Central Provinces	42,749	267	42,482	28
Assam	22,399	72	22,327	95
India, General	140,610	793	139,817	30
Madras	169,107	2,634	166,473	1,596
Bombay	353,768	3,425	350,343	5,294
TOTAL, 1888-89	1,520,940	16,298	1,504,642	27,128
TOTAL, 1887-88	1,431,436	19,949	1,411,487	28,079

INCOME TAX.

The net receipts from the tax, after deducting refunds, were Rx. 1,504,642, or Rx. 93,000 more than in the previous year; about half of this increase was due to the extension of the tax to Lower Burma, and the remainder to improved assessments or advancing prosperity. The taxable minimum of income is lower than in the United Kingdom; but the average of earnings and of the cost of living is also much lower in India. The total assessment represents, in round numbers, a taxable income of Rx. 60 millions from securities, companies, trades, and professions; and this total, though not in all respects comparable, is small by the side of the total annual value of 377 millions assessed to income tax under Schedules C., D., and E. of the British Act during the year 1888. The contrast is the more marked because the population of British India is more than five times as great as that of the United Kingdom. About three-fifths of the whole income tax revenue is paid by the provinces of Bengal and Bombay. A very large share is in each case contributed by the presidency town; and Bombay city, with a population of 800,000, paid 17 lakhs of income tax on trades and professions, as compared with 12 lakhs on trades and professions in the rest of the presidency, with a population of 12½ millions, and as compared with five lakhs paid on Government salaries and interest on Government securities. From all provinces it is reported that the income tax is an unpopular form of taxation; but the objection is rather against the levy of such a tax at all than against the manner of its working. It is noteworthy that the proportion of income tax paid by official salaries to the total receipts ranges from 10¾ per cent. in Bombay, 11½ per cent. in Bengal, 16 per cent. in Madras, 17 per cent. in the North Western Provinces, 18 per cent. in the Punjab, up to 38 per cent. in Burma. The large number of objections against assessments, and the considerable proportion of successful objections, go to show that the persons assessed are ready and able to defeat attempts at excessive taxation on the part of assessors. The objections are almost entirely against assessments on trade and professional incomes under Part IV. of the Income Tax Schedule.

Provincial details. In Bengal the number of objections against assessments was 16,770, as compared with 19,975 in the previous year; in both years about 41 per cent. of the objectors were more or less successful; and the final demand was only 6¼ per cent. below the original assessments, as compared with a difference of 7½ per cent. in the year 1887-88. In one out of every 400 assessments coercive measures had to be taken in Bengal for the realisation of the tax. The total receipts in Bengal showed an increase of 5 per cent., as compared with 1887-88.

In the North Western Provinces and Oudh the number of objections against assessments was 22,555, or about the same as in the preceding year; 30 per cent. of the objectors were in some degree successful, against 26 per cent. in the previous year; and the final demand was 7 per cent. below the original assessment, as compared with 5½ per cent. in 1887-88. Notices of arrear were issued in 5,058 cases, but in only 726 cases had any coercive measures to be taken against defaulters. The total receipts showed an increase of 1 per cent.

In the Punjab the number of objections against assessments was 11,404, of which 31 per cent. were successful, against 26 per cent. in the previous year; and the final demand was 7½ per cent. below the original assessment, as compared with 7 per cent. in 1887-88. In most cases of arrear the issue of notices sufficed to procure payment by defaulters. The total receipts in the Punjab showed an increase of 7½ per cent. on the receipts of the previous year.

In Lower Burma the income tax was introduced without friction; only selected towns were brought under the operation of the impost, and income taxpayers were exempted from capitation tax. Against the assessment 6,390 objections were preferred, of which 24 per cent. were successful; and the final demand was 38 per cent. below the original assessments. In 135 cases warrants were issued against defaulters, but in only two cases was any property sold or further action taken. Of the whole income tax revenue in Burma, 68 per cent. was paid on salaries, profits of companies, and income from

from securities, only 32 per cent. being paid on trade or professional incomes. INCOME TAX.

Against assessments in Madras 15,232 objections were preferred, of which 43 per cent. were successful, and the final demand was 12 per cent. below the original assessments, as against 15 per cent. in the previous year. In 22,908 cases notices had to be issued against defaulters, but in only 113 cases was any property sold or further action taken on account of arrears. The total receipts were 4 per cent. above those of 1887-88.

In Bombay the result of objections against assessments was to reduce the original demand by 8 per cent. The number of objectors amounted to nearly one-third of the number of persons assessed, or the same proportion as in Madras. The collections were made without friction, and were 1 per cent. above the total of the previous year.

VII.

SURVEYS AND SETTLEMENTS.

SURVEYS. THE work of the survey of India is divided under five heads, namely :—

- | | |
|---------------------------------|--------------------------------------|
| 1. Trigonometrical Survey. | 3. Cadastral Survey. |
| 2. Topographical Forest Survey. | 4. Special Surveys and Explorations. |
| 5. Map Production. | |

Trigonometrical. Out of 26 survey parties employed during the year, only one party was engaged on trigonometrical work. The secondary triangulation on the Coromandel coast having been finished, the party was transferred to Burifa, where a detachment was engaged in fixing points on the coast to serve as a basis for the marine survey; while another detachment began triangulation in Upper Burma. This latter work did not make good progress, partly by reason of the difficulties of the climate and the country; but it will eventually be carried to Mandalay and Bhamo. Triangulation in extension of the great Indian triangles in Baluchistan, as a basis for topographical maps there, was carried by the topographical party as far as Quetta, and nearly up to the Khwaja Amran range.

Topographical. The number of parties engaged on topographical work, which was reduced from ten to six in the two previous years, has now been brought down to four, which accomplished in all 9,002 square miles of topographical survey. Party No. 10 completed 1,542 square miles of survey in the southern Mahratta country, besides 1,109 square miles in Guzerat, where the thick forest rendered the work both difficult and costly. Party No. 15 continued the Baluchistan survey, accomplishing in all 5,711 square miles of topographical work, besides trigonometrical surveys over 3,000 square miles. Sub-surveyor Ahmad Ali, of this party, accompanied by two soldier surveyors, executed a reconnaissance, resulting in the addition of 19,000 square miles of geographical information, and has completed all that is at present required to be known in that part of Baluchistan. Party No. 18 surveyed 573 square miles in the Himalayan districts of Kangra, Simla, and the Native States pertaining to those districts. Soldiers and non-commissioned officers of the Native Army did excellent work with the Baluchistan party.

Forest Surveys. Four parties of the Topographical Survey were employed in mapping the forest reserves. Party No. 14 carried on surveys in the forests near Hoshungabad and Betul of the Central Provinces; they completed 308 square miles of detail survey, and 390 square miles of classification of soils and forest; the maps distinguish the several classes of soil and forest by line-shading. Party No. 20 effected 312 square miles of forest survey in the forests of the Prome and Toungoo districts of Lower Burma; the work was to some extent disturbed by outlaws in the Thayetmyo district, where triangulation was in progress. In Orissa surveys of certain forest reserves were effected by a cadastral party working in the neighbourhood. Party No. 17 was engaged in the reserved forests of the Satara, Nasik, Poona, Thana, and North Kanara districts of Bombay; 655 square miles were accomplished, at a cost of 84 rupees per square mile, which was moderate for such difficult and unhealthy tracts. Party No. 18 was divided into three sections, one for the forest reserves in each of the districts, Salem, Madura, and Tinnevely, in Madras; in the first year of the work much triangulation and other advance work had to be done; the country was very unhealthy; and only 168 miles of detailed survey were accomplished. The whole area of forest surveys accomplished by all these parties during the year was 1,443 square miles.

Cadastral Survey. The work of the cadastral and traverse survey parties is noticed below under each of the provinces where they were employed.

Geodetic. The telegraphic longitude observations were not continued, but latitude operations were carried on, and seven stations were observed on the Jubbulpore meridional series. The differences between the latitude of the seven stations.

stations, as determined astronomically and geodetically, was again large. These differences are believed to be due not to inaccuracies in the astronomical or geodetic work, but to local attraction, causing deviation of the plumb-line, or to some abnormal deviation of the earth's figure. SURVEYS.

The map drawing and reproducing departments have been housed during the year in a new and commodious building at Calcutta; and improvements continue to be made in the processes for printing maps; while the demand for maps, diagrams, and plates increases yearly. The heliogravure process has made further progress, and was much utilised. Altogether the map and plan departments of the Survey of India issued during the year 1,203,181 copies of maps, and plates of all kinds. The results of the solar photography, carried on as usual by the Indian Survey with two photo-heliographs, are included in the yearly volumes of Greenwich Observations. Map printing.

The recording of tidal curves by self-registering tide gauges, their reduction, and the publication of tide tables have been continued at 18 stations, of which eight are permanent and 10 are temporary for five years. One old station was abolished, and three new ones were opened, during the year. The total number of ports treated since 1877, for which tide tables are issued, is 29. The registrations of tides have been satisfactory, and there have been few failures. So far as predictions of high water were concerned, 98 per cent. of the entries in the tables were correct within eight inches of actual heights at open coast stations, and 70 per cent. at riverain stations; while as to time of high water, 72 and 62 per cent. respectively of the entries were correct within 15 minutes. The percentages of error show that, on the whole, steady progress is being made year by year in the effort to make tidal predictions accurate and trustworthy. All the observatories were inspected during the year; the registrations were found very satisfactory, though a few temporary failures occurred. Tidal and levelling operations.

Levelling operations were prosecuted from Bangalore to Mangalore, and from Bidar to Hyderabad. There were 323 miles of double levelling accomplished; while the heights of 315 permanent bench marks and nine stations of the Grand Trigonometrical Survey were finally determined. The work fell considerably short of the previous season's out-turn.

In Upper Burma survey parties or surveyors accompanied the officers who marched through the northern Shan States, and the southern Shan States, also the columns that operated in the Karenni country, the Chin hills, also other parts of the Bhamo-Mogoung district. Triangulation was carried over 20,150 square miles; and the whole of this hitherto unknown country was mapped on a scale of four miles to the inch. The total area mapped in Upper Burma during the past three years has reached 52,290 square miles; and a third edition of the Upper Burma map has been published. With the Lushai Expedition 540 square miles of new country were surveyed, and 210 square miles more were reconnoitered. In the Zhob valley, on the north-western frontier, 1,100 square miles were mapped. A native explorer on the north-eastern border of Assam was able to correct the fluviography of that region in such a way as to assign a larger drainage area to the Dihong river, and thus to account in some degree for the great volume of its waters. Explorations.

The survey vessel "Investigator" and one boat party was employed on marine surveys throughout the open season, the staff being employed in the chart office during the monsoon months. The "Investigator" has, during the past seven years, accomplished 22,000 miles, and boat parties 11,500 miles, of soundings; but it is estimated that 40 years' work has still to be done on the Indian coasts by the Marine Survey. Among the results of the year's work were the careful survey and correction of the banks and islands of the Laccadive group nearest to India; the detailed survey of the Diligent Strait and the Middle Strait in the Andaman Islands; further soundings round South Sentinel Island, and the Little Andaman; careful verification of the position of Table Island Lighthouse on the Cocos, resulting in certainty that the position of this important light is correctly shown on the charts, and that rumours to the contrary are unfounded; survey and reconnaissance of the Orissa coast, showing in detail the river mouths and anchorages that are practicable, and indicating those

SURVEYS.

those which are useless for coasting vessels; a detailed chart of the Gopalpur anchorage; survey of the Sacramento shoal off the mouth of the Godavari river; verification of the fact that the sand spits and channels at the mouths of the Orissa and other east coast rivers are moving northwards at a slow rate. A naturalist belonging to the Indian Medical Service joined the "Investigator" during the year, and furnished interesting details concerning the fish and other organisms brought up by the trawler and dredger.

Geological Survey.

Among the investigations of the Geological Survey during the year 1889 may be mentioned the further examination of the reputed auriferous lands, in the rocks of the Dharwar series, to the north-west of the Mysore territory. In some of the alluvial soils brought down by streams in that quarter fair results of good-coloured gold were found; and it was reported that, though the blue quartz reefs did not show any free gold, yet the field was well worthy of systematic prospecting. The economic geology of the Sandur State in the Madras Presidency was examined; great beds of hæmatitic iron ore were verified; but fuel is unfortunately difficult or costly to obtain. The reputed diamond-bearing beds of the Bellary country were further examined, with negative results; it is surmised that, if the diamond industry is to be a success, effort should be concentrated within the area of rocks marked on the geological survey maps as containing old diamond workings.

Much of the attention of the Geological Survey was devoted to economic geology. An exhaustive examination of the clays round Jubbulpore led to the establishment of pottery works there, which, by reason of their nearness to the Umeria coal sources, may become an important industry. An examination was made of samples of steatite from all parts of India; and, after reference to manufacturers in Britain, it was found that steatite from the Kurnool district of Madras might probably come into use for gas burners, for which purpose steatite is now imported into the United Kingdom from Germany.

Out of three borings carried down to the floor of the Rajmehal coalfield, at a depth of 297 feet, one only struck a good seam of four feet thickness; but the quality of the coal was not good, and further borings are being made. For several years search for coal in the Darjeeling district had led to finding seams in a poor and crushed condition. But persevering exploration was rewarded in 1889 by the discovery of two thick seams, one of which had more than 20 feet thickness of coal. These seams belong to the true Indian coal measures, and the assays give fairly satisfactory results. The region where the outcrop occurs is exceedingly difficult to examine; and coal seams in such crushed and overturned strata as characterise the outer Himalayan slopes are liable to danger in working, and also to disappointment in the sudden fractures and faults; but these newly-discovered seams promise a valuable fuel supply for the Doars and sub-Himalayan country. Investigations into the Baluchistan coal sources prove that the Khost seam is the only valuable coal in the Sharigh Valley, and may yield about 600,000 tons for the railway requirements in that region. Several more outcrops of coal have been examined between Quetta and Sibi; but the seams are thin and the dip of the strata is high, so that regular colliery working may be difficult. The true character of the mineral oil reservoirs in Baluchistan, and their productive possibilities, continue to puzzle the geologists; but towards the end of the year indications were traced which warrant expectation that an oil reservoir exists, possibly at a considerable depth, below the railway line itself. A thorough survey of the Cherra and Lakadong coalfields in the Khasia and Jainteah hills was completed during the year; but regular coal-raising has not yet begun. Detailed survey and report has been made of the Yenangyaung oilfield in Upper Burma; and a full report has been prepared of the Chindwin coalfield in the same region. Mr. Griesbach, of the Geological Survey, whose services were lent some years ago to the Ameer of Afghanistan, has returned to India. He has examined sundry copper lodes, graphite areas, iron and lead ores north and south of Cabul; but his most important discovery was, that in the upper valley of the Surkh-ab river is a large coalfield with numerous thick seams of good coal of Triassic and Rhaetic age. The Surkh-ab stream flows into the Cabul river at Jelalabad, about 60 miles from the Peshawur railway terminus by the Khaibar road.

SETTLEMENTS AND CADASTRAL SURVEYS.

The term "Settlement" is applied in Indian revenue affairs to the process of assessing the land revenue demand. Occasionally in newly acquired or specially backward tracts, the land revenue is assessed for a short term of years on a general review of the circumstances and capabilities of the land and people concerned; such a process is called a summary settlement. But a regular settlement is a more complicated affair, and consists of many stages. In the first place every separate estate or holding is demarcated by permanent marks on the ground; and disputes between neighbouring rightholders are investigated and decided. Every estate or holding is then surveyed and mapped, all boundary marks, wells, and buildings being shown on the field or cadastral maps. Sometimes these field surveys and maps are made by trained professional surveyors belonging to the survey department. When the field surveys are made by local or village surveyors, such agents are trained by, and their work is independently tested by, professional surveyors. The work of the professional survey, whether cadastral maps or traversing, rests on, and is checked by, the independent scientific work of the Grand Trigonometrical and Topographical Surveys. After the field maps are prepared, the next process is to classify each field according to its productive value, as evinced by its soil, by the amount of its produce, or by the rent it pays. A record is at the same time drawn up of all rents paid, and of all rights, whether landlord rights, or tenant rights, or rights of user over all the ground, buildings, wells, and trees shown in the maps. Then the assessing officer (or settlement officer as he is often called) compiles the information obtained for all the lands in a circle of villages; and on a review of all these data, of the past fiscal history of the tract, of the range of prices, of the accessibility of markets, and of other general considerations, he proposes rent rates or revenue rates for the several classes of land in the circle. In the determination of rent rates or revenue rates for any tract, the rainfall, the sub-soil water level, and irrigation facilities are important factors; but improvements, made by the owners or occupiers themselves are not held to enhance the assessable value of the land. The rent rates or revenue rates proposed by the settlement officer, and the grounds on which they were based, are then investigated by a superior officer, and are not adopted until they have been accepted or modified by him.

SETTLEMENTS
AND CADASTRAL
SURVEYS.
General.

In provinces where the zemindaree tenure prevails, that is, where single proprietors or proprietary brotherhoods possess large estates of several hundreds or thousands of acres, the State revenue is assessed at an aliquot part (usually about one-half) of the ascertained or assumed rental. The revenue, though it is fixed with reference to acreage rates on the land actually cultivated, is assessed on, and is payable by, each estate as a whole; the assessment remains unchanged for the 30 years or other period of the settlement; the proprietor can bring as much as he likes of his waste or fallow land under the plough; and it is only on re-settlement at the end of the term of the settlement that the State obtains any increase of revenue on account of the extensions of cultivation during the settlement period. In provinces where the ryotwaree tenure prevails, that is where each petty proprietor holds directly from the State, generally cultivates his own land, and has no landlord between himself and the Government, the revenue is separately assessed at an acreage rate on each petty holding, and land revenue becomes payable at once, or after a short term of grace in the case of uncleared lands, on all extensions of cultivation. The ryotwaree proprietor is at liberty to throw up his holding or any portion of it at the beginning of any year after reasonable notice; the zemindar or large proprietor engages to pay the revenue assessed upon him for the term of the settlement.

After the revenue is assessed, and the assessment is sanctioned, copies of the field map and of the schedule of fields, and of the record of rights are made; one copy is given to the proprietor; one copy is lodged in the district court-house; and usually a third copy is placed in the sub-divisional or

SETTLEMENTS.

tahseel office. Through the agency of the local officials of each village or circle the field maps and record of rights are corrected or written up year by year, so as to make them at all times faithful records of current rural facts and circumstances. When revisions of assessment are undertaken at the end of the settlement, the village maps and records serve, after adequate testings and corrections, as the basis for re-assessment; and in this way, a re-settlement is a shorter and less costly affair, and causes much less harassment to the people than is involved in an original settlement. At the present time, re-settlements are approaching completion in Bombay, and are being made in many districts of the Punjab, the North Western Provinces, and the Central Provinces, also in parts of Bengal and Assam. Original settlements are still being prosecuted in Madras, Sind, and Lower Burma. Re-settlement has not yet begun in Berar, it will soon begin in Oudh; while in Upper Burma the settlement of the land revenue has hardly been undertaken.

Bengal.

In Bengal, cadastral surveys were made during the year of 524,335 acres on Government estates, of 1,053,209 acres on wards' estates, and of 47,744 acres on private estates. Of this work, 95 per cent. was done under professional supervision, and the remainder was done by local surveyors, chiefly on small properties. The cost of the work averaged $6\frac{1}{2}$ annas per acre on Government estates, and $4\frac{1}{4}$ annas per acre on wards' estates. A regular survey was begun in the Jalpigi Dooars, where the existing settlement expires during the current year. Most of the cadastral work is done by local people trained and supervised by officials of the survey of India who test the work. Work in the Dooars was much impeded by the unhealthiness of the tract; and the cost was $1\frac{1}{4}$ annas per acre for the traverse survey, and $6\frac{1}{2}$ annas per acre for the cadastral work. On the Angul estate, 541 square miles were surveyed during the year; boundary marks were fixed, and the whole estate, outside forest reserves, has now been surveyed; while the assessment of 350 villages out of 627 has been completed. There has been a very great extension of cultivation, and it is expected that the Government revenue from the estate will be nearly doubled; all payments on account of extensions of cultivation have since last settlement gone into the pockets of the headmen. The collection of the enhanced revenue was postponed by reason of the scarcity which prevailed in Angul during 1888-89. On all wards' estates where a cadastral survey has been made the areas held by ryots have been found to be considerably larger than was supposed; but rents have not been raised proportionately, and an amicable adjustment has been made with the ryots whereby no enhancement of rent is demanded in cases where the excess area is found to be less than 20 or 25 per cent.

In all, 815 settlements were completed during the year for estates paying a revenue of Rx. 26,027; and 1,165 estates paying Rx. 58,127 were still under settlement.

North Western
Provinces and
Oudh.

In the North Western Provinces final reports were published in 1889 of the results of the important cadastral survey and record of rights undertaken in the five permanently settled districts of the Benares division. The work began in 1877 and was finished in 1886; and it cost in all Rx. 244,000, or Rx. 44.8 per square mile. There was much litigation, as many as 231,592 suits and 8,013 appeals having been instituted in the settlement courts. Excellent field maps and records of all landed rights have been prepared, copies of which are kept in the village accountant's office and in the Government revenue offices; and special care will be taken to correct these valuable records year by year so as to maintain a true account of current facts. Among the more important general facts disclosed by these operations may be mentioned, that in these densely peopled tracts 69 per cent. of the whole area is already under the plough, while 18 per cent. is absolutely uncultivable, and only 13 per cent. is left for possible expansion of cultivation; that 55 per cent. of the cultivated area is irrigated from wells, tanks, or streams; that 23 per cent. of the cultivated area is farmed by proprietors, while 84 per cent. of the land let to ryots is held by either tenants at fixed rates, or tenants with occupancy rights, only 16 per cent. of the rented lands, or 12 per cent. of the total cultivated area, being held by tenants-at-will; that rent rates average over $3\frac{3}{4}$ rupees per acre for tenants

tenants at fixed rates, $4\frac{1}{2}$ rupees for occupancy tenants, and 5 rupees an acre for tenants-at-will; that about 10 per cent. of the fields are sublet to sub-tenants who pay rack-rents, often more than double the rents mentioned above; that the sub-division of landed rights is minute, a proprietor's share averaging about 15 acres, and a ryot's holding, averaging little more than two acres; that the permanent assessment falls at the rate of Rs. 1-10-3 per acre on the cultivated land, or only about 6 annas an acre below the rate obtaining in adjacent temporarily settled districts. These operations do not affect the State revenue either by enhancing it or making it more secure; they were undertaken to safeguard the landed rights of the five millions who inhabit these districts.

Cadastral survey and settlement proceedings were in operation in parts of seven districts. The settlement of Jalaun was completed and the report submitted; the work cost Rx. 15,947, or one-fifth of one year's revenue. In Gorakpur 1,217 square miles were surveyed and the whole district survey completed; revised assessments were sanctioned for 909,000 acres, yielding an increase of Rx. 22,100, or 45 per cent. on the former revenue. In Basti 491 square miles were surveyed and the whole district survey completed; revised assessments were sanctioned, yielding an increase of Rx. 112,000, or 42 per cent. on the former demand. In Bolundshahr, Mozuffernagar, and Seharunpore, the cadastral records are being corrected, and revised assessments are being prepared, without a re-survey, on the expeditious and economical system described in last Statement. No new assessments have yet been sanctioned; but, so far as can be judged, the cost of these settlements will be kept within the estimate of Rx. 10 per square mile, or less than a quarter of the outlay under the old system, while the duration of the work and the harassment to the people will be reduced in the same proportion. In the Jhansi district a re-survey was found necessary and is being prosecuted by the local village accountants, who are trained and supervised by a selected officer of the Survey Department. No re-assessments have yet been made in Jhansi.

Throughout the North-Western Provinces the new assessments are being based on the actual rentals, plus an assumed rental of the home farms cultivated by proprietors, computed at rates somewhat below the rent-rates paid by ordinary tenants. The same system of re-assessment has been adopted for Oudh, where settlement operations have now to be begun as the existing settlements will soon expire.

During the year ending on the 30th September 1888 one party of the Imperial Survey Department was employed in the Punjab on a traverse survey in parts of four districts. An area of 7,275 miles was completed; and the cost of the work was reduced from Rs. $13\frac{1}{2}$ to Rs. $12\frac{1}{2}$ per square mile. Re-settlements of the land revenue, based upon the village field maps, which are tested and corrected by the traverse survey, were in progress over parts of 12 districts. In three districts, namely, Ambala, Karnal, and Ferozpur settlement operations were completed during the year, having cost Rx. 120,000, and having yielded an increase of Rx. 47,000 on the previous land revenue demand. Final reports upon the completion of the settlement have been submitted for seven districts, namely Sirsa, Goorgaon, Ludhiana, Mooltan, Hoshiarpur, Jullunder, and Rawalpindi. In the districts of Hissar, Kangra, Gurdaspur, and Shahpur, part of the re-assessment work was completed during the year; while in Lahore, Amritsar, Sialkot, Gujrat, and Gujranwala only the preliminary work of training the village surveyors and correcting the field maps and other land records was in progress. Every district in the Punjab, in which the term of settlement has expired, is now undergoing re-settlement. As was mentioned in last year's Statement the work is being done as expeditiously and economically as possible; and no general re-survey is attempted, though on some estates and in occasional tracts the existing field maps are so incorrect as to necessitate a fresh survey. Under the new system the re-settlement of the Hissar district will have been completed in less than $2\frac{1}{2}$ years, will have cost not more than Rx. 15,000, and will yield an increase of over Rx. 15,000 in the land revenue demand.

SETTLEMENTS.
Burma.

In Lower Burma one party of the Imperial Survey was employed in the Thongwa district. An area of 830 square miles was surveyed at a cost of 5½ annas per acre. Settlement operations were completed in the Akyab district, where Rx. 14,213 of land revenue came under re-assessment, with the result that Rx. 546, or 3¾ per cent., were added to the demand. The increase in the assessed area was 7 per cent., as compared with the figures previously returned by circle officers. Settlement work was begun in the Thongwa district. In this tract were found 678 sub-tenants, who paid to the petty proprietors of 6,032 acres a rental of Rx. 3,648, or 2½ times the land revenue; 316 sub-tenants were also found who paid nothing beyond the bare land revenue assessed on the lands they occupied. In the seven settled districts 26,744 sub-tenants were returned as holding areas averaging from 30 acres a-piece in Pegu, to 4½ acres in Prome, and paying rents averaging 4¼ to 6½ rupees per acre for lands on which the land revenue fell at from 1¼ to 2½ rupees per acre. Regular settlements of the land revenue, based on cadastral surveys, have now been made in Lower Burma for areas paying Rx. 425,720 previous to settlement; the cost of the survey and settlement has been Rx. 567,859; and the increase of revenue directly due to the settlement has been Rx. 23,940 a year. But during the ten years over which settlement operations have been spread the Lower Burma demand on account of the land revenue proper has risen from Rx. 602,800 to Rx. 806,581, the increase being Rx. 45,409 for the year 1888-89. A field survey has been started by the agency of local surveyors in five districts of Lower Burma over tracts not undertaken by the cadastral survey. In this way 13,367 acres of waste land in Pegu were surveyed and marked off into plots at a total cost of Rx. 370; and before the end of the year 7,930 acres of this land had been taken up by applicants who paid Rx. 410 for the survey of their plots. Outside the Pegu district an area of 75,000 acres in all was surveyed in this way; but the work has not, so far, been successful anywhere but in Pegu and Shwegyin. In the latter district this survey showed an increase of 55 per cent. in the cultivated area as compared with previous returns. In seven districts of Upper Burma a field survey was begun on the cultivated lands belonging to Government. In the Mandalay district 52,460 acres, and in the Kyaukse district 10,381 acres were surveyed; in other districts the areas completed were small. Everywhere the cultivated areas were found to be largely in excess of the totals previously returned; but the land revenue on these holdings cannot and will not be enhanced in proportion to the increased areas ascertained by the survey.

Central Provinces. In the Central Provinces survey or settlement operations of one kind or another were in operation in every one of the 18 districts. In Sambalpur the settlement was completed; the operations cost Rx. 13,018 in all; and they yielded an increase of Rx. 5,410 in the yearly revenue of the district. In Raipur and Bilaspur the survey has been finished, and so far as the assessments have been revised, they yield an increase of 60 per cent. on the old revenue in Raipur, and of 73 per cent. in Bilaspur. This increase has accrued by reason of the extensions of cultivation and the rise in prices since the last settlement; much of the improvement is due to the construction of the railway through these districts. In ten other districts an area of 7,197 square miles was surveyed by the agency of local surveyors, whose work was checked by traverse surveys effected by professional surveyors; in two out of these 10 districts the work of assessment had begun. In four other districts the instruction of the putwaris (village surveyors) in survey work was completed, and the work of cadastral survey has since begun. In the Mandla district, where cultivation is comparatively sparse, a summary re-settlement of the land revenue has been effected, without detailed survey, over an area of 438 square miles, whereby the revenue demand was increased from Rx. 3,113 to Rx. 5,358, or by 72 per cent. The experience of another year has shown that putwaris (village surveyors) can, after adequate instruction, execute a trustworthy cadastral survey and furnish excellent field maps at a cost not exceeding Rx. 4 per square mile; and the cost of re-survey and re-settlement is in most districts being kept below Rx. 10 per square mile. Under the system pursued at the previous settlement, the cost of the work came to Rx. 35 to Rx. 40 per square mile, and the operations occupied more than twice as long a time as they now take.

The

The cadastral survey of 650 square miles was effected, besides 586 square miles of revision survey, and 529 square miles of traverse survey. The employment of Assamese surveyors, chiefly village officials, was still further extended, and their work was found to be good. Survey certificates were gained at the survey schools by 84 village officials and by 117 volunteer students. Apart from the permanently settled estates of the Goalpara district, the total area of the Assam valley districts is returned at 11½ million acres, of which nearly two millions are settled, one million acres are reserved forests, and nearly half a million acres are revenue free or fee simple estates. Of the settled area one and a-half million acres are cultivated; while eight and a-half million acres are available for occupation. Two-thirds of the cultivated land are held on 10-year, and one-third on yearly leases. The yearly and decennial leases are granted and the land revenue is assessed upon measurements made by village officers, which measurements are tested by superior revenue officers. During the year 1888-89 the prescribed testings were carried out, and in some places considerable areas of concealed cultivation were discovered.

SETTLEMENTS.
Assam.

During the year 1888-89 the Madras survey staff completed the cadastral survey of 2,137 square miles, and the topographical survey of 1,177 square miles. The cadastral area was 5 per cent. larger and the topographical area was 20 per cent. larger than the result of the previous year's work; while the total cost of the operations was Rx. 9,853, or 14 per cent. less than in 1887-88. The out-turn of maps, both in number of copies and in area mapped, was considerably in excess of the previous year's total. The reforms introduced into, and the increased vigilance exercised over the Madras survey department during the past two years have thus borne valuable fruit. The average cost of the surveys per square mile showed a considerable decrease on the results of former years. Since the year 1858 the Madras survey has accomplished 61,372 square miles of cadastral survey and 55,256 square miles of topographical survey; there are 9,187 square miles of the former, and 15,677 square miles of the latter yet to be done. Settlement operations were in progress over parts of seven districts, namely, Bellary, Anantapur, Vizagapatam, Madura, Tanjore, South Arcot, and Malabar; South Canara is the only district in which work has not yet begun. The average rate of assessment on the ryotwarce (peasant proprietary) lands of the Madras Presidency is at present Rs. 1¼ on dry lands, and Rs. 5¼ on wet (or irrigated) lands, which latter constituted 27 per cent. of the total cultivated ryotwarce area. The total cost of the survey and settlement up to the end of 1888-89 was Rx. 2,742,039; and the increase in the land revenue demand, as compared with the periods previous to settlement in each case, amounts to Rx. 287,863, or more than 10 per cent. on the total cost of the operations.

Madras.

The operations of the Inam Department (the inquiry into and registration of quit-rent and revenue free tenures) during the year resulted in the issue of 3,137 title-deeds, affecting 18,581 acres, of which the full assessment was Rx. 4,358, and the quit-rent was fixed at Rx. 2,856; the total cost of the work during the year was Rx. 1,596. Of the title-deeds issued, 94 per cent. related to lands held on condition of village service. The total number of title-deeds, with which the Inam Department has dealt from the beginning of its work in Madras, is 470,015, affecting an area of 7,500,000 acres, assessed at Rx. 1,115,000. The increase of quit-rent secured by these inquiries and title-deeds amounts to Rx. 212,320 a year, while the cost of the inquiries has been Rx. 146,213.

In Bombay three revenue survey parties effected cadastral surveys of 2,529 square miles, and the Sind Survey Department accomplished 804 square miles. The operations extended to parts of 11 districts in Bombay, and of four districts in Sind. In Bombay the greater part of the work consisted of revision survey, for which testing and correction of old surveys, rather than complete measurement of the land is mainly required.

Bombay.

Settlement operations resulted in the sanctioning of revised assessments of 779 villages on which the old demand of Rx. 66,017 was raised by Rx. 19,302, or 29 per cent. The increase was justified by the great rise in prices, the improvement in communications, and the increase of agricultural well-being

SETTLEMENTS

that had taken place since the last settlement 30 years ago. The increase of prices ranged from 60 to 100 per cent., while railways had been introduced and roads had been multiplied during the period of the now expired settlement. The ease and punctuality with which the old demand was paid, and the way in which the agricultural classes of the Deccan have recovered from the calamities of the great famine of 1877, show that the old assessment fell lightly upon the people, and upon the land. The total cost of the settlement revision operations in Bombay to the end of March 1889 was Rx. 415,675, and the increase of revenue secured came to Rx. 222,545 a year. In Sind, the revisions of assessment yielded an increase of Rx. 3,494, or 20 per cent.

The alienation, or Inam, investigations in Bombay are practically completed, and so far as it is known only 4,806 title-deeds, or sanads, have still to be issued in respect of revenue-free and quit-holdings.

VIII.

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

THE subjoined table shows the receipts and disbursements on account of land revenue for each province, as entered in the public accounts for the year 1888-89; also the net land revenue for the past two years.

DETAILS OF LAND REVENUE AND EXPENDITURE.

	Bengal.	North West Provinces and Outh.	Punjab.	Burma.	Central Provinces.	Assam.	India, General (including England).	Madras.	Bombay.	TOTAL.
REVENUE.										
Ordinary Land Revenue -	Rx. 3,059,933	Rx. 5,692,339	Rx. 3,130,314	Rx. 661,924	Rx. 627,910	Rx. 410,724	Rx. 92,303	Rx. 4,740,332	Rx. 3,454,886	Rx. 21,401,348
Sale of Proprietary Right of Government in Land.	2,092	950	28	—	—	—	144	250	9,000	12,473
Rent of Resumed Police Service Lands and Service Commutations.	7,836	—	19,277	—	—	—	—	—	886,461	913,604
Sale of Waste Lands and Redemption of Land Revenue.	2,179	1,550	167	16	—	494	4,499	2,761	131	11,797
Capitation Tax or House Tax levied in lieu thereof.	1,964	—	—	332,378	—	—	1,380	—	—	335,731
Receipts for the Improvement of Government Estates.	32,588	—	—	—	—	—	—	—	—	32,588
Fisheries and other Receipts classed as Miscellaneous.	30,754	43,730	78,680	135,230	3,023	33,265	33,574	109,374	25,876	483,506
Upper Burma Receipts -	—	—	—	436,540	—	—	—	—	—	436,540
Total Gross Revenue - Rx.	3,737,346	6,738,550	2,218,466	1,556,088	630,933	444,483	132,509	4,852,726	4,376,344	23,687,446
Credited to Public Works	—	87,413	45,744	—	—	—	—	460,514	77,370	671,041
Total in Revenue Accounts - Rx.	3,737,346	6,825,963	2,264,210	1,556,088	630,933	444,483	132,509	4,312,240	4,453,714	23,016,404
Corresponding Total for previous Year - Rx.	3,800,109	5,899,841	2,109,978	1,597,351	624,273	429,939	125,765	4,527,937	4,374,112	23,189,292
EXPENDITURE.										
Refunds and Drawbacks -	4,798	3,525	3,118	2,320	168	682	502	11,361	15,237	41,745
General Charges of Administration.	283,256	661,916	180,901	75,877	101,776	55,122	26,130	352,368	283,392	2,020,527
Upper Burma Charges -	—	—	—	103,647	—	—	—	—	—	103,647
Survey and Settlement Charges.	26,939	66,233	53,620	23,485	42,153	14,268	13,080	101,288	97,749	419,829
Land Records and Agriculture.	6,713	8,405	3,903	12,165	3,847	1,800	—	5,176	6,847	48,756
Charges directly connected with the Collection of Land Revenue.	34,398	24,582	119,276	67,536	4	23,435	16,747	326,584	230,500	897,349
Charges in England -	—	—	—	—	—	—	584	—	—	584
Exchange on Charges in England.	—	—	—	—	—	—	272	—	—	272
TOTAL Charges - Rx.	351,306	765,123	362,600	281,610	147,779	94,626	56,819	786,400	609,748	3,513,957
TOTAL Expenditure - Rx.	356,102	768,648	365,718	283,836	147,947	95,308	57,321	797,747	624,985	3,555,702
NET REVENUE, 1888-89 Rx.	3,381,244	6,060,315	1,901,592	1,274,478	483,156	349,857	76,788	4,066,326	3,743,929	19,472,492
NET REVENUE, 1887-88 Rx.	3,455,101	5,910,122	1,766,026	1,319,001	471,680	335,980	71,539	3,728,342	3,902,301	19,600,141

LAND REVENUE.

In India the State, or the monarch, has always enjoyed a share in the rent or profits from the land. This revenue is levied according to an assessment fixed on estates or holdings. The assessment was fixed permanently about 100 years ago on certain tracts paying about Rx. 4,311,000 a year; and it is fixed periodically, for terms of 12 to 30 years, over the rest of India. On large estates, ranging from a few hundred to many thousand acres each, the assessment is a share, generally about one-half of the rental enjoyed by the proprietors; on small estates cultivated by peasant proprietors the assessment is levied on the cultivated area at a rate per acre fixed with reference to the productiveness of the land and representing about one-half of the estimated letting value. The permanently settled tracts comprise the greater part of Bengal, about one-fourth of Madras and certain southern districts of the North West Provinces. Of the temporarily settled tracts, the North West Provinces, the Punjab, Oudh, the Central Provinces and Orissa mainly contain estates held by proprietary brotherhoods 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. In the permanently settled tracts 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. The average advantages of soil and climate are on the whole greater, and the prevailing rates of rent are on the whole higher, in the permanently settled than in the temporarily settled tracts. In the latter tracts the land revenue averages about $1\frac{1}{2}$ rupee per acre of cultivated land, represents something less than one-half of the actual or estimated rental, and is probably about one-tenth of the gross value of the produce. Rates of rent and revenue vary greatly according to the productive power of the land, according to the advantages of climate and rainfall, and according to the facilities for carrying produce to markets or to the sea-board. Payment for water, supplied by State canals or reservoirs for purposes of irrigation, is made 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.

The total land revenue of the year 1888-89, shows a small decrease of Rx. 173,000, as compared with the previous year; but this decrease is unusual and due to diversities of season or other special circumstances. On the whole the tendency of the land revenue is to increase gradually and slowly, partly from periodical revisions of the assessment rates after a period of advancing prices, and partly to extensions of cultivation. The increase of the land revenue of India during the last six quinquennial terms may be thus shown:—

Period of five years from	Average yearly land revenue receipts of the period.
	Rx.
1861-65	19,931,000
1866-70	19,990,000
1871-75	20,965,000
1876-80	21,114,000
1881-85	22,122,000
1886-90	23,294,000

A part of the increase during the last period was due to the acquisition of Upper Burma, which yielded Rx. 167,000 of land revenue in the year 1886-87, and Rx. 436,000 in the year 1888-89.

The progress of the land revenue, the condition of the landed classes, and the relations of these classes to each other are now noticed province by province.

The

LAND REVENUE.
Bengal.

The land revenue demand of Bengal shows an increase of Rx. 7,889, due mainly to revisions of assessment in the temporarily settled tracts. In the permanently settled estates there was a decrease of Rx. 94 out of a total demand of Rx. 3,229,172. The uncollected arrears at the end of the year were Rx. 90,000 larger than in the preceding year; one half of this increase was due to an accidental failure on the part of the Court of Wards to pay an instalment due from the great Burdwan estate, and one-half to drought and floods. Remissions of revenue increased from Rx. 2,382 to Rx. 3,088. Sales of land for arrears occurred in 1,142 cases, as against 1,859 and 1,863 cases, in the two preceding years. The estates sold were mostly small and of little value; the total arrears due thereon were Rx. 4,117, and 65 estates were bought in for a total price of Rx. 15. In 169,072 cases arrears of public demand other than land revenue were taken into court under the certificate procedure, with the result that in 63,718 cases property was attached, in 5,735 cases attached property was sold, in 4,804 cases warrants for arrest were issued, and in 52 cases defaulters were actually sent to jail.

Revaluations of the rental for the purposes of the road-cess were in progress over the greater part of Bengal. The total demand of the year under the road-cess was Rx. 376,452, and for the public works cess Rx. 385,537, showing only a slight increase over the previous year. A number of petty settlements were effected; in some cases the cost of survey and settlement was as high as 14 annas per acre. In Angul of Orissa and in the Dooars of Jalpigori considerable areas were under settlement. In Angul out of 627 villages more than half have been surveyed and assessed; a large increase of revenue will accrue, and the work has so far cost only 1½ annas per acre. In the Dooars the survey is not yet complete. The registration of landowners has now been completed for the whole of Bengal; and there was during the year a considerable increase in the percentage of transfers by succession or otherwise that were registered.

Relations between landlords and tenants are said to be fairly satisfactory as a whole; from most districts, instances of strained relations are occasionally reported, but serious manifestations of ill-feeling are not numerous. Both parties are learning to know the Tenancy Law of 1885, which has so far worked smoothly and has not caused serious increase of agrarian disputes. The returns of suits under the rent-law of Bengal for the past five years, show—

1884	-	-	-	179,776	total suits under the Rent Law.
1885	-	-	-	183,566	" " "
1886	-	-	-	173,763	" " "
1887	-	-	-	189,387	" " "
1888	-	-	-	195,983	" " "

During the year 23 landholders applied to have their estates surveyed and settled under Chapter X. of the Tenancy Act. Of these estates, the largest was Dubalhati with an area of 41,000 acres. The total cost of the work will be under 8 annas per acre; 1,170 disputes about tenures and boundaries have been settled; 97 per cent. of the tenants were found to possess occupancy rights in their holdings which averaged 2½ acres each; and the serious disputes between the zemindar and his ryots about rent-rates were amicably settled in accordance with a compromise proposed by the settlement officer. On smaller estates the cost of the work was somewhat higher per acre than in Dubalhati.

The latest reports on land revenue affairs in the North-West Provinces and Oudh pertain to the year ending in September 1888. The rainfall was sufficient, though in parts irregular, at the outset; the harvests were on the whole up to the average, and much better than in the previous year; the total area under cultivation remained unchanged, a large decrease in the breadth of autumn crop being counterbalanced by an increase on the spring crop. Prices were high in consequence of the short harvests in previous years. The public health was good; the recorded death-rate in 1888 being nearly 5 per mille lower than in 1887.

North-West
Provinces and
Oudh.

In the North-Western Provinces there was a small decrease in the land revenue proper, owing to reductions of assessment in parts of the Agra and Muttra districts. But there was an increase of Rx. 36,300 in the demand in

LAND REVENUE.

other heads of land revenue, mainly in the yield of the occupiers' and owners' rates for canal water. The real, as distinguished from nominal arrears uncollected at the end of the year, were one-fifth per cent. on the demand, or the same proportion as in the previous year. Coercive processes for the realisation of arrears were slightly more numerous, 56,836 against 54,503 in the year 1886-87; and the increase was apparent under every form of process except sales of land. In only two cases was land sold for arrears. The number of defaulters imprisoned for arrears during the year was 304, and the average period of detention was one day; in the previous year 381 defaulters were imprisoned. The number of suits and applications under the rent law was 220,391, or 10 per cent. above the total of 1886-87. Of the suits 26 per cent., and of the applications only 19 per cent. were contested. There was an increase of 14 per cent. in the ejectment cases against privileged tenants, which affected an area of 121,798 acres; in one-third of the cases, relating to an area of 39,929 acres, ejectment actually took place. Notices to quit were issued against tenants-at-will who held 248,231 acres; and the cases of this kind were more numerous by 14 per cent. than in the previous year. Appeals were preferred to collectors in 19 per cent. of the appealable rent-law cases; and in 1,250 cases, or 38 per cent. of the appeals, the orders of the lower courts were either modified, or reversed, or remanded for re-trial. There was a decrease of 33 per cent. in the proportion of rent-law decisions that were appealed to the district judge; and in 43 per cent. of these appeals the original decision was either reversed, or modified, or remanded. There was an increase in the number of petitions for the partition of estates; but there was a still larger increase in the number of partitions effected; and the arrears of this important class of business were 11 per cent. less than at the end of the previous year. The number of applications for loans under the Land Improvement Acts rose from 2,140 in 1886-87 to 4,356 in the year 1887-88; and there was a corresponding increase in the advances made; of the instalments due on account of principal and interest of advances made in former years 85 per cent. were realised.

In Oudh the land revenue demand showed a small increase of Rx. 1,743; and over 99 per cent. of the demand was collected. The revenue was collected without difficulty; for 11 years there has been no sale of land for arrears of revenue in Oudh; and, while there was some increase in the number of arrests of defaulters and attachments of property for arrears, there was a large reduction in the number of writs of demand that were issued. In a previous statement it was mentioned that during 1886, the last year of the old Rent-Law in Oudh, 92,451 notices of ejectment were issued against tenants respecting an area of 360,000 acres; under the new Law there were 49 such notices in 1887, 2,369 in 1887-88, covering an area of 23,386 acres out of a total area of $9\frac{1}{2}$ million acres under the plough. The tenants appear able to assert their rights against the landlords; for in only 1,264 of these cases affecting 12,775 acres, or about half of the whole, did actual ejectment take place. No advance has taken place in the registration of tenants' improvements under the Act, although it is believed that in Oudh agricultural improvements are mainly done by the tenants; steps are being taken to make the provision of the law on this point more generally known to the tenantry.

Punjab.

The Punjab land revenue report and statistics have this year, for the first time, been prepared for the year ended on the 30th September, so as to include in the same report the two harvests pertaining to the same agricultural year. The present paragraph therefore gives facts and figures for the year ending on the 30th September 1888. The autumn rainfall was below, and the winter rainfall was fully up to the average; the autumn harvests were short, but the spring crops gave a full yield. The cultivated area increased by 2.17 per cent., and the irrigated area by 435,000 acres, or $6\frac{1}{2}$ per cent., as compared with the previous year; but the total cultivated area was still 250,000 acres, or one per cent. below the total of 1884-85, and 500,000 acres, or 2 per cent. below the total of 1885-86. The prices of wheat and oil-seeds, though the out-turn was heavy, ruled high, being governed by the export demand; the price of autumn grains did not rise. The land revenue demand was Rx. 10,000, or $\frac{1}{2}$ per cent., and the collections were Rx. 25,000, or $1\frac{1}{4}$ per cent. larger than in the previous year; and the arrears outstanding at

LAND REVENUE.

at the end of the year were smaller. The new Tenancy Act was in operation during eleven months of the year. The number of suits for enhancement of rent fell from 2,017 in the previous year to 1,423; in 1,105 of these cases enhancement was decreed, and in 318 cases it was refused. Out of 4,066 suits for ejection of tenants-at-will about 12 per cent. were contested, and of those one-half ended in favour of the tenants. Only 32 decrees for ejection of occupancy ryots were given in the whole province during the year.

