

EAST INDIA (PROGRESS AND CONDITION).

STATEMENT

EXHIBITING THE

MORAL AND MATERIAL PROGRESS AND CONDITION

INDIA

DURING THE YEAR 1915-16

FIFTY-SECOND NUMBER.

(Presented pursuant to Act 5 & 6 Geo. V. c. 61, s. 26.)

India Office,
14 August 1917. }

T. W. HOLDERNESS,
Under Secretary of State for India.

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PREFACE.

THE Statement exhibiting the Moral and Material Progress and Condition of India is presented to Parliament in accordance with the requirements of the 26th section of the Government of India Act (5 and 6 Geo. V., cap. 61), which provides as follows:—"The Secretary of State in Council shall, within the first fourteen days during which Parliament is sitting next after the first day of May in every year, lay before both Houses of Parliament an account for the financial year preceding that last completed of the annual produce of the revenues of India The account shall be accompanied by a statement, prepared from detailed reports from each Province, in such form as best exhibits the moral and material progress and condition of India."

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

This year, owing to the war, the arrival of many reports and returns from India has been considerably delayed.

The Statement has been greatly curtailed in accordance with the general policy of effecting economies in regard to parliamentary publications.

INDIAN CURRENCY AND WEIGHTS AND MEASURES.

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

The Indian denominations with their British equivalents are—

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

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

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

1 tola	=	180 grains	=	11·66 grams.
1 chittak (5 tolas)	=	900 "	=	58·32 "
1 ser (16 chittaks)	=	2½ troy lb (or 2½ lb. avoird.)	=	933·10 "
1 maund (40 sera)	=	100 " (or 82½ " ")	=	37·32 kgms.

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CHAPTER I.—ADMINISTRATION AND LEGISLATION.

Administration.

The names of the holders of appointments connected with the administration of India are published annually in the *India Office List* issued by the direction of the Secretary of State for India in Council.

Public Services Commission.—The report of the Royal Commission on the Public Services in India was signed in August.

Legislation.

I. In England.

The following enactments received the Royal assent:—

The Government of India Act, 1915 (5 & 6 Geo. 5. c. 61). It was the result of many years' work, and was designed to consolidate and make more intelligible the existing law contained in a series of Acts of Parliament, dating from the year 1770, relating to the Government of India. It represents the existing law contained in those Acts and reproduces the provisions of the Acts as understood and construed by existing constitutional practice.

The Indian Civil Service (Temporary Provisions) Act, 1915 (5 & 6 Geo. 5. c. 87), authorised during the War and for two years thereafter appointments to this service without examination to the extent of three-fourths of the vacancies, subject to the advice of the Civil Service Commissioners.

II. In India.

The assent of the Governor General of India was received for the following Acts, passed respectively by the legislative councils of the Governor-General (16); of Madras (2); Bombay (7); Bengal (4); Punjab (1); United Provinces of Agra and Oudh (3); Burma (1); Bihar and Orissa (1); Assam (1); and Central Provinces (3). He made one regulation under the Government of India Act of 1870, and promulgated five ordinances under the Indian Councils Act of 1861.

Acts of the Governor-General's Council.

The Sir Jamssetjee Jejeebhoy Baronetcy Act (No. X. of 1915).

The Repealing and Amending Act (No. XI. of 1915).

The Indian Soldiers (Litigation) Act (No. XII. of 1915) provided for special protection in respect of litigation for Indian soldiers serving under war conditions.

The North-West Frontier Constabulary Act (No. XIII. of 1915).

The Enemy Trading Act (No. XIV. of 1915) provided facilities for certain payments, and for other matters, in connection with trading with foreigners.

The Inland Steam Vessels (Amendment) Act (No. XV. of 1915).

The Benares Hindu University Act (No. XVI. of 1915) established and incorporated a Hindu University at Benares.

The Indian Trusts (Amendment) Act (No. I. of 1916).

The Defence of India (Amendment) Act (No. II. of 1916).

The Foreigners' (Trial by Court-Martial) Act (No. III. of 1916).

The Indian Tariff (Amendment) Act (No. IV. of 1916) amended the Indian Tariff Act, 1894, and the Sea Customs Act, 1878, in order to increase revenue.

The Indian Income Tax (Amendment) Act (No. V. of 1916).

The Indian Ports (Amendment) Act (No. VI. of 1916).

The Indian Medical Degrees Act (No. VII. of 1916) made regulations as to titles (western medical science).