Of the cultivated area in the Punjab 61 per cent. is tilled by proprietors, either members of proprietary communities or petty owners, and 38 per cent. by tenants. The rent rates vary greatly, according to the fertility and other advantages of the land, and they range from one-third of a rupee to 55 rupees per acre on the very best land irrigated from canals. Investigations were being conducted into the extent of indebtedness of the landed classes. It is clear that the recorded transfers and mortgages of land continue to increase. But a part of this increase is attributable to the improving circumstances of the people; and a large proportion of these transfers are from one agriculturist to another. The price of cultivated land in the Punjab has, as was stated in last year's report, increased greatly during recent years.

Lower Burma.

The rainfall in Lower Burma was on the whole favourable, and the rice crop was good, despite inundations in certain limited tracts. The area under cultivation was, 244,044 acres, or six per cent. larger than in the preceding year; and eight-ninths of the whole crop area was under rice. Prices of rice at the seaports, notwithstanding the favourable harvest ranged high; and the total exports of rice from Lower Burma by sea reached 909,178 tons in the calendar year 1889, as compared with 756,424 tons in 1888. The land revenue demand of the year showed an increase of Rx. 47,101 as compared with the previous year; but there was a large decrease in the collections and a corresponding increase in the uncollected balances, by reason of the postponement of the land revenue instalments in Arakan. The uncollected balance at the end of the year, that is on the 31st March 1889, was Rx. 173,911 against Rx. 43,287 in 1887-88; the whole balance except Rx. 8,426 was collected before the end of June 1889. The remissions were nearly double as large as in the preceding year by reason of floods on the sea-face and the bursting of embankments in the Irrawaddy and Sittang plains. The capitation-tax demand showed an increase of Rx. 10,000, or 3 per cent., and the fishery revenue demand an increase of Rx. 4,600, or 4 per cent. The total demand under all three heads of land revenue thus showed an advance of Rx. 61,700, or 5 per cent. on the previous year's demand. All descriptions of revenue were realised with little resort to coercive processes; only 18,719 processes of all kinds were issued upon defaulters during the year; the number of cases in which moveable property was sold for default was 418, and four defaulters only were sent to prison over the whole province.

Upper Burma.

For the first time information concerning Upper Burma has been furnished in the Burma revenue report. The rainfall of the province was normal, and the harvests were on the whole up to the average. The sources of revenue are the thathameda or capitation tax, which is levied at rates ranging up to 10 rupees per household; the land tax which is levied on Royal or State lands only, ordinary private lands being as yet exempt from land revenue; the miscellaneous revenue, which includes fishery and irrigation revenue, but not excise or forest receipts. The demands and collections were—

	Demands.	Collections.
	<i>Rx.</i>	<i>Rx.</i>
Capitation tax - - - -	350,727	329,889
State lands tax - - - -	79,929	60,685
Miscellaneous revenue - - -	63,168	63,072
Total - - -	493,824	453,646

LAND REVENUE. The revenue was collected with little trouble, and is believed to fall lightly on the people. In several districts no processes were issued for arrears; in one district only was any property sold for default; and in only three districts were more than 12 processes issued during the year. The business of discovering and registering the State lands is making progress everywhere, and is finished in some districts. There are everywhere great areas of cultivable land ready for occupation; the cultivated area is extending; and the demands of the upper province for supplies of rice from lower Burma are abating.

Central Provinces. The season 1888-89 was not favourable in the Central Provinces; and the rainfall was below the average in almost every district. The land revenue collections were Rx. 630,933, the increase of Rx. 6,660 being due to the revised settlements now coming into operation; there will be considerable further increase from this cause during the next three years. The land revenue was collected without difficulty, there was a considerable decrease in the number of coercive processes of all kinds, namely from 4,034 in the previous year to 3,320 in the current year; one defaulter only was imprisoned for arrears; in 14 cases immovable, and in 108 cases moveable property was attached. Inquiries have been completed regarding the extent to which proprietary rights in land have changed hands; and it has been found that one-fifth of the whole area (45,000 square miles) conferred on village proprietors (malguzars) at the settlements of 1862-68 have been transferred, while a large part of the remaining four-fifths is heavily mortgaged. Litigation under the Tenancy Act shows some tendency to increase but is as yet unimportant in quantity. Suits for arrears of rent rose from 7,308 in the preceding year to 8,621, of which 22 per cent. went in favour of the defendant; in sixty cases ejectment was decreed against tenants as compared with 26 cases in the previous year; suits for ejectment of ordinary tenants fell from 733 to 582, of which latter number 86 per cent. went in favour of the defendant; notices for enhancement of ordinary tenant's rent issued in 2,394 cases, in 72 cases decrees of enhancement were made absolute, but it is reported that in most cases the mere issue of a notice induces the tenant to accept a reasonable enhancement.

Assam The rainfall was seasonable and sufficient in Assam during 1888-89; the early autumn crops were everywhere good, but the late rice harvest and the spring crops were short in some districts. Prices of food were cheaper than in 1887-88; but the public health was not so good as in the preceding year. The land revenue demand increased by $1\frac{3}{4}$ per cent. above that of the preceding year; in the year 1887-88 the increase had been $1\frac{1}{4}$ per cent. Seven-tenths of the increase was due to extensions of cultivation, and the remainder to enhancements at settlement. Out of the whole demand 1.65 per cent. was in arrear, as compared with 3.3 per cent. uncollected at the end of the previous year. The remissions made during the year came to Rx. 115, as compared with an average of Rx. 631 remitted during the previous three years. There was an increase from 16,205 to 21,369 in the number of notices issued for arrears in the districts of the Assam Valley. There was a considerable decrease in the number of estates, mostly very small ones, sold for arrears in the permanently settled district of Sylhet. In the Brahmaputra Valley, the area held under decennial leases continues to decrease, being now 982,058 acres, as compared with 1,004,400 acres in the preceding year, and with 548,604 acres held on annual leases. The miscellaneous receipts decreased by Rx. 1,975, by reason of the smaller number of cases in which the land revenue was redeemed, and there was again a falling off in the income from fees for catching wild elephants. The area of land cultivated by time-expired coolies, who have settled in Assam, rose during the year from 16,414 to 25,315 acres; these totals do not include areas cultivated by coolies within the limits of tea gardens or private estates.

The total area in the whole province held by tea planters, under eight different sets of grant rules, was 965,359 acres, of which 216,676 acres were actually under tea. In Assam proper, one-eleventh of the tea-bearing area is owned by Natives and ten-elevenths by Europeans. During the year 69 new plots, aggregating 5,731 acres were taken up for tea-planting; of these 10 plots with an area of 2,302 acres, were granted under the thirty years' lease

lease rules, and 45 plots with an area of 2,078 acres were under the ordinary settlement rules of Assam. LAND REVENUE.

The average incidence of the land revenue is 1 r. 11 a. 4 p. per acre for land held on annual leases, and 1 r. 14 a. 1 p. for land held on decennial leases; while special tenures and waste land grants pay much lower rates.

In Ajmere the rainfall though deficient was seasonable; the autumn harvest was good, but the spring crops were poor, and prices ranged high. Ajmere and Coorg. There was an increase of 8 per cent. in the land revenue, owing mainly to the credit of certain receipts that used formerly to be devoted to a special fund. The collections of the year came to 99·85 per cent. on the demand; and the system of variable assessments, on villages liable to serious injury from fluctuation of season, worked well.

In Coorg the season was favourable for ordinary crops, but was unfavourable for coffee which is the chief exportable product of Coorg. There was a small increase in the area under rice, but a decrease of 2,323 acres, or nearly 3 per cent in the area under coffee. The reduction in the coffee area is entirely on large estates held by European planters. The coffee plantations in the hands of Natives of India have increased from 35,468 acres to 45,831 acres during the last five years, while European coffee holdings have fallen from 40,454 to 33,795 acres. The demand under "land revenue proper" shows a small reduction, and the receipts from the sale of waste lands show a decrease of 57 per cent. as compared with the preceding year. Last year's statement mentioned that a cadastral survey of the occupied lands in Coorg had been begun, but after one season's trial the work was found to be more expensive than had been expected; and the survey was closed after 78 villages in one sub-division had been finished. A small staff of local surveyors is maintained for measuring waste lands leased for coffee planting or for other cultivation. In order to promote the improvement of considerable areas that have fallen out of cultivation during the past few years, land revenue has been remitted, wholly or partially, for five years on such portions as may be recultivated within defined periods. The object is to secure the cultivation of a normal breadth of rice lands, which the Coorgs have recently shown a tendency to neglect, while paying more attention to their coffee plantations.

The latest Madras report upon land revenue affairs pertains to the year Madras. (July to June) 1887-88. The rainfall of the early (south-west) monsoon and of the late (north-east) monsoon was on the whole seasonable and sufficient. Harvests were in the main good; and the prices of food ruled lower than they had done for the previous 11 years. The cultivated area increased by 175,000 acres as compared with the preceding year. Though the total crop area of Madras is now larger than before the great famine of 1876-77, yet in four of the districts which suffered most severely, namely Bellary, Anantapore, Cuddapah and Kurnool, the area of cultivated is still 413,000 acres below the totals of those districts for the year before the famine. The land revenue demand was Rx 4,214,134, from ryotwaree lands held by petty proprietors direct from the State, Rx. 507,801 from large permanently settled estates with an approximate rental of Rx. 1,521,000, and Rx. 66,723 from quit-rent estates. The total demand was Rx. 48,000 above the demand of the previous year, which had yielded an advance of Rx. 100,000 above the year 1885-86. The increase of revenue was due to the extension of second crop cultivation, dry and wet; owing to the character of the season there was a considerable decrease in the area under early crops. The total area under cultivation, in districts for which detailed figures are available, was returned at 25,334,131 acres, of which 4,953,857 acres were irrigated from canals and tanks, 1,277,491 acres were irrigated from wells and other sources, and 19,162,805 acres were unirrigated or dry. The average incidence of the land revenue, was as before, a small fraction above one rupee an acre on unirrigated, and Rs. 4 $\frac{3}{4}$ an acre on irrigated land. The amount of revenue remitted on all grounds was Rx. 38,284, or about half the amount remitted in the previous year. The decrease in remissions was due to the favourable character of the season and also to the repairs that have recently been effected in certain irrigation works. Of the current demand 96·5 per cent. was collected, as compared with 95·8 per cent. in the preceding year. Of the arrear demand, 83·3 per cent. was collected, and 2·8 per cent. was

LAND REVENUE.

written off as irrecoverable. As compared with the previous year there was a decrease of 4 per cent. in the number of processes issued, of 13 per cent. in the lands sold, and of 37 per cent. in the personal property sold for recovery of arrears. But the number of defaulters, whose property was actually sold for recovery of arrears, increased to 35,750 from 30,915 in the previous year; the amount of arrears in respect of which these sales took place was Rx. 31,910 out of a total demand of Rx. 5,418,818.

The failure of rain and of harvests which brought about the scarcity of 1889 in Ganjam did not pertain to the year 1887-88, of which the foregoing paragraph treats.

Bombay.

The season of 1888-89 was unfavourable over the greater part of the Bombay presidency; in Sind the rise of the Indus was deficient and the rainfall was scanty. The price of food grains was higher than in the previous year. The net area of land taken up for new cultivation, after deducting that thrown up by ryots, was 160,224 acres. The incidence of the land revenue varies little from the rates of the previous year, and ranges from Rs. 2½ in the northern division, to Rs. ¾ in the southern division per acre of occupied land. The land revenue demand and the collections were larger than in the previous year, the increase under the latter head being Rx. 42,000. In all divisions and in nearly every district the amounts remitted were smaller than in the previous year. The number of coercive processes issued for recovery of arrears was smaller than in the previous year for every district except Broach; and there were no cases of arrest or imprisonment of defaulters. The uncollected balances at the end of the year were Rx. 11,136, much of which belonged to previous years and will now be written off.

Berar.

The rainfall of 1888 in Berar was much below the average, but it fell seasonably for the autumn crops. The yield of millet (jowari) was good, and the cotton crop was the heaviest that Berar had known for many years; the wheat crop was poor and forage was short. The area under crop was 6,469,504 acres, or 32,876 more than in the previous year; the decrease under spring crops being more than counterbalanced by the increase in autumn crops which covered 73½ per cent. of the whole cultivated area. The average price of all grains was somewhat higher than in the previous year; partly because the ryots realised so much from their cotton that they had no need to sell their millet. There was a great increase in the exports of cotton, and a decrease in the export of wheat. The dry season was healthy, the registered death-rate being 24·7 per mille as compared with 45·3 in the previous year, and 38·5 the average of the preceding five years.

The land revenue demand showed an increase of only Rx. 138. Collections were full and easy, Rx. 102,375 being voluntarily paid in advance on account of an instalment that fell due fifteen days after the close of the year. Of the demand actually due for the year, Rx. 6,598 or 1¼ per cent. were uncollected. The number of coercive processes issued against defaulters was much smaller than in the previous year; writs of demand fell from 10,294 to 7,680; no defaulters were sent to prison. The area of land transferred by sale continues to be small, ranging during the past five years from 108,000 to 153,000 acres, as compared with a total of 6,948,000 acres under occupation. Very little survey or settlement work had to be done, being confined to 60,000 acres in 96 villages. The maintenance of village revenue records and of boundary marks continues to be effectively supervised. The business coming before the revenue courts was 9 per cent. smaller than in the previous year; it was performed expeditiously. The total receipts brought to account under the head of land revenue in 1888-89 amounted to Rx. 670,693, or Rx. 2,000 less than in 1887-88.

GOVERNMENT AND WARDS' ESTATES.

GOVERNMENT AND
WARDS' ESTATES.
Bengal.

In Bengal, 73 wards' estates and 75 attached estates, or nine less than in the preceding year, were under the management of the Court of Wards, with a total rental of Rx. 1,034,455, of which 94 per cent. was collected during the year as compared with 97½ per cent. in 1887-88. The shortness of the collection was due to the unfavourable character of the harvests in several districts. The uncollected arrears of past years on wards' estates have been reduced by Rx. 98,802; but there are still on the arrear demand list many old items which are not legally recoverable, and which will shortly be written off. The cost of management was 7.3 per cent. on the current rental as compared with 7.2 and 8.2 per cent. in the two preceding years. Debts to the amount of Rx. 113,766 were paid off during the year, and the outstanding debts due from all wards' estates were Rx. 450,346 at the close of the year. The cash balances at credit of wards' estates were Rx. 259,247 on the 31st March 1889, and the investments in Government securities were Rx. 381,836. On seven large estates, aggregating 1,513,000 acres, a cadastral survey and record of rights has been undertaken. So far as the work has been completed, both processes have cost on the average less than 8 annas per acre in all. Briefly, the result has been that ryots' holdings were found to be from 12 to 25 per cent. larger than was shown in the landlords' accounts; that the ryots have accepted enhancements of from 10 to 12 per cent. on the rents; while adequate arrangements have been made for keeping the village records up to date for the future. The difficulties and friction involved in these operations were less than had been predicted. The outlay on material improvements was somewhat larger than in the preceding year. The balance sheet of all estates under the Court of Wards for the year 1888-89 resulted thus:

Cr.		Dr.	
	Rs.		Rs.
Opening cash balance	243,423	Management	76,510
Debts realised	22,284	Buildings and works	15,742
Rental cesses, &c.	971,839	Survey and settlement	13,810
Miscellaneous	181,683	Law expenses	28,662
		Maintenance of proprietors and their households	118,439
		Education of minors	5,757
		Schools and hospitals	9,681
		Improvements	5,816
		General direction and audit	8,982
		Miscellaneous expenses	139,324
		Debts paid	113,766
		Investments made	47,143
		Land revenue and cesses	533,469
		Payments to superior landlords	42,979
		Closing cash balance	259,247
Total	Rs. 1,419,229	Total	Rs. 1,419,229

The number of estates under the Court of Wards in the North-Western Provinces had fallen at the close of 1887-88 to 103, with a total income of Rx. 182,000. Twelve estates were restored to their proprietors during 1888-89 all but one of them free of debt. Against the estates under the Court there had been debts amounting to Rx. 416,000, which were reduced by March 1888 to Rx. 111,000. The cost of management averaged 7 per cent. on the income, the same rate as in the previous year; and Rx 5,480

North-West
Provinces and
Oudh.

GOVERNMENT AND WARDS' ESTATES. were spent on works of improvement, chiefly wells. Of the gross current and arrear rental, 88 per cent. was collected; Rx. 21,000 were expended in paying off debt; and Rx. 11,500 were invested from the surplus of solvent estates during the year. Tenants are on the whole well treated by the Court; the number of notices of ejectment was 322; and there were only 26 suits for enhancement of rent, in all of which enhancement was decreed.

There were 49 estates under the Court of Wards in Oudh, or three less than in the previous year. The rental of these estates was 17 $\frac{3}{4}$ lakhs, of which 97 per cent. was collected during the year; and there was an income of Rx. 67,958 from other sources. The chief items of expenditure were Rx. 88,841 in payment of the revenue; Rx. 10,799, or 4 per cent. on management; Rx. 6,083 on improvements, such as wells and purchase of cattle for tenants, and Rx. 84,118 on payment of debt. Eight estates were released from management by the Court of Wards before the close of the year; during the term of management the debts of these estates had been paid off to the amount of Rx. 43,000, while rents had risen by Rx. 5,000, owing to purchases of land and improvements. Litigation on account of wards' estates in Oudh was unusually heavy, and cost Rx. 4,000. During the year several heavily embarrassed estates came under the Court, and special measures were proposed for the composition and gradual liquidation of the debts.

Both from Oudh and from the North-Western Provinces minor proprietors were sent to the Wards' Institute at Agra for education. The personal expenditure of the wards and their families was kept in both provinces within the sanctioned allowances.

Punjab.

In the Punjab 45 estates were managed by the Court of Wards with a total income of Rx. 64,762, out of which Rx. 12,306 were devoted to paying off old debts. Three estates were released on the owners attaining their majority. The solvent wards' estates showed at the end of the year a cash balance of Rx. 38,378, and investments in Government stock, yielding Rs. 5,617 a year, besides net assets of an estimated value of Rx. 323,345.

Rx. 1,894 were spent on educating the wards. The debts due by the Nawab of Tank's estate were paid off during the year.

Central Provinces.

In the Central Provinces the Court of Wards relinquished the management of four estates with a rental of Rx. 3,004, and received charge of eight estates with a rental of Rx. 2,459. At the end of the year 139 estates, with an area of 8,271 square miles and a gross income of Rx. 600,000, were under the management. Of the eight estates newly undertaken, six came into the charge of the Court by reason of the minority of the proprietors, and two on account of their incompetence or indebtedness. The Court of Wards succeeded in collecting 93 per cent. of the rental of the year, and in reducing the amount of the arrears demand by one half. Careful scrutiny was made into the management of estates that were in debt, and some reductions of charge were effected. The total debts due from embarrassed estates were Rx. 280,000, out of which more than Rx. 30,000 were paid off during the year. Little was spent on the permanent improvement of solvent estates. The total cost of management came to 6 per cent. on the total income, and 9 per cent. on the rental of all estates under the Court. Two per cent. on the gross income of all estates is henceforward to be paid into the public treasury in compensation for the time devoted by revenue and other officials of the State to duties connected with the Court of Wards.

Madras.

The Court of Wards in Madras during the year handed four estates back to their proprietors, and took charge of six estates. The estates relinquished had balances at credit on relinquishment; on one of these Rx. 7,806 of debt had been paid off; Rx. 18,017 had been spent on improvements; Rx. 20,833 had been invested or added to the balances; while the rental had increased 57 per cent. during the 20 years the estate had been under the Court of Wards. There was an increase of 86,000 acres, or 13 per cent. in the cultivated area as compared with the previous year, by reason of the favourable character of the season. The total current collections of the year were Rx. 215,070, and they amounted to 82 per cent. on the current demand, or two per cent. worse than in the previous year. The balance at the credit of all estates, invested or uninvested, at the end of the year was 50 $\frac{3}{4}$ lakhs, or 6 lakhs more than at the beginning of the year. The debts due by

by the estates at the end of the year were Rx. 106,713, debts amounting to Rx. 40,920 having been paid off during the year. The expenditure on works of improvement was Rx. 21,956, of which the greater part was spent on irrigation works. The progress of 61 wards, of whom three were girls, in education was said to have been "pretty fair."

In Bombay the estates under the Court of Wards or under Government management were of several kinds, namely:—

	No.
(1.) Estates under the Court of Wards - - -	85
(2.) Encumbered estates in Guzerat, &c., managed under Acts of 1862, 1881, and 1884, and under the Civil Procedure Code; and talukdari villages - - - -	672
(3.) Encumbered estates in Sind - - -	103

The estates of the second category are all in Guzerat, and are under the care of a special revenue officer, a Native of India. The total rental of these estates, outside Sind, was Rx. 83,000. In Ahmedabad, 11½ per cent. of the outstanding debts, in Kaira 6½ per cent., and in Broach 10 per cent. were paid off. Eight new estates were taken under management by the special officer in Guzerat. The cost of management came to 9¼ per cent. on the income as compared with 9¾ per cent. in the preceding year. Out of total collections of Rx. 61,165, a sum of Rx. 13,726 was spent on paying debts. Rx. 22,699 were in hand at the end of the year, and Rx. 7,473 were in arrears as uncollected; the increase in arrears was due to the unfavourable character of the season. The difficulties placed in the way of educating minor proprietors, to which reference was made in last year's Statement, have been partly overcome, and many of the minors are now under instruction. On encumbered estates in Sind, the cost of management has been brought down to 2¼ per cent. on the revenue in Karachi district, to 4 per cent. in Hyderabad, and to 2½ per cent. in Shikarpore; in the other districts no expenditure was charged for management; in the previous year the cost in Karachi had been 6¾ per cent. Twenty-four estates were freed from debt and restored to their owners; on all the other estates material reductions of debt were effected; and the cost of management over the whole province of Sind was from 4½ to 5 per cent. on the gross income.

IX.

FORESTS.

FORESTS.

THE subjoined tables give the forest revenue, expenditure, and surplus, for each province during the year 1888-89, and the totals for all India for nine years since the year 1874:—

	Bengal.	North-Western Provinces and Oudh.	Punjab.	Burma.	Central Provinces.	Assam.	India, General.	Madras.	Bombay.	TOTAL.
REVENUE:	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Gross Receipts - - -	67,691	146,230	104,677	418,228	118,041	50,386	26,628	151,500	285,019	1,349,047
EXPENDITURE:										
General Direction - - -	—	—	—	—	—	—	4,986	—	—	4,986
Upper Burma - - -	—	—	—	78,502	—	—	—	—	—	78,502
Conservancy and Works - -	16,629	54,208	30,469	24,418	36,961	7,224	11,241	66,143	85,186	396,490
Establishments - - -	20,991	30,078	28,805	23,366	85,830	13,721	11,281	56,411	83,595	308,517
Charges in England - - -	—	—	—	—	—	—	2,392	—	—	2,392
Exchange on the same - - -	—	—	—	—	—	—	1,118	—	—	1,118
TOTAL Expenditure - - -	37,620	84,287	59,364	201,286	66,831	20,945	31,018	121,554	169,081	792,000
Net Revenue or Forest Surplus - - -	30,071	61,942	45,313	217,638	51,210	9,441	(- 4,335)	29,946	115,928	557,047
Net Surplus of the previous Year 1887-88 - -	26,607	41,879	11,111	136,203	64,096	4,918	(- 2,645)	24,839	109,690	404,331

FOREST REVENUE and EXPENDITURE.

	Receipts.	Expenditure.	Net Revenue.
	Rx.	Rx.	Rx.
1874-75 - - - - -	583,281	423,267	160,014
1877-78 - - - - -	664,102	421,667	242,435
1880-81 - - - - -	700,320	465,976	234,344
1883-84 - - - - -	1,052,190	649,375	402,815
1884-85 - - - - -	986,984	679,397	307,587
1885-86 - - - - -	1,086,092	680,988	405,104
1886-87 - - - - -	1,103,970	719,765	384,205
1887-88 - - - - -	1,124,125	719,794	404,331
1888-89 - - - - -	1,134,047	792,000	557,047

General.

Some beginning was made in the forest administration and conservancy of southern India in 1844; 10 or 12 years later similar work was begun in western and northern India; the subject was taken up systematically all over India when the mutiny troubles were over; and within the last 20 years forest laws have been enacted for, and forest administration has been placed upon a permanent basis in every province of India. The superior officers of the forest service have been selected by competition, and have been trained in forestry either in Germany, or in France, or at Cooper's Hill College; some of the subordinate officials are trained at a forest school near Dehra

Delhra in the sub-Himalayan country of the North Western Provinces. Briefly, the system is to select, acquire, and mark off as reserves an area of State forest in every province sufficient to supply the wants of the neighbourhood and the province in respect of timber, firewood, bamboos, canes, and other forest produce, and sufficient also for supplying the foreign demand for such articles as teak-timber, sandal-wood, and rubber. The reserves are or will be surveyed, conserved, and worked on sanctioned plans, designed so as to obtain the largest possible permanent yield in the most economical way. Private rights in the reserves are bought out or compromised. Among the most important measures of conservancy are the exclusion of the yearly fires which used to devastate forests, the maintenance of adequate seed-bearing trees, and the regular reproduction of timber of the more valuable kinds. At the present time the reserves cover an area of about 55,000 square miles; and they may hereafter be extended to 80,000 square miles. Outside the reserves are considerable areas of State forest, some part of which will be eventually brought within the reserve area, and all of which is managed and worked for the benefit of the people, of their cattle, and of the public revenue. The limited areas of private forest are, except where they have been leased to the Government, being rapidly exhausted; and as yet few private and no communal 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 license; outside the reserves the country folk are allowed to obtain from the State forests timber, bamboos, firewood, and grass for their own use, free of charge; inside reserves, only persons specially licensed are allowed to extract timber or other produce on payment of fees. Forest revenue is raised by royalties on or by the sale of timber or other produce, and by issuing at specified fees permits to graze cattle, or to extract for sale timber, firewood, charcoal, bamboos, canes, and other minor forest produce. In the year 1888-89 the gross forest revenue of British India was Rx. 1,349,047, and the net forest revenue was Rx. 557,047. This source of revenue has developed greatly during the past 20 years; and some of the better-managed Native States, such as 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, do not agree precisely with the figures given above, which are taken from the finally corrected financial accounts.

There was an addition of two square miles to the reserved forests, and of 75 square miles to the protected forests of Bengal; and the areas of each class of forests are now 4,987 and 2,264 square miles, respectively. Little further has been done towards preparing forest surveys and working plans. There was a considerable decrease in the number of prosecutions for forest offences, partly by reason of the leniency exercised in Orissa, where the forests were opened to people who were suffering from a failure of the crops and scarcity of food. Fire was excluded from only 75 per cent., as compared with 89 per cent. in the preceding year, of the 1,973 square miles over which protection against fire was attempted; the comparative failure was attributed to the extension of these efforts to a much larger area than before in the Singbhoon forests. Natural reproduction of timber is said to be progressing favourably, especially in the Himalayan and in the Sunderbuns forests. The extent of plantations was increased by 166 acres; and the total area of plantations in Bengal now amounts to 3,870 acres of oak, toon, sâl, and teak. There was an increase in the yield of timber by 14 per cent., and of fuel by 7 per cent. over the previous year; the largest increase was under the head of free grants of produce; while there was a decrease in the amount of timber and fuel extracted by permit-holders from the Sunderbuns forests. The forest receipts were Rx. 67,690, against an expenditure of Rx. 36,816; the receipts were higher than they have ever been before, while the expenditure was smaller than during any of the four previous years. The forest surplus of Bengal has advanced steadily year by year, from Rx. 15,923 in 1884-85 to Rx. 26,742 in 1887-88, and Rx. 30,873 in the year of which the present statement treats.

FORESTS.
North Western
Provinces and
Oudh.

The area of reserved forests in the North Western Provinces and Oudh remained practically unchanged. A reduction of 12 miles is shown in consequence of a more precise calculation of certain forests; one square mile was added to the Jounsar reserves, and the total area stood at 2,596 square miles. The demarcation of reserves has been mostly completed, and the boundary marks were found to be in good order. Much further progress has been made with the surveys and working plans of 15 different forests; but in some cases it was found impossible to work up to sanctioned working plans, either from lack of forest staff or because there was not sufficient market for the produce. There was again a small decrease in the number of prosecutions for forest offences. The area over which fire protection was attempted was 2,054 square miles, and of this area 94 per cent., as against 95 per cent. in the previous year, was successfully protected, at a cost of about 13 rupees per square mile. In the Seharunpore forest division several incendiary fires occurred; the authors of the mischief could not be traced, and the grazing privileges of certain villages had to be temporarily withdrawn. Natural reproduction of timber was satisfactory in the plains as well as in the hills' forests, with the exception of certain forests in eastern Oudh. The effect of fire protection in the improved growth of young timber trees is said to be noteworthy. There was a considerable decrease in the yield of timber and firewood in the Oudh circle, where stocks were large, and an increase in the yield of the central circle under all heads, while the produce of the school (or northern) circle remained stationary. The forest revenue of the year was Rx. 146,280, against an expenditure of Rx. 83,874, leaving a surplus of Rx. 62,405, which exceeded the surplus of the preceding year by Rx. 21,264, but fell a little short of the surplus in 1886-87.

At the Delra forest school 69 students were under instruction, of whom 42 were Natives and 27 were Europeans or Eurasians; seven were sent from Native States, 12 were private students, 48 were sent by the Governments of all provinces except Bombay and Berar, while two were sent by the Ceylon Government. The students were employed on conservancy, timber, and sylviculture operations in different parts of the Forest School (or northern) circle, besides receiving instruction in botany, forestry, forest law, surveying, and mathematics; 21 students obtained certificates as "Rangers," and six obtained certificates as "Foresters," as compared with 17 and 14 respectively in the previous year. The chief change introduced during the year was the institution of an entrance examination which candidates are obliged to pass before admission to the school.

Punjab.

The area of reserved forests in the Punjab was increased by 13 square miles, and is now 1,215 square miles. There are also 504 square miles of protected forests and 4,136 square miles of other State and leased forests, making a total of 5,955 square miles of forest lands. It is reported that forests on private lands are being rapidly exhausted, and that the demands upon State forests are increasing; the careful husbanding of the public forests becomes, therefore, more important than ever. The work of demarcating and erecting boundary marks for the forests continues; but there is still much to be done. The working plans of six forests were prosecuted; but working plans are as yet in force over only 364 square miles of forest. The 10 years' working plan of a Hazara forest, with an area of 18 square miles, expired during the year, and it was found that, by reason of a decreased demand for the produce, only two-thirds of the area had been cut over; the rotation will thus be 15 years instead of 10, and the forest blocks will have a longer time for recovery. Forest fires were successfully excluded from 97 $\frac{3}{4}$ per cent. of the area over which fire protection was attempted; and 27 $\frac{1}{2}$ square miles in all the 5,955 square miles of forest were burnt. Natural reproduction is reported to be good, and in some districts excellent, in all forests that are protected from fires and from grazing. The net addition to the plantations was 816 acres, and the Punjab plantations now cover an area of 20,155 acres. The railway demand for fuel from the Changa Manga plantation has revived; and it has been found that, apart from the railway, good markets exist for all the yield of this great plantation. There was a considerable decrease in the timber removed from the forests by Government agency or by purchasers; but there was a large increase

increase in the yield to private-right holders and free grantees. For 1888-89 the figures are :—

FORESTS.

	Cubic Feet.
Timber removed by Government agency - - -	2,444,340
" " purchasers - - - - -	6,683,486
" " right-holders and free grantees.	33,911,036
TOTAL - - -	43,038,862

Besides timber, minor produce to the value of Rx. 69,405 was yielded by the forests, and of this quantity more than two-thirds went to private-right holders and free grantees. The working of the leased forests of the Chamba State was specially successful; and the Rajah receives, besides yearly rent, two-thirds of the actual net profits of his forests during each term of five years.

The total forest revenue of the year was Rx. 104,576, as compared with an outlay of Rx. 59,292, yielding a surplus of Rx. 45,284, which compares favourably with the preceding year's surplus of Rx. 10,902, and with Rx. 24,800, the average of the five previous years.

An area of 20 square miles was added to the reserved forests of Lower Burma, bringing the total area of reserves up to 5,111 square miles. Further considerable areas have been proposed for reservation, and private rights therein are under investigation. Permanent boundary marks are maintained round all reserves. In Upper Burma no reserves have as yet been formed. The forest staff have been engaged in exploring and valuing the forests, and in reporting upon tracts that will have to be reserved as soon as the necessary preliminaries and settlement of private rights can be effected; in girdling trees for the lessees to work out; and in collecting forest revenue from lessees and others. Nearly all the best teak forests are in the hands of people holding leases from the ex-king, and the terms on which these leases are to stand have now been settled. Among the results of the forest explorations in Upper Burma it may be mentioned that 8,139 square miles of forest have been brought under protection; that 1,093 square miles of forest, mostly teak, have been notified as selected for reserves; that limited areas very rich in teak and catch trees have been examined; that in most of the leased forests great numbers of girdled teak trees are standing ready to be worked out; that some of the more accessible forests, formerly very rich in teak, have been so cut over as to leave hardly any first or second class trees; that everywhere there is a serious, sometimes a total lack of young teak growth, due partly to wasteful fellings and mainly to forest fires which yearly destroy seedlings wherever the disappearance of dominant teak trees have caused thick undergrowth.

Detailed surveys were completed over 312 square miles of forest; working plans were completed for two reserves, aggregating 115 square miles, under which 1,500 teak trees will be felled annually, securing a net revenue of Rs. 6,400 a year. For three other reserves, working plans were in a forward state. In Upper Burma regular surveys and working plans cannot yet be undertaken; but linear valuation surveys are being made, rough surveys and working plans are under preparation for eight forests aggregating 752 square miles, while a rough survey and working plan has been completed for one forest of 80 square miles. It is anticipated that these rough working plans will suffice for some years to regulate the fellings in these forests. In Lower Burma fire protection was fairly successful; from 303 square miles of deciduous forest, or 88 per cent. of the protected area, fire was excluded, as compared with 215 square miles, and 70 per cent. in the preceding year; careful investigation showed that plantations, where the young teak was 10 years old or upwards, had not suffered much injury from fires, which had burnt back younger plants. It is reported that in the Upper Burma teak forests, where the rainfall is often less than in Lower Burma, fire protection

FORESTS.

on a large scale will be necessary in order to secure natural reproduction of teak. In Lower Burma the area of new plantations was 2,685 acres, a larger area than had been planted in any preceding year; and the plantations, chiefly teak, now cover 19,987 acres, or 31 square miles. There was a large increase in the yield of timber, thus:—

	1887-88.	1888-89.
	Cubic Feet.	Cubic Feet.
Lower Burma - - - - -	7,036,423	8,797,279
Upper Burma - - - - -	4,806,576	8,122,916
TOTAL - - - - -	11,832,999	16,860,195

The teak worked out of the forests increased by 13,644 tons in Lower Burma and by 61,051 tons in Upper Burma, as compared with the previous year, the total out-turn of teak being 195,405 tons. In consequence mainly of the increased yield, and partly by reason of a rise in the price of teak, there was a great advance in the forest revenue, thus:—

	Gross Forest Revenue.	Forest Surplus of Revenue over Expenditure.	
	R x.	Rx.	
Lower Burma - - - - -	{ 1887-88	221,889	118,619
	{ 1888-89	260,930	142,858
Upper Burma - - - - -	{ 1887-88	20,687	17,572
	{ 1888-89	157,992	79,479
Total - - - - -	{ 1887-88	251,576	136,191
	{ 1888-89	418,922	222,337

There was a decrease in the revenue from cutch (acacia catechu) in Lower Burma, as the cutch sources are being exhausted; cutch reserves are being selected in the upper and lower province.

The export of teak from Burma by sea was 156,434 tons, as compared with 168,294 tons in the preceding year. The despatches of teak to England showed an increase of 19,000 tons, the decrease being under the head of exports to Bombay. The average price was Rs. 80½ per ton, as compared with Rs. 69 in the year 1887-88.

Central Provinces.

The area of reserved forests in the Central Provinces was 19,712 square miles, of which 4,012 square miles were at the end of the year classed as A. or permanent reserves, and 16,040 square miles were classed as B. reserves. The B. reserves are available either for eventual transfer to the A. class, or for possible extensions of cultivation in future years. The demarcation of reserves was complete in 10 divisions, and was progressing in eight divisions; the boundaries of all A. reserves were in good order. Surveys, preparatory to the formation of working plans, were being prosecuted in the Ahiri forest and in three other lesser forests. Out of 7,481 reported offences against forest laws 7,303 were compounded under sanction of competent officers, and in 218 only were prosecutions undertaken, in 75 per cent. of which convictions were secured. Fire was successfully excluded from 96½ per cent. of the 2,502 square miles over which fire protection was attempted, at a cost of 13 rupees per square mile. The area under protection was one-third larger than in the previous year, and extended to one-eighth of the whole area of the reserves. No regular plantation work is attempted in the Central Provinces. The fees for grazing were raised during the year, with

FORESTS.

with the result that the animals sent into the forests were 2,550,834 horned cattle, and 353,746 sheep and goats, as compared with 3,210,776 and 429,534 in the previous year. It is believed that in consequence of the enhancement of the grazing fees, cattle owners resorted more largely to private forests. The forest revenue of the year was Rx. 118,040, against an expenditure of Rx. 59,959, leaving a surplus Rx. 58,080, or Rx. 1,403 more than in the preceding year. The increase of expenditure was in a higher ratio than the increase of income.

The reserved forests in Assam were increased by 147 square miles, bringing up the total area to 3,447 square miles. The proportion of reserved forest to the total area varies in the several districts from $17\frac{3}{4}$ per cent. in Cachar to $2\frac{1}{2}$ per cent. in Sibsagor, and $\frac{3}{4}$ per cent. in the Khasia hills. The forest surveys and working plans of the year were costly in proportion to the work done. Fire protection was carried out successfully over 96 per cent. of 506 square miles, or about 15 per cent. of the whole reserved area; 66 per cent. of the reserves consist of evergreen forest wherein fire protection is not needed. The boundaries of reserves were kept clear and in good order. An area of 81 acres, principally planted with rubber, was added to the plantations, which now cover 1,611 acres; attempts are being made to induce the tribes, who cultivate with the axe, to sow their clearings with timber trees. The yield of the Assam forests continues to increase, and is returned for the last year thus:—

Yield of—	1888-89.
	Cubic Feet.
Timber removed by Government agency - - -	5,699
" " " purchasers - - - - -	1,481,515
" " " ryots and other free granters	4,040,829
TOTAL Timber - - -	5,528,043

The export of rubber from Assam increased from 4,661 cwts. in 1887-88, to 4,768 cwts. last year; and the rubber revenue remained at about the same figure. There was a moderate increase in the number of bamboos and other minor produce taken from the forests during the year. An increasing quantity of local timber is worked year by year into tea-boxes by the saw-mills which have been erected in the different districts.

The financial results of the Assam forests were better than in any previous year; the gross revenue rose from Rx. 26,731 in 1887-88 to Rx. 30,388, while the expenditure fell from Rx. 22,689 to Rx. 20,990, leaving a surplus of Rx. 9,397, or more than double the surplus of 1887-88, in which year the Assam forest surplus was larger than it had ever been before. The large quantity of timber and forest produce removed by ryots and other residents free of duty is a guarantee that the Assam forest management does not press hardly upon the people.

No addition was made during the year to the reserved forests of Ajmere, which extend over 137 square miles, producing bamboos, grass, firewood, and minor timber. Fire protection was successful, as less than one square mile only was burnt; natural reproduction of bamboos and indigenous trees was reported to be good. The number of cattle admitted to graze in the reserves was reduced to 16,292 head, as compared with 36,259 admitted in the previous year; these numbers are besides the cattle belonging to registered holders of forest rights. The gross receipts were Rx. 13,573, mainly from grass and firewood. The forest surplus was only Rx. 210, or less than half the surplus of 1887-88.

The reserved forests of Coorg have been increased to an area of 248 square miles. The efforts to exclude fires were very unsuccessful, only 58 per cent. having been protected, while over 42 per cent. of the 201 square miles over which protection was attempted were burnt; many of the conflagrations

FORESTS.

grations are said to have been caused by hunters. Natural reproduction of forest has been much impeded by fires and by cattle grazing. An area of 83 acres was added to the plantations, which now contain 918 acres of young teak, 395 acres of young sandal-wood, and 125 acres of fuel copse near the town of Mercara; the cost of new plantations was Rs. 36 $\frac{3}{4}$ for teak and Rs. 18 $\frac{3}{4}$ for other timbers per acre. The rainfall registered at eight different forest stations in Coorg ranged from 27 inches to 190 inches. The timber yield of the forests was 120,651 cubic feet and 67 $\frac{1}{2}$ tons of sandal-wood, besides minor produce. The total forest revenue of Coorg was Rx. 13,618, against an expenditure of Rx. 8,017, yielding a surplus of Rx. 5,600, or Rx. 160 more than in the preceding year. Sandal-wood sales yielded Rx. 2,199.

Madras.

An area of 419 square miles was added to the reserved forests of Madras during the year 1888-89, bringing the total area of reserves up to 4,460 square miles. There are 12,495 square miles of other Government forests from which reserves have still to be selected; and concerning 4,300 square miles of this area investigations had been practically completed at the close of the year. Permanent marks were placed along 3,400 miles of reserves boundary, as compared with 3,346 and 2,137 miles in the two preceding years; but much demarcation work has still to be done. Surveys of the reserves were begun by professional parties in the Madura forests of the southern, and in the Bellary district of the northern circle; but only 185 square miles were completed. Working plans on a large scale cannot be prepared until the surveys are ready; but for casuarina and for teak plantations on the coast, for eight small forests in the Nilgiri hills, and for two forests in Bellary and Cuddapah working plans have been prepared and sanctioned. Fire protection was attempted over 3,168 square miles, of which 280 square miles were burnt and 91 per cent. were protected. In the previous two years the percentage of successfully protected area was 95 and 91 per cent. The cost of fire protection varied from 8 $\frac{1}{2}$ to 13 $\frac{1}{2}$, and averaged 10 $\frac{3}{4}$ rupees per square mile. Natural reproduction was satisfactory in the Sál forests in the Nilgiri reserves, as also in most of the area over which coppicing had been carried out; but natural reproduction failed entirely in the forests which had been burnt or which had been open to grazing. The net additions to the plantations covered an area of 223 acres, and the total area of plantations, including groves, was returned at 49,319 acres, on which Rx. 5,074 were spent during the year. The valuable timber plantations consist of teak in Malabar, eucalypti on the Nilgiri hills, and casuarina on the eastern coast. Considerable fellings were made in the casuarina groves, some of which yielded 50 tons to the acre from trees about ten years old; one acre of trees 20 years old yielded 112 tons, and the timber fetched five rupees per ton. The working of the Nellore casuarina plantations, according to the sanctioned plans, now yields 5 $\frac{1}{2}$ per cent. per annum on the total cost of the plantations, which stands at Rx. 29,600. The yield of the forests, according to the returns, was 3,178,346 cubic feet of timber and 15,425,185 cubic feet of fuel, besides bamboos and other minor produce. The forest revenue was Rx. 151,500, against an expenditure of Rx. 121,667, leaving a surplus of Rx. 29,833, or Rx. 5,193 more than in the previous year.

Bombay.

The area of reserved forests in Bombay was 10,237 square miles, of which 402 square miles, chiefly in the northern Deccan, were added during the year. The settlement of rights in and demarcation of reserves is complete in Sind, is three-parts done in the northern circle, and is making good progress in the southern circle. Forest surveys were effected over 484 square miles in reserves of the Kanara, Poona, Nasik, and Thana districts, and over 27 square miles in Sind. Working plans have as yet been prepared for only 1,143 square miles of the Thana forests, which have been divided into 287 blocks, wherein 156 compartments, each comprising one-fortieth of a block, are now open for felling timber. Fires traversed one-fifth of the forests of the northern circle, as compared with one-ninth during the previous year. In the southern circle and in Sind there was some improvement in the results of fire protection; but in Sind 11 square miles were burnt, or twice as large an area as in the preceding year. The progress of natural reproduction was said to be unsatisfactory in many parts, in consequence of the scanty rainfall in the Deccan and of forest fires in the southern

southern circle. An area of 840 acres was added to the regular plantations, while broadcast sowings of timber seeds were made over 42,533 acres of the Deccan forest area. There was a considerable increase in the yield of grass and minor products throughout the Bombay forests; but the increase in the timber yield was confined to the northern circle; in Sind there was a large decrease in the quantity of firewood purchased by the North-Western Railway, and in the southern circle the Southern Malhatta Railway took much less fuel and fewer sleepers. The reduction in gross receipts on account of forest produce supplied to these railways came to over Rx. 35,000, as compared with the previous year. The total receipts of the three forest circles in Bombay were Rx. 256,408, against an expenditure of Rx. 139,506, leaving a surplus of Rx. 116,901, or Rx. 6,896 more than in the preceding year. This result was mainly due to reductions in expenditure, which were possible in consequence of the reduced demand by the railways.

FORESTS

The area of Reserved Forests in Berar is 1,537 square miles, besides 2,614 square miles of unreserved forest; the demarcation has been completed, and the boundary marks are in good order. Working plans are in force throughout two forest blocks. Fires were excluded from 90 per cent. of the 1,040 square miles wherein fire protection was attempted, as compared with 96 per cent. successfully protected in the previous year. The natural reproduction of teak is reported to be poor, as the seedlings and shoots die down during the hot season. No addition was made to the area of the regular plantations; broadcast sowing of timber trees was continued in all districts, but with poor results. The forest revenue was Rx. 40,818, against an outlay of Rx. 16,929, giving a surplus of Rx. 23,889, or Rx. 1,419 above the surplus of the preceding year. Of the revenue, Rx. 10,320 accrued from timber, and Rx. 20,391 from grazing fees.

Berar.

X.

AGRICULTURE AND MINERAL RESOURCES.

AGRICULTURE.

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 business 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 of the crops, the range of prices, and the approach of dearth or famine in any particular tract.

Bengal.

The rainfall of 1888 was irregular and unfavourably distributed over the greater part of Bengal; the rainfall of July and August was excessive and caused inundations; while the rainfall of the later autumn was deficient. The harvests were short, more especially in North Behar and Orissa. The chief seats of distress were a tract in North Behar along the base of the Himalayas, where the winter rice crop failed utterly, and parts of Orissa. Relief operations were undertaken; relief works were opened; gratuitous relief was distributed; loans were made to agriculturists; in some limited areas regular relief circles, such as are required in time of famine, had to be organised. The distress did not abate till after the close of the year 1888-89. In North Behar the difficulty was adequately met, and distress was relieved; but in part of Orissa, especially in some of the tributary States, distress was severe, and caused misery, if not loss of life. In Central Bengal, where at one time anxiety was felt, the rice crop gave a bountiful yield, notwithstanding the heavy inundations early in the season. In Eastern Bengal the crops were good, but prices ruled high by reason of the dearth in other parts of the province.

The only experimental or model farms in Bengal are on private estates belonging to the Maharajas of Dumraon and Burdwan; on these estates valuable experiments were made, by direct agency and through ryots, with different manures, with deep ploughing, with new staples, and with improved methods of cultivating the potato, sugar-cane, and wheat; while on an experimental farm at Berhanpore, Mr. Mukerji gained valuable results by experiments with bone manure on potatoe and turnips, with potatoe seed, and with seed wheat imported from other parts of India. English ploughs, as was the case in former years, did not find acceptance with the ryots; but the Behea sugar mills continue to spread among sugar-cane growers. The efforts to improve Darjeeling potatoe culture, which had suffered greatly from potatoe disease, have so far failed. Mr. Mukerji, who, after graduating at Cirencester, studied the Pasteur system of combating the silkworm disease, continued his experiments in Bengal; he established that the Bengal disease, pebrine, must be counteracted by the same methods as the analogous disease among French silkworms; he succeeded in rearing at the November, January, and March crop, healthy silkworm seed for distribution in considerable quantities; and he is continuing his operations under the direction of the Bengal Silk Committee, towards whose undertaking the Government has made a grant of Rx. 500 a year. M. Pasteur's system of inoculating cattle as a protection against anthrax has been tried on the Seebpore farm under Mr. Bannerji, another Cirencester graduate, who studied at the Pasteur Institution in Paris. So far as his experiments went, it appeared that Bengal cattle could in this way be preserved from anthrax, but no final conclusion had been possible at the end of the year. Some few bulls and rams of good breeds were imported from Northern India into Behar and Chota Nagpore. For the encouragement of veterinary science a plan for adding a veterinary department to the technical college at Seebpore was under discussion. Forecasts of the Bengal jute and wheat crops were framed and published; and the demand for these forecasts is increasing among the commercial community of Bengal, in which province it has always been difficult to procure accurate agricultural information.

The

The yield of indigo in 1887-88 was two per cent. above the estimate ; and for the year 1888-89 the yield was expected to be seven per cent. larger than in the preceding year. The exports of indigo remained at almost precisely the same figures as in the year 1887-88, namely, 118,000 maunds, valued at Rx. 4,734,000. The wheat and rice exports from Calcutta showed a heavy decline by reason of the short harvest ; but the exports of jute and jute bagging were the largest on record.

The rainfall of the year in the North-Western Provinces and Oudh, was fairly sufficient, though irregular at the outset ; the winter rains were abundant, and the crops were up to the average. The breadth of autumn crops decreased, and of spring crops increased, while the combined crop area was about the same as in the previous year. Hail storms in Aligarh and floods in Banda did harm. There were no severe outbreaks of disease either among men or among animals. Prices of food continued high in consequence of the indifferent harvests of previous years. The more important statistics of agriculture in the combined provinces are as follows:—

North Western Provinces and Oudh.

	North-Western Provinces.	Oudh.
	Acres.	Acres.
Total area of crops cultivated - - - - -	29,764,151	11,258,061
Area twice cropped within the year - - - - -	4,519,773	2,429,758
Area irrigated - - - - -	6,208,290	763,953
Area of food crops - - - - -	25,343,851	10,363,709
Area of non-food crops (including sugar cane and tea)	4,420,300	894,352

The proportion of food crop in Oudh is specially large compared with other provinces of India.

The process of educating the village accountants and the staff of supervisors continued to make steady progress. The number of village accountants was revised and reduced from 31,098 to 30,410 in the combined provinces. In Oudh an Act was passed requiring landholders to contribute to the salaries of the village accountants, who had for some years been paid wholly by the State. Both in the North-Western Provinces and in Oudh there was marked improvement in the punctuality and correctness of the village records, and also in the proportion of papers that were tested by supervising officers. In 26 districts of the North-Western Provinces the village papers were inspected and tested by officers of the agricultural department, and were found to be "surprisingly accurate." Thirteen agricultural shows were held during the year, of which those at Aligarh, Meerut, and Seharunpore were the most successful. A monthly agricultural journal was published throughout the year in Urdu and in Hindi ; for the former there were 75, and for the latter 22, subscribers, while nearly 300 and 175 copies were distributed to landholders who helped the Agricultural Department with information. At the Cawnpore experimental farm the year's proceedings demonstrated, among other things, that the most economical manure was farm-yard manure ; that green soiling with hemp was useful ; that moderately deep ploughing of five inches gave better results than deeper ploughings of six to nine inches ; and that feeding cattle with oil-cake, and applying the manure to the land, was more economical than applying the cake direct. The demonstration farm at Meerut was successful in procuring the extensive use of a more useful variety of Indian corn in the Meerut district. Sixty-seven ploughs, and the services of trained ploughmen, were either let or lent to landholders from the experimental farm. Well-boring apparatus and trained apprentices for the use thereof were lent to landholders, and 124 borings were thus effected. The Seharunpore gardens suffered from a violent storm ; but the year was, on the whole, favourable. The fruit crop was good ; the plants, cuttings, and seeds distributed or sold showed a large increase over the previous year ; the demand for trained gardeners was in excess of the supply, and the men sent out got good wages ; interesting and useful experiments were made with exotic fruit trees,

AGRICULTURE.

foreign varieties of sugar-cane, huskless barley for malting, and with the mesquit bean as fodder. The gardens cost Rx. 1,891, earned Rx. 1,612 in cash receipts, and saved an outlay of Rx. 497, by furnishing seeds and plants to soldiers' gardens, and by supplying drugs for the public service.

Agricultural shows are reported to be growing in popular favour, and some of the more important fairs were very successful; competitive trials between new patterns of sugar mills and between other agricultural implements were eagerly watched. Most exhibits sent by the department were bought, and in some cases duplicates were ordered. At one fair the number of agricultural exhibits alone came to 2,799; and at another improved ploughs were distributed to prize-winners who had gained money prizes. Eighteen selected bulls of Indian breeds and two Brittany bulls were bought and distributed in different districts. The number of horse stallions maintained by Government in the horse-breeding districts was 115, while there were 5,223 mares branded as fit for the services of these stallions. The season was not favourable for horse-breeding; and there was a small decrease in the number of mares served, and of foals dropped to each stallion, the latter ratio being $11\frac{1}{4}$ as against $12\frac{1}{2}$ in the previous year. The value of prizes distributed at the seven chief horse fairs was Rx. 615; and the number of re-mounts bought for the public service at these fairs increased by 46 per cent. The number of donkey stallions kept for mule-breeding was 82; and the demand for more donkey stallions is considerable, as mule-breeding is becoming popular. The number of mules foaled during the year was 1,299, or nearly 17 foals to each donkey sire.

Punjab.

The autumn rainfall of 1887-88 in the Punjab began late, and in parts ended early. The winter rains were late but abundant. In the sandy tracts to the west, the autumn crops suffered severely from drought. The spring crop gave a good yield, the total wheat harvest being estimated at 1,666,000 tons as against 1,517,852 in the preceding year; the average yield was taken at $9\frac{1}{2}$ bushels per acre. The wheat exportation was smaller than in some previous years by reason of the depletion of food stocks, in consequence of the short harvests during the year 1886-87. So far as the facts are known, the wheat area has not increased at the expense of other crops; for the breadth of wheat has extended only at about the same rate as other food crops. But the area of wheat varies from year to year according to the rainfall; for instance, a bad autumn harvest with heavy rain in September results in extended wheat sowings, while a good autumn harvest with light rain in September, is followed by restricted wheat sowings. The oil-seed area was 474,000 acres, or 33 per cent. larger than in the previous year, while the yield was 52 per cent. heavier. There was a decrease of 444,000 acres, or 41 per cent., in the cotton area, and of 47 per cent. in the yield of cotton as compared with 1886-87.

Cattle disease was prevalent in several districts during the year, but as yet the means for checking such disease are inadequate. Bulls from the Hissar Farm were sold to landholders for the service of their herds; and prizes were given at the great cattle fairs to the best stock exhibited. At seven of the principal fairs the number of cattle exhibited were returned at 259,579, of which as many as 171,003 head were sold. The Lahore Veterinary College continues to advance in popularity and usefulness; 33 students presented themselves for the final examination, of whom 25 obtained certificates, and seven were placed in the first class. Students are sent to the college from Native States as well as from British districts. In the horse-breeding districts 156 horse stallions and 205 donkey stallions were employed at the end of the year; the horses included 74 Norfolk trotters, 52 Arab, and 25 English thorough-breds; among the donkeys were 89 of Italian and 44 of Persian breed. The produce reported by owners of mares brought to Government stallions was 1,703 horse, and 2,513 mule foals. The number of mares branded as fit for Government stallions was 11,416 in the whole province. It is said that breeders often fail to report the produce of their mares; and that horse-breeding is not now so popular with landowners as it was a few years ago, partly by reason of the recent unfavourable seasons. It is expected that the decision to purchase very young horses to be reared at Government studs will give much stimulus to the horse-breeding industry. At 12 of the larger horse fairs for which returns were available, the number of horses

horses exhibited rose from 5,928 in 1888 to 6,647 in 1889; of donkeys, AGRICULTURE. from 806 to 1,537; and of mules, from 1,621 to 1,830; and the prizes awarded at these 12 horse fairs amounted to Rs. 12,451.

The duty of supervising and improving the village land records and the village officials concerned therewith, received much attention during the year. Examinations of the Kanungos, or local supervisors of land records, were held in 17 districts; their offices and records were inspected. The correct and punctual preparation of the yearly village papers, the maintenance of village note books, and the constant attendance of the patwaris, village accountants and land surveyors, are being enforced by constant inspection; and improvement is by degrees being obtained.

Experiments in new staples, in new methods of cultivation, and in new machinery, are made chiefly at the Agri-Horticultural Society's Gardens. But something was done under the orders of the Director of Agriculture for exhibiting agricultural machinery, such as threshing machines, at three of the principal fairs. Gradual progress is being made in the using of town sewage and refuse on irrigated lands near Lahore and Amritsar.

The rainy season of 1888 was favourable in Burma; and the rice crop, Burma. which occupies most of the cultivated area in Lower Burma, was abundant. In Upper Burma there was considerable extension of cultivation, and the harvests were on the whole good. Partly by reason of the good crop in Lower Burma, and partly by reason of the reduced demand for rice in the upper province, the exports of rice by sea from Lower Burma to places outside India reached 909,178 tons in the calendar year 1889, as compared with 756,424 tons in the year 1888. The total area under cultivation in Lower Burma showed an increase of 243,944, or nearly 6 per cent., as compared with the preceding year. The attention of the Agricultural Department was mostly devoted to the correct preparation of the village land records in Lower Burma. The supplementary survey and yearly correction of these records was carried on in seven districts, which comprise five-ninths of the cultivated land. There was an increase in the proportion of work tested by superior officers; many mistakes were found, but the errors were in the vast majority of cases of less than half-an-acre. The mistakes were usually against the interest of the occupier and in favour of the revenue, so they must have been due to carelessness rather than fraud. The character of the work is gradually improving, and revenue officials of all grades are giving more and more attention to the matter. Considerable additions have been made in the settled districts to the areas reserved as grazing grounds. The work of verifying and renewing the boundary marks of villages, and of grazing grounds, has been systematically prosecuted. From the old survey schools 223 certificated students passed out, and a new survey school was opened in Upper Burma. Analysis is being made of the probable supply of all food grains grown in each township, and of the consumption therein, of the possible causes of failure in the supply, and of the sources and routes by which such failure could be made good. Failure of food is hardly possible in any considerable tract of Lower Burma, but occasional difficulty arises in small landlocked tracts, while in parts of Upper Burma the crops are sometimes scanty. The attempts to promote wheat cultivation in the Shan States were not successful; neither were the experiments with barley and oats in Shwebo. Several kinds of European and Indian garden vegetables were introduced and succeeded in the Chindwin and other districts; and Indian policemen took much interest and share in the experiments. Agricultural shows, with prizes for cattle, for straw, for manured fields, for field embankments, for water supply to cattle, for cowsheds, and for wells, were held in five districts, and were popular with the Burmans.

Seventeen veterinary assistants were employed in combating cattle disease; of these all but one gave satisfaction to the people; and more of these men are required. Cattle disease was rife, and mortality among cattle was serious in 17 districts during the year, more especially in those districts into which large droves of cattle are brought for sale. Five Arab stallions are kept by Government, two by local committees, and five by private persons in Burma; and their services are said to be appreciated by the people.

The rainfall of 1888-89 was deficient and unseasonable throughout the Central Provinces. Central Provinces. Exceptionally heavy rain in July and August was followed

AGRICULTURE.

followed by dry weather in September and October. The cotton crop was very good, as is usually the case in dry seasons; the millet crop was good; but the rice, the wheat, and the linseed harvests were poor. Prices of rice and wheat ranged high, notwithstanding the bountiful wheat crop of the spring of 1888. Returns of crops cultivated are available for only 46,000 square miles out of the total area of 116,000 square miles; out of that area 44 per cent. was under crop and 6 per cent. was returned as "current fallows"; the proportion of cultivated land varies from 65 per cent. of the total area in the Wardha district to 20 per cent. in the Chanda district.

The areas under the principal crops were:—

Food grains:	Acres.	Acres.
Wheat - - - - -	4,045,399	
Rice - - - - -	3,785,566	
Millets, &c. - - - - -	4,298,061	
		12,129,026
Other crops:		
Oil-seeds - - - - -	1,302,523	
Cotton - - - - -	674,559	
Miscellaneous - - - - -	570,213	
		2,547,295
		14,676,321

The area producing two crops a year was returned at 806,271 acres.

The reorganisation, instruction, and supervision of the village accountant-surveyors (patwaris) has been diligently prosecuted; and patwaris have been established in some of the wilder and less populous tracts. A staff of inspectors or supervisors has been organised to control and direct the patwaris of each district. The regular preparation of the village papers is impeded while settlement operations are in progress; but the great advance secured in the efficiency of the patwaris is manifest from the way in which they are now effecting the cadastral survey of the province, and will be apparent in the improved village papers as soon as settlement work is concluded. Two large blocks of State waste in the Nerbudda Valley have been mapped and divided into lots by the patwaris, and are now ready for the ryots who are anxious to settle thereon. In order to encourage irrigation, patents guaranteeing persons who improve their land from any enhancement of revenue in respect of the improved value are being given to proprietors or ryots who effect improvements. The most important feature of the Nagpur experimental farm is the agricultural class, 22 students of which recently went up for their first year's examination. The course is said to be a very practical one, and qualifies for the office of inspector of patwaris. The instructor is the superintendent of the farm, a Native of India. Among the more important experiments of the year was ploughing green hemp into a field before it was sown with wheat, with a result that the out-turn increased by about 20 per cent. No less than 472 experimental cuttings of crops were made in several districts, mostly under the personal supervision of settlement officers, in order to test the average yield. The net result tended to show that the standards of yield previously accepted were below the truth; and it was inferred that the present rates of rental and revenue are decidedly light in most parts of the provinces. Against this inference has, however, to be set the statement that "a very large proportion of the land held by village proprietors is heavily mortgaged and must inevitably come shortly to the hammer."

Assam.

The season of 1888-89 was, on the whole, good for agriculture in Assam; but the potatoe crop on the hills was, for a second year, very short. Continued improvement is reported in the correctness and punctuality with which the village land records are prepared; the percentage of error disclosed

closed by testing was 3.57, as compared with 4.97 in the previous year; the errors were chiefly in the direction of understating the cultivated area. The outcome of crop cuttings, over 843 acres, in different parts of the Assam Valley, gave an average yield of 20 maunds (or about 32 bushels) of paddy, or rice in the husk, per acre; the average of many testings of sugar gave a yield of 1,515 lbs. of coarse sugar per acre of sugar-cane. The attempts to introduce *Puerh* tea, to grow *Eri* silk, and to introduce the potatoe into new districts were mostly failures. For the improvement of cattle eight bulls were imported from Northern India in behalf of Assamese landholders in the Mangaldai sub-division, who paid all charges. Three bulls kept by local committees served 213 cows, as against 118 in the previous year.

The rainfall of 1888-89 was below the average in almost all districts of Madras; the average of all reporting stations was 40 inches, against 47 inches in the previous year. In some of the central districts the crops were short. In Ganjam the season was disastrous, the early rains were short, and the later rains (N.E. monsoon) failed entirely; the rice crop was seriously affected throughout the district, and was in parts totally lost. In October 1888 prices rose 20 per cent.; although rain fell at the end of the month the crops had been lost, and distress began to increase among the poor. Relief works were opened, a relief staff was organised, advances were given, and gratuitous relief was given at 93 places in the district. At one time there were as many as 19,000 persons employed and paid on the relief works, and 69,606 persons receiving gratuitous food or other assistance. The distress abated somewhat in July and continued to decrease during the autumn of 1889. The season of 1889-90 was favourable, and the harvests were bountiful; but it was not until November 1889 that all relief operations in Ganjam were closed. During the period of distress the price of food never reached the high rates of the great famine in 1877. Food was brought into the district by private importers from Orissa and from the south by land, and by sea up to April when landing goods became impossible. The only case in which the Government interposed in the grain trade was when they bought 1,000 tons of seed rice for distribution to the ryots in the most afflicted districts. The difficulty experienced in communicating with Ganjam by sea after April gave much impetus to the scheme for continuing the coast railway from Bezwada towards Orissa, a work which will probably be completed before the next failure of the crops in Ganjam. Though distress was widespread and keen, it is certain that relief operations were more prompt and effective, and that the misery was far less severe than in the previous Ganjam famine of 1865-66. There was much increase in the mortality from disease, and in one week the cholera deaths in the Ganjam district reached 1,478.

Outside Ganjam the season was not on the whole unfavourable; and there was an increase of 457,000 acres, or $1\frac{3}{4}$ per cent. in the total cultivated area, as compared with the preceding year. The increase was confined to the second-crop cultivation; under first-crop land there was a decrease owing to short rainfall at the beginning of the season. Compared with the cultivated area of the Presidency before the famine of 1877, the figures for 1888-89 show an increase of 410,600 acres, or $2\frac{1}{2}$ per cent. There was a general rise of prices as compared with the previous year; but the average rate of wages remained stationary. The areas under cotton, indigo, and sugar-cane showed a considerable increase. The condition of cattle was not good, and the reported mortality increased by 27 per cent.

A committee was appointed to revise the system of village accounts and returns, but their report was not furnished till after the close of the year. Meanwhile the reform of the village establishments was undertaken and sanctioned for four districts. The village records and yearly village papers are improving; but the inspectors of rural circles are not yet fully efficient, though a considerable number of them passed the prescribed examination during the year. The dates of all land revenue instalments were revised in accordance with the principle that the instalment should not be payable until the harvest was over. There is now no Government farm in the presidency; and the stock of breeding bulls was sold off. Agricultural shows at Bellary and Salem were successful; and the travelling show of agricultural implements passed through four of the central districts,

AGRICULTURE.

obtaining orders for over 300 small ploughs. In the Tinnevely district there is now a private local manufacture of improved light ploughs. Experiments with imported barley and oats seed in the Nilgiri districts were unsuccessful. Specimens of shade-dried tobacco, prepared under the direction of a professional tobacco curer at the Madura district, were sent to England and pronounced by sundry tobacco curers and brokers to be unsuited for the British market, though the leaf by greater care and skill in manufacturing might perhaps be made fit for English tastes.

Bombay.

The rainfall of 1888 was below the average throughout the Bombay Deccan and Guzerat, but was fairly good in the Konkan and the south. There was a shrinkage of 338,000 acres, or 7 per cent., in the non-food crops, and of half per cent. in the food crops by reason of the unfavourable season. The yield of the great millets, the staple food of the poor, was good; but the yield of cotton, wheat, and oilseeds was poor. At one time there was fear of scarcity and distress, but a cyclonic fall of rain in November saved the country from such a disaster. There was a considerable increase in the irrigated area, which comprises $3\frac{1}{2}$ per cent. in Bombay proper, and $99\frac{1}{2}$ per cent. in Sind of all the cropped land. The dry season and consequent lack of fodder caused unusual mortality among the agricultural stock, which were fewer by 1 per cent. at the end than at the beginning of the year. The area for which accurate agricultural statistics are furnished has been extended; and the food crops area was returned at 82 per cent., and the non-food crops at 18 per cent. of the cropped lands. In the districts of Dharwar and Bijapur only are the village measurements, registers, returns, and boundary marks regularly tested by a special agency; there was an increase in the number of tests, and an improvement in the accuracy of the work checked.

The experimental farm work in Bombay is being contracted; the Khandesh farm is being devoted chiefly to stock-raising; the Poona farm is being made a training ground for Poona agricultural students; and the Hyderabad farm has been taken over by the Municipality. The purchase of good breeding bulls by the villagers is extending; and the need for good sires is greater than it was, because the number of bulls set free by Hindoos in the name of religion is decreasing. Passed students of the Bombay Veterinary College are finding useful work at veterinary dispensaries, which have been established at four places under the new system, whereby a municipality or district board establishes and maintains the dispensary, while the Agricultural Department gives a grant-in-aid and inspects. The agricultural section of the Poona College of Science is being enlarged, and the Bombay University have instituted a diploma in agriculture. The acting director of agriculture in Bombay during the greater part of the year was a Native of India, who appears to have treated his duties in a practical and intelligent manner.

The number of horse stallions maintained during the year was 117, of which the bulk were of Arabian breed, only 23 being English animals. Native chiefs in Kathiawar keep stallions for their own territories. There was an increase of 29 per cent. in the mares covered, and an average of 37 per cent., as against 34 per cent. in the previous year in the ratio of foals to mares. At nine of the chief horse fairs Rx. 1,915 were distributed in prizes, and 430 good remounts, as against 162 in the previous year, were bought for the public service. It is said that the number of good mares and of excellent young stock is increasing. The number of donkey stallions was 23, chiefly of Italian and Persian breeds; and 76 mules were foaled, an increase of 18 over the previous year's produce.

Berar.

The rainfall of Berar during 1888-89 was 30 inches, as compared with 52 inches in the preceding year, and an average of $38\frac{1}{2}$ inches. The season was, however, favourable to the staple crops of millet (jowari) and cotton, which amount to 63 per cent. of the crop area in Berar. The cotton yield and the cotton export were the largest for many years. Prices continued to be fairly high. The millet area increased by 7 and the cotton area by $3\frac{1}{2}$ per cent. as compared with the previous year; while the average cotton yield per acre was more than double that of the previous year. The Bombay Director of Agriculture visited Berar, and after consultation with local officers prepared a scheme for supplying improved cotton seed from the Amraoti

Amraoti experimental farm; but the scheme has not yet been carried out. The increase in cattle and other agricultural stock continues; and there was a small increase in the revenue from grazing dues. Berar was for a second year free from serious ravages of cattle disease. The Amraoti cattle show succeeded better than in the previous year, though but few exhibits came from districts outside Amraoti. The Arab pony stallions supplied by Government covered 178 mares during the year, or 51 more than in the preceding year; but the young stock from these stallions has not yet come into the markets. Efforts to popularize mule-breeding in Berar have failed; and the donkey stallions have been returned to the military department. The Berar students at the Bombay Veterinary College have done well during the year; one student passed his final examination, obtaining a diploma; four passed their second and one his first examination. It is intended to appoint one of these veterinary officers to each district, to equip him with medicines and appliances for treating cattle, and to assign him a place at each district head-quarters where he can be consulted by the ryots and other owners of cattle.

AGRICULTURE.

Forecasts continue to be published by the several agricultural departments of the areas under, and of the crop prospects of the more important staples, namely, wheat, oil seeds, rice, cotton, and jute. The central agricultural department issues printed copies of these forecasts and of the final reports of the chief crops to newspapers in India and England for publication; and the department has now undertaken to issue during the cotton season four compiled cotton crop forecasts for all India at intervals of two months; this latter arrangement has been made at the special request of the Blackburn Chamber of Commerce.

CROP FORECASTS.

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

WHEAT.

	Average Wheat Area for Four Years from 1884.	Area cultivated with Wheat in	
		1888-89.	1889-90.
	Acres.	Actual Area in Acres.	Acres. as Estimated
Punjab	6,618,000	6,919,000	6,575,000
North-Western Provinces and Oudh	5,074,000	4,777,000	4,589,000
Central Provinces	4,125,000	3,866,000	4,046,000
Bombay and Sind (including Native States)	2,914,000	2,970,000	2,781,000
Berar	917,000	942,000	846,000
Bengal (estimated)	1,034,000	990,000	1,016,000
Rajputana	1,557,000	1,657,000	1,600,000
Central India (estimated)	2,617,000	2,617,000	2,600,000
Nizam's Territory	1,111,000	1,111,000	1,110,000
Mysore (estimated)	14,000	5,000	5,000
Cashmere	500,000	500,000	500,000
Madras	27,000	27,000	20,000
Other Native States, probably about	800,000	800,000	800,000
TOTAL	27,308,000	27,181,000	26,422,000

The season of 1888-89 was on the whole unfavourable to wheat cultivation; in some provinces the rainy season continued too long, in others it ceased too early; the Christmas rains were scanty, and the Punjab wheat harvest was in danger until favourable rain fell in February. The total wheat area was somewhat less than in the previous year; in the Punjab the crop was good, but was poor in the North Western Provinces, Oudh, and the Central Provinces; and the total out-turn of wheat for all India was estimated at 12 per cent. less than in the previous season. The food stocks in the country

0.89.

were

AGRICULTURE.

were not large; and the wheat exports from India were much below the average. The wheat exports of the past seven years have been,—

1,047,824 tons in - - - 1883-84	676,908 tons in - - - 1887-88
792,714 " " - - - 1884-85	881,114 " " - - - 1888-89
1,053,025 " " - - - 1885-86	690,261 " " - - - 1889-90
1,113,167 " " - - - 1886-87	

Besides this export of wheat, an export of flour ground at mills in Bombay has arisen, which reached 322,164 cwts. in 1887-88, and remained about the same in 1888-89. Most of this flour goes to ports in Asia and Africa. The wheat exports go, nearly one-half, to the United Kingdom, and the rest to Italy, France, and other parts of Europe. The latest accounts of the wheat harvest of 1890 are that the yield is good in Bengal and the Central Provinces, poor in Bombay, and fair in other provinces. The area under wheat in 1888-89 was somewhat below the average, and the estimated area of 1889-90 is still smaller than in the previous year. So far there is no immediate prospect of a return to the high level of wheat exports which prevailed in 1883-86; and the recent rise in the silver market, if continued, may affect wheat exportations from India.

COTTON.

The area under cotton is returned at:—

	Average of two years 1886 and 1887.	Ascertained figures of 1888.	Estimated figures for 1889.
	Acres.	Acres.	Acres.
Madras - - - - -	1,670,000	1,507,000	1,387,000
Bombay and Sind - - - - -	2,568,000	2,762,000	2,872,000
Bombay Native States - - - - -	2,673,000	2,620,000	2,874,000
North West Provinces and Oudh - - - - -	1,772,000	1,399,000	1,659,000
Punjab - - - - -	880,000	756,000	964,000
Central Provinces - - - - -	626,000	674,000	790,000
Berar - - - - -	1,957,000	1,994,000	2,000,000
Nizam's Dominions - - - - -	932,000	950,000	950,000
Central India - - - - -	296,000	286,000	290,000
Rajputana - - - - -	595,000	655,000	650,000
Other Provinces and Native States (estimated)	1,335,000	1,335,000	1,335,000
TOTAL - - - - -	15,304,000	14,938,000	15,771,000

The cotton yield of the year 1889 was good in the North Western Provinces, but middling to poor elsewhere.

The exports of raw cotton from India were:—

1884-85 - - -	5,066,057 cwts., valued at Rx. 13,286,300
1885-86 - - -	4,189,718 " " " 10,777,200
1886-87 - - -	5,432,648 " " " 13,468,400
1887-88 - - -	5,374,542 " " " 14,412,800
1888-89 - - -	5,331,904 " " " 15,046,593
1889-90 - - -	6,325,898 " " " 18,669,934

Of this last quantity 34 per cent. was consigned to the United Kingdom, or about the same proportion as in the previous year.

The

The cultivation and the production of tea in India continues to increase. The returns for the last three years show:—

AGRICULTURE.
TEA.

	Area growing Tea, in Acres.		
	1886.	1887.	1888.
Bengal	69,810	73,641	79,962
Assam	203,993	211,079	216,576
Madras	7,023	11,301	11,301
North Western Provinces	8,373	8,280	8,556
Punjab	9,085	8,502	9,204
TOTAL	298,284	312,803	325,509

The yield per acre was returned at 386 lbs. in Assam, or the same as in the previous year, and at 343 lbs. per acre in Bengal, or somewhat better than in the previous year. The total exports of Indian tea are returned at,—

78 $\frac{3}{4}$ million lbs. in 1886-87 | 97 million lbs. in 1888-89
 87 $\frac{1}{2}$ " " 1887-88 | 103 $\frac{3}{4}$ " " 1889-90

According to British returns the importations of tea into the United Kingdom were:—

Tea Importations into the United Kingdom, from		1887.	1888.	1889.
China	Lbs.	119 $\frac{1}{2}$ million	105 $\frac{1}{2}$ million	88 $\frac{3}{4}$ million
	Value £.	4,641,000	4,336,000	3,616,000
India	Lbs.	84 $\frac{1}{2}$ million	89 $\frac{3}{4}$ million	127 million
	Value £.	4,211,000	4,416,000	
Ceylon	Lbs.	13 million	22 $\frac{1}{2}$ million	6,167,600
	Value £.	756,000	1,244,000	
TOTAL	Lbs.	217 $\frac{1}{2}$ million	217 $\frac{1}{2}$ million	215 $\frac{3}{4}$ million
	Value £.	9,608,000	9,996,000	9,783,000

The area under coffee shows a decrease, as compared with the previous year's figures, thus:—

COFFEE.

	1887-88.	1888-89.
	Acres.	Acres.
Coorg	84,658	82,335
Madras	59,612	56,094
Mysore	113,116	113,116
Travancore, Cochin, &c.	8,751	8,751
TOTAL	266,137	260,296

AGRICULTURE.

The coffee crop suffered severely from a long drought, and also from showers falling on the blossoms when open. The exports of coffee from Coorg fell from 93,240 cwts. in the previous year to 55,230 cwts. in 1888-89; and the total coffee exports from India were 239,795 cwts. in 1889-90, as compared with 365,000 cwts. in the previous year.

CINCHONA

On the Government plantations of the Darjeeling district in Bengal there were, at the end of the year, 4,810,231 cinchona trees, or 40,000 less than in the preceding year. Of the existing trees two-thirds are of the pure quinine yielding variety, and one-third belong to the cinchonine yielding variety. Seven years ago the more valuable trees were only one in four, so the substitution of the quinine yielding variety is proceeding rapidly. During the year 395,000 trees were uprooted for their bark or died, while 354,000 were planted out. The harvest of dry bark was 373,000 lbs., the largest ever taken. The Darjeeling plantations have now yielded, since their formation, $4\frac{1}{2}$ million pounds of dry bark for use in India. Nearly the whole of the year's yield was made over to the factory, which manufactured 6,384 lbs. of cinchona febrifuge and 2,191 lbs. of sulphate of quinine. The oil process described in last year's Statement continues to be successful, and the out-turn of quinine rose from 331 lbs. to 2,191. The issues of these medicines fell from 8,089 lbs. to 7,489 lbs., by reason of the cheapness of quinine in the market. The sales and issues of medicine during the year yielded a profit of Rs. 2,784 over and above the cost of the plantation and the factory. The superintendent of the plantation, Dr. King, explains the condition of the cinchona and quinine market, thus:—

“The chief cause of the extraordinary low price which has for some time ruled for cinchona bark, and, as a consequence, for quinine and the other cinchona alkaloids, is the immense exportation of bark from Ceylon. When coffee, which for a long time was the staple production of Ceylon, began, some years ago, to fail because of a disease which attacked the coffee tree, cinchona was largely substituted by the planters of that colony for the failing staple. And some idea of the extent to which this was done may be gathered from the following figures. During the year ending 30th September 1880 (using round numbers) $1\frac{1}{4}$ million lbs. of cinchona bark were exported from Ceylon to London. During the year 1883-84 the quantity rose to 11 millions, and the following year the quantity was about the same. During 1885-86, 15 million lbs., and during 1886-87, 14 million lbs., were exported. In 1887-88 the quantity fell to 11 millions, and during the current year it is expected to show a further fall. The explanation of all this is simply that, when cinchona began to fail from disease and depreciation in quality, the Ceylon planters turned their attention to tea-planting with such energy that they cut down their cinchona trees to make way for tea bushes; and, not being able to hold their bark, they were obliged to force it on the London market, to be sold for what it would fetch. The result has been an enormous fall in price, bark having been freely obtainable in London for several years past at prices considerably below the cost of production; and quinine having, as a consequence, fallen to a figure far below anything previously heard of. The exportation of bark from Java has also greatly increased of late years. South American bark, which a few years ago was our only source of quinine, has practically been driven out of the market. And the world has thus been drawing its supplies of quinine, for some time past, chiefly from bark grown in British and Dutch colonies in Asia. The efforts of the Governments of Great Britain and Holland to secure for their tropical subjects a cheap remedy for the commonest of all tropical diseases have thus culminated in a more triumphant success than was ever anticipated. But this state of affairs cannot last much longer. Ceylon planters will not go on planting cinchona trees to sell their product at a loss. As a matter of fact, planting has already ceased, and exportations are beginning to diminish; and, in the course of a year or two, the price of cinchona products must rise.”

In the Government plantations on the Nilgiri Hills in Madras there were, at the end of the year, 1,709,656 cinchona trees, of which only 70,693 belong to the red bark or inferior variety; the total is 31,000 less than in the previous year. A crop of 110,162 lbs. of dry bark was gathered, of which 18,350 lbs. were made into medicine, and the rest stored. At the end of the year the bark in store was 335,780 lbs.; which has been kept until appliances

are

are complete for the local manufacture of quinine by the oil process which has been introduced in Bengal. The cost of the Madras plantations has been brought down from Rx. 6,522 in 1885-86 to Rx. 5,515 in the year 1888-89. But until the factory is in operation the receipts of the plantations are small, now that Madras bark is no longer sent to London for sale. AGRICULTURE.

The area under cinchona on private plantations is returned at about 13,000 acres, chiefly in Madras, Mysore, and Coorg. From the last-mentioned district it is reported that the cultivation of cinchona is being gradually abandoned, owing to the low price of bark in the market, and because the shade of cinchona trees injures the coffee plants. The exportation of cinchona bark from India by sea, which had risen to 3,074,098 lbs. in 1888-89, or more than double the total of either of the two preceding years, was 1,854,632 lbs. in the year 1889-90.

The season of 1888-89 was very favourable to the jute industry; the crop was large and prices were high. The exportations of raw and of manufactured jute were valued at Rx. 7,897,000 and Rx. 2,571,000, as compared with Rx. 9,643,000 and Rx. 1,746,000 in the year 1887-88, in which year the jute trade had been larger than in any previous year. The estimate of the jute crop for the season 1889-90 shows that the area sown with jute was about normal, and that the yield was expected to be somewhat below that of a full average crop. JUTE.

MINES AND MINERAL RESOURCES.

There was a considerable increase in the production of Indian coal during the year. The collieries belonging to the East India Railway yielded 308,796 tons in the year 1888, the largest output they have ever given. The Makum coalfield in Upper Assam yielded 101,527 tons, and this coal is now used and appreciated by ocean steamships visiting Calcutta. The Warora colliery yielded 134,366 tons, or 23,611 tons more than in the previous year, yet the demand for this fuel on the Great Indian Peninsula and Bengal-Nagpur Railways exceeded the supply. The Mohpani colliery in the Nerbudda Valley supplied 23,442 tons; the Umeria colliery in the Rewah chiefship yielded 49,880 tons, or twice as much as in the previous year; from the Singareni colliery in the Nizam's territory were raised 13,382 tons in 1888, and 10,051 tons during the first three months of 1889; the Dandot colliery in the Northern Panjab yielded 15,200 tons, or double the previous year's output; and the coal seams recently worked in Khost, on the Sind-Pishin Railway, supplied 2,801 tons of good fuel in 1888, and 1,722 tons during the first three months of 1889. The collieries in the old coal fields of Bengal gave an output of 1,071,798 tons, besides the yield of the mines belonging to the East India Railway. No systematic working of the coal in Burma has yet been attempted; but some hundreds of tons from the Kalé outcrop near the Chindwin were burnt by steamers plying on that river. MINERAL RESOURCES.
Coal.

The total yield of all collieries in India continues to increase, thereby reducing the demand for imported coal, which is now less than half the amount of the Indian output, thus:—

	Coal produced in India.	Coal imported into India.
	Tons.	Tons.
1886 - - - - -	1,388,587	765,768
1887 - - - - -	1,560,393	848,878
1888 - - - - -	1,708,880	833,478

Of the coal importations 97 per cent. came from the United Kingdom, and the remainder mainly from Australia.

MINERAL
RESOURCES.
Earth Oil.

The petroleum field in the Akyab and Kyaukpyn districts yielded 219,000 gallons, of which 58,400 came from wells owned by European companies and the rest was produced from shallow wells by native workers. The oil industry in Lower Burma is not increasing; and, so far as is known, the oil-bearing strata are irregular and broken. The Upper Burma oil-bearing field extends over parts of the Minbu, Magwé, Pagan, and Pakoko districts: and the principal oil-producing tract is a small area near Yenauyaung on the banks of the Irrawaddy, about 350 miles from the sea. A British company, who worked this field in the times of the late Burman King, and who have a refinery at Rangoon, hold a lease of the Government wells in this field and have contracted to buy the oil produced by native wells; they have brought machinery to the site with the view of putting down deep wells and employing American appliances for raising the oil. Other companies are applying for concessions or for prospecting leases in other parts of the oil-field; and it is expected that before long the capabilities of the field will be more fully tested. The old wells were mostly about 150 feet deep, and none was more than 270 feet deep. By the last report there were in the whole oil-field of Upper Burma 526 wells, of which 281 yielded oil; and the total output was about 2,555,000 gallons a year. At present the strata yielding oil are about 200 feet below the surface; but it is believed that oil will be found at greater depths. Until the field has been tested by deep borings, and until improved appliances for raising the oil have been fairly tried, it is not possible to say how far the production may be increased. The Geological Surveyor, who reported on the field, hazarded the conjecture that the output might hereafter be raised to ten times the present total.

In the Punjab a concession has been granted to an English company to search for and extract earth-oil in certain of the Northern districts; a bore-hole has been put down 700 feet; but no oil had been discovered.

In Baluchistan two borings in the Khattan oil-field have been carried down 535 feet and 700 feet, respectively, without result; but it is expected that the yield of the existing wells will now be fully tested by an attempt to deliver 300,000 gallons a year through pipe-lines to the works on the Khojak range. Meanwhile, indications of earth-oil have been found at Kirta in the Bolan Pass, close to the railway, and steps are being taken to test the quantity and quality of the oil, which appears in strata that are geologically 1,000 feet higher than the oil sources of Khattan. The investigation of the Shoran oil sources, recently found in the Khan of Khelat's territory, is postponed until the actual facts of the Kirta oil source are ascertained.

The importations of earth-oil into India by sea continue to increase, thus—

	Importations of Oil into India during			
	1883-84.	1887-88.	1888-89.	1889-90.
	Gallons.	Gallons.	Gallons.	Gallons.
From America - - - -	12,714,697	25,038,020	20,645,894	35,849,959
„ Russia - - - -	—	5,035,785	17,516,003	15,961,875
„ Elsewhere - - - -	—	125,037	123,662	37,466
Total - - - -	12,714,697	30,200,042	38,285,559	51,839,400

This increase of 33 per cent. in 1888-89, and a gain of 30 per cent. in 1889-90 in the importations of petroleum, occurred notwithstanding that a duty of half an anna (about one halfpenny) per gallon was imposed on all imported petroleum in the month of February 1888. The value of the imported petroleum was returned at Rx. 1,767,935 in the year 1888-89, and Rx. 2,386,668 in 1889-90.

The

The terms on which the Barrakur ironworks were transferred to a company were settled after the close of the year, and the company took over the works in October 1889. Though the works are on the railway, 142 miles from Calcutta, and though there are ample supplies of coal and iron and lime close at hand, yet the works have not been as yet successful, either in the hands of private companies or of the Government. The new company is supported by capitalists interested in British steel and iron manufacture, as well as by persons engaged in Indian trade.

MINERAL
RESOURCES.
Iron, Tin.

An investigation of the tin mines and processes at different points in the Malay peninsula was made by a geological officer and the Director of Agriculture in Burma, in order to ascertain why the tin industry at Maliwan in Tenasserim did not succeed, when the tin mines at Perak and Renong are successful and are increasing. The result of these inquiries showed that the Perak system might with some modifications be applicable to Maliwan, provided the tin ore was there in sufficient quantity and of adequate richness. An expenditure of Rx. 3,000 was sanctioned for the thorough examination of the Maliwan tin sources, with a view to ascertain the localities of the best ore, publishing the information obtained, and inviting persons willing to work the tin.

As was the case last year only three of the South Indian gold mines have produced considerable quantities of gold, and only one yielded a dividend. Both those mines are situate in the territory of the Maharaja of Mysore, for which no report has been furnished since the quinquennial report of 1885-86. The London "Economist" newspaper states that the position of the three leading Indian gold mines has steadily improved; that the total yield of gold from the Mysore group of mines was only 283,000 *l.* from 1883 to the end of 1888; that in the year 1889 the production of gold was 304,000 *l.*; and that the production of the year 1890, as so far announced, has been at the rate of half-a-million sterling per annum.

Gold.

The lease of the Burma ruby mines to a company formed by Messrs. Streeter and Co. took effect from November 1889. As yet nothing is known concerning the yield of the mines; but the lessees paid their first instalment of rent, or Rx. 20,000, in the month of March 1890. Since Upper Burma became British territory the revenue realised from Native miners has been small; and it is not known what the yield of rubies has been.

Rubies.

XI.

PUBLIC WORKS.

PUBLIC WORKS.
GENERAL

THE public works of India are classed under three heads, viz., Railways, Irrigation, and Buildings and Roads. In the last-named division are included 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, *i.e.*, by taxation. For the railways and the 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, capital and revenue 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 1888-89 is compiled from the Finance and Revenue Accounts of the year :—

RECEIPTS.		Rs.
Railways - - - - -	15,520,690	
Irrigation - - - - -	1,900,718	
Buildings and Roads - - - - -	604,753	
	18,026,167	

EXPENDITURE (exclusive of Rs. 789,595 charged under Special Defence Works).

	Charged to Revenue.	Not Charged to Revenue.
	Rs.	Rs.
<i>Railways :</i>		
• Construction - - - - -	22,401	1,178,111*
Ditto from Famine Relief Grant -	—	—
On Revenue Account - - - - -	17,754,088	—
<i>Irrigation - - - - -</i>	2,622,904	459,890
From Famine Relief Grant - - - - -	70,537	—
<i>Buildings and Roads :</i>		
Military Works - - - - -	1,108,200	—
Civil Works - - - - -	4,202,526	—
TOTAL - - - - -	25,790,722	1,638,001

* Note.—The outlay on railway construction not charged to revenue in 1888-89 was, in round numbers, Rs. 2,585,000, but the Indian Midland Company refunded Rs. 921,000, and the Bengal-Nagpur Company Rs. 486,000, on the transfer to them of the Sindia and Katni-Umaria lines, respectively.

Independently of the amount shown in the foregoing statement as expenditure on the construction of railways, a large amount of liability was undertaken by the Government during the year in connection with the purchase of the Oudh and Rohilkund Railway Company's undertaking. The discharge of debentures of this railway falling due in 1888 involved a payment of 1,885,000*l.* The purchase of the property of the company required an expenditure of 5,036,049*l.*, and the debentures and debenture stock of the company, for which the Secretary of State was responsible, amounted to 3,415,000*l.* The total capital sum representing this railway, amounted, therefore, to 10,336,049*l.*

RAILWAYS.

RAILWAYS.
Classification.

A full account of the results of railway enterprise 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 operations of the past year.

The railways of India are classified primarily with reference to their ownership, and may be broadly divided into the Guaranteed, the State, and the Assisted. In the early days of railway enterprise the agency of private companies guaranteed by the State was exclusively employed, and nearly all the great trunk lines were made under this system. The contract between the old guaranteed companies and the State was as follows: the Government gave the land required free of charge; it also guaranteed interest generally at the rate of 5 per cent. on the share capital raised with its consent, and a lower rate upon debenture capital. A general control and supervision over the proceedings of the company is also retained, and Government stores and troops are carried on favourable terms. If the net profits in any half-year fall below the amount of guaranteed interest the Government makes up the deficiency. If they exceed this amount the surplus is equally divided between the Government and the company. Moreover, the Government has the right of buying the undertaking at specified dates, on payment of the value of the shares calculated at their market price on the average of the three preceding years. In this way the East Indian Railway was acquired in 1880, the Eastern Bengal Railway in 1884, the Scinde, Punjab, and Delhi Company's lines in 1885-86, and the Oudh and Rohilkund Railway at the end of 1888. In 1870 a new policy of railway development by the direct agency of the State was inaugurated; and in 1880-81 the system of encouraging private enterprise by State assistance was again resorted to. The experience gained of the working of the old guarantee system has, however, suggested various modifications in the relations between the State and the companies which have more recently been formed for the construction and working of railways, and the nature of the assistance granted now varies considerably. In some instances, of which the Bengal and North-Western Railway is the most important, lines have been constructed without any direct pecuniary assistance; in others a subsidy or limited guarantee has been granted. The agency of private companies has also been employed by the Government both in the construction and working of State lines. In all cases, the Government has the power of taking over the railway at specified periods on stated terms.

The following figures, taken from the Finance and Revenue Accounts of 1888-89, show the financial result of the working of the railways in India for the year ending 31st March 1889:—

Financial results to the State.

	Imperial.	Provincial.	England, including Exchange.	Total.
REVENUE:	Rx.	Rx.	Rx.	Rx.
<i>Railways:</i>				
State Railways (gross traffic receipts)	10,289,064	1,537,729	337	11,827,120
Guaranteed Companies (net traffic receipts)	3,650,808	-	-	3,650,808
Subsidized Companies (repayment of advances of interest)	42,768	-	-	42,768
TOTAL	13,982,630	1,537,729	337	15,520,696

RAILWAYS.

	Imperial.	Provincial.	England, including Exchange.	TOTAL.
EXPENDITURE :				
<i>Railway Revenue Account :</i>				
	Rx.	Rx.	Rx.	Rx.
State Railways :				
Working expenses - - -	5,241,911	817,345	- - -	6,059,256
Interest on debt - - -	2,216,121	456,962	925,783	3,598,866
Annuities in purchase of rail-ways	- - -	- - -	2,474,215	2,474,215
Interest on capital deposited by companies - - -	19,703	- - -	939,696	949,399
Guaranteed Companies :				
Surplus profits, land and super- vision - - - - -	614,540	- - -	- - -	614,540
Interest - - - - -	6,671	- - -	3,952,496	3,959,167
Subsidized Companies :				
Land, &c. - - - - -	13,632	14,439	- - -	28,071
Miscellaneous railway expendi- ture - - - - -	54,398	16,236	- - -	70,634
TOTAL - - - - -	8,166,976	1,304,982	8,282,180	17,754,088

In the figures under expenditure are included all charges falling on the Government for management and working expenses of railways, for control, for interest on their capital outlay, for land required by the companies, and for miscellaneous items, such as head-quarters establishment and surveys. After meeting all these expenses the total charge to the State in 1888-89 was Rx. 2,233,392. It is probable that there will continue to be a considerable net loss to the State for some years to come, seeing that, although traffic will be likely to develop and improve the revenues of existing lines, there will be increased interest charges due to lines subsequently undertaken and in course of construction.

General results of the working of the railways.

The general results of the working of the various classes of railways up to 31st December 1889 are given in the following table. The aggregate net receipts realised by all Indian railways amounted to 4.94 per cent. on the total capital outlay on open lines, including steamboat service and suspense items, but excluding other indirect charges :—

Railway Statistics, 1889.

CLASS.	Length of Lines open on 31st December 1889.	Total Capital Outlay on open Lines to 31st December 1889, including Steamboat Service and Suspense.	Total Number of Passengers Carried.	Total Weight of Goods Carried.	Gross Earnings, including Steam-boat Service.	Working Expenses, including Steamboat Service.	Net Earnings, including Steam-boat Service.
	Miles.	Rx.	No.	Tons.	Rx.	Rx.	Rx.
State lines worked by Companies.	5,859.62	72,607,878	20,976,460	8,309,738	7,016,272	3,341,350	4,274,922
State lines worked by the State.	5,061.60	67,476,290	32,328,033	6,430,721	5,507,207	3,126,680	2,380,616
Lines worked by Guaranteed Companies.	3,243.03	53,670,474	42,228,461	6,187,090	6,511,495	3,404,564	3,106,931
Assisted Companies - - -	505.02	3,850,734	3,797,293	526,015	396,503	223,351	173,152
Native States lines worked by Companies.	472.48	4,397,119	1,482,739	581,210	259,539	168,893	90,646
Native States lines worked by the State.	107.94	628,392	60,810	32,307	10,848	5,008	5,840
Native States lines - - -	524.22	1,978,126	1,624,472	290,101	191,710	106,828	84,882
Total - - - - -	15,857.90	204,609,013	111,493,074	22,306,188	20,493,664	10,376,674	10,116,989
*Total for 1888 - - -	14,517.45	193,043,257	103,156,013	22,393,292	19,764,475	9,874,347	9,890,128

* As corrected from later information.

It will be observed that with an increase of 1,340.45 miles, or 9.23 per cent., in the open mileage, as compared with 1888, the gross earnings show an increase of Rx. 729,189, or 3.69 per cent., while the working expenses exhibit an increase of Rx. 502,327, or 5.09 per cent.; the net earnings showing an increase of Rx. 226,861 or 2.29 per cent. RAILWAYS

The total number of passengers carried was better than in 1888 by 8,337,063, but the tonnage of goods moved showed a decrease of 87,014 tons.

The railway mileage open on the 31st of March 1890 was 16,108 $\frac{3}{4}$ miles. During the 12 months then ended, 869 miles of railway had been completed and opened for traffic. In addition, there were then 1,570 miles of lines under construction or already sanctioned, of which 545 had received sanction in the year 1889-90.

The chief sections of railway opened during the year 1889 were 209 $\frac{1}{4}$ miles of the Bengal-Nágpur Railway, 199 $\frac{1}{2}$ miles of the Southern Mahratta Railway, including 76 $\frac{1}{4}$ miles of the Mysore Section, 165 miles of the Indian Midland Railway System, 92 $\frac{1}{2}$ miles of the Rajpura-Bhatinda Railway, 73 $\frac{1}{2}$ miles of the Assam-Bihar Section of the Eastern Bengal State Railway, and 68 $\frac{3}{4}$ miles of the Bhávnagar-Gondal Railway System in Kathiawar.

The extensions sanctioned during the year were 156 miles of the Mu Valley Railway in Upper Burma, 63 miles of the Villupuram-Guntakal Railway, 62 $\frac{1}{2}$ miles of the Tirhoot State Railway, and 27 miles of the North-Western Frontier Railway Extension from Mianwali to Mari.

Of the important bridges mentioned in last year's Report as then under construction, the bridge over the Chenab near Sher Shah was completed, and opened for traffic on 1st February 1890.

The tunnel through the Khwaja-Amran Mountains was still in progress at the end of the year. The length of tunnel bored up to the 31st of March 1890 was 12,440 feet out of a total of 12,531 feet,* the distance remaining to be driven to unite the east and west advanced headings being 91 feet. It has since been reported that the headings met on 17th April 1890.

The through communication between Killa Abdulla and New Chaman by the temporary lines and inclines is in good working order.

Amongst the principal events which occurred during the year may be noticed the completion of the Midland Railway, and the passing into law in March 1890 of the new Railway Bill as Act IX. of 1890.

On the 12th February 1889 a contract was concluded with a new company, under the title of the Delhi-Umballa-Kalka Railway Company, formed for the purpose of constructing a line from Delhi to Umballa on the North-Western State Railway, with an extension towards Simla. The line is to be worked by the agency of the East Indian Railway Company.

Arrangements have been concluded for handing over the working of the Tirhoot Railway to the Bengal and North-Western Railway Company, and for the construction of an extension of the Lucknow-Sitapur-Seramau State Railway to Filibhit, the terminus of the Bareilly-Filibhit State Railway, 55 miles, by the agency of the Rohilkund and Kumaon Railway Company, to whom will be entrusted the working of the entire State Railway System from Bareilly to Lucknow.

* Length as corrected since issue of last report

GUARANTEED
RAILWAYS.*Guaranteed Railways.*

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

RAILWAY COMPANY.	Capital Expended to 31st December 1889.	Net Revenue for Year ended 31st December 1889.	Guaranteed Interest for Year ended 31st December 1889.	Interest in excess of Net Revenue.	Net Revenue in excess of Interest.	Surplus Profits earned by Guaranteed Companies during Half-Years	
						Ended 30th June 1889.	Ended 31st December 1889.
	£.	£.	£.	£.	£.	£.	£.
Madras - - - - -	10,668,589	842,680	522,259	179,570	—	—	—
South Indian - - - - -	4,792,716	161,779	213,914	52,135	—	—	—
Great Indian Peninsula - - -	25,211,998	1,650,808	1,189,541	- -	461,327	492,585	—
Bombay, Baroda and Central India.	8,703,365	698,248	418,760	- -	279,488	241,751	30,754
TOTAL - - - £.	49,316,668	2,853,584	2,344,474	- -	500,110	734,336	30,754
						765,090	
Total for 1888, excluding Oudh and Rohilkund Railway - - - }	£. 48,930,491	3,132,088	2,334,605	- -	707,483	1,028,470	

IRRIGATION.

IRRIGATION.
General.

Irrigation is extensively used in most parts of India under one or more of the three following methods. The first and most widely used is irrigation from wells. This class of works does not, however, come within the scope of operations of the Public Works Department, which is confined to the more elaborate methods of irrigation from tanks and canals. The storage of water in tanks for the purposes of irrigation has been practised most extensively, and on the largest scale in Southern India. These works are for the most part of native origin, but much has been done under the British Government in repairing old tanks, and constructing new works, in Madras, the Bombay Deccan, and in Ajmere-Merwara.

It is in canal irrigation, however, that the efforts of English engineers to carry out systematic irrigation on a large scale are seen to the greatest advantage, and have produced the most important results.

Irrigation canals are of two descriptions, viz., "perennial" and "inundation." The former class includes many magnificent works, which have required large capital outlay and the highest professional skill in their construction. They are furnished with permanent headworks and weirs, and as, for the most part, they draw an unfailing supply of water from the larger rivers, they are capable of irrigating large tracts of country throughout the year, independently of the local rainfall. 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 simple 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 success of canal irrigation, as measured by the financial results, has been very different in different parts of India, though, even where no adequate return on the capital sunk has been obtained, it is difficult to overrate the value of the security provided by this means against loss of life and property in times
of

of drought. The causes of comparative financial success and failure are numerous. In some districts, as in Sind, the very existence of cultivation depends on the irrigation works; in others, as in a great part of Bengal, the rainfall in ordinary years is sufficient for the needs of the cultivator, and the demand for irrigation only becomes insistent with the recurrence of drought. In some provinces the practice of irrigation on a large scale is of ancient standing, while in others, as in Bombay, it is of comparatively recent introduction, and it is difficult to induce the cultivators to take the trouble and incur the expense of preparing their lands for the artificial supply of water. In some districts the large rivers which traverse the country offer an unfailing supply of water; in others, as in Bombay, the supply is fluctuating, and irrigation is uncertain, and liable to fail when most needed.

It may be added that the difference of system under which the revenue with which the irrigation systems are credited is collected has 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 some other provinces, nor, with 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 North Western Provinces 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.

All the irrigation works under the control of the Public Works Department are divided into two classes, viz., "major" and "minor." The former class includes all the works which have been constructed from borrowed funds, and the conditions attached to their being undertaken require that, as far as can be foreseen, the net revenue derived from them should at least equal the interest which Government has to pay on the money borrowed for their construction. This class also includes the works known as "protective," whose cost has been met, not from borrowed money, but from the annual grant for famine relief and insurance. The cost of constructing, as well as of maintaining and working, minor works is met from the ordinary revenues of the year, 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.

The following statement gives a general view of the results obtained from working the canals for which full accounts are kept, for 1888-89 and the previous year:—

	Capital Outlay (Direct and Indirect) to End of Year.	Gross Receipts	Working Expenses.	Net Receipts.	Percentage of Net Receipts on Capital Outlay.	Area Irrigated.
	Rx.	Rx.	Rx.	Rx.		Acres.
Major Works - -	27,700,215	1,764,246	752,944	1,011,302	3.6	6,555,373
Minor Works - -	4,210,617	471,888	254,641	217,247	5.1	1,088,295
TOTAL for 1888-89 -	31,910,832	2,236,134	1,007,585	1,228,549	3.8	8,543,668
TOTAL for 1887-88 -	31,226,609	2,016,597	947,693	1,068,904	3.4	7,500,836

IRRIGATION.

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

Bengal.

In Bengal the deficiency and early cessation of the rainfall, by forcing the cultivators to apply more freely than usual for canal water, were the causes of a considerable improvement in the financial results of irrigation for the year.

The general results for 1888-89 of working all the irrigation and navigation systems for which full accounts are kept are compared with the results of the three 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.
	Rx.	Rx.	Rx.	Rx.		Acres.
1885-86 - -	6,881,318	211,028	145,921	66,007	0.9	480,078
1886-87 - -	6,071,157	191,220	167,544	23,676	0.3	417,821
1887-88 - -	7,061,459	174,151	190,973	- 16,822	—	494,968
1888-89 - -	7,155,684	204,329	189,444	14,885	0.2	562,181

The outlay for the year under the head of capital amounted to Rx. 94,345, the greater part of which was incurred upon the Orissa Canal, the distributary system of which is still very incomplete.

The remainder was absorbed for the most part by improvements to the Sone and Orissa Coast Canals. The latter canal was opened throughout its entire length of 97½ miles during the year.

The major works consist of the Orissa, Sone, and Midnapore Canals, which are mainly intended for irrigation, and the Hidgelli Tidal Canal, which is for navigation only. The results of the year's working of those canals will be seen from the following statement:—

CANAL.	Capital Outlay.	Revenue Collected.	Working Expenses.	Net Revenue.	Percentage of Net Revenue on Capital.
	Rx.	Rx.	Rx.	Rx.	
Orissa - - - -	2,406,880	24,329	40,501	- 16,172	—
Midnapore - - - -	844,972	25,151	20,980	4,171	0.49
Sone - - - - -	2,618,324	83,127	79,443	3,684	0.14
Hidgelli - - - -	184,029	5,509	7,804	- 2,295	—
TOTAL - - - -	6,054,205	138,116	149,728	- 10,612	—

The financial condition of the two chief irrigation systems in Bengal, viz., the Orissa and Sone Works, continues to be very unsatisfactory, though there was some temporary improvement in the year under review, owing to the nature of the season. A committee was appointed in November 1887 to investigate complaints which had been made against the administration of the Sone Canals, and the adoption of some of their recommendations produced beneficial results. On the Orissa Canal nearly 1,400 miles of distributaries are still wanting, and improved financial results may be hoped for when they have been completed.

The minor works include the Sarun Canals, primarily intended for the supply of water for the manufacture of indigo, but partly used for irrigation, and two navigation works, viz., the Orissa Coast, and Calcutta and Eastern Canals. The net revenue from the last-named work yielded a return of 5.3 per cent. on the capital outlay. The other two systems were worked at a loss.

Including

Including the Nuddea Rivers, a system of navigation canals for which no capital account is kept, the total receipts from navigation for the year amounted to Rx. 116,589. The maintenance charges were Rx. 68,908, and the net receipts, Rx. 47,681. IRRIGATION.

The number of passengers carried was 466,291, and the estimated value of the cargoes was Rx. 13,657,566.

In the North West Provinces there was an increase both in the area irrigated and in the irrigation revenue. North-West Provinces.

The following table compares the general results of the working of the canals for 1888-89 with those of the three preceding years :—

YEAR.	Area Irrigated.	Capital Outlay to End of Year.	Net Assessed Revenue.	Percentage of Net Revenue on Capital.
	Acres.	Rx.	Rx.	
1885-86 - - - - -	1,709,676	7,514,950	354,462	4.72
1886-87 - - - - -	1,363,815	7,705,922	257,687	3.34
1887-88 - - - - -	1,517,288	7,876,731	301,356	3.83
1888-89 - - - - -	1,604,753	7,998,365	310,088	3.87

The area irrigated though showing a large advance when compared with the two preceding years is still below the average of the 10 past years.

The results obtained from the working of the four large works classed as productive are shown in the following statement :—

CANAL.	Area Irrigated.	Capital Expenditure to End of Year.	Net Assessed Revenue.	Percentage of Net Revenue on Capital Outlay.
	Acres.	Rx.	Rx.	
Upper Ganges - - - - -	628,260	2,831,399	159,506	5.63
Lower Ganges - - - - -	519,022	3,246,156	55,671	1.71
Agra - - - - -	124,431	908,945	23,651	2.60
Eastern Jumna - - - - -	185,026	322,619	64,725	20.06
TOTAL - - - - -	1,456,742	7,309,119	303,553	4.15

The Betwa Canal, a protective work, was worked at a loss of Rx. 3,315. This canal was opened in 1885-86, and irrigation from it has been only partially developed.

The minor works produced a net revenue of Rx. 10,288, equivalent to a percentage of 3.7 on the capital outlay of Rx. 275,643 expended on their construction. The area irrigated by these canals was 115,402 acres.

The capital expenditure for the year on all irrigation works amounted to Rx. 121,633, the greater portion of which was absorbed by the construction of the new Kali Nadi Aqueduct at Nadrai on the Lower Ganges Canal, which was approaching completion at the end of the year.

The length of navigable channel open during the year was 509 miles, of which 390 miles were on the Upper and Lower Ganges Canals, and 119 on the Agra Canal. The receipts from navigation were Rx. 2,651, against Rx. 2,523 in the previous year. On the Ganges Canals the traffic was worked at a loss, but there was a small profit on the working on the Agra Canal.

The year's record of irrigation in the Punjab shows a general improvement in the extent of the area irrigated by the canals, and in the financial results of their working. In one or two instances the rapid development of irrigation Punjab.

IRRIGATION.

from comparatively new works has been very striking. On the Sidhnai Canal, which has been in operation three years only, the area irrigated during the year was 50 per cent. in excess of the estimate formed when the original project was drawn up. The Swat River Canal, a protective work which has been four years in operation, earned a net revenue equivalent to 3.79 on the capital outlay, against a return of 0.38 per cent. in the preceding year, and on the newly-opened Sirhind Canal there was a satisfactory increase of 86,000 acres in the area irrigated.

The general results of the year's operations for all works are shown in the following table, in comparison with the records of the four previous years:—

YEAR.	Capital Outlay to End of Year.	Area Irrigated.	Assessed Revenue.
	Rx.	Acres.	Rx.
1884-85 - - -	5,304,742	1,614,288	397,648
1885-86 - - -	5,529,079	1,787,567	437,278
1886-87 - - -	5,746,169	1,959,640	468,806
1887-88 - - -	5,948,697	2,250,081	570,437
1888-89 - - -	6,083,938	2,614,130	650,138

The greater part of the money expended by the British Government on irrigation works in the Punjab has been devoted to the construction of perennial canals with permanent headworks and weirs. Four such canals are now in operation, comprising 1,205 miles of main and branch channels, and 6,370 miles of distributaries. The inundation canals, which are much more numerous, though individually smaller, and of simpler construction, aggregate 2,763 miles of channel and 872 miles of distributaries.

The financial returns for the year from the major class of works are shown in the following statement:—

CANALS.	Capital Outlay.	Gross Receipts.	Working Expenses.	Net Receipts.	Percentage of Net Receipts on Capital Outlay.
	Rx.	Rx.	Rx.	Rx.	
Perennial :					
Swat River - - -	350,422	22,750	9,466	13,284	3.79
Western Jumna - - -	1,105,790	94,493	49,853	44,580	4.03
Bari Doab - - -	1,629,935	179,800	60,101	119,499	7.33
Sirhind* - - -	2,349,282	113,180	56,609	56,520	2.40
Inundation :					
Lower Sohag and Para - -	66,953	5,632	5,425	207	0.31
Sidhnai - - -	75,534	17,137	7,609	9,528	12.61
Chenab - - -	317,524	3,761	8,184	- 4,423	-
TOTAL - - -	5,894,840	436,493	197,298	239,195	4.05

* Exclusive of the Native States portion.

The minor works, which consist entirely of inundation canals, were much more remunerative than the major works. The net return from the whole class of these works was equal to 14.06 per cent. on the total capital outlay. In the case, however, of the Lower Sutlej and Chenab Canals, the most remunerative of this class of works, the capital account does not represent the first cost of the canals, which are old works taken over by Government.

The

The gross area irrigated was again the largest on record, and exceeded the area of the previous year by 364,049 acres. Since 1884-85 there has been an increase of 1,000,000 acres in the area of irrigation, of which 700,000 acres are attributable to the perennial canals. IRRIGATION.

It is noticed that the increase of irrigation "has an effect not only on the quantity of crops produced, but also on the distribution of population. In the case of the Swat River irrigation, the opening of the canal has resulted in a multiplication of the number of villages in the tract commanded. Of the 160 villages now irrigated, only 41 are old villages, the remainder having sprung up since irrigation was started."

Of the principal crops under irrigation, the chief place in point of extent must be assigned to wheat, of which there was 935,510 acres, against 783,189 acres in the preceding year. The gross value of all the crops irrigated during 1888-89 is estimated at 752 lakhs of rupees.

The capital outlay for the year amounted to Rx. 132,240, of which Rx. 59,143 were expended on the Chenab Canal, and Rx. 30,663 on the Sirhind Canal.

Sanction was given during the year to the project for the Sirsa branch of the Western Jumna Canal, and to the Jhelun Canal scheme, but the latter project was deferred, in order that sufficient funds might be provided for the conversion of the Chenab Canal from an inundation to a perennial canal, with permanent headworks. An estimate for this work was under preparation. Sanction was also given to the construction of the Koranga Canal, a small work in connection with the Sidhni Canal.

The only canals available for navigation are the Western Jumna and Sirhind, on which the length of navigable channel is, respectively, 243 and 188 miles. The total quantity of goods carried was 73,381 tons, valued at Rx. 233,802 but the traffic does not show any signs of expansion.

In Lower Burma there are no irrigation works of any importance under the control of the Public Works Department. In Upper Burma expenditure under this head was confined to the repair and improvement of old Burman irrigation works. Only one large scheme was taken in hand, the Mu Valley irrigation project, which is still incomplete. Burma.

The irrigation works in Ajmere-Merwara under the control of the Public Works Department consist entirely of tanks. The revenue of these works is derived partly from water rates directly paid, and partly from a share in the land revenue, including a well assessment, credit being given for the effect of the tanks in raising the level of the water in the wells in their vicinity. Ajmere-Merwara.

The total area assessed for revenue was 36,000 acres, or 1,625 acres less than in the preceding year, and the net revenue of the works amounted to Rx. 6,406, against Rx. 6,924 in 1887-88. As the capital outlay at the end of the year amounted to Rx. 164,637, the net revenue yielded a percentage of nearly 3.9 on the cost of construction. The total estimated value of all crops raised by irrigation amounted to Rx. 57,666.

Madras contains some of the oldest, and at the same time most remunerative, of the irrigation works in India. The favourable financial returns obtained from the class of major works are due in a very large measure to the highly successful working of the three large deltaic systems of the Godaveri, Kistna, and Cauvery. The net revenue derived from these works during 1888-89 was at the rate of 11.9, 12.6, and 49.7 per cent., respectively, on the sums expended by the Indian Government on their construction. Other successful works were the Pennér and Srivaikuntham anicut systems, which both returned more than 5 per cent. on their capital expenditure. Taking the whole of the works for which full accounts are kept, including both the "major" and "minor" classes, a comparison of the working results for the year

IRRIGATION.

year with those of previous years will be obtained from the following statement:—

YEAR.	Capital Outlay to End of Year.	Area Irrigated.	Revenue.	Working Expenses.	Net Revenue.	Percentage of Net Revenue on Capital.
	Rx.	Acres.	Rx.	Rx.	Rx.	
1885-86 . . .	6,003,512	2,031,324	425,578	159,084	265,594	4.4
1886-87 . . .	6,158,674	2,050,181	437,484	133,344	304,170	4.9
1887-88 . . .	* 6,318,281	2,077,657	458,483	136,075	322,408	5.1
1888-89 . . .	* 6,436,030	2,197,160	512,237	130,523	372,713	5.8

* Exclusive of expenditure on the Rushikulya project, which is under construction.

The major works, as a class, earned 7.02 per cent. on their capital outlay. The return from the minor works was only 0.46 per cent. The most successful works of the latter class, from a financial point of view, were the Chembrambakam Tank and the Pálár anicut, the net returns from which were equal, respectively, to 5.66 and 3.74 per cent. on the capital outlay.

The works for which full capital and revenue accounts are not kept, though individually small, constitute in Madras a very numerous and important class, which during the year under review afforded irrigation to 2,699,538 acres. The expenditure on these works during the year was chiefly devoted to tank improvements, and amounted to Rx. 195,709. The revenue derived from them was Rx. 872,370.

An investigation into the requirements of the numerous tanks scattered over the presidency, and the cost necessary to put them in repair, is proceeding under the title of the Tank Restoration Scheme. A sixth survey party was added to the five parties already engaged in this work, and by the end of the year 12,226 square miles had been completely investigated.

There are five large reservoir projects in the Madras Presidency, two of which, the Chembrambakam Tank and the Madras water supply and irrigation extension project, are complete. The Barur Tank, though still incomplete, was in partial operation during the year. The Periyár and Rushikulya projects, which are in course of construction, are large undertakings estimated to cost, respectively, 56 lakhs and 28½ lakhs of rupees. The expenditure during the year was Rx. 59,292 on the former, and Rx. 26,072 on the latter.

Excluding the Rushikulya project, which is a protective work, the total capital expenditure during the year on the major works amounted to Rx. 137,790, which was absorbed to a great extent by outlay on the Periyár project, already referred to, and on the Kistna system. The capital expenditure on the minor works was Rx. 35,166, of which Rx. 27,027 represent work done on the Buckingham Canal.

During the year there were 1,214 miles of canal open for navigation, of which 481 miles were in the Godaveri system, 281 miles in the Kistna system, 190 miles on the Kurnool-Cuddapah Canal, and 262 miles on the Buckingham Canal, which is used for navigation only. Except on the Godaveri Canals, navigation is carried on at a loss. The estimated value of the cargoes carried by the boats amounted to Rx. 4,835,471, and the number of passengers was 463,574. Owing to scarcity in the Ganjam district, the Ganjam-Gopalpur tidal canal was commenced in January 1889, with the object of providing relief works.

Bombay
(excluding Sind).

The results of the year's irrigation in Bombay afford several instances of the value, in times of scanty rainfall, of financially unsuccessful works, to which there is little resort in ordinary seasons.

The

The average rainfall was exceptionally low, and there was a consequent increase in the area of irrigation, under those canals for which full accounts are kept, of more than 71 per cent., the crops in several instances being saved entirely by the artificial supply of water. IRRIGATION.

The general results for 1888-89 are compared with those of the three previous years in the following table:—

YEAR.	Capital Expenditure to End of Year.	Area Irrigated.	Revenue.	Working Expenses.	Net Revenue.
	Rx.	Acres.	Rx.	Rx.	Rx.
1885-86	2,184,007	59,450	27,987	21,068	6,919
1886-87	2,242,513	42,628	33,446	23,041	9,505
1887-88	2,300,078	46,187	34,344	24,438	9,906
1888-89	2,360,723	79,195	37,154	23,431	13,723

These figures refer exclusively to the class of works for which capital and revenue accounts are kept, which includes entirely new works and restorations, or extensive improvements, undertaken within the last 25 or 26 years, to old works. The works for which only revenue accounts are kept, comprising the old works, mostly tanks and weirs, which are maintained by the Public Works Department, and to which minor improvements are effected from time to time, afforded irrigation to an area of 143,683 acres, and yielded a revenue of Rx. 52,555.

A satisfactory feature in the year's report is the reduction in working expenses, notwithstanding the expansion of irrigation. This decrease may partly be ascribed to economies effected through the amalgamation carried out in the previous year of the separate establishment previously maintained for irrigation with the ordinary Public Works staff.

It has been decided to raise the scale of water rates to the full charges in force previous to 1883-84. The general abatement of rates made in that year has not resulted, as was hoped, in any large extension of irrigation, while the Government revenue has suffered from the experiment.

The financial results of irrigation in Bombay cannot be considered encouraging, though some improvement is visible in the year under review. The net revenue from the "productive" works yielded a return of 1.59 per cent. on their capital outlay, but neither the protective nor the minor class of works gave any appreciable return on the money expended on them. The Muttra Canals, which is the most costly, and financially most successful, work of the productive class, produced a net revenue equivalent to 2.35 per cent. on capital. The works which give the worst financial results are, however, frequently those which prove of most value in years of scarcity, and the importance of maintaining them as protective works cannot be questioned.

The capital expenditure for the year, Rx. 60,645, was principally upon the Nira Canal, a protective work.

The storage of water to supplement the failing supply in the rivers in the hot season is an essential feature of irrigation in Bombay. Storage works are now under construction in connection with the Nira Canal, the Gokak Canal, and the Kadva River works.

In Sind; even more than in the Punjab, irrigation is dependent on the annual rise of the waters of the Indus and its tributaries. The irrigation works are almost without exception inundation canals, and are for the most part old native works which have been restored, improved, and maintained by the British Government.

In spite of an indifferent inundation, the results of the working of the canals for 1888-89 show a very satisfactory improvement on those of the previous year, which had in themselves been the best recorded.

IRRIGATION.

In the following table the area of cultivation and the total canal revenue of the year are compared with the corresponding results of five previous years :—

YEAR.	Area of Cultivation.	Total Canal Revenue.
	Acres.	Rx.
1883-84 - - - -	1,540,831	330,705
1884-85 - - - -	1,783,173	377,316
1885-86 - - - -	1,739,919	357,731
1886-87 - - - -	1,814,670	377,793
1887-88 - - - -	1,871,114	307,806
1888-89 - - - -	2,118,035	446,943

A large part of the cultivation and revenue represented in the foregoing figures is due to the class of works for which only revenue accounts are kept, the area irrigated by their means being 792,595 acres. But the improvement in the results, as compared with previous years, is most clearly shown in the class of major works, which together accounted for nearly 50 per cent. of the increase in cultivation on Government lands. The following table gives the results obtained from the major works during the year :—

CANAL.	Capital Outlay to End of Year.	Gross Assessed Revenue.	Working Expenses.	Net Revenue.	Percentage of Net Revenue on Capital.
	Rx.	Rx.	Rx.	Rx.	
Desert - - - - -	125,467	16,830	4,061	12,768	10·2
Unharwah - - - - -	33,912	7,923	2,400	5,523	16·2
Begari - - - - -	107,307	32,143	9,557	22,585	13·5
Eastern Nara - - - - -	516,131	40,384	12,878	27,505	5·3
TOTAL, 1888-89 - - - -	842,837	97,230	28,905	68,325	8·11
TOTAL, 1887-88 - - - -	831,105	74,527	24,301	50,226	6·04

The net revenue derived from minor works amounted to Rx. 49,921, and was equivalent to a percentage of 15·25 on the capital outlay of Rx. 327,363.

The capital expenditure incurred during the year on all works was Rx. 17,976; the principal items of outlay being the widening of the Desert Canal, the enlargement and extension of the Dimwah, one of the canals of the Eastern Nara system, and the provision of a head regulator to the Fuleli Canal.

A project is under consideration for the construction of the Jacob Canal which will supply water to uncultivated lands in British territory round Jacobabad, and also to lands lying waste in Kelat. A new feeder to the Western Nara is also in contemplation, which would bring under cultivation about 27,000 acres. Other projects are the extension and improvement of the Khipra Canal, and the improvement of the Renwah Canal, an old native work.

The total mileage of canals and river embankments in the province was 5,916 and 613 respectively, against 5,827 and 610 respectively in the previous year. The maintenance of the bunds, which are of the greatest importance in checking the tendency of the river to erode its banks, and also in maintaining and regulating the supply of water, cost Rx. 15,837.

In Baluchistan the few irrigation schemes on which expenditure has been incurred come under the head of minor works. The most important are the Khusdil Khan Reservoir and the Shebo Canal scheme, the latter of which was approaching completion at the end of the year under review. The total capital expenditure on all works during the year was Rx. 47,362.

IRRIGATION.
Baluchistan.

BUILDINGS AND ROADS.

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 Railway 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.

BUILDINGS AND
ROADS.

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 1888-89 under the heads referred to is shown in the following table:—

	Imperial.	Provincial.	Local.	Total in India.	Expenditure in England.	Exchange.	GRAND TOTAL.
	Rx.	Rx.	Rx.	Rx.	£.	Rx.	Rx.
Military Works - - -	1,092,979	- - -	- - -	1,092,979	10,392	4,835	1,108,206
Civil Works - - - -	745,071	1,814,981	1,497,621	4,057,623	98,891	46,012	4,202,526
TOTAL, 1888-89 - -	1,838,050	1,814,981	1,497,621	5,150,602	109,283	50,847	5,310,732
TOTAL, 1887-88 - -	2,115,780	1,732,667	1,461,410	5,309,866	99,410	41,773	5,451,049

This statement does not include the outlay from imperial revenues recorded under the head of Special Defence Works, which amounted to Rx. 456,017 in 1887-88, and Rx. 789,595 in 1888-89.

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.

Including the sum charged under Special Defence Works, the gross expenditure on military and defence works amounted in 1888-89 to Rx. 1,897,801, as compared with Rx. 1,688,087 in 1887-88. The net expenditure, receipts being deducted for the two years respectively, was Rx. 1,749,257 and Rx. 1,647,664.

MILITARY
WORKS.

Up to the end of 1888-89 more than Rx. 1,778,000 had been spent on special defence works, of which about Rx. 150,000 had been charged to the ordinary military works grant, and Rx. 56,000 had been recovered from the British Treasury for its share in the works at Aden. The outlay in England on special defences has been almost wholly on account of armaments for the coast defences, and has amounted to about Rx. 630,000. Of

Special Defence
Works.

BUILDINGS AND
ROADS: MILITARY
WORKS.

the outlay in India, rather more than half has been devoted to the coast defences, mainly at Aden, Bombay, and Karachi, three-eighths to frontier defences, and the balance mainly to military communications. The works connected with coast defences were practically complete at the end of the year 1888-89 at all the chief ports except Karachi, where the defence operations were being vigorously pushed forward. At Aden works for the defence of the inner harbour, and of the land side of the peninsula, were commenced. The principal defences on the frontier on which work was pushed forward were the fortifications at Mooltan, the arsenals at Ferozepore and Quetta, the Miri defences at the latter place, and the Balcli-Regi Ghazaband and Murgi Kotal works. The most important road in progress was that from Quetta to Chaman.

The expenditure in connection with the special defence works during 1888-89 may be thus shown:—

Expenditure in India :	Rx.
Frontier and Inland Defences - - - - -	171,426
Communications - - - - -	52,580
Establishment, plant, &c. - - - - -	85,937
 Coast and Port Defences :	
Aden - - - - -	34,001
Bombay - - - - -	68,642
Karachi - - - - -	49,549
Rangoon - - - - -	27,649
Hooghly - - - - -	23,051
Total Expenditure in India - - - -	512,835
Expenditure in England on Armaments, &c. - - - -	292,972
TOTAL - - - -	805,807
<i>Deduct</i> ,—Moiety of expenditure on Aden defences re- covered from the British Government - - - -	16,212
TOTAL - - - -	789,595

Ordinary Military
Works.

The expenditure on ordinary military works included an outlay of Rx. 538,239 on new works, Rx. 282,365 on repairs, and Rx. 213,360 on establishment. Of the total, Rx. 524,596 were expended through the Inspector General of Military Works, Rx. 157,035 in Upper and Rx. 40,757 in Lower Burma, and Rx. 118,319 in Bombay. From the grant to the Inspector General of Military Works a sum of Rx. 35,063 was expended in providing accommodation for British troops at Quetta, and Rx. 17,081 for accommodating additional Royal Artillery at Jhansi. The total amount spent during this year in providing accommodation was Rx. 188,372. General cantonment works absorbed a further outlay of Rx. 19,140.

The works completed during the year included buildings for two battalions of British infantry, and for two garrison batteries of Royal Artillery, at Quetta, and accommodation at Jhansi for a field battery, and for a heavy battery of Royal Artillery. Sheds for 12 elephants of the heavy battery were constructed at Jhansi, also a barrack for married families. Several other barracks and auxiliary buildings were in progress. A considerable amount of work was done for the Ordnance and Commissariat Departments. On the Bolan road, at the Gaetna Bridge, the approaches, abutments, central pier, and training bunds were completed. A road from Loralai to the Raosun

Raosun valley was finished, and the Mohan-Gargia Forest road near Ranikhet was improved. Improvements in the fortifications of Fategarh, Delhi, Benares, and Jhelum were carried out.

BUILDINGS AND
ROADS: MILITARY
WORKS.

In Upper Burma the expenditure was almost wholly applied to the provision of accommodation for troops, and to general cantonment works. In Madras the most important work was the construction of buildings for a regiment of native infantry at Bangalore. In Bombay two new barracks were erected at Colaba, at a cost of 3½ lakhs. Steps were taken towards the erection of new barracks for artillery at Aden, and the zareba constructed at Zaila, on the Somali coast, was provided with a reservoir of drinking water. The fortified post at Ahmedabad was completed, and improvements were made in connection with the hill fort at Satara.

The following statement shows the distribution of the total outlay in CIVIL WORKS. India on civil works in 1888-89 among the different provinces :—

EXPENDITURE in India on CIVIL WORKS in 1888-89.

	India, General and Political.	Bengal.	North West Provinces and Oudh.	Punjab.	Burma.		Central Provinces.	Assam.	Madras.	Bombay.	GRAND TOTAL.
					Upper.	Lower.					
<i>Expenditure by Public Works Department:</i>	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Civil Buildings - - -	30,991	218,528	116,492	183,453	123,809	30,339	20,412	11,498	106,174	147,094	944,790
Communications - - -	66,453	141,422	258,415	314,533	130,740	70,036	58,816	95,979	49,024	205,063	1,399,481
Miscellaneous Public Improve- ments.	4,748	14,849	4,601	15,618	— 220	11,200	907	1,908	7,866	18,087	79,504
TOTAL Works and Repairs -	102,192	374,799	379,508	463,604	263,329	111,575	86,135	109,385	163,064	370,244	2,423,885
Establishment - - - -	47,827	82,859	119,147	88,213	35,451	37,906	20,132	37,614	58,179	101,032	637,410
Tools and Plant - - -	1,437	5,453	2,690	1,503	2,512	1,468	1,099	742	11,366	6,279	35,057
Profit and Loss, Suspense, &c. -	1,756	— 8,622	655	— 9,402	— 8,369	2,324	1,484	175	— 2,863	527	— 22,335
TOTAL Expenditure by Public Works Department - - - }	153,212	454,489	502,006	543,920	292,923	153,273	117,000	147,916	230,248	478,082	3,073,907
<i>Expenditure by Civil Department</i> -	2,619	384,563	27,566	4,383	4,081	14,761	22,217	2,064	404,379	117,653	984,286
TOTAL Expenditure in India -	155,831	839,052	529,572	548,303	297,004	168,034	140,117	149,980	634,625	595,735	4,058,253

Of the total outlay by the Civil Department, Rx. 51,636 were expended on civil buildings, Rx. 682,981 on roads, and the remainder on various miscellaneous objects. BUILDINGS AND
ROADS: CIVIL
WORKS.

The expenditure in England consists to a great extent of furlough and absentee pay and allowances of military and civil officers of the Public Works Department. It also includes the expenses of the Royal Indian Engineering College at Cooper's Hill, which amounted in 1888-89 to 28,768 l. (including 3,675 l. expended on alterations and additions to the college buildings). The revenue of this institution for the year was 26,380 l.

The new viceregal residence at Simla was completed during the year, and was occupied by the Viceroy in July. The cost of the building was upwards of 13 lakhs of rupees. India,
General.

Towards the close of the year a special officer was appointed from England to make an examination into the condition of the various lighthouses on the Indian coasts.

There was a larger expenditure in Bengal than in the previous year, as will be seen from the following statement:— Bengal.

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88	2,349	62,218	292,681	352,199	707,098
1888-89	2,745	64,059	402,396	372,597	839,052

The imperial expenditure on civil works was chiefly on buildings, among which may be mentioned the new offices of the Survey of India in Calcutta. Buildings also formed the largest item in the provincial expenditure, the greater portion of the outlay on roads in this province being met from the district road funds, which are administered locally. About half the expenditure on buildings was under the heads of Administration and Law and Justice. New public offices at Chittagong were put in hand, the magistrate's residence and subdivisional courthouse at Somastipore were nearly completed, and the erection of the new collectorate and law courts at Khowlna was finished. An addition to the Calcutta Museum was put in hand during the year, and improvements and additions of more or less importance were made in public buildings in various towns. About 1½ lakhs were expended on Government colleges and schools, and about 2½ lakhs on medical buildings. Improvements were carried out in the Calcutta Madrassa College, and in the Presidency College, and in the water supply and drainage of the Campbell Hospital at Sealdah. Fair progress was made in the extension of communications, and a good deal of road work was carried out by the Department in connection with the Sikkim and Lushai expeditions.

The lighthouse and connected buildings at Shortt's Island were completed, as also the post office and refuge house at Hookeytolla.

The operations at the Burrakur ironworks were adversely affected by the negotiations which were proceeding for the transfer of the works to a private company. The outturn of pig iron was 7,190 tons, and 2,061 tons of castings were manufactured in the foundry.

In the completion of the waterworks extension scheme the municipality of Calcutta have successfully carried out a large and costly undertaking of the greatest public importance. By this work the average daily supply of filtered water to the town was raised from 8,106,000 gallons in 1885-86 to more than 16½ million gallons in the second quarter of 1889. The total cost of the project was Rx. 617,560.

BUILDINGS AND
ROADS: CIVIL
WORKS.

The expenditure on the large dock works at Kidderpore reached the sum of Rx. 1,328,773 by the end of March 1889. Work was pushed on vigorously during the year.

The outturn of the Akra brick factory more than responded to the requirements of the port commissioners for the docks. Some damage was done to public buildings by cyclonic storms, shocks of earthquake, and floods during the year, especially at Dacca, and in the districts of Bogra and Pubna.

North West
Provinces and
Oudh.

The expenditure in the North West Provinces and Oudh was smaller in 1888-89 than in the preceding year. The outlay for the two years is given below :—

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88 - - - - -	12,225	16,106	293,690	246,131	555,927
1888-89 - - - - -	6,637	11,668	277,824	240,080	529,572

There were no works of any importance under construction from imperial funds, with the exception of the Ránibagh and Ránikhet cart road, the expenditure on which is partly met from provincial funds.

The civil buildings in hand were chiefly of an ordinary character. Among the larger works may be mentioned the new central prison at Bareilly, which has been completed at a cost of Rx. 9,664, and the alterations to the jail at Hardoi, which when finished will cost Rx. 7,972. An interesting item of outlay was the sum of Rx. 4,363 expended from the Dufferin Fund during the year on the several buildings connected with the Lady Lyall Hospital at Agra, which were expected to be completed by the end of the following year. The restoration of the Secretariat buildings at Allahabad, injured by fire in 1887, was completed at a cost of Rx. 6,683. The important subject of water supply in the large towns received attention during the year. At Agra and Allahabad new works were in full progress. The scheme for the drainage and waterworks of Benares was not yet finally settled. Nearly 11 lakhs were advanced by Government to municipalities on loan for this class of works.

Under the head of communications, Rx. 107,829 were expended from provincial, and Rx. 149,580 from local funds. The metalling of the Cawnpore, Jhánsi, and Saugor road was completed, and good progress was made with many minor works of communication and bridges.

In consequence of the condition of the Ballia ravine and outfall of the lake, a committee was appointed in September 1888 to consider what measures should be taken for the protection of the station at Naini Tal. Changes were introduced during the year into the management of the Government foundry at Roorkee, which will in future devote itself more especially to the execution of Government work. The transactions of the foundry for the year showed a net profit of Rx. 9,800.

The arrangement mentioned in the previous year's report, under which all the public works of the province, whether imperial, provincial, or local, are carried out by one agency, was found to work satisfactorily, but it was considered desirable to allow the local boards to entertain a small inexpensive establishment of their own for the execution of petty repairs and minor works which did not require the professional aid of the Public Works Department.

The works of public utility due to private munificence included a bridge over the Khanaut, on which Rx. 4,490 was spent. A sum of Rx. 25,795 was expended during the year on public works constructed by private individuals at their own cost.

The

The expenditure under the head of Buildings and Roads in the Punjab is above the average of previous years. The following statement compares the figures for 1888-89 with those of 1887-88 :—

BUILDINGS AND
ROADS: CIVIL
WORKS.
Punjab.

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88	27,934	170,633	235,247	96,837	508,717
1888-89	36,196	202,679	238,732	106,802	548,308

The increased expenditure is chiefly under the head of Communications. The great lines of road which have been under construction on the North-Western Frontier were, at the end of the year, approaching completion. On the Khushalgarh and Dera Ismail Khan Road, 227 miles long, the expenditure had reached 27½ lakhs out of the estimate of 31 lakhs, and the important bridges over the Kurram and Gambila were finished. The Dera Gházi Khan-Pishin Road, 68 miles, was opened for traffic, and the Murree-Kohála Hill Cart Road, 28½ miles, was completed.

Communications also absorbed the greater part of the expenditure from Provincial funds. The number of miles of metalled and unmetalled roads maintained during the year, exclusive of those under district officers, was 2,881, as against 2,824 miles in the previous year. Renewals of metal were carried out on 243 miles of road. The boat bridges, which form a special feature in the public works of the Punjab, yielded a net revenue of Rx. 19,389. A few of these bridges are maintained throughout the year, but the majority are closed from May to October. The largest is that over the Indus at Dera Gházi Khan, which measures 3,643 feet, and rests on 92 boats.

The Civil buildings completed during the year included the Chief Court at Lahore with its subsidiary structures, new Courts at Rawalpindi for the Divisional and District Judges, several new Munsiffs' Courts, and a new church at Ludhiána. Some outlay was incurred in the preservation and restoration of ancient buildings. The expenditure to the end of the year on the Emperor Jehángir's Tomb, near Lahore, was Rx. 1,054.

Important additions were made to the Lahore Central Jail, and plans have been drawn out for the location of central jails at Rawalpindi and Montgomery. Other buildings completed were the Lady Aitchison Hospital for Women which was formally opened in November 1888, and the new buildings in connection with the Veterinary School, and good progress was made with the Aitchison College. The project for the Dufferin Hospital at Delhi was under preparation.

In Peshawur the municipal authorities have taken steps towards commencing the waterworks scheme, and the City drainage was completed. Progress was made with the Gujranwála drainage works, and the Delhi water supply and drainage scheme was under preparation. Among municipal buildings under construction may be mentioned the new Town Hall at Simla, and the Lahore Town (or Victoria Jubilee) Hall.

In June 1888 the separate public works administrations which have hitherto been maintained for the upper and lower divisions of Burma, were amalgamated. But for financial purposes the two divisions of the province are still treated separately. Expenditure in the former is almost entirely from Imperial funds, while in the latter the cost of nearly all civil works is met from provincial or local resources.

152 STATEMENT EXHIBITING THE MORAL AND MATERIAL

BUILDINGS AND
ROADS: CIVIL
WORKS.

The expenditure in Lower Burma contrasts with the previous year's outlay as follows :—

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88 - - - - -	25,644	—	117,340	33,027	150,367
1888-89 - - - - -	40,757	2,134	121,901	43,990	168,034

There were no civil buildings of any importance under construction during the year. The outlay on communications was incurred chiefly in the completion and maintenance of existing roads. Good progress was made in the construction of an iron bridge over the Pegu river at Pegu, which is estimated to cost Rx. 17,776. The roads kept in repair throughout the province aggregated 1,050 miles in length.

The expenditure in water communication amounted to Rx. 46,738. Fifty-nine miles of navigable canals and 320 miles of embankment, were kept in good repair. Progress was made with the restoration of the Abya Escape in the Pegu-Sittang Canal, and in the construction of the Kyaikto-Sittang Canal, which was nearly finished.

The expenditure in Upper Burma for the year under review is compared with the outlay for the previous year in the following statement :—

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88 - - - - -	314,842	342,093	—	—	342,093
1888-89 - - - - -	160,944	295,923	—	1,081	297,004

The outlay on civil buildings was Rx. 123,810. Court-houses were completed or were in progress at most of the district head-quarters, and buildings were being provided for the administration of the Police, Jail, Postal and Telegraph Departments.

Much important work was done in the construction of roads under very trying conditions, owing to the unhealthiness of the jungles and the difficulty of procuring labour and provisions, and great tracts of country formerly entirely closed to all but the lightest traffic, are being rapidly opened up. Good progress was made with the Ruby Mines road from Thabeikkyin to Bernardmyo, with the Chin frontier road, and on the main lines of communication from Taungdwingyi to the Irrawaddy, from Fort Stedman on the Shan plateau through the Meiktila and Myingyan districts to the Irrawaddy, from Myinmu on the Irrawaddy to Mōnywa on the Chindwin, from Kyankmyaung through Shwebo and Ye-u to Mawkadaw on the Chindwin, from the Wuntho border to Tigyaing on the Irrawaddy, and on the Mandalay-Maymyo road, the main route to the Northern Shan States. Numerous smaller roads were also under construction in nearly every district, and many miles of tracks and rough paths were cut. The Mandalay town and district embankments were kept in good repair.

The outlay in the Central Provinces for 1888-89, is compared with the previous year's expenditure in the following Table :—

BUILDINGS AND
ROADS: CIVIL
WORKS.
Central
Provinces.

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88	7,663	2,238	126,665	25,100	154,000
1888-89	14,007	1,107	115,993	23,017	140,117

There were no works of any importance constructed during the year under the head Imperial.

The expenditure on provincial civil buildings showed some increase on the previous year's outlay. The most important work in hand was the construction of the divisional and district court-house at Jubbulpore. A circuit-house was also commenced in the same place. Useful work was also done in the improvement of various jail buildings, much of it being carried out by convict labour.

The most interesting feature in the operations of the department was the complete scheme which has been drawn up for the future systematic construction of roads in the province. The roads are of three descriptions :—

- (1.) First class roads, which are regularly graded, metalled, and bridged throughout.
- (2.) Second class roads, also graded and bridged throughout, but metalled with moorum or gravel.
- (3.) Third class roads, which may be generally described as fair-weather roads. As the maintenance of a complete system of first-class roads would be beyond the means of the department, the object in view is chiefly to provide and keep up improved fair-weather roads, to connect the various centres of trade and administration with the railways.

The scheme contemplates the construction, as circumstances admit, of 953 miles of main roads, at an approximate cost of 20 lakhs of rupees ; 95 miles of this length have already been surveyed, and information has been collected as to the nature of the traffic, the population of towns and villages, the principal marts, and the actual incomes from the existing road cesses and from ferries.

The road scheme will also be of use in providing a sound basis for a provincial programme of famine relief work when necessary.

The outlay on new roads during the year was nearly 2 lakhs, the largest item in which was the expenditure on the Nagpur-Itarsi road.

Surveys and estimates were under preparation during the year for the extension of the Nagpur Water Supply scheme to the high parts of the city. The improvement of the water supply of Burhanpur, Khandwa, and Harda was also under consideration. The Warora and Umeria collieries, which are under Government management, show in the results of the year's working, a decided advance over previous returns. The output of the Warora colliery increased from 116,397 tons in the previous year to 132,930 in 1888-89. The net profits were Rx. 10,866, or Rx. 3,376 in excess of those in the preceding year. The output of the Umeria colliery was practically doubled, the return for 1888-89 being 50,067 tons as against 25,548 tons in the previous year. The net receipts increased from Rx. 503 in 1887-88 to Rx. 2,426 in the year under review.

BUILDINGS AND
ROADS: CIVIL
WORKS.

These favourable results are due partly to the economies which have been effected in the working, and partly to the increased demand from the large railways which use the coal. It is reported that the results of the trials made show that 1½ tons of the Umeria coal may be taken as equivalent to one ton of English coal.

Assam.

A comparison of the expenditure in Assam for the year under review with the previous year's outlay is given below:—

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88 - - - - -	15,228	1,720	56,418	93,247	151,391
1888-89 - - - - -	22,111	1,427	61,187	87,366	149,980

Excluding railways the improvement and extension of communications constitute the bulk of the public works operations in Assam. The construction of the Companyganj-Salutiker road was vigorously pushed on, and in the Naga Hills good work was done in opening up communication between Kohima and the North Cachar border. The greater part of the expenditure from local funds, which is controlled by the local boards, was absorbed by the upkeep and improvement of the Assam Trunk Road, and the Northern Trunk Road.

There were no civil buildings of any magnitude under construction during the year. Efforts were being made in various towns towards a better system of sanitation and water-supply. The most important works undertaken were the improvement of the Gauhati water-supply, and the Shillong conservancy scheme. A water-supply scheme for Sylhet and the improvement of the sanitary condition of Barpeta were under consideration.

Coorg.

The expenditure in the Commissionership of Coorg under the head of buildings and roads amounted to Rx. 12,524, of which Rx. 10,428 was from Imperial funds. The larger part of this outlay was on communications. There are no works of any special interest to record.

Madras.

The expenditure in the buildings and roads branch of the Madras Public Works Department for 1888-89 is compared with the outlay of the previous year in the following statement.

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88 - - - - -	52,831	2,222	202,750	397,579	602,554
1888-89 - - - - -	61,651	2,018	225,152	407,455	634,625

The most important work in hand under the head of buildings, was the new law courts at Madras which are estimated to cost Rx. 94,500. Other works of some magnitude completed during the year were the District Jail at Trichinopoly, the accommodation built for the sub-judge at Ootacamund, and the works in connection with the preservation of Tirumal Naik's Palace at Madura, and its adaptation for public offices.

In Madras the expenditure on roads is to a very great extent in the hands of the local boards, who maintain separate engineer establishments of their own to carry out the minor class of public works with which they are entrusted.

entrusted. In the year under review, 222 miles of new road were constructed by the different local administrations, and 20,311 miles of existing roads were kept in repair. Of the roads constructed from provincial revenues, the most important works in progress were the Pottinghi-ghât, Pottinghi-Koraput, and Vayitri-Gûdalûr roads.

BUILDINGS AND
ROADS: CIVIL
WORKS.

The widening of the Elephant-gate bridge, Madras, was completed, and satisfactory progress was made with the Vaigai bridge.

Among miscellaneous works of public improvement may be mentioned the Cuddapah Waterworks. The water supply schemes for Bangalore and Bellary were still under consideration. The pier at Gopâlpur, and the lighthouse at Seven Pagodas were completed.

The most costly and important public work at Madras is the re-construction of the harbour works, which were partially destroyed by the storm of November 1881. An important question which has been much debated in connection with these works is the position of the entrance, which it has been proposed to place in the north-east corner of the harbour. It has, however, been decided to proceed for the present with the re-construction works on the lines of the original design, with an eastern entrance. A satisfactory amount of work was done on the north and south piers of the harbour, Rx. 61,722 being spent during the year. The total length of the North Pier was advanced to 2,825 feet, and of the South Pier to 3,519 feet. At the end of the year, the total cost of the re-construction works had reached a sum of Rx. 303,347 against the estimate of Rx. 459,005.

Expenditure on Civil Works in Bombay shows a not inconsiderable decline. This is partly due to the economies which have been effected by the measures, which were proposed and partially introduced in 1887-88, for the reduction and re-arrangement of establishment, and the revision of the system of auditing accounts. When these changes have been fully carried out the total annual saving which they will effect is estimated at over 2½ lakhs.

Bombay
(including S'nd).

The expenditure of the year is compared with that of the preceding year in the following table :—

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88	82,251*	28,418	407,867	212,325	648,610
1888-89	131,306*	14,860	371,740	209,129	595,735

* Excluding special defence works.

About 21 lakhs were spent on buildings, and about 26 lakhs on communications.

The outlay on Civil buildings was expended in the construction and repair of the usual class of works for administrative, judicial, protective, educational, medical and other purposes. The most important were the new Police Courts and Elphinstone College in Bombay, and the Yeraoda Reformatory at Poona.

A considerable extension of hospital accommodation in Bombay was due to the munificence of private citizens, which was displayed in a remarkable manner in the year under review. Donations and bequests amounting to more than 4½ lakhs were made for the purpose of erecting hospitals and dispensaries. New buildings for the European General Hospital, to be erected from provincial revenues, were sanctioned during the year.

The work on Communications for the year included several important lines of road, which were under construction in the Ahmedabad, Khandesh and Belgaun districts.

In Poona and Ahmednagar progress was made with a scheme of roads intended to open out the hilly tracts infested by predatory Râmosis and Kolis.

BUILDINGS AND
ROADS: CIVIL
WORKS.

The expenditure on miscellaneous works of public improvement was nearly 2½ lakhs. Projects for improving the water-supply in various towns were under consideration, notably that for Ahmedabad, which will cost about 6 lakhs.

The two large harbours of the Bombay Presidency are in the hands of Port Trusts. The capital expenditure of the Bombay Port Trust amounted at the end of March 1889 to Rx. 5,036,710. Twelve lakhs were expended during the year on the Victoria Dock which was fully opened in April 1888. The reclamation of the Apollo basin was completed during the year, and progress was made with various minor improvements.

The construction of a graving dock at the corner of Prince's Dock, which has been under consideration for some time, was finally settled, and the contract was signed at the close of the year. The estimated cost of the work was Rx 114,485, and it was to be completed in two years. The question of the construction of the Government dry dock, which has been the subject of much discussion, still remains in abeyance.

Special efforts have been made of late years to improve the harbour at Karachi, which has been growing in importance with the gradual extension of the system of railways for the protection of the North-West frontier, of which it is the sea terminus. The Government have assisted in the work by means of contributions and loans. The year under review showed an important addition to the wharf accommodation of the port in the completion of the second division of the Erskine Wharf. The amount dredged, viz., 690,387 tons, was somewhat smaller than in the preceding year, owing to increasing depth, and the greater hardness of the matter dealt with.

The expenditure on Military and Civil Works in Berar for 1888-89, and for the preceding year, are shown in the following statement :—

YEAR.	Military Works.	Civil Works.			
		Imperial.	Provincial.	Local.	TOTAL.
	Rx.	Rx.	Rx.	Rx.	Rx.
1887-88 - - - - -	24,179	2,815	190,793	4,914	138,522
1888-89 - - - - -	27,784	1,328	115,423	5,080	121,831

There were no works of particular interest under construction from Imperial funds. More than half the provincial expenditure was on communications. Upwards of 2½ lakhs were expended on constructing and improving roads, and the important bridge across the Purna river, on the Amraoti-Ellichpur road was completed at a total cost of Rx. 26,098. A length of 820 miles of bridged and moorum-surfaced roads in Berar was kept in good repair at a cost of Rx. 26,808. No civil buildings of unusual importance were in hand; the work done was chiefly in the construction of ordinary buildings for administrative, jail, police, educational, ecclesiastical, and other miscellaneous purposes.

The expenditure on Miscellaneous works of public improvement referred chiefly to schemes for improved water-supply.

NATIVE STATES.

An incomplete account only can be given of the Public Works operations in the Native States of India, owing to the want of information in the case of some of the larger and more independent feudatories. They include, however, many works of great public utility, and some of large size, in many cases carried out by European engineers lent by the British Government.

Central India
Agency.

The total imperial outlay on civil works for the year in the Central India Agency was Rx. 33,196, of which the larger part was upon communications. In addition to this sum an expenditure of Rx. 19,029 was incurred from local and cantonment funds, &c., and contributions from Native States. The most noticeable event of the year was the transfer, in accordance with the recent policy of the Government, of the care of communications in the larger States to the several Durbars concerned. Five hundred and fifty miles of road, together with the Dāk and Inspection bungalows on them were thus made over to the Gwalior State, and 91½ miles to the Bhopal State. Among miscellaneous works,

works, the completion of the Mhow waterworks deserves notice. Considerable sums were expended under the head of public works by the Native States during the year. Thus the outlay by the Indore State Public Works Department was Rx. 47,325, and Rx. 137,500 were expended by the Gwalior State.

NATIVE STATES.

The outlay on Civil Works in Rajputana from Imperial funds was Rx. 14,926, in addition to which there was an expenditure of about Rx. 7,000 from local and contributational funds.

Rajputana.

The outlay by Native States for the year was Rx. 281,494. This total, however, does not include the outlay in those States which do not submit their annual reports on public works. The Native States expenditure comprises all classes of public works. It includes outlay on the Jodhpur Railway, both on capital account (Rx. 2,956), and for working expenses (Rx. 16,999), and numerous works of irrigation, chiefly of an unimportant description. The principal items of expenditure were buildings and irrigation.

Among the chief buildings in progress may be mentioned the Udaipur new palace and Victoria Hall, the general offices at Jodhpur, and the Albert Hall and new jail at Jaipur.

Speaking generally, the expenditure by the Native States on public works was incurred principally under the supervision of the Public Works officers lent by the British Government.

In the State of Rampur public works were prosecuted under the initiative of the engineer officer whose services had been lent in the previous year, and a system of drainage for the city, and of canals for the country was commenced.

NORTH-WEST PROVINCES.

There is little of special interest to record in the way of public works in the numerous class of native states connected with the administration of the Punjab. On a former occasion the Patiala State gave material help in contributing funds towards the construction of a great Imperial work, viz., the Sirhind Canal; and in the important branch of the Western Jumna Canal which it is now proposed to construct towards Sirsá, the native State will bear a proportionate part of the cost. In Kapurthala the five public buildings which have been under construction for some years were completed, as well as the Victoria Hospital. The construction during the year of a bridge over the Sutlej at Suni, of which half the cost was borne by the Rája of Suket, and the Rána of Bhajji, was a public work of some importance.

Punjab.

In the Native State of Travancore the expenditure on public works amounted to Rx. 106,177, or 15·3 per cent. of the total revenue. This outlay was chiefly on irrigation, but a portion of it was allotted to the construction of new roads. In Cochin the progress made by the Public Works Department was satisfactory. The expenditure was Rx. 38,117; 315 miles of road were kept in repairs, and some advance was made with new roads.

Madras.

With one or two exceptions the Native States under the political supervision of the Bombay Government, are, individually, of minor importance, and there is not much that calls for notice in their expenditure on public works. In Cutch, the first State in point of size, the total expenditure for the year was Rx. 21,900, of which Rx. 4,657 was upon roads, and Rx. 3,726 on water works. A breakwater is under construction at Mándvi. In population and revenue the Kolhápúr State is the most important of those under the control of the Bombay Government. The expenditure in this State amounted to Rx. 88,000, of which Rx. 44,378 was upon the State Railway. Three important bridges were under construction during the year, viz., the Victoria Jubilee Bridge at Ajra, the Lee-Warner Bridge near Udgaon, and the Panchganga Bridge near Rukdi.

Bombay.

XII.

POST OFFICE AND TELEGRAPHS

POST OFFICE.

POST OFFICE.

THE receipts and charges of the Post Office for the last two years, as shown in the Finance and Revenue Accounts, are given in the following statement:—

YEAR.	Receipts.	Expenditure.	Net Charge.
	Rx.	Rx.	Rx.
1887-88 - - - -	1,214,196	1,375,215	161,019
1888-89 - - - -	1,281,540	1,342,452	60,912

The decrease of the net charge, as compared with 1887-88, is due to an increase of about Rx. 67,000 in the revenue, and a decrease of Rx. 33,000 in the expenditure. This deficit is on purely postal transactions, including exchange. If indirect expenditure in connection with the Post Office were added, on the one hand, and a deduction made, on the other hand, of the charges for the district post (the receipts under which head are not credited to the Post Office), the deficit would be reduced to Rx. 23,758.

YEAR.	Post Offices.	Letter Boxes.	Village Postmen.	Length of Postal Lines.
	No.	No.	No.	Miles.
1886-87 - -	7,007	9,386	4,455	64,965
1887-88 - -	7,263	9,704	4,725	68,900
1888-89 - -	7,533	10,067	3,297	68,020
Increase in 1888-89 over 1887-88 - -	270	363	- 1,428	1,066

The extent of the sphere of the operations of the Post Office, and its development during the last three years, are shown in the table in the margin. The apparent decrease in the number of village postmen is due to a change of classification, the staff of these men having actually increased by 321.

YEAR.	Letters (including Postcards).	Newspapers.	Parcels.	Book and Pattern Packets.	Total.
	No.	No.	No.	No.	No.
1887-88 - -	238,692,376	21,832,775	1,021,418	6,739,658	268,386,227
1888-89 - -	254,491,320	22,696,378	1,797,705	8,102,035	287,087,438
Increase - -	15,798,944	863,603	176,287	1,362,377	18,201,211

The general correspondence returns for 1888-89, of which a summary is given in the margin, show an increase of upwards of 18 millions of articles carried by post, as compared with 1887-88. Of this increase, 10 millions were

due to postcards, which now represent a third of the entire number of communications passing through the post.

The number of parcels exchanged with the United Kingdom increased from 158,792 in 1887-88 to 163,989. The increase was entirely in the parcel post with the British Post Office, the number of parcels transmitted through the agency of the Peninsular and Oriental Company showing a slight falling off. This latter agency is used, on the side of India, only for sending parcels exceeding the Post Office limit of 11 lbs., and on the side of the United Kingdom, also for insured parcels and parcels on which postage has not been prepaid. The greater number of the parcels sent from the United Kingdom by the Peninsular and Oriental Company are book packets, for which a special rate of 6 *d.* a pound is charged. The ordinary parcel post shows, for the first time for some years, a substantial increase (10 per cent.).

The

The receipts from the insurance of letters and parcels rose to Rx. 19,993, an increase of nearly 9 per cent., as compared with the preceding year, notwithstanding that in Burma the value of the insured parcels fell off by nearly 13 lakhs of rupees, in consequence of the action of the Local Government in putting a stop to the improper transmission of rubies through the post, with a view to evade duty. The amount paid as compensation was Rx. 1,080, being 5.40 per cent. on the insurance fees. The number and value of money orders issued in India increased from 5½ millions and nearly Rx. 12,000,000 in 1887-88, to more than six millions and nearly Rx. 13,000,000 in 1888-89; and the commission realised, from Rx. 149,438 to Rx. 165,776. Year by year the average value of the money orders issued has declined. It is now Rs. 21. 2. 6., and 73 per cent. of the entire number of orders issued were for sums not exceeding Rs. 10. The adaptation of the money-order system to the payment of land revenue and cesses has proved a success in the North Western Provinces and Oudh and in the Lower Provinces of Bengal, the amount of revenue remitted in this way having been Rx. 197,465 in 1888-89 in the former provinces. One of the principal features of the revenue money-order system in the Lower Provinces is, that all payments of such orders to a collectorate are made by book transfer, thus reducing to a minimum the risk of fraud and embezzlement. A somewhat similar system of book transfer, with respect to payments of income tax and other miscellaneous remittances in favour of district officers and district boards, was introduced from 1st July 1888, and has also proved a success. During the year 126,391 money orders for land revenue and other dues of Government and district boards were paid by book transfer in the Lower Provinces, the total value of the orders thus paid being Rx. 119,893. The arrangements to enable the agricultural population in the North Western Provinces and Oudh to use money orders for the remittance of small sums due on account of rent by tenants to landowners have been found to meet a want, and the system will be introduced into the Lower Provinces of Bengal.

The remittances from India to the United Kingdom by money orders decreased from 136,735 l. in 1887-88 to 132,726 l. in 1888-89.

The value of the deposits in the Post Office savings banks during 1888-89 was Rx. 565,000 more than in 1887-88. The balance at the end of 1888-89 was Rx. 5,886,468 (there being Rx. 5,008,203 at the credit of natives of India, and Rx. 878,265 at that of Europeans and Eurasians), as compared with Rx. 5,048,835 at the close of 1887-88. There were 311,001 depositors, of whom 88 per cent. were natives of India, the number of accounts belonging to the agricultural classes being only 3,859, which, however, is an increase of nearly 1,000 over 1887-88. Nearly half the depositors belong to the professional class, in which are included Government and municipal servants of all kinds. In 1886-87 the power of purchasing Government securities through the Post Office was limited to *bond fide* depositors in the savings banks, and the effect of this limitation was felt in 1887-88, in which year the total amount of such investments was Rx. 33,330, as compared with Rx. 44,060 in 1886-87. In 1888-89 the amount of these investments rose to Rx. 35,500, and the total number of transactions (purchases and sales) was 504, of which 469 related to securities not exceeding Rs. 1,000 in value.

TELEGRAPH DEPARTMENT.

The Indian Telegraph Department now includes the Indo-European system of Government lines, extending from Karachi to Teheran, which were transferred to the administration of the Department in February 1888. But in accordance with precedent, and for the sake of comparison with previous years, the results of working the latter system are shown separately.

During the year under review the Indian Telegraph System was extended by the construction of 1,568 miles of new line; the increase in the wire mileage being 6,137 miles, and four miles of cable. The new lines of telegraph were chiefly in connection with the railways under construction or survey, such as the Bengal-Nagpur, the Villapuram-Guntakul, and the Southern Mahratta Railways.

The most important of the new lines constructed for departmental or military purposes were those from Chittagong to Demagiri, 89 miles, and from Loralai to Dera Ghazi Khan, 179 miles. An important line of communication in Upper Burma, from Bhamo to Mogong, 100 miles through very difficult country, was under construction; and 42 miles were completed by the end of the year.

Good work was also done by the department in the erection and working of field telegraphs in connection with the Sikhim, Hazara, and Chin Expeditions. In the first-named expedition a telegraph office was opened at Bhutong at an altitude of 13,500 feet, and in the Hazara Campaign, ground wires, which enable a temporary line to be rapidly laid, were used for the first time in India.

The number of offices opened for public traffic was increased during the year by 161, of which 109 were established on railways.

In the following table the results of the year's working of the department are compared with those of the preceding year:—

Year.	Number of Signal Offices at end of Year.	Miles of Line at end of Year.	Miles of Wire and Cable at end of Year.	Number of Messages during Year.	Revenue for Year.	Expenditure on Revenue Account.	Surplus on Revenue Account.	Total Outlay on Capital Account to end of Year.	Percentage of Net Revenue on Capital Outlay.	Capital Outlay during Year.
					Rx.	Rx.	Rx.	Rx.		Rx.
1887-88	745	31,804	93,743	1,802,299	662,866	429,234	233,642	4,277,758	5.46	334,955
1888-89	797	33,462	99,884	2,078,998	632,247	434,223	198,024	4,452,120	4.45	174,362

* Exclusive of offices on railways and canals.

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 India. In the year under review the receipts of the department were sufficient to cover both the working expenses and the amount expended on capital account, and there was therefore no net charge on the Imperial revenues.

It will be seen that the gross receipts for the year were smaller than in the preceding year. The decrease is entirely under the head of State telegrams, both inland and foreign, and may be ascribed partly to the curtailment of military operations in Upper Burma, and partly to the action of official rules which have tended to restrict the number and length of messages sent in the service of the State.

On the other hand there was a very satisfactory increase in the number and value of the private messages, both inland and foreign. The development of the traffic from inland messages sent by private persons will be seen from the following figures:—

	Rx.
1883-84 - - - - -	29,124
1884-85 - - - - -	88,879
1885-86 - - - - -	133,532
1886-87 - - - - -	181,779
1887-88 - - - - -	198,181
1888-89 - - - - -	223,151

The increasing use of the telegraph by private persons is due to various causes, and among them may be mentioned the enlarged facilities for telegraphing offered by the system of combined post and telegraph offices introduced in 1883, and the change of tariff in 1882. Under the tariff then introduced, which is now in force, messages are dispatched in order of urgency, according as they are paid for as "urgent," "ordinary," or "deferred," the charge for the unit message of eight words being 2 rupees, 1 rupee, and 8 annas, respectively. About 6 per cent. of the messages received are sent as urgent, 46 per cent. as ordinary, and 48 per cent. as deferred.

The

The private telegrams sent to, or received from, places abroad, also show an increase to the extent of 4 per cent. over the number of the preceding year, and 12.6 per cent. in value. In order to cover loss arising from the unfavourable rate of exchange the charge for foreign telegrams was raised in July 1888 from Rs. 2. 13. per word to Rs. 3 per word.

TELEGRAPH
DEPARTMENT

The working of the traffic was up to the standard of previous years. The number of faults was 140 less than 1887-88, though the average duration was somewhat longer. The most serious interruptions were due to storms and floods. The total number of telegrams which for various reasons could not be delivered was about 0.39 per cent. of the whole number sent.

The duplex system was in use on 26 circuits; and three main circuits, viz., Bombay-Madras, Calcutta-Rangoon, and Calcutta-Agra, of which the first is 796 miles in length, were worked on this system.

The telegraph is largely used for transmitting advices of money remittances, and the number of such advices increased from 46,420 in 1887-88 to 58,770 in the year under review.

The private lines and telephone exchanges show an increase both in their number and in the amount of their earnings. There are telephone companies at Calcutta, Bombay, Madras, Karachi, Moulmein, and Rangoon. The number of subscribers in December 1888 was 893, the number of exchange connections was 923, and the number of private lines 113. Telephonic operations are also carried on by the Department, but to a very small extent.

TELEPHONES.

INDO-EUROPEAN TELEGRAPH DEPARTMENT.

The capital account of the Indo-European Telegraph Department stood at Rx. 1,124,136 at the end of the year.

INDO-EUROPEAN
TELEGRAPH
DEPARTMENT.

The revenue receipts and charges compare with those of the three previous years as follows:—

YEAR.	Receipts.	Working Expenses.	Net Receipts.
	Rx.	Rx.	Rx.
1885-86 - - - -	101,928	162,007	—60,079
1886-87 - - - -	100,379	86,552	13,827
1887-88 - - - -	103,523	83,685	19,838
1888-89 - - - -	114,460	95,322	19,138

The increase in the receipts was due to a prolonged break in the Eastern Company's cables, which threw a great deal of traffic on to the lines of the Indo-European Company and the Government. Owing to the joint-purse arrangement between the two companies and the Government department, the increase in the receipts bears no proportion to the greatly increased work performed by the department.

The increase in the working expenses was due to renewals of old cable.

The net revenue represents a profit of 1.72 per cent. on the capital of the department. In this statement of the net revenue, however, the charge of Rx. 18,027 on account of the deferred annuity to the shareholders of the late Red Sea Telegraph Company is not included. If this payment be taken into account the net receipts amount to Rx. 1,111 only. The accounts of the Indo-European Department are weighted with various special charges incidental to the establishment of telegraphic communication with Europe through foreign countries, and the financial returns cannot therefore be compared on equal terms with those of the rest of the Indian Telegraph system.

162 STATEMENT EXHIBITING THE MORAL AND MATERIAL

INDO-EUROPEAN
TELEGRAPH
DEPARTMENT.

Throughout the year there was no break in the traffic on the Persian Gulf Section between Karachi and Bushirè affecting communication with Europe, though the carrying power of the section was affected by a long interruption on the Gwadar-Karachi Cable, resulting in some congestion of traffic and consequent retardation of the average speed of transmission.

On the Persian section the interruptions, owing to the severity of the winter, were rather in excess of those of the previous year.

The average speed of transmission of the three routes between England and Calcutta is shown below :—

	<i>Via</i> Teheran.	<i>Via</i> Turkey.	<i>Via</i> Suez.
	H. M.	H. M.	H. M.
1886-87 - - - -	1 31	13 23	2 31
1887-88 - - - -	1 11	16 11	2 42
1888-89 - - - -	2 24	19 28	3 2

The percentage of errors on the Persian Section was 0.18, and on the Persian Gulf Section 0.27.

XIII.

EDUCATION AND LITERATURE.

EDUCATION. EDUCATION in British India is conveyed through the medium of two classes of institutions, known respectively as "public" and "private" institutions. A "public" institution is defined to be "a school or college in which the course of study conforms to the standard prescribed by the Department of Public Instruction, or by the University, and which is either inspected by the Department or regularly presents pupils at the public examinations held by the Department or the University." A school or college not coming within that definition is called a "private" institution.

The information available regarding private institutions, which is neither exhaustive nor trustworthy, tends to show that the instruction imparted in them is, as a rule, less systematic and efficient than that imparted in similar schools controlled by the Department. In order, however, to present a general view of the condition of education in India, it is desirable for the moment to ignore the difference between the two classes of institutions and to combine the statistics of attendance at both.

As to the character of the instruction imparted, it appears that in the case of the greater mass of children this is of the most elementary kind. Broadly speaking, the system of education administered in India operates through three grades of institutions, namely, primary schools, secondary schools, and colleges. The primary school aims at teaching the elements of reading and writing, and such simple rules of arithmetic and land measurement as will enable the peasant in a purely agricultural country to look after his own interests. This course meets at the present time the wants of about 94 per cent. of the entire school-going population. The secondary schools, in which advanced instruction in the vernacular and a substantial knowledge of English are conveyed, claim an attendance of 5.1 per cent. of that population, while the remaining .9 per cent. supplies students to all the colleges which impart the highest English education, or teach the various professions of Law, Medicine, and Engineering.

The number of institutions referred to in the Educational Reports of the various provinces for the year 1888-89 has declined from 133,125 in the previous year to 131,709. The decrease has occurred entirely in the number of public institutions, which have fallen from 94,636 to 92,865.

The number of pupils on the registers of all the schools and colleges, to which the statistics relate, was, on 31st March 1889, 3,544,257 as compared with 3,460,844 on the same date in 1888. The percentage of pupils to the population of school-going age was 11.2 as compared with 11.0 in 1887-88. In spite of the decline in the number of public institutions the number on the rolls of attendance at them rose from 3,021,721 to 3,047,251. There was a more substantial increase in the numbers enrolled at the private institutions from 439,123 to 497,006,—mainly at elementary schools. The average monthly attendance at public institutions was slightly better than in the previous year, except at aided institutions; and the falling off at the latter occurred in primary schools. Statistics to show the average attendance at private institutions (advanced and elementary) are not available. At Arts Colleges the number on the rolls at the end of the year was 11,250 as compared with 10,328, and the number at the Professional Colleges 2,691, as compared with 2,861 in the previous year. The number at secondary schools rose from 441,876 to 452,058, and at primary schools from 2,550,384 to 2,563,294. The training schools had 4,937 on the rolls as compared with 4,761, and at the other special schools there were 13,021 as compared with 11,511.

The number of pupils studying English was 342,953 compared with 325,425. The number learning a classical language rose from 478,608 to 512,959, and the number reading a vernacular language only from 3,122,291 to 3,179,453. Of the latter 2,552,010 were at primary schools, as compared with

EDUCATION.

with 2,543,983 in 1887-88. The increase occurred chiefly at private institutions, where there were 248,675 pupils studying a vernacular as compared with 199,528 in 1887-88.

Turning to the race and religion of the pupils it will be observed that there were 2,413,588 Hindus as compared with 2,365,794 in 1887-88; 832,449 Muhammadans as compared with 804,485; 23,948 Europeans and Eurasians as compared with 23,160; 74,376 Native Christians as compared with 74,498; and 199,760 of miscellaneous races or religions as compared with 192,314 in 1887-88.

The number of boys attending school was 3,253,996, or 20·3 per cent. of the male population of school-going age, as compared with 3,182,643 in the previous year. The number of girl pupils was 290,261, as compared with 278,201. The percentage of girls attending school to the female population of school-going age was 1·8, the same figure as in 1887-88. While the public institutions for boys declined from 89,766 to 87,902, and the private institutions rose from 36,347 to 37,243, the public institutions for girls rose from 4,870 to 4,963, and the private fell from 2,142 to 1,601.

The total expenditure on education rose from Rx. 2,619,128 in 1887-88 to Rx. 2,709,232 in 1888-89, and the direct expenditure was Rx. 2,134,484 as compared with Rx. 2,090,980. The expenditure on Professional Colleges fell from Rx. 72,147 to Rx. 67,414, while that on Art Colleges rose from Rx. 180,164 to Rx. 185,158, that on secondary schools from Rx. 862,711 to Rx. 890,887, that on primary schools from Rx. 838,889 to Rx. 849,981, that on training schools from Rx. 56,614 to Rx. 57,144, and that on other special schools from Rx. 80,453 to Rx. 83,897. In the indirect expenditure on education are included charges on account of direction, inspection, scholarships, buildings, and other miscellaneous charges. The amount thus expended indirectly rose from Rx. 543,876 to Rx. 574,748. The chief increase was under the head of buildings.

Towards the expenditure on education, provincial revenues contributed Rx. 739,787 compared with Rx. 729,357 in the previous year. The contributions from local and municipal funds rose from Rx. 464,155 to Rx. 478,447 and from Rx. 129,431 to Rx. 131,419, respectively. Fees which amounted to Rx. 729,409 in 1887-88, were Rx. 768,532 in 1888-89; and the receipts from subscriptions, endowments, and other sources rose from Rx. 566,774 to Rx. 591,045.

From a statistical point of view the year's results were satisfactory, especially as regards the increased attendance at schools and the growth of private contributions towards the maintenance of schools and promotion of education.

The following table gives a general summary of the chief statistics as to education during the year :

E D U C A T I O N .

ABSTRACT RETURN of COLLEGES, SCHOOLS, and SCHOLARS in the several PROVINCES comprised in *British India* for the Official Year 1888-89.

AREA AND POPULATION.				PUBLIC INSTITUTIONS.							PRIVATE INSTITUTIONS.		GRAND TOTAL.	Percentage of			
Total Area in Square Miles.	Number of Towns and Villages.	Population.		University Education.		School Education, General.		School Education, Special.		Total of Public In-	Advanced.	Elementary.					
1.	2.	3.		4.	5.	6.	7.	8.	9.	10.	11.	12.			13.	14.	15.
					Arts Colleges.	Profes- sional Colleges.	Secondary Schools.	Primary Schools.	Training Schools.	All other Special Schools.	stitutions.						
973,175	Towns - 1,350 Villages - 578,863 <hr/> TOTAL - 580,222	Males - 106,576,908 Females - 102,607,538 <hr/> TOTAL - 209,184,446	Institutions	For Males -	95	26	4,335	82,908	110	428	87,902	7,243	30,000	125,145	21.5		
				For Females	3	—	364	4,554	34	8	4,903	—	1,601	6,564	1.1		
				TOTAL - - -	98	26	4,699	87,462	144	436	92,805	7,243	31,601	131,709	22.6		
			Scholars	Males -	11,234	2,641	422,843	2,338,093	4,066	12,722	2,791,649	79,956	382,391	3,253,996	Male scholars to male population of school-going age* -	20.3	
				Females -	16	50	20,105	225,201	871	299	255,602	1,034	33,625	299,261	Female scholars to female population of school-going age* -	1.8	
				TOTAL - - -	11,250	2,691	452,958	2,563,294	4,937	13,021	3,047,251	80,990	416,016	3,544,257	Total scholars to total population of school-going age* -	11.2	

* The population of school-going age is taken at 15 per cent. of the whole population.

EDUCATION.
Bengal.

During the year 1888-89 the district boards in Bengal, to which the control of primary education had been transferred in 1887-88, received further development, and some of their educational functions were delegated to local boards or to special sub-committees. The relations between the Educational Department and the local boards have been on the whole satisfactory. As regards university education, while the number of colleges remained stationary, there was an increase in the number of students borne on the rolls. At the chief university examinations the superiority of the Government colleges was fully maintained. The yearly cost of each student in a Government college fell from Rs. 258 to Rs. 233, and the cost of his education to the State from Rs. 168 to Rs. 140. Secondary schools advanced in number from 2,226 to 2,319, and their pupils from 189,103 to 200,124. The history of primary education during the year was discouraging, for although there was an addition of 51 upper primary schools with 3,162 pupils, there was a loss of no fewer than 741 lower primary schools and 8,973 pupils. The average cost of each primary school was 18.3 rupees, and that of each pupil 12.2 annas. To summarise the educational progress of the period in Bengal, it appears that there was a slight decrease in the number of public institutions, but an increase in the attendance thereat, while in private institutions an advance under both heads is reported. The total number of schools and colleges now stands at 64,628, and that of scholars at 1,482,150, the net result of the year's operations being a gain of 1,146 schools with 29,205 pupils.

North-Western
Provinces and
Oudh.

The most important feature in the history of education in the North-Western Provinces and Oudh in the past five years has been the development of the demand for university education. The number of pupils in college classes has increased from 1,041 to 1,426, or by nearly 40 per cent. The Allahabad University authorities held their first examination in March 1889. In secondary education the principal measures have been a revision of the scale of fees, by which a more reasonable share of the expenses is borne by the persons who directly benefit by it, and the closing of secondary classes at village schools, where there were no proper arrangements for teaching them. In primary education the measures to be noticed are, the introduction of a general and uniform standard of examination; a reorganisation of the inspecting staff, which provides a larger number of high-class Native inspectors for the supervision of village schools, and the consequent elimination from the rolls of attendance of fictitious and nominal entries; the imposition of a very low scale of fees; and finally, the closing of a number of village schools where the attendance or the quality of teaching was inferior. The natural result of all these measures combined was an appreciable reduction in the returns of primary students.

Punjab.

In the Punjab the year was one of educational progress. There was a large increase in the number of public schools and scholars, and in the proportion of scholars in the higher classes of the secondary schools; and though the returns show a reduction in the number of indigenous schools, this is due to the exclusion of those containing less than six pupils. The number of indigenous and elementary schools brought under the grant-in-aid rules largely increased. The results of the primary examinations show a large addition to the number of children able to satisfy their tests. In different parts of the province physical education has been vigorously taken in hand, and discipline improves in all directions with the increasing supply of trained teachers. Excellent work, it is reported, is being carried on in the colleges of the province.

Burma.

At the close of the year there were in Lower Burma 5,679 colleges and schools, with 121,672 pupils. The statistics of intermediate education during the year were not wholly satisfactory, for whereas the number of primary pupils who passed into the middle schools increased, there was a decrease in the number of passes at the University entrance examinations. Steps are being taken to improve the quality of the instruction in middle schools by establishing normal schools for the training of middle school teachers. The condition of primary education, mainly indigenous, was generally satisfactory. The number of pupils who passed the primary examinations, and the amount of results grants earned by primary schools, increased. The system of teachers' training schools, which has proved very successful, is being

being further developed. No expenditure was incurred on education in Upper Burma during the year; but since its close preparations have been made for extending the educational system to the upper province. EDUCATION.

In the Central Provinces the year was specially characterised by the progress made in the introduction of the elements of technical education. There was an improvement in the attendance and in fee receipts at primary and secondary schools during the year. District councils and school boards continued to take an active interest in education. Arrangements are now being made for the transfer to the management of district councils of the grants-in-aid given in most districts for the support of indigenous schools, so that primary schools of all classes may be brought under the control of the councils and benefit by their influence over the people. Central Provinces.

There was an increase from 2,199 to 2,349, or by 6·8 per cent., in the number of departmental and aided schools in Assam. The number of pupils increased from 70,538 to 74,889, or by 6·1 per cent., the increase being common to all classes of schools for general education, except girls' schools, and being most marked in the case of primary schools for boys. There was a decline in the number of, and attendance at, girls' schools. The most prominent feature in the educational history of the year was the increase in lower primary schools from 1,764 with 51,606 pupils, to 1,925 with 56,224 pupils; and, as this increase is most noticeable in the case of schools aided under the grant-in-aid rules, the improvement may be fairly attributed to the system of payment by results. Assam.

In Ajmere there was a slight increase in the number of schools. The total number of students borne on the rolls was 8,843. It is reported that, female education is still in a very backward condition. Ajmere.

In Coorg the attendance at public schools increased from 3,764 to 4,179. There was a slight increase in the number of, and attendance at, private unaided schools. The attendance at the primary vernacular schools which suffered on the first introduction of fees in 1886-87 was partially restored in 1887-88, and made good progress in the year under report. In Bangalore the number of pupils fell from 4,653 to 4,258. Coorg and Bangalore.

In Madras the total number of institutions, public and private, rose during the year from 17,355 to 18,931, and that of scholars from 505,658 to 552,152. Of the pupils, no less than 492,514 belonged to public institutions; and the total 552,152 was made up of 482,279 boys and 69,873 girls. In the previous year the numbers had been 440,123 boys, and 65,535 girls. The proportion of boys under instruction, to population of school-going age increased from 19·2 to 21, and that of girls from 2·8 to 2·9. The pupils were distributed among different classes as follows,—Europeans and Eurasians, 7,007; Native Christians, 40,235; Muhammadans, 56,478; Hindus, 446,817 (of which number 76,993 were Brahmans); others, 1,113. The number of public primary schools for boys advanced from 13,301 to 13,800, and the pupils in them from 365,887 to 389,394. The number of public primary schools for girls advanced from 650 in 1887-88, to 677; but the number of girls in the upper primary departments of secondary and primary schools fell from 3,222 to 3,157. The total number of private institutions furnishing returns to the department rose from 2,542 to 3,552, and the number of pupils from 41,004 to 59,638. Of these schools 3,235 were ordinary primary schools, and eight were English middle schools. The rest were indigenous schools teaching Arabic and Sanskrit, and of a semi-religious character. The attendance at the high school secondary department rose from 6,795 to 7,466,—and the strength of the lower secondary departments from 12,084 to 12,667. The number of candidates for the matriculation examination rose from 6,582 to 7,327; but the number of passes fell from 1,963 to 1,854. There was a slight increase in the strength of the B.A., and F.A. classes. MADRAS.

In Bombay the progress made in education in many preceding years was fully maintained in 1888-89. At the close of the year 582,853 pupils, of whom 60,804 were girls, were under instruction in 11,732 schools, both public and private, throughout the presidency; the number of boys under instruction representing 28 per cent., and the number of girls 3 per cent. of those of an age to attend school. During the year the number of public Bombay.

EDUCATION.

schools rose from 8,274 to 8,642, the number of pupils on the rolls from 484,059 to 507,752, and the average daily attendance from 74 to 75 per cent. The increase was distributed over schools of every grade, but was most marked in the case of schools, more especially aided schools, affording primary and secondary education. A larger number of candidates than in the previous year competed at the University examinations, higher than the matriculation; and the number successful was both actually and proportionately higher. The number of high schools (including 11 for girls) rose from 78 to 82, and the number of pupils in these schools from 21,391 to 22,335. With few exceptions the high and middle schools, both Government and aided, were in a very satisfactory condition. The number of primary schools for boys was 7,573, and the number of pupils attending them 428,928,—the schools having increased since the preceding year by 306, and the pupils by 19,764. The increase occurred principally in schools maintained or aided by the local boards. Many of the local boards evinced an increasing interest in the encouragement of education; but its extension is impeded by the want of sufficient funds. The most important of the schools for Chiefs continued efficient and popular. Somewhat fewer Muhammadans attended the schools specially established for their benefit; but on the other hand, many more attended the ordinary schools of every grade. There was an increase in the number of training schools, and of pupils attending them.

Berar.

In Berar the working of the Educational Department was on the whole more successful than in the previous year. The proportion of male pupils to male population of school-going age rose from 20·4 to 21·3 per cent. The results of the matriculation examination were very satisfactory. There was an increase in the attendance at girls' schools. Some advance was also made in the education of Muhammadans.

LITERATURE AND THE PRESS.

LITERATURE.

The Act XXV. of 1867, passed by the Governor General of India in Council for the regulation of printing-presses and newspapers, provided amongst other things that every book or paper printed within British India shall have printed legibly on it the name of the printer and the place of printing, and (if the book or paper be published) of the publisher and the place of publication. It also provided for the registration of every book, pamphlet, map, &c., printed or lithographed in British India.

Bengal.

In Bengal four new serial vernacular papers came into existence during the year, and two were discontinued. Of 68 vernacular papers in circulation, seven were monthly, ten fortnightly, 45 weekly, one bi-weekly, and five daily. The language of a large majority of them was Bengali. Twenty-seven were published in Calcutta. Of daily papers the circulation of the *Dainik-o-Samachara Chandrika* appears to have fallen to 1,500, but the paper is still, judged by this circulation, more successful than any of its contemporaries. Among weekly papers the *Bangabasi* is said to have maintained its circulation of 20,000. The number of publications received in the Bengal Library in the calendar year 1888 was 2,693, or 438 more than in 1887. The number of publications registered under the provisions of Act XXV of 1867 was 2,491, as against 2,406 during the year 1887-38. There was a great paucity of historical works, and most of the works dealt with religion, fiction, or poetry.

North Western
Provinces and
Oudh.

The total number of newspapers in the North-Western Provinces and Oudh was 103, of which 25 were monthlies, eight bi-monthlies, two tri-monthlies, 63 weeklies, and three dailies, all the last-mentioned belonging to Oudh. At Lucknow 19 newspapers are published; 11 at Meerut, ten at Moradabad, nine at Agra, and seven at Allahabad and Benares. The great majority of the papers, 79, were published in the Urdu language; 17 were in Hindi. Under the head of Political the national congress was the topic which was discussed almost to the exclusion of all others. The total number of publications was 1,362, compared with 1,078 in the previous year. Of these 30 were in English,

English, 558 were in Urdu, 295 in Hindi, and 126 in Persian. The number of noticeable books was greater in the Urdu language than in any other, and comprised almost all the important subjects. There were few good original works, and the tendency of the writers was to translate from English or an Oriental language. LITERATURE.

Seventy papers, for the most part weeklies, were being published in the Punjab during the year. The great majority of the papers were in the Urdu language. The total number of books registered during the year was 2,031 against 1,790 in the previous year. There was a marked increase in the number of productions in almost all the languages in which books are written in the province, and in most of the heads under which publications are classified according to subject. The year was conspicuous in the Punjab for literary activity. The copyright of 214 books was registered against 168 in the preceding year, a sign of the appreciation of the advantages secured to the public by copyright. The greatest number of publications was in the Urdu language, 961; in Punjabi there were 645 publications, in Hindi, 169. Poetry and religion were as usual the subjects in which the largest number of publications appeared. Punjab.

In Burma 81 publications were registered during the year against 14 in 1887, and 147 in 1886. No cause is assigned for the falling off in the number registered. Twelve publications were in English and 51 in Burmese. There were 41 original works, 24 republications, and 16 translations. Thirty-four works dealt with religion, 11 with language, and nine with poetry. Two medical works are of interest as being the first published in Burmese which treat of European methods of surgery and medicine. Three English and two Burmese newspapers were issued daily throughout the year; the highest daily circulation of any of these was 750, and the lowest 150. Burma.

In the Central Provinces there were nine vernacular and English newspapers. The publications were few and unimportant. Central Provinces.

Fifteen works were registered in Assam during the year. Of these 13 were educational, ten were original works, and five were republications. None of the works registered call for special notice. Two newspapers in Bengali were published throughout the year; one fortnightly and one weekly. An Assamese monthly paper was started during the year. Assam.

There was nothing deserving of special notice as regards literature and the press in the history of the administration of Ajmere-Merwara, Coorg, or Bangalore during the year. Ajmere, Merwara
Coorg, and Ban-
galore.

In Madras the number of works registered was 1,169, which was the highest for any year on record. This may be contrasted with 409 in 1868, the first complete year of operations under the Book Registration Act, and with 824 in 1878 which was midway between that year and the year under review. The appearance of periodical publications in the vernacular languages, some of them with good illustrations, and in simple and sober prose, and the increasing desire of native writers to translate the poetical and puranic literature from Sanskrit into vernacular prose rather than into verse, are facts that go to prove that new literary influences have begun to work. Of the total of registered works, 529 were original publications, 37 were translations, and 553 republications. A considerable advance has taken place in the number of publications classed as original; and there has been a decreasing activity in the way of merely reprinting old books verbatim in the vernacular languages. Of the total number of publications, 226 were of an educational and 943 of a non-educational character,—the former class showing a decrease of six works and the latter an increase of 132, as compared with the figures of the previous year. The number of vernacular newspapers and magazines advanced from 77 in 1887 to 87 in 1888. Of these, 44 were in Tamil, 11 in Telugu, 11 in Canarese, five in Malayalam, and 16 in Hindustani. The paper having the largest circulation was the "Satyathūthan," an organ of the Christian religion in Tamil. Of the total number, 54 dealt with matters of general and political interest. Madras.

During the year under review 1,924 publications, mostly in the Marathi and Gujarati languages, were registered in the Bombay Presidency. As far as mere quantity was concerned, the year was more fruitful than its predecessor, but in the quality of the literature produced little or no improvement. Bombay.

170 STATEMENT EXHIBITING THE MORAL AND MATERIAL

LITERATURE.

was visible. Next to school books, works of theology and religious poetry for the most part predominated ; and secular works of the imagination were also plentiful. There was but little production in the departments of art, history, science, and travels. The literature of all the vernaculars was equally sterile in this respect ; but in other respects that of Gujarati showed more vigour and vitality than the rest. The newspapers and periodicals of the Presidency increased by 24 during the year, and at its close numbered 173. Among the more influential newspapers a gradual improvement in the direction of sobriety of tone and in quality of writing was visible.

Berar.

In Berar only 15 books were registered during the year, under the Act of 1867.

XIV.

EMIGRATION AND MIGRATION.

UNDER the latest Indian Emigration Act, XXI. of 1883, an Indian "emigrant" is one who goes by sea under contract to labour for hire to some country other than Ceylon and the Straits Settlements. These countries are excepted on account of their proximity, and of the similarity of their general conditions to those of India. The emigration under this Act is in other terms styled "colonial emigration."

EMIGRATION.

The most important administrative measure taken during the year consisted in the absolute prohibition of further emigration to the French colonies of Martinique and Guadeloupe. The expediency of this step had, in the interests of Her Majesty's Indian subjects, been under consideration for some time, and it was decided in November 1888 that it should no longer be delayed. The only other change calling for notice was the increase from Rs. 2.8 to Rs. 3 of the consolidated fee leviable in India from the 31st March 1888 for each emigrant, the amount received under the lower tariff having proved insufficient to cover the yearly expenditure incurred in connection with the supervision of colonial emigration.

As was anticipated, the demand for Indian labourers has considerably increased, owing in the main to requisitions having been again received from the Fiji, Surinam, and Guadeloupe* Agencies. The figures show a very decided advance from 4,625 in 1887, to 7,180, the total number of coolies indented for, and a return to the state of affairs in 1886 and previous years. It appears that a still further improvement may be expected to result from the brighter prospects of sugar, in which a remarkable rise of 30 per cent. is reported to have brought prices up to a higher range than has been reached at any time during the last five years.

Bengal.

Keeping pace with the advance in labour requisitions, the number of recruiting licenses granted rose from 345 to 511; and the fact that only four were forfeited is satisfactory. No fewer than 10,325 intending emigrants, male and female, were collected by these licensees during the year under report, as against 6,882 in 1887; and of these 4,420 were registered in Bengal and Behar, 5,101 in the North-Western Provinces, and 804 in Oudh. As was the case in preceding years, the largest labour-importing colony was Demerara, for which 4,781 persons were registered, Trinidad following with 3,362, and Surinam with 1,321. The competition for recruits appears to have been keenest in the metropolitan district of the 24-Pergunnahs, as usual, and in Shahabad, where the number of recruitments was almost double that of the former year, a circumstance attributed to the partial failure of the crops in this district.

Of the total number, viz., 10,325, of emigrants registered, 9,274 only were despatched from the sub-dépôts in the recruiting districts. The hospital and sanitary arrangements generally appear to have maintained a high standard of excellence. Although the admissions into hospital were more numerous, the mortality was less.

Of the 7,121 persons who actually embarked on the outward voyage, 6,379 proceeded to British, and 742 to foreign colonies. Among the number were 823 returned emigrants, 362 of them destined for Demerara, and 301 for Trinidad. Almost all the coolie-importing colonies are represented in respect of these 823 re-emigrating colonists, and the indication afforded by the circumstance is reassuring. Savings to the extent of Rx. 52,205 were brought back by 3,908 returned emigrants, i.e., an average of nearly Rs. 134 per head, against Rx. 69,232 by 6,346, i.e., an average of Rs. 109 per head, in 1887. The death-rate on the return voyage was 2.7 per cent., and this, although in excess

* The Guadeloupe requisition was received before emigration to that colony and Martinique had been prohibited.

EMIGRATION.

excess of that of last year, may be considered remarkably low, due allowance being made for the number of invalids and aged persons who are included in the return shipments.

The following table shows the number and description of emigrants who left Calcutta for the West Indies during the year 1888, and the number returned therefrom during the same period:—

NAMES OF COLONIES.	EMBARKED.								RETURNED.							
	Men.	Women.	Children.		Infants.		Total Number of Souls.	Total Number of Statute Adults.	Men.	Women.	Children.		Infants.		Total Number of Souls.	Total Number of Statute Adults.
			Boys.	Girls.	Males.	Females.					Boys.	Girls.	Males.	Females.		
Demerara	2,157	890	213	182	08	63	3,572	3,309	775	321	103	115	12	15	1,341	1,218½
Tritulad	1,299	580	169	130	67	55	2,270	2,053½	884	148	57	55	11	11	606	500
Jamaica	-	-	-	-	-	-	-	-	275	163	55	46	15	9	532	489½
Grenada	-	-	-	-	-	-	-	-	50	18	6	16	1	4	93	81½
Surinam	304	123	43	18	10	15	513	470	-	-	-	-	-	-	-	-
Guadeloupe	180	52	16	21	8	7	228	205½	-	-	-	-	-	-	-	-
Réunion	-	-	-	-	-	-	-	-	52	13	4	1	-	3	73	68½
Cayenne	-	-	-	-	-	-	-	-	27	15	5	1	-	-	48	45
TOTAL	3,890	1,614	441	351	148	140	6,984	6,044	1,504	667	230	234	39	41	2,775	2,502

Madras.

During 1888, 714 emigrants left Madras for Mauritius and 1,413 for Natal. Return immigrants to the number of 374 arrived in Madras from the former, with savings amounting to Rx. 1,228; 838 returned from the latter with Rx. 13,529. Recruiting of British subjects in Madras as emigrants to French colonies recommenced in 1888 after an interval of four years, during which no requisition had been received. The French Government† endeavoured to obtain 550 coolies for Guadeloupe; but the result in Madras did not satisfy their expectations, and the shipment had to be completed in Bengal. Three hundred and thirty-one return emigrants arrived from Cayenne, bringing savings amounting to Rx. 3,301, and 1,009 from Réunion with Rx. 1,200. From Karikal 1,480 passengers embarked for the Straits Settlements, against 693 in 1887, and 1,238 returned thence to Karikal.

MIGRATION.

MIGRATION.

The passenger traffic from Madras to Burma was considerable; 38,014 free immigrants having proceeded there during the year. The number of immigrants by sea alone registered at Rangoon during the year was 87,506, and the number of emigrants, 63,535. In 1887-88 the corresponding numbers were 87,427 and 49,839.

Assam.

During his cold-weather tour the Chief Commissioner of Assam took the opportunity to conduct a personal inquiry into many important questions connected with immigration into Assam. The result was to convince him of the necessity of further detailed investigation before any final decision can be arrived at which may involve legislation, whether for the reform of abuses found to exist in the present system, or for the better protection and amelioration of the condition of the immigrant class.

During the year 1888, the total number of immigrants into Assam reached 46,293, or 9,830 over the number of the preceding year. Of these 22,601 were statutory immigrants, 10,716 free labourers, and 12,976 children. The sardári coolies continue to increase and the contractors' coolies to decrease, partly

* This does not include 1,053 return emigrants from Fiji, Natal, and Mauritius.

† See note on previous page.

partly in consequence of the better physique of the former and the smaller expense attending their recruitment. But the Chief Commissioner also intimates that the figures of sardari coolies will be found to include considerable numbers of coolies recruited by non-certificated sardars and placed under contract at Dhubri. He has noted as points worthy of examination the transmission of 766 persons from Dhubri without contracts, the rise from over 3 to nearly 5 per cent. of the medical rejections, and the large proportion of those who went on as dependents.

The number of immigrants arriving at and proceeding by the Dhubri route to the Assam Valley districts has again risen.* There was a large increase in mortality, both at Dhubri, and while on transit on the Brahmaputra, compared with that of the previous year. The figures are as under :—

* 1887—25,635.
1888—31,217.

	1887.	1888.
At Dhubri - - - - -	18	239
On steamers - - - - -	24	171
At debarkation depôts - - -	45	428
Total - - -	87	838

Of the total number of deaths, however, 771, or 20 more than the whole excess, are attributed to cholera, an outbreak of that disease having occurred in January 1889 and lasted till April. The subject was brought to the notice of the Government of Bengal at the beginning of the year, and led to the promulgation of a special Sanitary Act by that Government. Measures were also taken on the Assam side by the Chief Commissioner for the prevention and mitigation of cholera.

Statements have been made that undue pressure was sometimes brought to bear on coolies at Dhubri to induce them to enter into labour contracts for a long term.

After minute and careful examination on the spot, in consultation with the local officers, of the system pursued at Dhubri, the Chief Commissioner has come to the conclusion that, for the purpose of inducing coolies to proceed onwards from that station, the use of force is absolutely out of the question, and even intimidation is extremely rare. Misrepresentation, though the reports concerning it are often exaggerated or unfounded, is undoubtedly more frequent.

The total labour force of the tea districts at the end of the year was 354,314 against 324,100 at the close of 1887, 88,380 of these being Act labourers, 133,888 free labourers, and 132,046 children. The general opinion in Assam is, that the labourers settle there, and a few only get adrift. But the matter is under special inquiry, and it is difficult without more precise information to form a correct opinion as to the ultimate destiny of the majority of the immigrants.

Labour contracts under Section 111 of the Act fell from 19,457 in 1887 to 18,209 in 1888, while those under Section 112 also decreased from 987 to 558. Contracts executed at Dhubri, however, again show an increase from 15,447 in 1887 to 16,544 in 1888. The noteworthy points regarding contracts under Act I. of 1882 are (1) the great preponderance of five-year terms in the case of labourers put under contract at Dhubri, (2) the similar preponderance of contracts for periods varying from three to five years in the Surma Valley as compared with the Assam Valley, and (3) the small proportion of five year contracts executed on the gardens in both valleys. The Chief Commissioner does not believe that the preponderance of five-year contracts at Dhubri is due to any undue pressure exercised at that place.

There was a large increase of offences under Act XIII. of 1859 and Act I. of 1882, the figure for the former having risen from 97 to 177, and for the latter from 74 to 118. Offences under the Penal Code, however,

MIGRATION.

decreased from 492 in 1887 to 375 in 1888, the greatest numbers occurring under the following heads:—Theft (113), assault (37), causing hurt (23), rioting (17), grievous hurt (16), and unlawful assembly (15).

The percentage of desertions is smaller than in 1887-88. The Chief Commissioner has instituted special inquiries with a view to ascertain the causes to which desertions are attributable.

With regard to the health of the labour force during the year, it is stated that cholera was more prevalent; that the annual death-rate for the whole force was higher in 1888 than in the preceding year (39·8 against 36·2 per mille); that the mortality was much heavier among Act than non-Act coolies (62·9 per mille against 30·2); and that the number of gardens classed as unhealthy increased from 49 in 1887 to 65 in 1888. There are difficult questions in connection with the high death-rate and low birth-rate among the immigrants. One reason, however, why the mortality of Act labourers so much exceeds the rate among the non-Act coolies seems to be that a larger proportion of the former have been freshly imported, while many of the latter have become acclimatised.

The causes of unhealthiness are represented as twofold. Coolies physically unfit for work are allowed to leave the recruiting districts—and in cases of sickness in the gardens, medical attendance is not always given with sufficient promptitude. The remedy suggested for the first defect is medical inspection in the locality of recruitment, with special reference to the emigrant's physical fitness to stand the climate of Assam, and with special precautions against perfunctory inspection.

The general relations of the labourers with employers were satisfactory. It is proposed to amend the law so as to make it unlawful to compound offences without the express permission of the Court. Statements have sometimes been made that the coolies are ill-treated by their employers. There can be no doubt, however, that cases of brutality are very rare and are emphatically repudiated by the planting community in their own interests. The testimony of the Rev. Isaac Row, that the coolies are remarkably well cared for, and that hundreds of the poor in England are less well-fed and well-housed than the great bulk of the Assam coolies, is of material value as proceeding from an independent witness of peculiarly qualified experience.

PILGRIMAGE TO ARABIA.

Allied to the subject of emigration is that of pilgrimage to foreign countries. As a step in the direction of securing the well-being of Indians voyaging across the seas, an arrangement was concluded by the Government of India in 1887 with Messrs. T. Cook & Son, with a view to the regulation by that firm of the annual pilgrimage to the Arabian Holy Places of some 12,000 Muhammadan pilgrims. Great hardships have sometimes been endured by pilgrims during the passage, while heartless extortions have often been practised upon them. It has been the steady endeavour of the Government for years past to mitigate these sufferings by any legitimate means. The acceptance of the offer of Messrs. Cook & Son appeared likely to prove conducive to this object; and after the experience of two seasons the results so far commended themselves to Government that it was determined to renew for a term a large pecuniary guarantee. The perfect success of the scheme is impeded by various causes,—the opposition of the old-established conductors of the pilgrim traffic, the absence of ships owned by the firm, and the ignorance of the pilgrims themselves. Consequently, a comparatively small proportion of the pilgrims avail themselves of the improved arrangements. But as the pilgrims become better acquainted with the provisions made for their benefit by Messrs. Cook & Co., and as the system becomes perfected in certain details, the benefit will go on increasing.

XV.

TRADE AND MANUFACTURES.

(Detailed information regarding the Trade of British India being furnished in a separate Parliamentary Paper [C.-5965], a brief Review only is given under the present Chapter.)

TRADE.

THE external trade of India continued in the course of steady development by which it has been marked now for several years. Whereas, however, in the two preceding years imports advanced by greater strides than exports, in the year now reported on the increase of exports far exceeded that of imports. TRADE OF 1888-89.

Of the increase of Rx. 4,185,505 under imports in 1888-89, the bulk was due to cotton goods. The increase under exports (Rx. 6,506,709) was distributed under various heads, notably jute and cotton (both raw and manufactured) and wheat; against which, however, must be set off a serious decline of rice exports.

There was an increase in the imports on Government account of coal, arms and ammunition, books, machinery, metals, and a smaller importation of paper, telegraph and railway material, and other items of small importance.

The imports of gold were rather less than in 1887-88 and those of the last four years much below the average of former years. The imports of silver were slightly larger than in the preceding year and much in excess of the average.

The enormous expansion of the trade in cotton goods was in the main of a speculative character, caused by the condition of the English manufacturing industry rather than by the condition of the Indian market.

Comparing the trade of the year with that of 1883-84, it will be found that, while the quantity has increased about 16 per cent., the value has increased by only about 8 per cent., indicating a heavy reduction in prices.

The importation of mineral oils has progressed rapidly in recent years. Its use as an illuminant is now quite common in India, and is indeed in urban tracts the rule rather than the exception. In 1888-89 the quantity imported was 30,951,885 gallons.

Russian oil, the importation of which commenced only three years ago, and which is said to be on the whole not quite equal to American oil in quality, but is appreciably cheaper, is competing with remarkable activity with American oil.

The export trade in husked rice was bad in 1888-89. In 1887-88, although the exports from Burma were low, Bengal rice was shipped in quantities which more than made up the deficiency from Burma. In the following year, however, the exports from Bengal declined greatly, for the harvest was inferior, and prices kept at a high level. From Burma they also fell off. Exportation of wheat also was on a restricted scale, although much larger than in 1887-88. The jute crop was a good one.

The quantity of cinchona bark exported rose from 1,286,900 lbs. in 1886-87 to 1,449,313 lbs. in 1887-88, and to 3,074,090 lbs. in the following year. This expansion was accompanied by a largely reduced value, the result of a fall in prices which has been so heavy that cinchona has been sold below the cost of production. Production in fact has outrun consumption for the time being. Nearly the whole of the export is from Madras, the bark produced in Bengal (at least in the Government plantations) being manufactured there for consumption in India. It is now made into sulphate of quinine at a cost which is not higher than that of the imported drug, low as that is.

176 STATEMENT EXHIBITING THE MORAL AND MATERIAL.

TRADE of 1889-90. Although the present statement relates to the year ending March 1889, a brief reference to the approximate trade figures of the succeeding year will be interesting. The following are the general results as compared with the year above commented on:—

	1888-89.	1889-90.
Private Imports:	Rx.	Rx.
Merchandise - - - -	66,570,318	66,562,008
Treasure - - - -	13,844,960	17,454,304
	Rx.	
	80,415,278	84,016,312
Private Exports:		
Merchandise - - - -	90,978,171	103,385,169
Treasure - - - -	1,703,497	1,841,920
	Rx.	
	98,681,668	105,227,089
Government Transactions (Imports and Exports)	3,022,360	2,765,506
TOTAL Trade - Rx.	182,119,306	192,008,907

The trade, which steadily expands year after year, reached in this year a figure in excess of any previous period. The increase occurred, as far as merchandise was concerned, under exports only, and that to the extent of nearly Rx. 6½ millions. The principal head of increase was *raw cotton*, Rx. 3,624,287; while exports of husked *rice* improved by Rx. 2,201,981, and those of *oil seeds* by Rx. 1,058,937.

External Land Trade.

The foreign trade across the land frontiers of India, Cashmere for trade statistics being considered a foreign country, showed a decrease as compared with former year, thus:—

Value of Land Trade.	1886-87.	1887-88.	1888-89.
	Rx.	Rx.	Rx.
Exports from India - - - -	5,644,855	5,021,623	4,896,702
Imports into India - - - -	3,766,563	4,171,941	4,226,145
TOTAL - Rx.	9,411,418	9,193,564	8,922,847

As Upper Burma is now a part of British India, its traffic with Lower Burma no longer comes within the category of foreign trade. The decrease in the total trade is mainly due to the Russian customs regulations and the competition of the Central Asia Railway, whereby tracts beyond the Oxus are practically closed to goods carried from India by land. The principal countries with which India's landward foreign trade is done are Nepal and Cashmere, which took, respectively, Rx. 1,115,410 and Rx. 1,115,410 of exports from India, and sent Rx. 1,528,134 and Rx. 812,344 into India. There was a large decrease in the imports from Nepal, owing to the bad rice harvest in that country.

Inland Trade.

An attempt has been made, which it is hoped, will be repeated annually with increasing completeness, to collect statistics of the inland trade of the various provinces of India with one another, and of the interior with the Port towns. These returns are designed to be an interesting supplement to those of the foreign trade, showing whence the exports by sea are derived and

and where the imports are utilised. As far as results have been obtained, which at the best must be to a great extent approximate only, the following is the most useful, general form in which they may be presented:—

TRADE of 1889-90.

	Population.	Exports from Interior to Port Towns.		Imports into Interior from Port Towns.	
		Value.	Rate per Head.	Value.	Rate per Head.
Sub-Himalayan Region (North-eastern India)	145,000,000	Rs. 51,290,000	4.5	Rs. 30,820,000	3.0 (nearly)
Peninsular Region (Madras and Bombay)	56,000,000	18,880,000	4.0	12,290,000	2.9
Central Region	46,000,000	16,190,000	4.7	5,500,000	2.8
TOTAL		86,360,000		48,610,000	—

The bearing upon each other of the statistics of *Foreign* and of *Inland* Trade may be illustrated by the following quotations from the Report:—

“The importation of foreign sugar establishes the fact that the manufacture of refined sugar in the country is not equal to the consumption; and unless the special difficulties which exist against the establishment in India of large refineries on the European system can be successfully overcome, the Indian market for foreign sugar is likely to expand.”

“A taste for tea-drinking has not yet spread among the Native population, although efforts are being made to encourage it; consequently, with the exception of the comparatively small quantity required for the European population, and the limited class of Natives who do drink tea, the whole production is sent to foreign markets.”

MANUFACTURES.

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, an important manufacturing industry is growing up, and steam-power factories are at work, among which those for spinning and weaving cotton, for spinning and weaving jute, for making paper, for husking and cleaning rice, for sawing timber, and for brewing beer, are the most important. Steam power is also largely employed in factories on tea gardens and in indigo factories. There were at the end of the year 1888-89, 108 cotton mills at work, of which 75 were in the Bombay Presidency, and which represent a nominal capital of about Rs. 10,000,000. These cotton mills employ over 92,000 hands, and, with their 22,156 looms and 2,669,222 spindles, consumed 3,095,000 cwt. of raw cotton in 1888-89 as compared with 2,526,000 cwt. in 1887-88. The increase in the number of looms has been 8 per cent., and in the number of spindles 13 per cent. over the totals of the preceding year. There has been also further progress in the jute industry; the 26 jute mills, mostly in Bengal, with a nominal capital of Rs. 3,019,000, employed 60,000 hands, and worked up 3,796,000 cwt. of jute, or 321,000 cwt. more than in the previous year. Forty-seven rice mills, for husking and cleaning rice, and 47 saw mills, most of which were in Burma, employed over 44,000 hands. The produce of the paper mills, of which there were four in the Bombay Presidency, and five in other parts of India, had increased in value to Rs. 268,434 in 1888. There were 21 breweries at

MANUFACTURES.
General.

MANUFACTURES.

work, of which two were opened in 1888-89. They produced during the year 5,165,000 gallons of beer and porter; the principal customer for this malt liquor is the Commissariat Department, which bought during 1887-88, 4,628,000 gallons, and during 1888-9, 3,778,000 gallons for the use of European soldiers.

Among other "large industries," which are shown in the Indian Returns for 1888, may be mentioned:—

Woollen mills	4	Cutch and lac factories	52
Silk mills	7	Oil mills	36
Soap factories	2	Flour mills	32
Tanneries (large)	8	Ice factories	22
Iron and brass foundries	47	Pottery and tile factories	15
Sugar factories (large)	11	Cement factories	1
Coffee works	26	Bone-crushing factories	13
Cotton and jute presses	269	Tobacco factories	29

These do not include silk filatures where raw silk is wound by hand, or indigo factories and tea factories which are worked on indigo and tea estates. Returns of village and domestic industries are made at the census, once every 10 years, and do not find place in the annual reports.

Bengal.

The quantity of *jute* worked up in the mills of Bengal was 3,726,000 cwt., against 3,412,000 cwt. in the preceding year.

Indigo prospered during the year, and the out-turn of 1888-89 was 138,000 maunds compared with 132,000 and 130,000 in the two preceding years. Prices were slightly higher than in 1887-88. The *cotton* mills of the Presidency division worked up 290,147 cwt., which showed an increase of 26,000 cwts. over the preceding year.

Regarding petty and local industries, it is reported that sugar-making, tobacco, saltpetre, blanket-weaving, and stone-carving, are doing well in the Patna division; cotton cloth, silk, jute, brass-ware, pottery, paper and cocoanut oil, are all said to be industries in a rising condition over the greater part of the Burdwan division; in one district, locally-made cotton cloths are said to be holding their own against Lancashire competition. The iron works at Barrakur, 100 miles outside Calcutta, on the East India Railway, have been transferred to a company. Though they have unlimited stores of coal, iron ore, and lime close at hand, these works have not hitherto been a financial success either in the hands of their founders or of the government. In the Rajshaye division the silk industry is said to have been driven out by competition, and the weavers have taken largely to agriculture. The spinning of jute and the weaving of gunny bags are flourishing in most parts of the division. In the Presidency division the cane and palm-sugar industry, after native methods, is doing well; so also are the power mills for sugar and paper, which increased their out-put 42 per cent. in the case of sugar, and 3 per cent. in the case of paper. There were 91 silk filatures at work in the Moorshedabad district against 77 in the previous year; the attempts to eradicate pebrine from the silk factories of this district, and to distribute selected seed, have not yet had perceptible result. The only special industry in the Chittagong division is ship and boat building, which appears to be flourishing.

North-West
Provinces and
Oudh.

There are various manufactories in the North-West Provinces and Oudh, of which the principal are 1,619 indigo factories, employing over 60,000 hands. Five cotton mills employ 4,084 hands, and a sixth mill is under construction; and there are also 14 cotton presses. Among native industries, brasswork, stone-quarrying and stone-carving, and weaving, are the most important; but these provinces, which contain more large cities than any part of India, possess a great number of flourishing arts and crafts.

Panjab.

In last year's Statement reference was made to the brass and copper industries of the Panjab, of which an interesting account has been published, after careful inquiry in many parts of the province.

The *wood* manufactures of the Panjab were selected for special report in the year 1888-89, and a monograph on the subject has been published. The architectural and ornamental wood-carving of the Panjab has acquired a more than local reputation, and the artificers of some of the better known centres

MANUFACTURES.

centres can produce carved designs of considerable artistic merit. Manufactures in wood, however, are not of much commercial importance, at least as regards export to places outside the province. Apart from the use of wood in buildings, the demand for articles manufactured from wood was in the times preceding British rule very limited indeed, being confined, with few exceptions, to the carved doors and windows of the houses of the better-to-do classes, the rough agricultural implements in common use, and the scanty furniture found in a Native house. That with the introduction of European rule the Native workers in wood have been able to meet the very considerable demand of both European and Native customers for furniture, carriages and carts, and other articles of the kind, is a matter of no small importance; and though exports may, for many years to come, be confined to a few articles of artware, not elsewhere produced, yet the manufacturing industry can with justice be said to be progressive so long as it can comply with the requirements of a population growing in wealth and civilisation.

An increase in the amount of *cotton* worked up, and in the amount of labour employed, appears in all the three mills of the Central Provinces, and especially in the Empress mills at Nagpore. The number of spindles at work was 67,880, besides 600 looms; 56,500 cwt. of cotton were worked up, and 3,986 hands were employed. No improvement is reported in the condition of the domestic weaving industry which was in former years a notable feature in the Nagpore country.

Central Provinces.

The rice mills and timber mills, which have been already mentioned, are the most important of the large industries in Burma; at Rangoon there are three shipbuilding yards, where large vessels for ocean or river traffic are built or put together. Of Native industries the most important are *weaving, fish curing, boatbuilding, and timber work*. The woven *silk* fabrics of Mandalay are often very beautiful and valuable. Wood-carving and silver work are among the most successful of Burmese arts.

Burma.

The company of Burmese artists which was formed in 1886-87 is still in existence. These artists undertake carving in *wood* and *ivory*, and number among them several *silversmiths*. During the year there was a fair increase in the demand for wood-carving, and a considerable increase in the demand for silverware.

As stated in last year's Report, many of the indigenous manufactures of Madras are gradually dying out before the cheap machine-made goods imported from Europe. *Cotton* spinning and weaving by hand, which form the most important industry of the people, continue to suffer from this competition. The manufacture of *indigo* and the *curing of hides and skins*, however, are fairly thriving, and fine cotton goods are made in some districts.

Madras.

Eighty-one factories, to which Act XV. of 1881 (the Factory Act) applied, existed in the island of Bombay and were visited by the inspector during the year. Children under 12 worked in six mills, the manager of one of which was prosecuted and punished for employing them as full-time hands. The number of accidents reported during the year was 445, only six of which, however, had fatal results. The number of steam boilers examined under Act III. of 1887 was 494, or 140 more than were examined in the previous year.

Bombay.

The period between January 1888 and June 1889 was one of marked expansion in the *cotton* mill industry of the Bombay Presidency. The number of mills rose from 75 to 84, and the number of spindles from 1,779,220 to 1,820,369. The development of the export trade in cotton yarns with China and Japan kept pace with the increase in production; and the exports of piece-goods in 1888 exceeded those of 1887 to the remarkable extent of 13½ millions of yards; but during the first half of 1889 a reaction was visible and shipments were made on a smaller scale. The growth of the cotton industry attracted the attention of the English cotton-spinners, and a suggestion, emanating from the Manchester Chamber of Commerce, that factory legislation on the lines of the English Acts should be introduced into India, excited much interest and apprehension in Bombay. The subject was exhaustively discussed both in the press and at a meeting of the Mill-owners' Association. A Bill amending the Factory Act was introduced into the Legislature after the end of the year, and has not yet become law.

Another

180 STATEMENT EXHIBITING THE MORAL AND MATERIAL

MANUFACTURES.

Another event of great importance to the mercantile community of this Presidency was the passing of the Indian Merchandise Marks Act, IV. of 1889. By this Act, which came into force on 1st April 1889, the stamping of lengths on all piece-goods at the place of manufacture is rendered compulsory, and false stamping made punishable by fine and imprisonment.

There remain few indigenous industries of any importance to be described, or with regard to which there is any progress to record. Handloom weaving appears to be suffering from the competition of the cotton mills, and oil-pressing from the competition of kerosine. The *silk* industry of Ycola in Násik was said to be much depressed, and the *art-work* of Kánara continued to decline. On the other hand, the manufactures of silk, gold brocade and carpets in Ahmedabad and of brass-work in Násik were reported to be flourishing, and the *Reay paper mills* near Poona quadrupled the out-turn of the previous year.

Berar.

The only large manufactory in Berar is the steam mill at Badnera, where *yarn* and *cotton cloth* are manufactured. It produced 1,774,207 lbs. of twist and yarn against 1,633,500 in the preceding year. The number of persons employed in this manufactory was 742, or 92 more than in the previous year. The proprietors also started a weaving mill at Badnera about the middle of December 1888, which up to the close of the year produced 142,973 lbs. of cloth, valued at Rx. 6,702. The number of employés in this mill was 244. The steam cotton presses are by far the most important industries in the province; and of these there were 24 at work during the year. The number of bales pressed rose from 226,498 to 381,324. An oil press is worked in conjunction with one of the cotton presses at Amraoti. It turned out 483 tons of oil and 1,053 of oil-cake, against 300 and 658 respectively in the previous year. In addition to the steam presses there were 19 ginning factories at work, of which number 10 were working in the Amraoti district alone.

XVI.

NATIVE STATES, FRONTIER RELATIONS, ARMY AND MILITARY OPERATIONS.

THE area and population in 1881 of the Native States, excepting, however, the Shan States subordinate to Burma and estimated to have an area of about 80,000 square miles, will be found in pages 1 to 24 of the Twenty-third number of the Statistical Abstract.

NATIVE STATES.

The most important question affecting a number of Native States which was under consideration during 1888-89 was that of the re-organisation of a portion of the States' armies. The loyal offers of grants in aid for frontier defence made in 1887 by the Nizam of Hyderabad and by chiefs in the Punjab, Central India, Rajputana, &c., were indeed declined in their original form; but it was determined to utilise the occasion and the spirit in which the offers were made in re-organising detachments of troops from the several Native armies in such a way as to render them serviceable for co-operation with the Imperial forces. As a first step measures were taken with the help and to the satisfaction of the Native Governments, for obtaining a closer inspection of the States' troops and a more detailed examination of their existing organisation, and of the system by which they are at present supplied with arms and ammunition. The Punjab Native States have agreed to maintain in a thoroughly efficient condition a force of 1,300 cavalry and 3,400 infantry. The inspection of their troops has been placed in the hands of selected officers of the British army, and a marked improvement in their efficiency has already been produced.

Armies Re-organisation.

In direct relations with the Government of India are the four great States of Hyderabad, Mysore, Baroda, and Kashmir, the two groups of States comprehended in the Central India Agency and the Rajputana Agency, and the frontier districts under the superintendence of the Baluchistan Agency, which are dealt with in a later paragraph under the heading of "Frontier Relations and Frontier tribes." It may, however, be noticed here that Baluchistan was elevated in June 1887 to the rank of a first-class Residency.

STATES UNDER THE GOVERNMENT OF INDIA.

In the State of Hyderabad (excluding the Assigned Districts), and in the large Agencies of Central India and Rajputana, the prevalence of Dacoity is indicated by the following figures, taken from the Report of the Department established for the suppression of this crime and of Thuggee:—

Dacoity in Central India, Hyderabad, and Rajputana.

		Number of Dacoities.	Number of Persons Killed.	Number of Persons Wounded.	Value of Property Stolen.	Value per Case.	Number of Dacoits concerned.	Number per Case.
					Rs.	Rs.		
Central India	1887 -	178	31	119	3,16,793	1,780	5,334	30
	1888 -	217	34	184	2,05,646	948	5,238	24
Hyderabad	1887 -	105	1	36	95,629	901	1,197	14
	1888 -	165	7	51	78,066	588	1,641	11
Rajputana	1887 -	73	11	42	45,558	628	2,034	28
	1888 -	59	5	30	17,705	300	909	15
TOTAL	1887 -	356	43	197	4,57,273	1,669	8,865	19
	1888 -	441	46	265	3,01,417	683	7,788	18

NATIVE STATES.

These figures are useful for comparison, but are not in themselves a complete record of dacoities in those countries, as many offences are not reported at the time by the States, though frequently discovered at a later date by the investigations of the Thuggee and Dacoity Department. Thus in the last five years, 1,813 dacoities have been reported at the time of their occurrence, but 1,096 other cases have been subsequently discovered to have taken place in the same period without being reported. It is unfortunate that the dacoits continue to enjoy a comparative immunity from punishment for their crimes. Of nearly 8,000 persons alleged to have been implicated in the reported cases, only 157 were prosecuted to conviction. The difficulty of procuring conviction is especially great in Hyderabad. The statistics for Rajputana are very satisfactory, particularly as the two previous years had also shown a considerable diminution in crime. In Central India and Hyderabad, where dacoities were already relatively numerous, their number considerably increased in 1888. Strenuous efforts were indeed made by the Gwalior State to cope with the crime prevailing in its eastern districts, and the most powerful gangs there were dispersed, 238 dacoits being captured, and 10 killed, and 121 having surrendered themselves. The condition of the northern districts, however, remained as bad as before, and was seriously dealt with, only after the close of the year. The most disturbed States next to Gwalior, which had a record of 107 cases, were Bhopal with 26, Dhar with 22, and Indore with 21 cases. But earnest endeavours were made by the States of Bhopal and Indore as well as Gwalior in coping with the dacoits. There was consequently less friction with the Government of India, and the success met with in the succeeding year, 1889-90, may be expected to reduce the future statistics of crime in these regions. In Central India and Hyderabad the increase of crime is to some extent attributed to the partial failure of the harvests and the pressure of high prices on the population. It may be noticed, however, that the season was equally bad in Rajputana, where dacoity diminished.

Hyderabad, and
the Assigned
Districts.

The principal Native State in India is Hyderabad; with an area of 81,807 square miles, and a population at the time of the last census in 1881 of 9,845,594. In July 1887 the Nawab Busir-ul-Dowlah Amir-i-Akbar Asman Jah Bahadur, was appointed by the Nizam to be his Chief Minister, in succession to Sir Salar Jung, K.C.I.E. Under this Minister's management the administration of the State has continued to be carried on smoothly and in the direction of reform in various departments. Dacoity, it is true, still requires for its suppression a more energetic policy of police. The irregular Arab troops of the State are perhaps more numerous than is desirable, and are not sufficiently amenable to control. Some of the Civil Courts admit too many of the law's delays. The municipalities, lately instituted, require more power to levy as well as to spend taxes, if they are to reach a full measure of utility. The management of the finances is rendered particularly difficult by the legacy of debts, arrears, and complications from past years. On the other hand, the financial situation is sound, and the revenues of the State are believed to be skilfully and successfully managed. Something has been done for the separate management and control of local and State funds. Advance in local self-government has been made by the establishment of municipalities; the water supply of Hyderabad and some other cities has been attended to; education has been largely developed; salaries and establishments have been increased in order to improve the efficiency of the district officials, especially in the revenue, police, and judicial departments; a more settled policy has been arrived at, though it requires still further development in the construction and maintenance of irrigation and other public works; and survey and settlement of the land revenue have made progress.

The year 1888-89 was not a favourable one for the people of Southern India. The bad season affected the land revenue, which fell off by nearly 14 lakhs to Rx. 1,925,883. There was a decline in the receipts from the Berar surplus of more than two lakhs, and miscellaneous receipts were less by 18 lakhs, this decline being mainly nominal and caused by account adjustments. On the other hand there were increases of about 2½ lakhs under
customs,

customs, and three-quarters of a lakh each, under stamps, excise, and opium. Altogether the revenue for the year, exclusive of railway transactions, stood at Rx. 3,136,473 as compared with Rx. 3,418,683 in the previous year. The expenditure amounted to Rx. 2,889,523 against Rx. 3,108,471 in 1887-88, leaving a surplus of nearly 25 lakhs. Of the expenditure, 68 lakhs were required for military purposes, 45½ for land revenue and general administration, 39 for His Highness the Nizam, 25¼ for the police, 19 for public works, 8½ for law and justice, and 4½ for education. The year closed with a cash balance of 63 lakhs. The figures for education show great progress. In two years the number of Government and aided schools have advanced from 201 to 392, and of scholars in these schools from 11,796 to 27,703. The increase in serious crime, in 1887-88, under dacoities from 108 to 142 offences, under robberies from 100 to 120, and under theft from 175 to 329, is due to the distressed condition of the population in a year of scant harvests.

NATIVE STATES.

Under treaty with the Government of India the surplus of the province of Berar is paid to the Nizam. Accordingly, though these Assigned Districts are administered under the Government of India, the revenue and expenditure in them are excluded from the regular accounts of that Government. In the year 1888-89, omitting the figures for excluded local funds, the revenue of the Assigned Districts rose from Rx. 987,120 to Rx. 1,006,748, and the expenditure from Rx. 813,470 to Rx. 864,254. The surplus, therefore, was only Rx. 142,494. Of the expenditure, Rx. 352,149 were classed as military, Rx. 115,423 as devoted to public works, including railways, and the remainder as civil. The principal increase of expenditure (five lakhs) was under "Military." The amount paid to the Nizam in 1888-89, on account of the Berar surplus, was Rx. 173,650, raising the total of payments under this head since the transfer of the province to British administration to Rx. 2,556,054. In addition to this, there is a large working balance of Rx. 407,804 at the credit of the province.

The area in square miles and the population of Mysore, according to the census of 1881, are 24,723 and 4,186,188. The population in 1876 is believed to have been 25 per cent. larger; but in the following two years of famine a million of the inhabitants are estimated to have perished. The famine also for a time crippled the resources of the State. Cultivation, and consequently the land revenue, were much reduced. The famine, moreover, cost the State 160 lakhs of rupees of actual expenditure, and left behind it a debt on this account to the Imperial Government of 80 lakhs. The period of famine had, therefore, to be followed by a time of vigorous retrenchment in all departments of the State. Such was the condition of things when the province was surrendered to Native rule in 1881. By the Treaty of Rendition the tribute had been fixed at 35 lakhs, instead of 24½ lakhs, as previously paid, but under the circumstances of the province the enhancement of 10½ lakhs was postponed, and under the present agreement will not take effect till 1896. Since 1881, the province under Native rule has been very rapidly recovering from the effects of the famine. Cultivation is now more widely extended than it ever was.

Mysore.

The highest sum due for land revenue in the State, in the period before the famine, was 76 lakhs in the year 1875-76. In 1884-85 the land revenue demand was nearly 67, and by 1888-89 it had risen to nearly 84 lakhs. The total actual revenue receipts for the year 1888-89 amounted to nearly 133 lakhs, which sum is 20 lakhs in excess of any year's revenue before the famine. For the last five years the principal items of revenue and expenditure have been as follows:—

NATIVE STATES.

	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.
RECEIPTS :	Rx.	Rx.	Rx.	Rx.	Rx.
Land Revenue - - - -	668,889	764,124	870,960	851,388	839,634
Forests - - - - -	65,756	88,310	99,836	100,842	113,530
Abkari and Opium - - -	117,962	116,872	117,816	149,452	159,961
Assessed Taxes - - - -	26,510	29,498	33,510	34,018	32,956
Customs - - - - -	34,070	39,114	43,634	41,246	40,757
Stamps - - - - -	44,279	48,048	51,533	50,555	55,575
Receipts from Gold Mines -	225	3,887	5,125	3,343	10,853
All other Revenues - - -	87,719	97,530	64,784	91,509	75,697
TOTAL - - -	1,044,910	1,187,378	1,287,198	1,325,453	1,328,972
EXPENDITURE :					
Interest and Repayments of Loans.	55,488	53,577	54,361	54,528	55,090
Land Revenue - - - - -	139,108	131,297	122,385	123,438	117,884
Forests - - - - -	24,803	22,607	32,069	39,753	45,678
Law and Justice - - - -	45,179	42,327	74,529	74,438	74,990
Police - - - - -	46,702	50,455	53,699	58,040	59,603
Tribute and Assignments - -	255,405	255,263	255,190	255,402	255,162
Palace - - - - -	100,000	100,000	130,000	130,000	130,000
Military (Mysore Local Force) -	75,694	73,510	73,723	71,787	72,868
Public Works - - - - -	89,369	113,230	127,113	157,991	198,208
Mysore State Railway - - -	58,685	64,388	11,549	38,157	36,504
All other Payments - - - -	164,877	169,745	167,846	174,482	164,589
TOTAL - - -	1,055,310	1,076,399	1,102,464	1,178,016	1,210,576
Surplus + or Deficit - - -	- 10,400	+ 110,979	+ 184,734	+ 147,437	+ 118,396

The balance at the close of the year 1888-89 amounted to Rx. 493,260 invested, Rx. 280,323 cash balance belonging to the State, and Rx. 312,039 cash balance belonging to savings banks and local and other funds. The whole of the loan of 80 lakhs received from the British Government during the famine has been paid off; the railway loan of 20 lakhs raised in 1882 will be paid off by 1892-93 out of the funds set apart for repayment of loans, provided the debentures can be bought up. After the year 1892-93 the only liability of the State should be that of providing 6½ lakhs interest on the capital of the Mysore lines of the Southern Mahratta Railway Company. Against this liability may be set the State share of the railway earnings of this line, amounting at present to 3 lakhs and expected to rise by 1895-96 to 4½ lakhs. The financial position of Mysore is thus shown to be very strong; and an annual surplus may be anticipated to the extent of 15 to 20 lakhs. Various schemes are under consideration for utilising these surplus funds. Large projects of irrigation may be expected to absorb a portion of these funds. Some, if not all, of the customs revenue may possibly be sacrificed by the abolition of such taxes. There are proposals also for creating a large balance of 100 lakhs to meet any abnormal famine expenditure, or for providing fresh security against famine by extending the system of railways in the country. The latter alternative would be more in accordance with the policy adopted by the British Government in India. It may also be mentioned that Mysore has offered to aid in the scheme of Imperial defence; and if this offer be accepted a portion of the surplus

surplus will be devoted towards this additional military expenditure. The normal annual grant for public works in the State has been fixed at 20 lakhs, to which is expected to be added 5 or 6 lakhs if the projected irrigation schemes are undertaken. The survey and settlement of the land in Mysore has now been almost completed. The forest administration is considered satisfactory, and produces a large net revenue from this source. The people are somewhat more heavily taxed in the State than in the contiguous British districts, but the land is probably on the whole more valuable and the Mysorean cultivator is able to pay a somewhat higher rent.

Baroda, with an area of 8,570 square miles, and a population in 1881 of 2,185,005, is a Residency of the second class under the Government of India. The State is well governed and progressive. For the year (August to July) 1886-87, which is the last for which figures are available, the receipts of the State are given at Rx. 1,522,896, and the expenditure at Rx. 1,561,881.

The last year for which a report of this State has been received is that ending in July 1888. For that year the revenue of the State is given at Rx. 1,532,292, and the expenditure at Rx. 1,585,287. The financial position of the State is sound, as is shown by the fact that the head of interest provides revenue to the amount of Rx. 83,000, Baroda also receives tribute from subordinate States to the amount of Rx. 82,000. By the abolition of transit duties the customs receipts of the State have fallen $3\frac{1}{4}$ lakhs in two years. The Abkari arrangements, which have now been assimilated to those prevailing in the neighbouring British districts, have, on the other hand, produced an increase of revenue. The receipts from this source were Rx. 37,500 in 1883-84 and Rx. 77,000 in 1887-88. The land revenue somewhat exceeds 100 lakhs. The year 1887-88 was not very favourable to the cultivators, water supply being scanty, and prices of food grains higher; collections of revenue had to be suspended, and relief measures undertaken in some districts. The weight of heavy arrears, much of which will have eventually to be written off, also exercised a prejudicial effect on the peasantry; steps are being taken to put an end to these arrears. Survey and settlement of the land revenue is also in progress. In one district, which was finally settled during the year, the State revenue was reduced by 12 per cent. The principal heads of expenditure are the palace and tour expenses of the Gaekwar (30 lakhs); public works, exclusive of railways (29 lakhs); and military (27 lakhs). The armed forces of the State consist of nearly 5,000 regular, and 4,000 irregular troops. The operations of the Registration Department indicate a not very satisfactory condition among the cultivators. Mortgages on immoveable property are very numerous, over 7,500 in the year, representing 28 lakhs of property transferred; and of these 11 per cent. resulted in sales. A more satisfactory feature was the increase of State advances to cultivators, made with the object of encouraging permanent farm improvements. The figures of criminal justice also indicate an unfavourable condition of the people in the year under review. The number of serious offences increased from 483 in the previous year to 640. The total number of criminal cases filed amounted to 10,902 in 1887-88, which is 60 per cent. in excess of the number of cases six years previously. In the same period, the number of persons accused has increased 87 per cent. Civil suits also grow enormously; the number instituted in 1887-88 was 18,284, showing a growth of 41 per cent in four years. Education is encouraged in the State; there are now about 360 schools with over 35,000 scholars; and yearly the State contributes more to their maintenance. Boundary disputes are still outstanding with some of the Kathiawar States; but, notwithstanding, the relations of Baroda with the paramount power are satisfactory. The Gaekwar's contingent has finally been relieved of all duties in the States and tracts tributary to the Gaekwar; their former work being undertaken by the Agency police. The assimilation of the Abkari arrangements, and the abolition of transit duties, have greatly reduced the friction there used to be between the Baroda authorities and their neighbours. Contrary to the usual system prevailing on the railways in Native States in India, the Gaekwar has been permitted to retain jurisdiction on the portion of the Arnaud-Petlad line which lies within his territory, so long as that line remains an isolated one.

NATIVE STATES.
Kashmir.

The area of Kashmir, the Residency in which is also of the second class, is estimated to be 80,000 square miles, with about one and a-half million of inhabitants. The revenue exceeds Rx. 700,000, of which over Rx. 400,000 is derived from Jummoo, Ladakh, and Skardo, the remainder being realised from the Kashmir portion of the State. The year 1888-89 was an eventful one in Kashmir. As stated in last year's Report, a scheme for the re-constitution of the State Council was proposed by the Maharaja in March 1888, and sanctioned by the Government of India. This Council which began work with some energy, did not continue in power to the end of the year. Early in 1889 the Resident in Kashmir discovered certain letters, said to have been written by the Maharaja, which threw an unfavourable light on the Chief's character and conduct. Immediately on the discovery of these letters, to which the Government of India were not disposed to attach excessive importance, the Maharaja handed to the Resident a resignation of his powers for a term of years. This resignation he afterwards wished to withdraw. But the Government of India, acting partly on it and partly on the other circumstances indicating the unfitness of the Maharaja to rule, determined, without accepting all the stipulations laid down by the Maharaja in his letter of abdication, to take the opportunity for effecting a thorough re-organisation of the Kashmir Government. Instructions were accordingly given that the administration of the State should be handed over to a Council consisting of the Maharaja's brothers and certain selected Native officials in the British service, and that the Council should have full powers, subject to the condition of consulting the Resident before taking any important step, and of acting upon the Resident's advice when offered. The Maharaja was allowed to retain his rank and dignity as chief of the State, with an adequate allowance, but was excluded from all interference with public affairs. One of the earliest duties of the Council was to pay up a large portion of the heavy arrears due to the army and to the officials in all departments. Reforms urgently called for throughout the administration were undertaken. In spite of the natural resources of the country the population, at least of the Kashmir Valley, has steadily dwindled, and has become impoverished to the point of chronic scarcity, a scarcity aggravated by a system of government monopoly of grain. Under the system of assessment in force the cultivator has been pressed down by the unchecked greed of the official classes to the condition of a coolie cultivating the State property on a bare subsistence allowance; and the artisan classes have shared in the general ruin. The work of securing the rights of the cultivators and of establishing a fair and reasonable system of land revenue settlement and administration is being ably and actively pushed forward. Public works, including a railway to Jummoo, waterworks at that place, and important trunk roads through the State, have been taken in hand or completed. The new Council is carrying out its work satisfactorily. (Further particulars as to the condition of this State will be found in the Papers relating to Kashmir presented to Parliament this Session.)

Central India Agency.

The group of States included in the Central India Agency lie between the Satpura Mountains on the south, and the River Jumna on the north, stretching east and west to Benares and Rajputana. There are altogether 70 separate States, of which the total area is 75,059 square miles, and the population, according to the last census, 9,261,907. The entire Agency, which is under the charge of the Agent to the Governor General for Central India, is itself divided into eight subordinate Agencies. The most important of the States in the Agency are Gwalior, Indore, and Bhopal.

The following is a table showing the area, population, and actual or approximate revenue of the chief States in the Agency:—

STATE.	Area in Square Miles.	Population in 1881.	Revenue.
			Rx.
Ajaingarh - - - - -	802	81,454	22,500
Alirajpur - - - - -	837	56,837	7,983
Baoni - - - - -	117	17,055	10,000
Barwahi - - - - -	1,302	56,445	16,171
Bhopal - - - - -	6,873	954,901	350,000
Bijawar - - - - -	974	113,285	22,500
Charkhari - - - - -	787	143,015	55,900
Chhatarpur - - - - -	1,169	167,700	30,700
Datia - - - - -	836	182,598	100,000
Dewas (Senior) - - - - -	1,378	73,940	36,000
Dewas (Junior) - - - - -	1,198	68,222	32,000
Dhar - - - - -	1,740	151,877	76,333
Gwalior - - - - -	20,046	3,071,524	1,433,549
Indore - - - - -	8,400	1,055,237	610,695
Jaora - - - - -	581	108,434	95,206
Jhabua - - - - -	1,336	92,038	12,823
Khilchipur - - - - -	273	36,125	17,500
Kurwai - - - - -	139	24,831	10,000
Nagod (Unchehra) - - - - -	450	79,629	15,000
Narsingarh - - - - -	623	112,427	43,433
Orehha (or Tehri) - - - - -	1,934	311,514	90,000
Panna - - - - -	2,568	227,306	50,000
Rajgarh - - - - -	655	117,533	35,000
Ratlam - - - - -	729	87,314	130,000
Rewah - - - - -	10,083	1,305,124	124,520
Sailana - - - - -	114	29,723	12,140
Samthar - - - - -	174	38,633	40,000

It has already been noticed that the season in Central India was unfavourable. Prices ran high; crime, and particularly dacoity, was very prevalent; the water supply threatened to fail, and in some parts cattle suffered from want of pasture; there was considerable distress among the Bhils, who indeed began to emigrate; and in Bhopal and elsewhere relief works were started. But the later crops turned out better than was at one time expected, and the distress never became really acute. The health of the population was good.

The policy referred to in last year's Report of transferring the charge of communications in the larger States to the darbars concerned has, so far, met with no unfavourable results.

In *Gwalior* the system of government has continued as in the previous year, with modifications in the *personnel*. The President of the Council, Sir Ganpat Rao, K.C.S.I., who had served the State ably and loyally, died in August 1888, and was succeeded in the Presidency of the Council by Bapu Sahib Jadov, grandfather of the young Maharaja. Other changes also occurred in the Council, which consists of five members besides the President, and in the command of the army; and the Maharaja's mother was appointed Regent of the State during her son's minority. The work of the Council has been satisfactorily distributed among its members. The budget system has been adopted in the State. The Gwalior revenue for the year ending 5th June 1889 amounted to Rx. 1,433,549, of which 94½ lakhs were derived from land, 23½ from interest on loans, and 13½ from customs. The expenditure in the same period was Rx. 1,129,622, the chief items being 36½ lakhs for civil expenditure, 35 lakhs for military, and 15 lakhs for public works. These figures show a nominal surplus of over 30 lakhs. Allowing for adjustments in the complicated system in which the accounts are drawn up, the true surplus is certainly not less than 20 lakhs. And as the State had an invested balance of Rx. 5,357,271 as well as a cash balance at the close of the year 1888-89 of Rx. 4,300,818, or a total of 9½ millions of tens of rupees, the financial position of the State is strong indeed. There are local proposals to add to these enormous balances, but it would seem to be more consistent with European views of administration under such circumstances to

NATIVE STATES.

remit taxation or to undertake some large and useful scheme of public works, a railway, for instance, that would develop the resources of the rich tracts which are now shut off by difficulty of communication from distant markets. Great efforts are being made to open up communications, especially by constructing feeder roads to the new railway, and to supply proper buildings for the service of the Government Departments in various districts. The duties of judicial and revenue officials have been now clearly defined; arrangements have been made for fresh survey and settlement operations; meanwhile, remissions of revenue and advances to cultivators have been made in order to relieve urgent distress in various localities. Education has advanced, the number of schools having been raised from 96 to 108, containing 5,432 students. The young Maharaja has continued to make satisfactory progress in his education.

In the *Indore* State the administration, though not altogether favourably reported on, shows progress in certain respects. Two taxes, imposed ten years previously, which had pressed heavily and somewhat unjustly on the cultivators, were abolished at the cost of $4\frac{1}{2}$ lakhs of revenue a year. The loss can be well afforded, as the revenue of the year 1888-9 exceeded 61 lakhs, leaving a surplus over expenditure of nearly 11 lakhs. Of the revenue, interest, presumably on invested funds, contributed six lakhs. Of the expenditure, the army and police absorbed 22 lakhs, while $4\frac{3}{4}$ lakhs were devoted to public works. Besides the abolition of obnoxious taxes and vigorous action against the dacoits, other measures were taken during the year for the improvement of the condition of the people. Excessive assessments were in many cases reduced; a grant of Rs. 43,000 was made for the amelioration of the drinking-water supply; waste land was brought under cultivation; the criminal tribe of the Moghias was dealt with more successfully, though complaints are still made that they are not so peacefully settled as they would seem to be; and better arrangements were made for the prevention of opium smuggling. Education in the State is represented by 92 schools, teaching 5,136 boys and 83 girls. These figures show a satisfactory advance on the previous year. An unfortunate religious riot occurred at Burwai in the Indore State in September. The police siding with the Muhamadans aggravated the disturbance, in which three Hindus were killed and twenty-five wounded. Six rioters, including two policemen, were sentenced to death in consequence.

The most important change in the administration of *Bhopal* in 1888-89 was caused by the withdrawal of the minister, Colonel H. E. Ward, and the appointment of Munshi Imtiaz Ali as his successor. As a number of officials withdrew with Colonel Ward, the new minister had at the outset great difficulties to contend with. These once got over, the administration worked smoothly and satisfactorily. The principal reforms in progress in the State are those connected with the settlement of the land revenue. It is unfortunate that the remissions of arrears that have been granted in the last two or three years in the villages where the new settlement operations have been carried on, and which have amounted to $8\frac{1}{2}$ lakhs, have gone mainly into the pockets of the revenue farmers, instead of to the relief of the cultivators. In future reductions of assessment or remissions of arrears, steps are to be taken to secure for the real benefit of the tenants such concessions as are granted. This can only be done by establishing some form of tenant right, which unfortunately does not exist in Bhopal territory. The land revenue is farmed, and the contractors, who are absentees, are checked by legal restrictions from obtaining what they can from the cultivators. The forest rules framed by Colonel Ward for the conservation of the forests have been modified under the Begum's order so as to give greater facilities to the villagers. There is a considerable and well-directed expenditure on public works in the State. The system of criminal justice is being improved. A reform of the Mint arrangements is required, as trade suffers from constant fluctuations in the relative value of Bhopal and Government rupees.

In *Nerwah* also, which during the Maharaja's minority is under British superintendence, aided by a council of State nobles, there was less friction in the administration than in the previous year. The revenue exceeded the expenditure by Rx. 1,575, and the balance at the close of the year is stated to have amounted to Rx. 34,150. Revenue settlement operations are also

in

in progress in this State, and are adding considerably to its revenue. The Umeria collieries have not yet been a source of much profit to the State or the Imperial Government; but better results are hoped for. Besides Rewah, the States under management during the year were *Charkhari*, *Sarita*, *Joso*, *Bhaisaunda*, and *Garauli*. But of these and of most of the States in the agency, there is nothing of special interest to report. The affairs of the *Dewas* State (senior branch) received much attention. The management of the State is being carried on under the supervision of the Assistant to the Governor General's Agent, and arrangements are under consideration for effecting a gradual clearance of the State debts, which still stand at four and two-thirds lakhs. The States of *Sailana* and *Sitamar*, with debts somewhat exceeding a lakh of rupees, and of *Baoni* are also in financial difficulties. *Jaora* affairs show a considerable improvement, though it is noticed that its system of farming the land revenue leads to oppression and requires reform. The chronic disagreement of the Rana of *Burwani* with his minister has been causing confusion in the affairs of that State; and *Panna* and *Samthar* are troubled with domestic differences. There is also some cause for anxiety in the condition of *Ajaigarh* and *Nagod*. Of the states in the agency, *Rutlum* and *Orcha* receive the chief praise for the excellence of their government.

The educational statistics of the agency show a total of 379 institutions and 18,047 scholars; the girl schools numbering 17, with 817 pupils. The year was a successful one for the Daly Rajkumar College at Indore, particularly in the matter of numbers, which showed a satisfactory increase.

The States of the Rajputana Agency, of which there are 19 having direct relations with the Government of India, the rest being feudatory to other Native States, cover an area of 129,750 square miles, lying to the west of the Central India States. Their population in 1881 was 10,268,392. The following table shows the relative importance and financial condition of the 19 principal States of the Agency:—

NAME OF STATE.	Area in Square Miles.	Population in 1881.	Revenue for 1888-89.	Expenditure for 1888-89.	Expenditure on Public Works.	Remarks on the Financial Condition of the State.
			Rx.	Rx.	Rx.	
Alwar - - - -	3,024	682,926	268,632	206,535	21,900	
Banswara - - -	1,500	152,054	18,417*	20,255*	—	State is in debt; the tribute is in arrears; and embarrassments increasing.
Bhartpur - - -	1,974	645,540	265,390	261,346	15,619	
Bikanir - - - -	22,340	509,021	161,532	157,200	—	
Bundi - - - - -	2,300	254,701	59,042	53,938	—	
Dholpur - - - -	1,200	249,657	102,451*	98,749*	—	
Dungarpur - - -	1,000	153,381	20,000‡	22,000‡	—	
Jaipur - - - - -	14,465	2,584,357	619,609	493,425	87,787	
Jaisalmir - - -	16,447	108,143	14,000*	17,300*	—	
Jhalawar - - - -	2,694	340,488	144,486	136,218	15,944	Balance Rx. 66,456.
Jodhpur (Marwar) -	37,900	1,750,403	407,972	330,011*	50,527	Expenditure for 1889-90 not stated; but is less than the revenue.
Karauli - - - - -	1,208	148,670	50,000‡	—	—	State debts have been paid off and finances are satisfactory.
Kishengarh - - -	724	112,633	34,259	29,879	—	
Kotah - - - - -	3,797	517,275	212,043	201,494	26,987	Balance Rx. 88,453.
Partabgarh - - -	1,460	79,568	28,970	26,432	—	
Shahpura - - - -	400	51,750	31,087	25,423	4,121	
Sirohi - - - - -	3,020	142,903	22,800	25,800	—	Revenue and expenditure figures are estimated.
Tonk - - - - -	2,509	338,029	125,991	121,853	4,699	Debt still outstanding, Rx. 109,978, are expected to be paid off by 1895.
Udaipur (Meywar) -	12,670	1,494,220	271,096	257,892	69,541	The expenditure includes 2 lakhs in repayment of debt.

* These figures are for 1887-88.

‡ Approximately; the actuals are not stated.

NATIVE STATES.

Of those States for which accounts are given, *Sirohi* alone overspent its income in 1888-89, and its financial position is not unsatisfactory. Of the other States, *Karauli* is now financially strong and clear of debt; *Tonk* expects to have cleared itself of its remaining debts in five or six years; *Jaisalmir* is suffering temporarily from a succession of bad seasons. *Dholpur* is in debt, but is stated to be gradually freeing itself from embarrassments. *Dungarpur* is in some financial difficulty, and *Banswara* alone is seriously embarrassed.

The diminution of dacoity and of serious crime in Rajputana is a satisfactory feature of the year's administration, especially as the season was unfavourable for agriculture. The harvests were particularly deficient in *Jaisalmir*, *Malani*, *Jodhpur*, *Bikanir* and the hilly tracts of *Udaipur*. Relief works were started with varying success in *Bikanir*, in the distressed parts of *Udaipur*, and at the Sambhar salt-works in *Jodhpur*. In *Bikanir* and *Shahpura* remissions of duty and revenue were granted. From *Malani* there was some emigration of the people owing to the scarcity of fodder for their cattle.

The social reforms, referred to under the head of the "Tyag Conference" in last year's report, which have for their objects the raising of the marriageable age to 18 for boys and to 14 for girls, and the curtailment of expenditure on the occasion of marriages and funerals, were maintained in operation during the year through the personal support extended to them by the Rajput chiefs.

The only important chief who died during the year was the veteran and much lamented Maharao Raja Ram Singh of *Bundi* who had ruled his state since 1821, and had in 1877 received the decoration of G.C.S.I. He was succeeded by his eldest son. The administration of the State was for a time disturbed during 1888 by the insubordination of one of its feudatories, the chief of *Kapran*. This Jaghiradr carried his opposition so far as to offer armed resistance to the Durbur troops, and in consequence was punished by the confiscation of his estate. In other states long standing disputes with feudatories were mitigated. In *Shahpura* an inquiry was set on foot with the object of finding a satisfactory settlement. In *Kishengarh* the quarrel with the Rajah of *Futtehgarh* was healed. In *Bikanir* three feudatories who had been deprived of their estates and banished in 1884 were allowed to return to the State.

The administration of most of the Rajputana States is favourably reported on. In some of the best governed, however, such as *Jaipur*, improvement is still required in the administration of the Police departments and of the Judicial Courts. The Chief of *Alwar*, in recognition of the excellence of his government received from the Government of India the hereditary title of "Maharaja." The hereditary title of Maharao was likewise bestowed on the Chief of *Sirohi*, the affairs of which state showed a marked improvement. In *Jodhpur* it is noticed that forest conservancy received special attention during the year, and that codes and manuals for regulations of its courts of justice and state departments were published and had a large sale. In *Tonk* there has been great improvement in the last few years, the Nawab having specially exerted himself to establish good government. *Karauli* has been for some time managed by the Maharaja and his council under the supervision of the Political Agent; as it is now freed from debt, it is proposed to reinvest the Chief with full governing powers. *Jhallowar* continues to be governed by the Political Agent and the State Council, to the exclusion of the Maharaj Rana. The revenue administration has improved, and the work of the courts commands more general confidence. Reforms of the customs department with a simple revised tariff are under contemplation. In fulfilment of an engagement made by the Maharaj Rana while he enjoyed governing powers, the State has carried out a somewhat doubtful measure of liquidating the debts of certain jaghirdars, amounting to nearly a lakh of rupees. The Maharaj Rana of *Dholpur* has abolished his State Council, making its senior and ablest member his chief minister. Three serious affrays between rival villages occurred in *Udaipur*. The conduct of the *Bhils* was generally good. The measures for the reclamation of the

the criminal tribe of Moghias were continued with success. It is proposed to extend similar measures to the Minas of Godwar and Sirohi. NATIVE STATES.

Education is advancing in Rajputana. *Alwar* boasts of 100 schools for boys and 15 for girls. *Jaipur* has 164 educational institutions with 7,390 pupils.

With regard to public works in these States, the expenditure on which is shown in the statement on page 189, it may be noticed that general progress is being made with the construction of roads, of which, for instance, there are 354 miles in *Jaipur* and 238 miles in *Kotah*. The *Jodhpur* railway continues to be most profitably worked; earning in 1888-89 $8\frac{1}{2}$ per cent. on its capital outlay of 22 $\frac{3}{4}$ lakhs. The irrigation works of *Jaipur* are not less successful financially. The total expenditure on them to the end of 1888-89 amounted to Rx. 315,931, but up to the same period they had yielded a revenue of Rx. 154,006 of which Rx. 30,978 were obtained in the last year. These works, consisting of 364 miles of main channels and 422 miles of distributaries, irrigate an area of 50,000 or 60,000 acres. Extensive irrigation works are also being carried out in several other States of Rajputana. Perhaps the most important is the *Parbutti* canal in *Kotah*, which is 150 miles in length. Financially, however, the irrigation works of the other States do not show such great success as the undertakings in *Jaipur*. Cotton cultivation is extending in Rajputana to the benefit of the cultivators. It is wisely assisted by some of the chiefs by the establishment of local cotton presses. The State cotton press in *Jaipur* made a profit on its working of 50 per cent. during the year.

The Feudatory States of Bengal are *Kuch Behar*, *Hill Tipperah* and the Tributary States or *Mahals* of *Orissa* and *Chota Nagpur*, to which also may be added *Sikkim*, which is referred to in a later paragraph, and *Bhotan*, also referred to later on, the relations with which are conducted through the Bengal Government. BENGAL.

The thickly populated State of *Kuch Behar* was visited by the Lieutenant Governor of Bengal in 1889, who found the country looking prosperous, the native officials well educated and intelligent, the whole system of government well designed for the administration of a State in the special circumstances of *Kuch Behar*, and the management of affairs satisfactorily carried out by the supervising officers. The legislation of British India is largely adopted in the State, and the administration generally takes the pattern of that in vogue in the neighbouring British districts. Measures are under consideration for establishing, or rather for re-establishing reciprocity in the execution of decrees between the Civil and Revenue Courts of the State and of those of British India, but certain technical difficulties stand in the way. In 1888-89 the principles to be adopted in the re-settlement of the land revenue were determined after obtaining and carefully considering the opinions of all the parties interested. The income of the State amounted to Rx. 169,529 in 1887-88 and to Rx. 166,333 in 1888-89. The expenditure, however, increased from Rx. 144,342 in the former, to Rx. 174,732 in the latter year. Though there was stated to be a cash balance of Rx. 32,019 at the end of the year, yet as a portion of the expenses of the Maharaja's tour to England remained to be adjusted, the financial position of the State was reduced to considerable difficulties. The Maharaja's return to his State from Europe, where he had been honoured by the decoration of the G.C.I.E., was celebrated by certain grants and measures of relief to his subjects. The State possesses 355 miles of bridged and metalled roads. A scheme for a State railway to be constructed with the aid of the Bengal Government was mooted during the year 1888-89, but the original proposal was too vague to be accepted. Education in the State was represented on the 31st March 1889 by 278 schools and 9,407 pupils. These figures show a decline since the same date in 1888 of 49 schools and 835 pupils, a decline which was caused by the withdrawal of State aid from a number of schools in order to set free funds for the support of the new *Victoria College* opened in June 1888. The year was an unfavourable one for the cultivators. As the season of 1887-88 had also been unpropitious, prices ran high, and there was some distress among the people. Crime in consequence increased considerably, and there was some emigration from the State to the *Bhootan Doars*.

Affairs in *Hill Tipperah* are not altogether satisfactory. For some time past the Government has had reason to comment unfavourably on the revenue

NATIVE STATES.

revenue and financial administration of the State. No accounts of revenue and expenditure are submitted, but it is known that the Maharaja is in debt, and it is believed that his embarrassments have been increasing. The Maharaja's zemindari property in British territory is stated to be mis-managed. It is likely to suffer further from the dismissal of the Maharaja's minister without the appointment of any responsible successor. In the administration of the courts of justice and of prisons some improvement is reported; but some change would seem to be required in the arrangement by which the police force is still charged with the dual duty of preserving the public peace and of collecting the revenue. In 1888 the practice of *Suttee*, which is stated to have been formerly permitted in Hill Tipperah, was prohibited by public order. The season was unfavourable, and prices high. Raids by the Lushai tribes into the neighbouring Chengri Valley caused a considerable temporary migration into Hill Tipperah territory; the consequent disquietude added to the distress of the season. The export trade is estimated to have fallen from Rx. 78,200 to Rx. 64,100 in value. Trade is much checked by exorbitant duties on almost all kinds of staple produce. The revenue of the State is placed at Rx. 29,751, showing a decline of Rx. 3,984 as compared with the previous year.

In the *Orissa Tributary States*, 19 in number, the scant rainfall and partial failure of the crops is reported to have caused arrears of revenue, decrease in civil suits, a falling off in stamp revenue, reduced demand for labour, the closing of schools and of country spirit shops, unsatisfactory vaccination returns, rise in the price of salt, and cholera. Symptoms of distress grew even more acute after the close of the year. In this group of states, with a population in 1881 of 1,630,004, the total land revenue demand is stated at Rx. 79,313, and their aggregate total revenues may be estimated at Rx. 104,600. Two of these 19 states, Angul and the Khondmals, are Government estates, and four others, Mohurbhunj, Dhenkanal, Baramba, and Narsingpore were under direct Government management during the year. The State of Pal Lahera was also brought under management towards the end of the year, on the death of its chief. The number of schools in these states declined from 1,255 with 16,619 pupils in 1887-88 to 1,182 with 15,153 pupils in 1888-89. Forest conservancy received more attention and progress was made with the construction of new roads to open up the country.

The nine *Tributary States of Chota Nagpur*, with a larger area and a scantier population than those of Orissa, also suffered from a bad harvest and its usual consequences. The health of the people was generally good, but there was a serious mortality among the cattle, of which great numbers are brought to Sirgooja for the purpose of grazing. In the absence of restrictions there is no check to the spread of disease among them. The chiefs of Sirgooja, Jashpur, and Udaipur, are reported to govern their territories well. The government of the Raja of Bonai, on the other hand, has for some time been unsatisfactory, and notwithstanding remonstrances, shows no improvement. Education generally retrograded, excepting, however, in Sirgooja and Kharsowan.

North-West Provinces and Oudh.

The Nawab of *Rampur*, who was installed in the chiefship in April 1888, died in February 1889, when he was succeeded by his son, a boy of 14. The council of state was transformed into a council of regency under the presidency of one of the leading members of the Nawab's family, and arrangements were made for the suitable education of the young Nawab. The year was one of transition. It was marked by a large increase of both revenue and expenditure, the former rising from Rx. 218,879 to Rx. 299,187, the latter from Rx. 145,380 to Rx. 235,671. The growth of revenue is derived from the investment of state funds, and the larger expenditure is attributed to an increase in the number of officials employed and in their salaries. Three and a quarter lakhs, as compared with $1\frac{1}{2}$ in 1887-88, were expended on public works. The only other state connected with this province is *Tehri* or *Garwhal*, of which the revenue is about Rx. 14,000. There has been a great improvement in the management of this state since the Dowager Rani was made regent and president of the Council of the State.

PUNJAB

The number of Native States subordinate to the Punjab Government is 34. They are grouped as follows: Patiala, Bahawalpur, Jind, and Nabha, under

under the Lieutenant Governor; Kapurthalla, Faridkot, Mandhi, and Suket, controlled by the Commissioner of Jullunder; Chamba, by the Commissioner of Lahore, and the rest by the Commissioner of Delhi. After the close of 1888-89 the supervision of the Simla Hill States was transferred from the control of the Commissioner of Delhi to the direct control of the Punjab Government. The following table indicates the relative importance of the principal States:—

NATIVE STATES.

STATE.	Area in Square Miles.	Population in 1881.	Actual or Approximate Revenue in 1888-89.
			Rx.
Patiala - - - - -	5,410	1,467,433	478,567
Jind - - - - -	1,259	249,862	59,928
Nabha - - - - -	928	261,824	70,000
Bahawalpur - - - - -	17,285	573,494	160,000
Kapurthala - - - - -	620	253,000	202,976
Faridkot - - - - -	624	97,084	30,000
Mandhi - - - - -	1,200	146,681	49,688
Suket - - - - -	474	53,484	13,775
Chamba - - - - -	3,092	115,773	31,200
Maler Kotla - - - - -	164	71,051	27,577
Kulsia - - - - -	169	67,708	19,352
Simour (Nahun) (one of the Simla Hill States).	1,045	112,371	21,000
Kahlur (Bilaspur) (one of the Simla Hill States).	448	86,546	10,000
Remaining 21 States, including 18 Simla Hill States	5,025	305,547	60,000

The year was generally uneventful in the Punjab States. Throughout 1888-89 *Patiala* and *Jind* continued to be governed satisfactorily by councils of regency. The young Maharaja of *Patiala* was married in November 1888, and after the close of the year under review was invested with full-governing powers. The Raja of *Jind* was formally installed. The Council of Regency acting during his minority have begun their duties well. They have to take the place of a chief who was very intimate with the details of the administration, and attended closely to its duties. The Raja of *Bilaspur* died in February 1889, and was succeeded by his son who is a minor. Measures are being taken by the Punjab States to preserve their valuable forests. *Mandhi* and *Suket* were the States which demanded most attention in the Punjab. In *Mandhi* on the death of the Wazir, there were some violent displays of faction and considerable excitement over the question of the appointment of a successor. None of the officials of the State was found suited for the post; and there was strong popular opposition to the choice of any native from outside the State. In these circumstances the Raja was permitted to appoint a European officer as counsellor to the *Mandhi* State. The arrangement is temporary and has as yet worked well. The warnings addressed to the Raja of *Suket*, referred to in last year's report, have had some effect in inducing him to soften the harshness of his administration. This characteristic of his conduct has appeared chiefly in his dealing with the personal cases of some of his Jaghirdars. Some remission of land revenue was granted during the year, but the land remains generally too heavily taxed, and no security of tenure is allowed to the cultivators. *Kapurthala* and *Maler Kotla*, in consequence of the minority and mental derangement of their chiefs respectively, were as in the previous year under the administration of British superintendents. The former State had a surplus of income over expenditure in 1888-89 of Rx. 18,993, and a balance

NATIVE STATES.

at the close of the year of Rx. 185,684, of which 15 lakhs were invested. The expenditure on public works in the State, has been considerably reduced, as almost all the works which it was considered important to construct during the Raja's minority have been completed. The working of the police was the least satisfactory feature of the State administration. Railway and irrigation works continue to progress. The Patiala-Bhathinda railway was so nearly completed in 1888-89, that it was opened to traffic a few months after the close of the year. The Western Jumna Canal which has been begun, passes through part of the Patiala territory, and that State will bear its share in the cost, as in the case of the Sirhind Canal the use of which has largely developed in the last two years. The bridge over the Sutlej at Suni, is another public work of importance carried out largely at the cost of the Raja of Suket and the Rana of Bhajji.

BURMA.

The territories usually known as the Shan States may be divided into three groups,—the Northern States, comprising the States of North and South Theinni, the State of Taungbaing, and the State of Thibaw with its dependencies, Mainglô, Thônzè, and Maingtôn; the Southern States, embracing all the rest of the Shan country west of the Salween river; and the Trans-Salween States. Since the expulsion of the Karenni from Maukmè and the death of the noted dacoit leader, Twet Nga Lu, early in the year 1888-89, the whole of the Southern and Eastern Shan States have up to the present time enjoyed profound tranquillity. The most important event connected with the history of the Shan States during the past year was the settlement of affairs in Eastern Karenni. The expedition which was sent to bring Sawlapaw to terms occupied Sawlôn, the capital of Eastern Karenni, after an attempt at resistance on the part of the Red Karens. A satisfactory arrangement was come to with Sawlawi, a member of Sawlapaw's family, and this State has since been on the most friendly terms with the Government. Trans-Salween affairs attracted some attention, but except the instalment of the Maingpan Sawbwa as ruler of the four small States of Mainghan, Maingtun, Maingta, and Maingsut, no event of importance connected with the Trans-Salween States falls within the record of the year's administration. Communication was, however, opened with Kyaingtôn, and in May 1888 the Vice-Consul at Chiengmai visited that State. A Commission has since been appointed to inquire into and report concerning various matters in which the Government is interested in the region of the Trans-Salween States. The relations between the superintendent and the Shan Chiefs were of the most cordial nature, and numerous attended durbars were held at Monè and Fort Stedman at which matters affecting the well-being of the States were publicly discussed. In the Northern Shan States an insignificant rising occurred in South Theinni in November 1888 which was quickly suppressed by the arrival of the superintendent with a handful of men. For the rest of the year Theinni was at peace. The confidence of the chiefs of Taungbaing and North Thienni has been gained. There is no record yet as to the resources and internal management of the Shan States.

CENTRAL
PROVINCES.

There are 15 Feudatory States in the Central Provinces. Five of these are managed by their chiefs without any assistance from Government. In the remaining 10, officers appointed by Government control the administration, either as Diwans of the States, or as temporarily representing the feudatory authority during minority or in consequence of misrule. The States under management are rapidly recovering from the effects of previous mal-administration. Re-settlements are being carried out, forest conservation introduced, oppressive taxes abolished in favour of a light income tax, and the police and judicial administration re-organised. Whenever possible, the heir to the estate is sent to the Rajkumar College at Jubbulpore, or, if his age permits, is instructed in the rudiments of judicial knowledge and administrative work. The following is a list of the States, of which the last six are under direct Government management.

S T A T E.	Area in Square Miles.	Population in 1881.	Revenue for 1888-89.		REMARKS.	NATIVE STATES.
				Rx.		
Makrai	155	16,764		3,721	Fairly well managed.	
Bastar	13,062	196,248		14,100	Administration of justice in the subordinate zemindaries is unsatisfactory.	
Kauker	1,420	63,610		5,100		
Khairagarh	931	166,138		21,470	Large expenditure on road construction would be advisable.	
Nandgaon	871	164,339		17,630	With an expenditure of Rx. 23,574, the finances of the State are embarrassed; the administration too is faulty.	
Chhuikhadan	154	32,979		4,800		
Sonpur	906	178,701		4,800	The administration is improving.	
Bamra	1,988	81,286		3,700	The Raja has been made a C.T.E., in recognition of his good government.	
Behracoie	833	17,750		1,000	The Diwan appointed by Government has neglected his duties, and has now been replaced.	
Patna	2,399	257,959		8,160		
Kalahandi	3,745	224,548		11,600	The financial position of the State is not yet satisfactory.	
Sarangarh	540	71,274		4,178		
Raigarh	1,486	128,943		6,672	The prosperity of the State has been largely increased by the new Bengal Nagpur Railway running through it.	
Kawardha	798	86,362		8,150	The administration is good.	
Sakti	138	22,819		1,700		

There was not much to note, during the year under review, in the history of the tributary State of Manipur, the relations with which are conducted through the Chief Commissioner of Assam, except that the Maharaja was obliged to send an expedition to effect the due submission of the Chasads, a small tribe near the Burmese frontier. The Maharajah co-operated with the British authorities in the Chin Expedition by supplying 500 coolies, who rendered good service. The administration of the State is somewhat primitive. The harvests in the State were fairly favourable. Trade, however was dull. The one school at Manipur increased in numbers, and the dispensary received more patients.

ASSAM.

There are five Native States connected with the Presidency of Madras. Their administration is largely assimilated to that of the neighbouring British districts, and causes little anxiety.

MADRAS.

The States are :—

	Area in Square Miles.	Population in 1881.	Revenue in 1888-89.	Expenditure.	Expenditure on Public Works.	Balance at end of Year, and Remarks.
			Rx.	Rx.	Rx.	Rx.
Travancore	6,730	2,401,158	711,526	699,246	106,177	592,952 The figures for Travancore are for 1887-88, (August to August).
Cochin	1,361	600,278	168,076	171,082	38,118	384,650
Pudukota	1,101	302,127	69,990	88,678	15,932	49,461
Bauganapalle (Karnool)	306	30,754	20,884	2,630	1,047	—
Sundar (Bellary)	140	10,532	5,428	4,216	—	State debts are in process of liquidation.

NATIVE STATES.

The financial position of the important Madras Native States is very strong, as is clear from the above statement. It is indeed rather to be regretted that so large balances have been allowed to accumulate, particularly in Cochin. Excess funds might have been employed in the development of the State. The principal event of the year in these States was the death of the Rajah of *Cochin*, who was succeeded by his brother. It was the outlay in connection with the late Raja's funeral which caused the expenditure of the State to exceed its income. The judicial administration of Cochin is still in need of reform; the delay that often now occurs in the disposal of both civil and criminal cases being very detrimental to justice. Education, too, is backward, less than a quarter per cent. of the population being under tuition as compared with 2 per cent. in the neighbouring State of *Travancore*. The encouragement of education is not the only sign of a wise and enlightened policy in this latter State; its grant for public works of 10½ lakhs, which was to be increased to 15 lakhs in 1888-89, is satisfactory. The works undertaken are chiefly reclamation schemes, which are likely to be advantageous to the people and remunerative to the State. The trade of the State is increasing by leaps and bounds, and now exceeds Rx. 1,700,000. The judicial and police departments are well conducted; the number of children at school in Travancore in 1887-88 was 45,812, of whom 20,613 were in missionary schools, 13,979 in State institutions, and the rest in village schools. Little need be reported as to the *Pudukota* State, which during the Raja's minority is under a Dewan Regent. His administration is praiseworthy. The only unsatisfactory feature of the year's report is the large increase, 30 per cent. as compared with 1887-88, and 95 per cent. as compared with 1886-87, in the number of persons charged before the Criminal Courts. False charges account for a considerable part of this increase; but a larger part is due to the introduction of the Madras Salt Law, under the regulations of which 1,148 persons were charged in 1888-89. There is nothing special to report as to the smaller states of *Banganapalle* and *Sandur*.

Besides these five states there are certain tracts and estates chiefly inhabited by the Khonds, Sauriahs, and other wild tribes under the charge of political agents in the Godavari, Vizagapatam and Ganjam districts. In the Godavari Agency, the season was favourable, but in that of Vizagapatam and still more in that of Ganjam, there was a deficiency of rain and consequent distress. It is unfortunate that the destruction of forests in these tracts is being carried on recklessly. Good work was done during the year in the construction of roads in all the agencies; and education progressed, though slowly.

BOMBAY.

Of the numerous Native States subordinate to the Bombay Presidency, the most important are those in the Northern Division, including Cutch, Kathiawar, and the States of the Palanpur, Mahi Kantha, Rewa Kantha, and Surat Agencies. In the Southern Division Kollhapur is the chief State, while Sangli, Savantvadi and the Southern Mahratta Jaghirs also occupy considerable areas. In the Central Division the Satara Jaghirs and the Dang States of Khandesh, and in Sind Khairpur, though considerable in extent, have a scanty population. Last of all there is the Settlement of Aden with the subordinate Somali coast, which is immediately administered by the Bombay Government. The following statement gives details of the area, population, and revenue of the Bombay Native States according to the groups into which they are divided:—

NATIVE STATES.

N A M E.	Area in Square Miles.	Population according to Census of 1881.	Gross Revenue in 1888-89. Rx.
GROUP 1—NORTH GUJARAT :			
Cutch			201,825
Palanpur-Rádhapur Group (11 States)	6,500	512,084	131,675
Mahi Kántha (64 States)	7,775	576,478	114,745
Káthiawár (188 States)	9,300	517,485	1,556,635
Camlay	20,559	2,343,809	62,820
Rewa Kántha (61 States)	350	86,074	208,432
Nárukot	4,837	543,452	544
	143	6,440	
GROUP 2—SOUTH GUJARAT :			
Dharampor	794	101,289	28,248
Bánsda	215	31,807	25,815
Sachin	42	18,036	18,748
GROUP 3—NORTH KONKAN :			
Khándesh Political Agency (22 States)	3,840	60,270	13,655
Jawhár	534	48,556	11,279
GROUP 4—SOUTH KONKAN :			
Janjira	324	76,361	47,752
Sávantvádi	926	174,433	42,023
GROUP 5—DEKKHAN :			
Sátára Feudatories (5)	3,314	318,687	95,091
Akalkot	498	58,040	27,263
Kolhápúr (with 4 Feudatories)	2,816	800,189	312,504
GROUP 6—SOUTHERN MARÁTHA STATES :			
Southern Marátha Feudatories (7)	1,836	326,921	162,344
Sáugli	1,083	196,832	97,484
Savanúr	70	14,763	7,594
GROUP 7—SIND :			
Khairpur	6,109	129,153	71,683
GROUP 8—Aden			
Somáli Coast	† 75	34,850	17,359
			20,980
GRAND TOTAL (372 States)	71,940	6,976,109	3,276,500

* Inclusive of feudatories.

† Exclusive of Perim, the area of which is five square miles.

The 324 States of the Kathiawar, Palanpur, Mahi Kantha, and Rewa Kantha groups are divided into seven classes, according to the extent of the jurisdiction allowed to be exercised by the Chiefs. Excepting in the State of Khairpur, which under its venerable Chief clings to the tradition of ancient times, and stands apart in its unqualified adherence to purely eastern methods of Government, the influence of British ideas is more or less visible in all the States of the Presidency. The history of the year though uneventful, indicates this growing conformity to the principles and methods in application in British territory. Among certain Rajput clans in Cutch and Guzerat, in which on the occasion of marriages, custom demands heavy expenditure and a large dowry on the part of the girl's family, and where, consequently, female infanticide has been rife, measures are under consideration, similar to those already adopted by the Chief of Rajputana, having the object of curtailing marriage expenses.

The work of administrative reform was carried on with marked energy in the two States of *Porbandar* in Kathiawar and *Rajpipla* in the Rewa Kantha. The rulers of these States have been temporarily deposed for misgovernment, and the whole framework of administration is in the process of being remodelled in the hands of the British Administrators. Excepting in Kolhapur, and in one or two of the smaller states in the south of the Presidency, the rainfall was deficient or unseasonable. The later November rains prevented actual famine, but the harvests were generally poor. There was some scarcity, particularly of fodder. Prices were consequently high; and the people were compelled to migrate from some distressed tracts. The health too of the population was bad; cholera, small-pox, and various epidemics prevailed, especially in the northern group of Gujára States. Vaccination and dispensary work made satisfactory progress. Crime at the same time showed a tendency to increase, while education and trade suffered check in various states.

NATIVE STATES.

The report on the administration of *Cutch*, which is the largest native state connected with the Bombay Presidency, is generally satisfactory. The revenue accounts of the State are somewhat confused, and their long promised reform has not yet been effected; but as far as can be judged, the financial position is strong. There is stated to be not only a balance in hand of about 14½ lakhs, of which 5¾ are invested, but also a reserve fund, the amount of which is not made known. The expenditure for the year exceeded the revenue by 1½ lakhs, but this was partly due to a larger allotment on public works, and to the fact that the revenue year was an intercalary one of thirteen months. The unfavourable season caused a diminution in the revenue from land and Customs. Some alleviation to the distress was afforded by a reduction of dues as well as by expenditure on wells and on public works. But any considerable diminution, much more the abolition, of Customs duties in this State, though desirable, can hardly be expected, as two-thirds of the land revenue in the state has been alienated to the *Cutch* nobility. These noble families while losing their old martial occupations and instincts, show little inclination towards education which alone could enable them to take the lead in their altered circumstances. The relations of the Rao of *Cutch* with his nobles are amicable. During the year under review there was some increase of crime, though not of serious crime; but the work of the police and of the courts was not unsatisfactory. Civil litigation showed some decline. Under education though the number of schools increased to 123, there was a small falling off of pupils, who numbered 7,161. Trade was represented by Rx. 7,010,000 worth of imports, and Rx. 2,638,000 of exports. But for the increased imports of grain, there would have been a decline of between four and five lakhs in both imports and exports. Progress was made with the construction of the *Maudvi* breakwater; and there was a useful outlay on a waterworks' scheme for the capital of the State.

In the *Palampur* superintendency, the only States of importance are *Palampur* and *Radhanpur*, each with an income of about 5 lakhs. In neither State are the finances in a quite satisfactory condition, though there is no serious embarrassment. In both the foundation of new villages and the excavation of wells indicate a growing prosperity. The principal reform required is the appointment of a competent prime minister in *Palampur*. As in the neighbouring Agencies, there was an unfavourable and unhealthy season, and an increase of crime; but the detection and punishment of offenders showed improvement. In *Palampur* too, the civil courts made progress in clearing off heavy arrears. Education in the superintendency advanced, by the opening of four new schools, raising the total to 44 State schools and 49 private schools. The attendance also improved. Proposals have been made for the construction of a line of railway from *Palampur* to *Deesa*.

The *Mahi Kantha* Agency contains one State of first-class importance, viz., *Idar*, of which the revenue for the year is stated at Rx. 57,226. Its administration was somewhat hampered by disputes with feudatories, and by the want of the effective control of a competent Diwan. A suitable minister was, however, appointed shortly after the close of the year. The chief event in the Agency was an outbreak among the *Bhils* on the *Mahi Kantha-Rajputana* border. These disturbances, arising out of frontier quarrels, caused the loss of several lives and of Rs. 70,000 worth of property. A strong force of police was required to check further outrage, while the cause of dispute was itself removed by the demarcation of the boundary. A considerable number of other boundary questions were also settled. What with this disturbance on the *Meywar* border, and with the unfavourable season generally, there was a very heavy record of serious crime in the Agency. The number of robberies and dacoities increased from 134 in 1887-88, to 191 in 1888-89, and the amount of property lost or destroyed increased seven-fold. The police of the States is not efficient. It is not satisfactory that the chief State of *Idar* has seen fit in such circumstances to reduce the pay of its police force. The Agency police are being reorganised. The total expenditure of the States in the Agency is stated to have exceeded their aggregate revenue by nearly a lakh of rupees. This is the more unfortunate because, except in *Idar*, in which the allotment was Rx. 2,300, but a small
portion

portion of the expenditure was allotted to public work. The number of civil suits which had risen abnormally in the previous year owing to the introduction of some limitation rules declined in 1888-89; and the Agency Courts were able during the year to reduce their arrears from 1,207 to 578. Education was almost stationary, except as regards the efforts of the Church Missionary Society among the Bhils, which were increasingly successful. The Maharaja of Idar gave a donation to the Missionary in charge for the purpose of establishing another school and dispensary at Posina. Of the other States in the Agency, besides Idar, there is little to report, except that one of the more important of these, *Mansa*, came under British management on the death of the Thakur. *Katosan* and *Ilol* are the best administered of the smaller States. *Malpur* is in financial difficulties, and *Pol* shows no improvement. Cultivation is said to be rapidly extending in the Bhil tracts of *Pol* and *Danta*.

The areas, population, revenue, &c. of the first and second-class States in *Kathiawar* are as follows:—

NAME OF STATE.	Area in Square Miles.	Population in 18-1.	Revenue.	Expenditure on Public Works.	Number of Schools in the State.
<i>First Class.</i>					
Bhavnagar	2,860	400,323	433,800	85,000	138
Navanagar	3,791	316,147	240,000	16,350	80
Junagad	3,206	387,499	210,000	14,380	120
Gondal	1,925	185,604	189,026	31,724	74
Morvi	822	89,964	95,863	10,945	27
Porbandar	637	71,072	55,000	135,000	27
Dhrangadra	1,157	99,686	40,000	19,300	40
<i>Second Class.</i>					
Palitana	289	49,271	47,500	—	17
Wadhwan	236	42,500	40,000	5,800	18
Vankaneer	415	30,401	28,258	3,857	11
Limbdi	344	43,068	24,362	—	17
Rajkot	282	40,527	22,600	2,013	15
Elval	283	21,776	15,140	—	5
Jafarabad	42	9,405	6,380	688	5

These 14 States are invested with plenary jurisdiction. Of the remaining 174 States six are in the third class, 11 in the fourth, 18 in the fifth, 43 in the sixth, and 17 in the seventh class. The remainder have no jurisdiction at all. The lawlessness which in previous years had reached such serious proportions in *Junagad* and several other States as to require the deputation of a special officer to deal with it, received in the year under review a serious check by the capture or death of almost all who remained in outlawry. Violent crime was as usual prevalent; but cases of robbery and dacoity, which had occurred to the number of 175 in the previous year, fell in the year under review to 149, and there was a considerable decrease in the amount of property stolen. Ordinary crime, possibly in consequence of the bad season, increased. The Agency police force, to which is entrusted the protection of the non-jurisdictional States, was re-organised during the year, and in coping with crime showed some improvement, but the operations of the police of the jurisdictional States showed deterioration both in securing convictions and in the recovery of stolen property. Railway construction is being pushed forward energetically in the province. The *Jetalsar-Veraval* and the *Dhorabji-Porbandar* extensions were completed within the year under review, or shortly after its close, and the extension of the *Morvi* line to *Rajkot* approached completion. Exclusive of the outlay on railways, the total expenditure

penditure on public works in Kathiawar increased from 18½ to 21½ lakhs. The most important of these were the Jubilee waterworks at Bhavnagar and a Jubilee bridge at Navanagar. Notwithstanding the unfavourable season the seaborne trade of the province increased from 387 to 418½ lakhs in value, and the railway systems showed a satisfactory return. Good progress was also made in education and dispensary work.

Of the more important States *Porbandar* and *Vankaneer* are being temporarily administered, the former by a British officer, the latter by a minister appointed by the British Government. Of *Vankaneer* there is not much to report beyond the fact of continued progress, growing revenues, and larger balances. In *Porbandar* the year was one of great change. The deposed Rana has begun to show a friendly attitude towards the administration. The reforms established included a partial disarmament of the population, the initiation of a new land revenue system in which the assessment should be based on a classification of the fields, and the State share should be more carefully regulated. Measures were also adopted to encourage the reclamation of waste lands. The conflicting interests of grazing, forestry, and tillage had also to be reconciled by a system which, while ensuring to the graziers a sufficiency of fodder, should prevent their roaming freely to the destruction of the standing crops, and which should allow extension of cultivation and reasonable forests rights without destroying the State property in the forests. In view of the general distress special measures had also to be taken to relieve the population. The large public works expenditure in *Porbandar* was caused by the construction of the railway. The accounts of the State were being reformed during the year. Its invested balances exceed 22 lakhs, and the year's revenues are calculated at 5½ lakhs. Of the States not under management, *Bhavnagar* is the most successfully governed. The council lately established by the Thakor Sahib for the conduct of public business has worked well, and has caused a marked improvement in the administration of the State. The financial condition of *Navanagar* which had in previous years been unsatisfactory, improved considerably, and three lakhs of State debts were paid off. To prevent the diversion of trade to other harbours, the import duties at the *Navanagar* ports were reduced by one-half. The State of *Dhrol* is also freeing itself from debt. *Palitana*, which is likewise embarrassed, is not likely to show much improvement till the disputes of its chief with his brother are settled. Some disputes which have been interfering with the welfare of other States are approaching settlement. Those between *Cutch* and *Morri* have been at least provisionally arranged. A decision has also been arrived at in the disputes between *Junagad* and *Gondal*, but those between *Naranagar* and *Baroda* continue to cause serious friction. Internal dissensions and general maladministration in the small State of *Malia* have become so acute that the interference of the British Government may possibly be required.

The year was not a very favourable one in *Cambay*, and in consequence of certain extraordinary payments the year closed with a deficit of Rx. 3,170. But the financial prospects of the State are not unsatisfactory. The State ports were used by a larger number of ships, and, now that the customs duties have been abolished, trade is likely to expand.

The *Reva Kantha* Agency contains only one first-class State, *Rajpipla*, which continued during the year under the charge of a British Administrator. The reforms introduced were large and many. Survey work was pushed on, and survey rates introduced in some tracts. Outstanding balances were adjusted, 21 lakhs of arrears being struck off as fictitious or irrecoverable. Alienations and claims of creditors were investigated and settled. The judicial administration was improved and worked with more success. The Public Works Department was reorganised; measures were adopted for the reclamation of wild tracts; obstructive transit duties were abolished. The year closed with a satisfactory balance of Rx. 23,900. The other important States of the Agency, with the amount of their incomes during 1888-89, are *Bariya* (Rx. 21,338), *Lunavada* (Rx. 20,291), *Chota-Udepur* (Rx. 18,222), *Balasinor* (Rx. 14,016), and *Sunth* (Rx. 12,440). Of these *Lunavada*, *Balasinor*, and *Sunth* deserve most credit for their administration. Crime, especially violent offences against life and property, prevailed. The work of the police was fairly satisfactory, and education progressed.

Narukot is administered by the Political Agent under a long standing agreement. NATIVE STATES.

Sachin, the Raja of which has resigned his duties, continues to be administered by a Native officer under the supervision of the Political Agent. Its finances are satisfactory. So are those of *Bansda*, the Raja of which appears to be governing well. In *Dharampor* the expenditure is in excess of the income, and the general administration, particularly in the *abkari* and judicial departments, is defective. Police organization in *Sachin* also requires reform; and forest conservancy in *Bansda* is desirable.

The petty States under the political supervision of the collector of *Khandesh* consist of the State of *Surgana*, with a population of 14,205 souls, and two groups of estates known as the *Mewas* States and the *Dangs*. The inhabitants, chiefly *Bhils* and *Konkani Kanbis*, are illiterate and addicted to drink; and the Chiefs, who also belong to one or other of these races, for the most part share the characteristics of their subjects. During the year under report the Chief of *Surgana* was induced to abolish transit duties and remodel the *abkari* arrangements in his state; but the latter reform was not thoroughly carried out. Throughout the Agency there was as usual, little serious crime. The condition of the *Jawhar* State, which is administered by the Raja himself, and of which the revenues are increasing, is generally satisfactory.

There is much to indicate progress and prosperity in the report of the Muhammadan State of *Janjira*; a considerable surplus, a large closing balance, an increase of trade to the extent of 18 per cent. in the year, a well-managed forest department yielding a large profit, useful public works under construction, land revenue and *abkari* efficiently administered, police working successfully, no serious crime, and no serious delay in the administration of justice, local and municipal boards organised and doing good work, and new schools and dispensaries being established year by year. In 1888-89 the number of schools in the State rose to 42, and of pupils to 2,079. The State of *Savantvadi*, of which the present Sir Desai is not fit to rule, has now been for 50 years uninterruptedly administered by the British Government; the system of administration has been gradually assimilated to that in force in British territory. The people are peaceable and contented. Their condition is much improved; they are much better clothed and fed than they were even 25 years ago. In the same period the number of schools has increased from six to 120, as much as 335 miles of road have been constructed, and a standing Legislative Committee has been established in the State and is said to be working well.

Of the five *Sataru Jaghirs* little need be said. In each the expenditure of the State appears to have been kept within the income. But the accounts are not clear. The *Phulvan* and *Aundh* States are both to some extent in debt, and the latter State is generally in need of reforms; complaints as to the character of the chief's rule being frequent. The schools in these States numbered 129. The year's administration of *Akalkot* was marked by the abolition of certain petty taxes obstructive of trade. The year's accounts show a small deficit.

Owing to the minority of the Maharaja, the administration of the *Kolhapur* State is carried on by a Diwan aided by a council, who have also charge of three out of the four *Kolhapur* Feudatories, the chiefs of which are minors. The revenue of *Kolhapur* is nearly 17 lakhs, and that of the feudatories together nearly 7 lakhs. The total balances at the close of the year amounted to Rx. 258,000, of which Rx. 188,000 belonged to the parent State. There was a heavy outlay during the year on public works, amounting to Rx. 88,000, of which Rx. 44,400 were spent on the *Kolhapur* State Railway, a line $28\frac{3}{4}$ miles in length, which was commenced in May 1888, and is intended to connect *Kolhapur* with the Southern *Mahratta* system at *Miraj*. The collections of land, forest, and *abkari* revenue exceeded those of the previous year. The season was not unfavourable; notwithstanding, crime increased. So also did civil litigation. The work of the courts was satisfactory. Education flourishes. There are 13,519 scholars being educated in 217 institutions in the State. These include an agricultural class, a technical school, and the midwifery class attached to the *Kolhapur* Hospital. The dispensaries are gaining in popularity, though

NATIVE STATES.

the year was not an unhealthy one. Trade is expanding, partly as a result of the abolition of transit dues in 1886. The yearly horse and cattle show at Chinchli is increasingly successful. There was also an industrial exhibition at Kolhapur in the year; and the State, in addition, sent exhibits to the Poona Exhibition at its own cost.

The seven *Southern Mahratta Feudatories*, with their gross incomes in 1888-89, are *Miraj (Senior)* (Rx. 29,067), *Miraj (Junior)* (Rx. 25,296), *Kurúdvád (Senior)* (Rx. 13,130), *Kurúdvád (Junior)* (Rx. 13,081), *Jamkhandi* (Rx. 43,335), *Mudhol* (Rx. 21,174), and *Bámdurg* (Rx. 17,279). In the same group are *Sangli* (Rx. 97,484), and *Savanur* (Rx. 7,594).

Six of the States are under the management of their respective chiefs, who all exercise first-class jurisdiction. The chiefs of *Miraj (Junior)* and *Bámdurg* being minors, their States are managed by Joint *Kárbláris*. The Chief of *Sangli* has exercised full powers in his State from December 1887. No events of importance occurred in any of the Southern *Maráthá* States during the year. These States consist for the most part of scattered groups of villages, and their police administration is unfavourably affected by this. A slight improvement is however visible in four States. Education has progressed in all except one. The majority show an increased expenditure on public works. A free trade policy has been adopted in all the States, and the financial condition during the year of all except the two *Kurúdvád* States was satisfactory. Cholera and small-pox generally prevailed, but with less destructive results than in the previous year. Some improvement in the working of the police was visible in *Sangli*, in the two States of *Miraj*, in *Kurúdvád Senior*, and in *Jamkhandi*; but in the other States there was more or less deterioration. The financial condition of all the States, except the two *Kurúdvád* States, which are in debt, was satisfactory.

During 1888-89 the Mir of *Khairpur* was honoured by the addition of two guns to his salute. The administration of the State underwent no change. It is conducted after the rude and primitive methods of former days, and there is a consequent absence of trustworthy statistics respecting it. There was a general increase of crime, principally against property, during the year. The administration of justice is summary. The State is in debt, but accurate information respecting the finances is not available. Trade is hampered by numerous and vexatious imposts. Medical relief and education are in a very backward condition, but some trifling improvement in both was visible in the year under review.

FRONTIER RELATIONS AND FRONTIER TRIBES.
Baluchistan.

The country of *Baluchistan* and the tracts with which the Governor General's Agent in *Baluchistan* has relations have an area of about 130,000 square miles, lying between *Persia* and *Afghanistan* and the *British Indian Provinces* of the *Punjab* and *Sind*. The area may be divided, for the purposes of the Agency, into five sections, viz.: (1) the greater part of *Baluchistan*, which is of the nature of a confederation of chiefs administered by or under the suzerainty of the *Khan of Kalat*; (2) the districts of *Quetta* and the *Bolan*, which, being part of the dominions of the *Khan*, are administered on his behalf by the *British Government*; (3) the "Assigned Districts," formerly belonging to *Afghanistan*, which are directly under *British* administration, and include *Pishin*, *Sibi*, *Harnai*, *Thal Chotali*, and *Shorarud*. These districts were, in *November 1887*, constituted *British* territory, and placed under the *Chief Commissioner of British Baluchistan*. Then (4) there are the *Afghan* tribes between the *Amir's* territory and *India*; and (5) the *Baluch* tribes, known as *Marris* and *Bugtis*. Sections (2) and (3) are directly under the administration of the *Governor General's Agent*. Over the remaining portions of *Baluchistan* that officer exercises general powers of supervision, of arbitration, and, if necessary, of interference in the interests of peace and order. For instance, in the year 1887-88, to which the report last received refers, on the death of the *Jam of Las Bela*, the administration of that State was temporarily assumed and carried on by the assistant to the *Governor General's Agent*, until the question of succession had been finally decided by the *Government of India*. By this decision, which was arrived at after the close of the year, *Jam Ali*, the eldest son of the late *Jam*, was recognised as chief, although his father had wished his claims to be set aside in favour of a younger son by another wife. Some trouble was

was

was caused by disputes between the Jhallawan Sardars and the Khan of Kalat. The Sardar of the Jhallawan tribes was deprived of his estate for misconduct and detained at Quetta. Affairs in the Zhob Valley were troubled. The conduct of the Marri, Bugti, Dumar, and other tribes in the Thal Chotiali Agency was satisfactory. There was tranquillity in the direction of the Persian frontier. Relations with Afghanistan were also harmonious. Some temporary agitation and difficulty was, however, caused by the Ghilzai insurrection in Afghanistan, and by the subsequent immigration into Baluchistan of numerous refugees, who fled from the Ameer's country on the suppression of that revolt. As many as 225 families took refuge in Thal Chotiali alone. The boundary between Sind and Baluchistan was definitely settled during the year 1887-88.

The districts under the direct administration of the Chief Commissioner of British Baluchistan were increased by the inclusion of the Khetran country. Protection was afforded mainly by establishment of local levies; a light revenue was raised from the land, and jurisdiction was interfered with as little as is possible consistently with the security of the roads. Since the close of the year under review a system of laws and regulations in force in the districts under the Chief Commissioner has been promulgated. The year 1887-88 was one of scanty rainfall in Quetta and Pishin, and consequently the harvests there were poor. The land revenue in these districts declined from Rx. 9,325 to Rx. 6,719. But there was an increase under other heads of revenue, as is indicated by the following statement:—

	Revenue.		Expenditure.	
	1886-87.	1887-88.	1886-87.	1887-88.
	Rx.	Rx.	Rx.	Rx.
Quetta - - - - -	13,134	16,384	10,560	12,237
Pishin - - - - -	7,087	6,815	13,865	14,098
Thal Chotiali - - - - -	26,124	33,073	47,861	47,582
TOTAL - - - - -	46,345	56,272	72,286	74,917

The Thal Chotiali revenues include Rx. 1,576 collected in the Barkhan and Khetran Valleys in their first year of administration, and Rx. 6,000 collected in the Bori Valley in its second year of administration. What Thal Chotiali lost by the completion of the railway works, in its districts, was gained by the Pishin District, in which new railway works, including the Khojak tunnel, were commenced during 1887-88. The expenditure above stated does not include military charges, the outlay on roads and other civil public works, amounting to Rx. 95,533, and that on irrigation, amounting to Rx. 50,332. As a result of these works the country is being opened up in a remarkable manner; contractors and merchants have poured in; bazaars have been rapidly formed and extended; revenues have generally increased; trade has largely developed; litigation is much more frequent; and the inhabitants of the country give evidence of having entered upon an era of prosperity. With many thousands of men employed on the railway works crime has increased, and riots have been not infrequent. There has also been some fanatical crime in the form of isolated attacks on Government soldiers and officials.

The small tribe of *Bozdars* who were blockaded in 1887 have benefited by the lesson, and behaved well in 1888-89. There was general quiet along the whole Dera Ghazi Khan and Dera Ismail Khan borders. The completion of, and traffic on the frontier roads, combined with the enlistment of local levies to maintain order, is gradually having the effect of pacifying these rough districts. The conduct of the *Mahsuls* was at one part of the year unsatisfactory, but it has since improved. The disputes between the *Turis* of the Kurram Valley and the neighbouring tribes under the

FRONTIER.
RELATIONS.

dominion of the Ameer continued. An attempt was made to settle the causes of dispute by a joint commission, but led to no result. On the Kohat border affairs were distinctly unsatisfactory; the conduct of the *Mulla Khels*, the *Rabia Khels*, and the *Akhels*, was such as to threaten the necessity for strong punitive measures. The behaviour of the *Kaki Khels* of the Khaibar also tended to cause trouble. In the Peshawur district there was not much to notice. In *Boner* and *Swat* excitement was caused for the time by the Black Mountain expedition, but it soon quieted down.

The affairs which made necessary the *Hazara* or *Black Mountain* expedition were related in last year's report. There had been a long series of outrages committed against British subjects in British territory, and there was an absolute refusal to refrain from such outrages and make compensation. The operations which were carried out in October and November 1888 were quite successful in their main objects. There was some fighting, in which all opposition was overcome; and the principal villages of the offending tribes were captured and burnt. The *Hazanais*, the *Akazais*, and the *Parari Sayads* made unqualified submission to the terms imposed on them. The *Allaiwals* were not so effectually subdued; but the village of *Arsala Khan*, the chief of their tribe, was burnt; and the lesson they have received will probably be sufficient to check future outrages on their part. The colony of Hindustani fanatics suffered considerable loss; their stronghold was blown up, and their members scattered. The *Chhajurais*, who at one time showed some inclination to side with the refractory tribes, received timely warning from the swift punishment of their neighbours, and refrained from hostilities. Their country was accordingly not invaded.

Nipal.

Relations with Nipal continued to be friendly. There is, however, nothing special to report.

Sikkim and
Tibet

The year was eventful in Sikkim. Early in 1888 military operations had to be undertaken, as stated in last year's report, against the Tibetans, who had occupied a position within Sikkim territory. In May an attack was made by the Tibetan forces on the Gnatong encampment; but they were driven back, with loss, beyond the Jelep pass. The Maharaja still continued to intrigue with the Tibetan faction. A change was effected in his attitude in September, when, the weather having cleared, the British troops were able to advance and drive the Tibetan forces across the Tukola pass into the Chambi Valley. In October the Maharaja came to Guntok, and established a council, whom he authorised to transact the business of the State in his name. In November the Chinese Ampa or commissioner arrived in Sikkim, and negotiations were commenced with him for the settlement of the whole question. These being concluded by January 1889, measures were taken to secure order and to protect Sikkim territory from future aggression. It was decided to maintain a British officer in Sikkim, to advise the Raja and his council, and to organise the whole administration, which had been thrown out of gear by the events of the last few years. Measures are being taken for the development of the resources of the country, by recording the actual holdings of the people, by arranging for the collection of revenue, by encouraging the settlement of unoccupied wastes, by conserving the valuable forests, by providing better protection of life and property, and by constructing roads and public works. It is also proposed to modify the system of forced labour practised in the country. The development of the country is the more important because the revenue of the State is at present so small, amounting to only Rs. 844 a year.

Bhutan.

Affairs in Sikkim had their influence on the relations of Bhutan with the British Government. The attitude of the Bhutanese was doubtful during the military operations against the Tibetans. While fearing to offend the British Government, from which Bhutan receives a yearly subsidy, they were bound to some extent by their historic connection with Tibet. Some Bhutanese officials went so far as to make preparations to aid the Tibetans, but the people were not inclined to throw in their lot with the Tibetans, and the country remained quiet. The ruling chiefs were really anxious for peace. Delegates were therefore sent to offer mediation between the British authorities and Tibet; but the offer was declined. On the arrival of the Chinese Amba the Bhutanese sent a deputation to meet him, and indicated a wish to visit him, but this too was disallowed.

On

FRONTIER
RELATIONS.
Assam and
Bengal Frontier
and Hill Tracts.

On the Assam border arrangements were made to facilitate trade with the *Bhutia* tribes. The *Hiti Duffis* gave no trouble. The policy of excluding their settlements from a five-mile strip of land along the border has tended to remove difficulties. There were signs of unrest among the *Abors*, but no punitive measures against them were found necessary. The conduct of the *Aks*, *Mris*, *Mishmis*, *Khamptis*, and *Singhpas* was satisfactory. The *Nagas* within the Naga Hills district behaved well; a tract inhabited by the *Ao* or *Hatipuria* up to the Dikhu river was incorporated during the year within the regular district boundary. The tract, containing some 7,000 houses, was successfully dealt with, and a revenue of Rs. 2 per house was imposed. An expedition against the *Mazungs* was decided upon, in consequence of a destructive raid into the newly incorporated tract. The punishment dealt out to this tribe will, it is hoped, be effective, although the object of the expedition, to recover the captives taken in the raid, was not attained. In the *Khasi* and *Jaintia* and *Garu Hills* there was no disturbance; nor were there any actual troubles along the *Cachar-Lushai* border, but in view of impending military operations in the Lushai country special precautions had to be taken. These operations were rendered necessary by the Lushai raid into the *Chittagong Hill Tracts* and the massacre of the villagers of Pakuma Rani; while the troops for the campaign were being collected another murderous raid was perpetrated in the Upper Chengri Valley. There was naturally a decline in trade in the disturbed portions of the frontier. The frontier police of Bengal and Assam, who have a kind of military organization, behaved well on the expeditions and other duties in which they were employed.

North-east of Bhamo there were considerable disturbances which led after the close of the year under review to a punitive expedition against the *Poukan Kachins*. The object of the expedition was obtained, and the result has been a marked improvement in our relations with the tribes on the Bhamo border, and a growth of trade. A punitive expedition was also required against the *Kachin* tribes in the Mogaung sub-division. The result as regards the pacification of the Mogaung country surpassed expectation. The remaining frontier tribes with which the Burma authorities were brought in contact, were the *Chiu* tribes who inhabit the hills between the Upper Chindwin and Pakokku district and Chittagong. In consequence of continued raids, chiefly on the Kubo Valley and the State of Kale, it was found necessary to send a strong force into the hills and to inflict severe punishment on the offending tribes. The operations were not followed, as in the Mogaung sub-division, by the submission of the offending tribes; but the release of a number of captives was secured. A force has since been maintained in the hills during the rains, and it is possible that the punishment of the tribes dealt with last year may induce other tribes to come to terms. Negotiations to this effect were still in progress at the end of the year. On the whole the result of the frontier policy of 1888-89 may reasonably be regarded with satisfaction.

Burma Frontier.

On the frontier of Lower Burma the main incident was the expedition to *Eastern Karenni*, undertaken on account of the unprovoked attack made by its chief, Sawlapaw, on the State of Maukme. The Karens were defeated and the capital, Sawlon, occupied. As Sawlapaw had fled, it was found necessary to appoint a new chief. Sawlawi, the nephew and heir-apparent of Sawlapaw, was accordingly appointed, an indemnity and tribute were imposed. After the retirement of the British troops, Sawlapaw re-appeared, but did not disturb his nephew's administration. Some difficulty has been caused by territorial claims of Siam to States and districts also claimed by the Indian Government; the disputes were still pending at the close of the year under review.

The area of the settlement at Aden was enlarged during the year under review by the purchase from the Akrahi Chief of five square miles of territory to the north of the harbour. The settlement enjoyed a year of unbroken tranquillity and progress. The survey of the proposed railroad to Shaik Othman was completed. At a personal conference with the Resident, a number of the neighbouring Arab Chiefs, including the Kotaibi, agreed to lower the transit duties on the caravan routes and to fix a future tariff; and the compact was carried out by the majority. Intercourse with the Kotaibi,

Aden.

FRONTIER
RELATIONS.

who gave trouble the year before, was broken off in consequence of their breach of this agreement. Five additional Chiefs became regular stipendiaries of Government, and three Chiefs died during the year. The year was a prosperous one in this dependency; the trade of the port increased from Rx. 5,169,626 to Rx. 6,565,454 in value. The receipts of the Aden treasury are stated at Rx. 269,141, but of this only Rx. 17,359 represented the portion obtained from Imperial or provincial sources of revenue. The revenues of the Municipality, including Shaik Othman, increased to Rx. 15,061. Important public works, including defence works, were carried out during the year. There was no serious crime in the settlement in 1888-89.

Somali Coast.

The Somali country lies on the coast of Africa opposite Aden, and is inhabited by three tribes, with numerous sub-divisions. The British protectorate, extending from near Ras Jibuti to Bandar Ziyada, is administered by a political agent, who is subordinate to the Resident at Aden. The coast is divided into the two sub-residencies of Bulhar-Berbera and Zaila. Among the principal events of the year was the withdrawal of the French representative, and the French flag from Zaila in accordance with a convention between England and France. An attack on Berbera by the Ayal Ahmed tribe was repulsed with loss, and the tribe subsequently resumed peaceful relations. The town of Berbera with a population of 30,000 inhabitants was burnt to the ground on 1st June 1888, but was rapidly rebuilt with considerable improvements. The trade of the three principal ports during 1888-89 was valued at Rx. 783,974, as compared with Rx. 627,176 in the previous year. The following table of receipts and expenditure since 1885 will show that the receipts of the protectorate have already begun to meet the whole cost of the administration:—

	Receipts.	Expenditure.	Surplus + or Deficit -
	Rx.	Rx.	Rx.
1885-86 - - - - -	11,089	8,887	+ 2,202
1886-87 - - - - -	13,441	27,044	- 13,603
1887-88 - - - - -	19,086	20,315	- 1,229
1888-89 - - - - -	20,939	17,653	+ 3,286
TOTAL - - - Rx.	64,605	73,899	- 9,294

Muscat.

The year 1888-89 was an important one in Oman, on account of the death, on the 4th June 1888, of the Sultan, Seyyid Turki bin Saïd, after a reign of seventeen years. His rule, though not vigorous, had been skilful, mild, and liberal. The chief characteristic of his policy had been loyalty to and trust in the British Government. In return he had received an assurance of active support during his lifetime in case of insurrections and attacks on Muscat, an assurance which had secured the maintenance of peace during the remainder of his reign. He had also received the honour of Grand Cross of the Star of India. Of the three sons of the deceased Sultan, it had for some time been generally accepted that the eldest, Seyyid Mohammed, should be passed over for the succession. The second son, Seyyid Feysal, accordingly assumed the Sultanate. His position was not fully assured at the end of the year; indeed it had been to some extent weakened by an unsuccessful expedition undertaken by him in September against his cousin, Ibrahim bin Kais. Towards the end of the year there were rumours of a contemplated rising of the Nejdeau tribes, under Mohammed "Ibn Rasheed," chief of the Jebal Shammar, against Oman. The power of Mohammed "Ibn Rasheed" is now paramount throughout Nejd from the confines of Syria to El-Hasa. No disturbance, however, from this quarter occurred. The trade of Muscat, valued at \$1,857,270 of imports and \$1,403,100 of exports, showed a small falling off in the year under review.

Persian Gulf.

The threatened invasion of Oman from Nejd and El-Katr caused considerable agitation on the *Oman Pirate Coast*, and particularly among the

the Trucial Chiefs. There were as usual feuds, intrigues, and petty hostilities among the various chiefs and tribes. The most important was a defeat of the men of El-Bilaa by the Beniya, and a retaliatory massacre of Beniya villagers perpetrated by Shaikh Jassim of *el-Katr*. In *Bahrain* affairs were quiet; a reconciliation was effected between the Chief of Bahrain and Shaikh Jassim. In *el-Katr* the political condition was unsatisfactory. Piracies continued to be committed in Turkish waters, though not so frequently as in the previous year. Some coercive measures had to be adopted against Shaikh Jassim to obtain redress for his ill-treatment of British subjects. On the *Persian Coast* the most important events were the Royal Proclamation of the Shah promising respect for the liberties and rights of his people, and permitting the formation of companies for large public undertakings, and the opening, under certain regulations and conditions, of the river Karun as far as Ahwaz to the commerce of the world. In the early part of 1888 the Bakhtiari country was in a very disturbed state and the disorders spread partially to Arabistan. Tranquillity was restored by the Persian authorities, In Laristan, too, there was some disorder. In Persian Baluchistan the condition was not disturbed. In the neighbourhood of Fars much distress was caused by the prevalence of a fatal form of cattle disease. The exportation of grain from Persian ports was prohibited in December 1888, possibly in consequence of the large shipments of wheat and barley that were made in October. The export trade in wheat was unusually profitable. The harvest of 1889 promised well at first, but the failure of the rains reduced the outturn. The trade was further checked by the renewal of the prohibition on the export of grain in April. The import trade in cotton goods was prosperous during the year. The following table shows the condition of trade in the principal ports of the Persian Gulf during 1887 and 1888 :—

	Exports.		Imports.	
	1887.	1888.	1887.	1888.
	Rx.	Rx.	Rx.	Rx.
Bushire - - - - -	624,955	596,468	871,568	813,536
Shiraz - - - - -	685,356	666,236	382,867	382,936
Lingah - - - - -	838,682	1,024,539	920,067	1,353,415
Bunder Abbas - - - - -	389,190	439,984	464,359	430,496
Bahrain - - - - -	448,307	520,584	447,108	489,818
Ports on the Arab Coast - - -	304,363	548,292	307,080	374,480
TOTALS - - - Rx.	3,290,853	3,796,097	3,393,049	3,844,681

Of the total trade in 1888 valued at Rx. 7,640,778 more than Rx. 3,300,000 represented trade carried on with the United Kingdom, British India, or the British Colonies. With other European countries the trade was small. The year was a successful one for the pearl fisheries of Bahrain and the Arabian coast of the Persian Gulf. The export in 1888-89 was valued at Rx. 600,000, or Rx. 100,000 more than in 1887-88. The opening of the Karun route is likely to cause some redistribution of trade in Persia, the merchants of Shiraz being particularly alarmed on this account, but it will certainly conduce to the increased prosperity of the whole country, in which the province of Fars is likely to participate. The establishment of banking agencies in Persia for the first time in 1888 also promises to aid the commercial development of the country.

There were no captures of slaves in the Persian Gulf or in the Oman waters; nevertheless some cargoes are known to have been run from Africa to Oman, and a few fresh slaves were brought by the Persians from Oman to Persia for sale. It was found impossible to recover them

Slave Trade.

ARMY.

ARMY.

The sanctioned establishment for 1888-89 was as follows:—

British troops	-	-	-	-	-	73,782
Miscellaneous officers	-	-	-	-	-	1,129
Native troops	Bengal	-	-	-	84,062	
		Madras	-	-	32,645	
		Bombay	-	-	28,664	
						<u>145,371</u>
TOTAL						<u>220,282</u>
Corresponding Total for 1887-88						<u>218,870</u>

The actual strength of the Army on the 1st April 1889 was as follows:—

BENGAL.					
BRITISH:					
Cavalry	-	6 regiments	3,778		
Artillery	-	52 batteries	7,814		
Infantry	-	34 battalions	34,060		
				40,052	
NATIVE:					
Cavalry	-	19 regiments	11,954		
Artillery	-	2 batteries	458		
Infantry	-	52 regiments	47,108		
Punjab Frontier Force	-		14,882		
Sappers and Miners	-		1,346		
Other Corps, including Hyderabad Contingent	-		13,641		
				89,389	
MADRAS.					
BRITISH:					
Cavalry	-	2 regiments	1,224		
Artillery	-	15 batteries	2,364		
Infantry	-	11 battalions	9,414		
				13,002	
NATIVE:					
Cavalry	-	4 regiments	1,893		
Infantry	-	32 "	25,822		
Sappers and Miners	-		1,476		
Other Corps	-		4,378		
				33,569	
BOMBAY.					
BRITISH:					
Cavalry	-	1 regiment	624		
Artillery	-	21 batteries	3,226		
Infantry	-	9 battalions	9,089		
				12,939	
NATIVE:					
Cavalry	-	7½ regiments	4,542		
Artillery	-	2 batteries	203		
Infantry	-	26 regiments	21,219		
Sappers and Miners	-		848		
				26,807	
					89,746
TOTAL					<u>221,758</u>

In the previous year the actual strength was less than this number by 3,101.

The number of troops in Upper Burma on the 1st April 1889 was:—

British	-	-	-	-	2,715
Native	-	-	-	-	9,768
TOTAL					<u>12,483</u>

The

The total of the Native Army Reserves in India was 3,055.

ARMY.

The net expenditure on the Army in 1888-89 was:—

	R x .
In India - - - - -	13,807,515
In England - - - - -	5,431,963
TOTAL - - - R x .	19,239,478
Total in 1887-88 - - - R x .	19,357,119

The number of Volunteers in the whole of India on the 1st April 1889 was as under:—

	Enrolled.	Efficient.
Cavalry, 10 corps, aggregating 23 troops - - - - -	968	858
Artillery, 6 corps, aggregating 8 batteries - - - - -	671	605
Mounted Rifles, 9 corps, aggregating 11 companies - - - - -	526	258
Infantry, 52 corps, aggregating 274 companies - - - - -	18,508	15,794
TOTAL - - -	20,665	17,515

On the 1st April 1888 the number of Enrolled Volunteers was 18,388, of whom 15,458 were efficient. The number of Volunteers enrolled in the Reserve at the end of 1888-89 was 639, of whom 529 were efficient.

MILITARY OPERATIONS.

Military operations in Burma during the year 1888-89 were confined to encounters with Chin rebels and gangs of Dacoits. The most important engagement was at Malin in Upper Burma on 7th February 1889 between the Six Column under Captain Smith, R.A., and the rebels.

MILITARY OPERATIONS.
Burma.

Immediately after the capture of the Fort of Lingtu on the 20th March 1888 a party of Pioneers pursued the fugitive Thibetans along the Gnathong road, but the snow being very heavy and the day far advanced the party was obliged to return to Lingtu without seeing anything of the enemy.

Sikkim.

Reconnaissances were made in the direction of Gnathong, and on the 29th March news was brought that 400 Thibetan regulars were just across the Jelap, while 1,000 more were at Chambi, and further reinforcements were daily expected. On receipt of this intelligence 200 Pioneers were moved to occupy Shalambi, and 200 brought up to Jeluk. On the 5th April information was received that the Thibetans in the Chambi valley numbered 11,000, and accordingly the 200 Pioneers at Jeluk were ordered to Shalambi, and the guns directed to advance from Sedonchen to Garnei.

On the 12th April the force, consisting of—

No. 9, 1st Northern division Royal Artillery - - -	2 guns
2nd Battalion Derbyshire Regiment - - -	80 men
Head Quarters 32nd Pioneers - - -	300 „

moved to Gnathong, where a fort was constructed. It having been ascertained that the enemy were in force in the Jelap pass further reinforcements were ordered up, and on the 26th April a company of the Derbyshire regiment reached Gnathong. Up to the 22nd May nothing of importance occurred; the troops were employed in butting themselves, improving the fortifications, and repairing the roads. The weather was most unfavourable, but the health of the force was good.

On the 22nd May the Thibetan army, numbering about 3,000, attacked Gnathong, but were repulsed after a fight lasting for three hours. The British

o. 89.

D D

loss.

MILITARY
OPERATIONS.

loss consisted of three killed and eight wounded; that of the enemy was estimated at 100 killed and as many more wounded.

By the 30th May the Pioneers were reinforced by 230 men, and the fortifications of Gnathong further strengthened, and a stockade 10 feet in height constructed. In June the British portion of the force was withdrawn to Darjiling for the rainy season, the 32nd Pioneers, completed to a strength of 788 men, remaining to garrison Gnathong.

Towards the end of July the enemy gradually advanced, and offensive measures were decided upon. Reinforcements were despatched from India, the troops at Gnathong being increased to a strength of 1,700 men; the Thibetans also received reinforcements, their numbers being estimated at from 14,000 to 20,000 men.

In September Gantok was occupied without opposition by a detachment of the 13th Bengal Infantry under Colonel Mitchell, who subsequently advanced to Tumlong.

On the 24th September the enemy having been observed in force in the neighbourhood of Gnathong, it was decided to attack them. The result was their complete defeat and dispersion with very small loss to the British troops.

Nothing further occurred of any importance, the expeditionary force being employed for the remainder of the year merely as an army of occupation.

Hazara, or Black
Mountain Expedi-
tion.

On the 1st October 1888 a force was concentrated at Oghi and Dharband for the purpose of punishing certain tribes of the Black Mountain. The force, which consisted of about 12,500 men, was commanded by Major General J. W. M'Queen, C.B., A.D.C., and was divided into four columns. The operations, which resulted in the submission of the Hussanzai and Akazai tribes, and the discomfiture of the Hindustani fanatics, were skillfully conducted. Several engagements with the enemy took place, the most important being that by the River Column on the 4th October. The troops were withdrawn on the 17th November 1888. The British casualties amounted to 94, including 27 killed and 50 wounded. The losses of the enemy were estimated at 400. The working of the departments of the Army left nothing to be desired, and the efficiency of one and all was evidenced throughout. The Commissariat Department was especially conspicuous, and the rapidity with which the considerable transport required for the force was collected, and the success which attended the collection, so as to keep pace with the concentration of the troops, was commended. The health of the troops was uniformly good. There was no epidemic, with the exception of a few sporadic cases of cholera, against the spread of which special precautions were taken. Papers connected with this expedition have been presented to Parliament.

Lushai.

2 companies, No 2 Bombay Mountain Battery.
200 men, 4th Madras Pioneers.
250 " 2nd Bengal Light Infantry.
250 " 9th
400 " 2-2nd Goorkha Regiment.

In January 1889 an Expeditionary Force, composed of the troops mentioned in the margin, under the command of Colonel V. W. Tregear, was concentrated at Demagiri.

The objects of the expedition were,—

(I.) to construct a road from Demagiri in the direction of the Shendu country;

(II.) to punish Howsata and Jahosta for the murder of the late Lieutenant Stewart;

(III.) to establish an advanced post to be garrisoned during the rains.

These objects were fully effected. The road was constructed, Howsata's and Jahosta's village destroyed, and an advanced post established at Lungleh, 41 miles from Demagiri, and garrisoned by the Frontier police. In the absence of opposition the expedition must, in a great measure, be regarded more in the nature of a pioneering one. The operations were brought to a close on the 5th May 1889.

XVII.

AFFAIRS IN UPPER BURMA.

THE Statement for last year brought the account of matters in Upper Burma to the spring of 1889, and the present section will continue the narrative down to May 1890.

AFFAIRS IN UPPER BURMA.

By the middle of 1889 all the large gangs of rebels that had given trouble in the plains were completely broken up; and the remnants of once powerful bands had taken refuge in the inaccessible broken tracts which form a marked feature of the upper country. Buddha Yaza and his lieutenants collected their followers in the strip of hilly country lying between the districts of Magwe, Pyinmana, and Yamèthin. Nga Cho and other leaders established their jungle camps in the wilderness which stretches round Popa Hill. The scattered followers of the so-called Setkya Prince, under the leadership of his principal lieutenant, re-assembled on the banks of the Myitngè River. Saw Yan Naing, the last of King Mindôn's grandsons, who held out against British rule, after being abandoned by the Shan Chiefs, who declined to set him up as the ruler of the Shan States, had retired to the Kachin Hills, lying between Momoik, Taungbaing, and Theinni. He had with him Kan Hlaing, the Pretender to the Mohlaing State, and Nga Zeya, a notorious Shan freebooter, who formerly disturbed the Mandalay district. On the western bank of the Irrawaddy the sons of the rebel Bo Swe were wandering with a small following in the valleys at the foot of the Arakan Yoma Hills. Further north the Shwegyobyu Pretender, with the leaders of the Yaw rebellion, was a fugitive in the Chin Hills. In Shwebo, Katha, and Ye-u, the remnants of the scattered gangs of rebels had found refuge in the rugged country which adjoins the Wuntho State, and when hotly pursued fled into Wuntho territory.

Remnants of Rebel Gangs.

Under the altered condition of things columns of troops were no longer required to scour the country and attack strong bands of rebels. The military garrison was reduced by 7,000 men, at the same time that numerous military posts were withdrawn. The posts of military police had also been reduced from 192 to 173 before the end of 1889, and the police force thus set free was able to pursue the broken remnants of the different gangs, and make a vigorous effort to stamp them out completely. In Magwe, Pyinmana, and Yamèthin, the police of the three districts, acting under the orders of a selected officer, drove the rebels from hiding-place to hiding-place until 79 in all, of whom 17 were leaders, were killed, captured, or surrendered. In the country round Popa Hill the operations with a force of military police were equally successful. At the end of the dry weather the principal leaders and their followers had been captured or had surrendered, and only Bo Chyo with six followers now remains at large.

Special Police Operations in the Plains.

On the Myitngè the police succeeded in completely breaking up the remaining gang, the leader of which is now a fugitive without any following. On the Minbu-Thayetmyo border, also, the operations were successful. Saw U, son of Bo Swe, was killed, and his brother, Saw Pu, captured. Only six leaders, with about 40 followers, are still at large out of 19 leaders and 150 followers at large in the Minbu district at the beginning of the dry weather of 1889-90. In the north of Shwebo and Ye-u and south of Katha police operations gave good results. Nine leaders and over 200 of the rank and file in the rebel gangs surrendered, or were killed or captured. In the northern portion of Katha the repressive measures undertaken against the different gangs, met with little success, as the Wuntho Sawbwa continued to hold aloof from British officers, and dacoits found a safe refuge in his territory. But the policy of forbearance towards this Shan chief

AFFAIRS IN
UPPER BURMA.

chief has at last begun to bear fruit. He has lately shown signs of a desire to establish more friendly relations with Government officers, he has sent his chief wife and his children on a visit to Mandalay; and he has, for the first time since annexation, had an interview with the Deputy Commissioner. The Mu Valley railway will soon be laid to his capital.

Operations in the
Hills on the
Border.

Whilst every effort was being made in the plains to stamp out the remnants of the rebel gangs, expeditions were undertaken in more remote regions. The operations against the Chin tribes, who inhabit the country between Bengal and Burma, were continued. Two columns operating under the orders of Brigadier-General Symons, marching the one through the Siyin and Sagyilaing country, and the other through the Baungshè country, converged on the head village of the Tashôn tribe, secured the submission of the whole Chin country with almost no bloodshed, and finally joined hands with the Chittagong column, which had advanced from the Koladyne through Ranganatti and Lungleh. These operations resulted in the recovery of 147 captives, who had been carried off from the plain villages in the raids of the hillmen. The pacification of the less warlike Chinbòks, was secured by the Chin battalion of military police, and the whole of their country was traversed by officers from Akyab, Kyaukpyu, and Minbu, who met at Yanan, and received the oaths of allegiance of the various tribes.

On the east of the Irrawaddy two columns, starting, one from Momeik, and the other from Bhamo, operated against the rebel Prince, Saw Yan Naing, and his following. These columns joined at Mantôn, succeeded in driving out all the rebels, and in bringing this part of the Momeik district under effective control. But they were unable to seize Saw Yan Naing, or any of his chief adherents.

Shan States.

At the same time that peace was maintained in Upper Burma proper, the Shan States remained almost undisturbed. A local rising under Kun Yi, a relation of the Theinni Sawbwa, was immediately suppressed by the Superintendent of the Northern Shan States, who, by a bold dash to the scene of the disturbance, with a handful of men, scattered the gathering, killing Kun Yi himself. British supremacy was so firmly secured in the Shan States that the members of the Anglo-Siamese Commission were able to visit the outlying Shan States on the borders of Siam, under the protection of small escorts of 12 to 15 men; and the Superintendent of the Shan States journeyed safely to the distant town of Kyaingtôn, 16 marches beyond (east of) the Salween, with an escort of 40 men. He secured the peaceable submission of the Kyaingtôn Sawbwa, and conferred upon him a *Sanad* (or patent) confirming his position from the Chief Commissioner. For the greater part of the ex-King Thebaw's reign, the Kyaingtôn State had stood aloof from the Burmese kingdom, and had headed a confederacy against it.

Thus, whilst British rule in the plains was becoming firmly established, expeditions to hitherto unexplored tracts of country proved the reality of our control to distant tribes and races over whom the Burmese rule had only been nominal.

Pardon and
Release of Rebels.

At the same time measures were taken for improving the administration of the country and developing trade. The pacification of the country made it possible to extend a larger measure of clemency than had hitherto been possible to the prisoners who had been convicted in the early days of the occupation. The object in view was to release those who had been led during a time of anarchy and political excitement to take part in crimes and acts of violence, from which under ordinary circumstances they would have abstained. It was therefore necessary that the selection should be carefully made, so that no risk should be incurred of adding to the regular criminal classes. An officer of much judicial experience was placed on special duty to select those who should be pardoned. Orders have been passed for the release of 899 prisoners at once, and 450 more have been promised their release next December if their conduct in jail continues good.

Military and Civil
Police.

The military police force, which at one time numbered 20,000 men, was reduced by the transfer to the Army of three frontier battalions, and the amalgamation of three other battalions into one. At the same time a reserve battalion was formed, into which men are now drafted as it becomes possible to reduce the different battalions. The strength of the reserve battalion is

at

AFFAIRS IN UPPER BURMA.

at present 1,130 men. Measures were also taken to increase the efficiency of the civil police, whose duties in the prevention and detection of ordinary crime became more heavy as the country became less disturbed. Officers of experience were placed on special duty to train and guide the police officers in the interior. The activity of the police resulted in a considerable decrease in violent crime. In 1889, the number of violent crimes reported was 1,823, as compared with 3,408 in 1888. Gangrobbery and cognate offences contributed mainly to this decrease. Thus dacoities fell from 2,528 to 1,185, and robberies from 493 to 421. It is possible that the actual decrease was greater than these figures indicate, for the system of reporting and recording crime in 1888 was imperfect, and the figures for that year are doubtless below the mark. The cost of the military police for 1889 was, in round numbers, Rx. 675,000 as compared with Rx. 595,000 in the previous year. This increased expenditure was caused by the formation of the Chin Frontier and the Shan States Levies, and by the enlistment of a force for garrisoning the country beyond the upper defile in the Bhamo district.

Judicial Commissioner for Upper Burma.

The necessity for closely supervising the judicial work in a new province, where many of the European magistrates had little experience, and where some of the Native magistrates were unacquainted with our system of law, led the local Government to recommend the appointment of a judicial commissioner for Upper Burma. This appointment has lately been sanctioned by the Secretary of State, and a selected officer has since assumed the duties.

Land Revenue Administration and Surveys.

The improvement of the revenue administration also occupied the attention of the local Government. A survey was undertaken in the Mandalay district in order to throw some "light on the as yet obscure question of the condition and customs of the rural parts of Upper Burma." In the previous year 16,616 acres, and in the past season 30,479 acres were surveyed in the Mandalay district, and 10,387 acres in the Kyaukse district. These surveys were carried out by Burmans who had been trained for the purpose. In the open season of 1890, 508 square miles were traversed, and 294 cadastrally surveyed in the Kyaukse district. Surveys of State lands, irrigated fields paying water-rate, and fisheries have also been undertaken in the districts of Ye-u, Shwebo, Sagaing, Meiktila, Pakôkku, and Minbu. Fifty-five thousand seven hundred and seventy-six acres were surveyed in these districts. Ten thousand four hundred and three acres in the Yenangyaung oil-fields, were also surveyed by Burmese agency. A settlement officer has been recently appointed in the Kyaukse district and has started operations.

Irrigation Works.

The old Burmese irrigation works were maintained and improved in many districts. Rupees 34,819 were spent during the year on the Mu canal in addition to 74,288 rupees already expended in previous years.

Agricultural advances were continued, and the following sums advanced : —

Advances for Land Improvement.

	Rs.
Pyinmana - - - - -	37,000
Minbu - - - - -	7,000
Pakôkku - - - - -	10,000
Shwebo - - - - -	20,000
Magwe - - - - -	26,000
Shan States - - - - -	5,000
Sagaing - - - - -	20,000
Ye-u - - - - -	5,000
Myingyan - - - - -	5,000
TOTAL - - -	1,35,000

In all districts except Pyinmana, the advances made have been punctually repaid, and the agricultural interests of the people considerably promoted. In Pyinmana the repayment of the advances was postponed on account of the continued prevalence of cattle disease.

Railways.

The Mandalay extension of the Rangoon-Toungoo Railway, which was opened 0.89.

AFFAIRS IN
UPPER BURMA.

opened on the 1st March 1889, is 220 miles long. It has paid well from the very first, and will be a most successful railway. The Mu Valley line was surveyed and aligned for 149 miles, and a reconnaissance made on to Mogaung for 152 miles with a branch from Nahakong to Katha. The work is now in progress. A reconnaissance survey has been at work in the Shan States. The best alignment for a railway to the Chinese border has not yet been decided.

Roads.

The cart-road from Thabeitkyin on the Irrawaddy to Bernardmyo in the Ruby Mines district, (67 miles), with a branch to Mogòk (19 miles), has been opened and carts travelled to Mogòk all the dry season. The cart-road from Meiktila Road station to Kalaw on the Shan plateau has been made, and 76 miles of road, of which 58 are on the hills, have already been completed. This will be the high road to Monè and the Southern Shan States. The cart-road from Pakòkku to Kan in the northern part of the Yaw country has been opened. This work was pushed on with much energy as it was wanted for the purposes of the Chin Field Force. Besides these large works many minor roads have been constructed.

Every district except the Upper Chindwin has now been supplied with needful court-houses. There are two central jails in Upper Burma, at Mandalay and Myingyan. Elsewhere there are district and subsidiary jails.

Education.

A small beginning was made in the work of introducing an educational system into Upper Burma. The Director of Public Instruction visited each district in Upper Burma and inquired into the number and condition of existing schools of all kinds. A knowledge was thus obtained of the field in which work has to be done. At present the action of Government will be confined to the registration, inspection and aiding of the schools of private managers. Two Deputy Inspectors of Schools were appointed, and another Inspector was deputed to classify and register schools that were prepared to come under the new system. The lay school managers were eager to have their schools examined; but in the monastic schools the monks have shown some suspicion of the intentions of Government.

A valuable test of the improved state of the country is the revenue collected, and the returns everywhere show a satisfactory increase. The revenue under the principal heads has been—

	Land Revenue.	Stamps.	Excise.
	Rx.	Rx.	Rx.
1888-89	436,540	13,848	43,669
1889-90	539,524	19,863	45,591
Difference	+ 102,984	+ 6,015	+ 1,922

In 1888-89 the total revenue amounted to Rx. 768,345; in 1889-90 it rose to Rx. 1,010,315. Rx. 126,497 of the receipts of the last financial year are due to the railway, and cannot be taken into account for the purposes of comparison. After deducting this amount there still remains a surplus of Rx. 105,472 over the revenue of 1888-89. Everywhere it is reported that cultivation is extending, lands abandoned during the disturbances are being taken up, and jungle land being broken up. In 1888-89 the number of houses assessed to the capitation or house-tax had risen to 323,693 from 286,571 in the previous year. The house-tax figures of the year 1889-90 are not yet fully known, but they will probably show a further increase over those of 1888-89.