The Presidency Banks (Amendment) Act (No. VIII. of 1916).

The Indian Paper Currency (Temporary Amendment) Act (No. IX. of 1916).

Acts of the Provincial Legislative Councils.

Madras.—*The Madras Port Trust (Amendment) Act* (No. II. of 1915).

The Madras Outports Landing and Shipping Fees (Amendment) Act (No. I. of 1916).

Bombay.—*The Sind Coast-lights Act* (No. II. of 1915).

The Bombay Decentralization Act (No. III. of 1915).

The Bombay City Survey Act (No. IV. of 1915).

(Provincial Legislative Councils.)

- The Bombay Protection of Pilgrims (Amendment) Act (No. V. of 1915).*
The City of Bombay Municipal (Amendment) Act (No. I. of 1916).
The Sind Courts (Amendment) Act (No. II. of 1916).
The Bombay Medical (Amendment) Act (No. III. of 1916).
 Bengal.—*The Calcutta Improvement (Amendment) Act (No. III. of 1915).*
The Bengal Embankment (Sundarbans) Act (No. IV. of 1915) repealed the Acts of 1855, 1866, and part of the Act of 1882 (i.e., section 1), and extended part of the latter Act.
The Bengal Decentralization Act (No. V. of 1915).
The Bengal Smoke-Nuisances (Amendment) Act (No. I. of 1916).
 Punjab.—*The Punjab Military Transport Act (No. I. of 1916)* repealed the Act of 1903 and made better provision for the impressment of animals, &c.
 United Provinces.—*The Bundelkhand Alienation of Land (Amendment) Act (No. IV. of 1915).*
The Bundelkhand Encumbered Estates (Amendment) Act (No. V. of 1915).
The Pargana of Kaswar Raja Act (No. VI. of 1915), extended the United Provinces Land Revenue Act of 1901, and the Agra Tenancy Act of 1901, with certain modifications, to the Pargana of Kaswar Raja.
 Burma.—*The Burma Medical Act (No. I. of 1915)* provided for the registration of medical practitioners in Burma.
 Bihar and Orissa.—*The Patna Administration Act (No. I. of 1915).*
The Bihar and Orissa Excise Act (No. II. of 1915) amended and re-enacted the excise law in the province, with a view to checking traffic in cocaine.
The Bihar and Orissa Cess (Amendment) Act (No. I. of 1916) amended the Cess Act, 1880, and the Bengal Local Self-Government Act, 1885, in order to amalgamate the public works cess with the roads cess and make them over direct to District Boards and District Committees for their disposal.
The Bihar and Orissa Medical Act (No. II. of 1916) provided for the registration of medical practitioners in the province.
The Bihar and Orissa Decentralization Act (No. III. of 1916).
 Assam.—*The Assam General Clauses Act (No. II. of 1915)* interpreted and shortened Assam Acts.
 Central Provinces.—*The Central Provinces Excise Act (No. II. of 1915)* consolidated and amended the Excise Law in the province.
The Central Provinces Vaccination Law Amendment Act (No. III. of 1915).
The Central Provinces Slaughter of Animals Act (No. IV. of 1915).

Regulation.

The Arakan Hill District Laws Regulation (No. I. of 1916) declared and amended the law applicable in the district.

Ordinances.

- The Indian Soldiers (Litigation) Ordinance (No. II. of 1915)* provided for special protection in respect of litigation for Indian soldiers serving under war conditions.
The Defence of India Ordinance (No. VII. of 1915) extended the powers conferred by the Defence of India Act, 1915.
The Indian Paper Currency (Amendment) Ordinance (No. I. of 1916) temporarily amended the Act, 1910.
The Dutiable Goods and Salt Ordinance (No. II. of 1916) took power to limit or prevent the clearance of salt under certain circumstances.
The Foreigners' (Trial by Court-Martial) Ordinance (No. IV. of 1916).

(Civil Justice.)

CHAPTER II.—JUSTICE AND POLICE.

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

There was an increase of litigation in all provinces except Bihar and Orissa, mainly in connection with money or movable property of small value.

Bengal.—There was a very large increase in the number of suits instituted in the mufassal courts, with consequent heavy arrears, in spite of substantial increase in outturn of work, and of a reduction in the number of suits pending over one year. The pending file of appeals to the Privy Council (including figures of Bihar and Orissa and Assam) rose from 186 to 249, of which 5 dated from 1912; the results of 4 were received, 2 being affirmations and 2 reversals.

Madras.—The number of suits instituted exceeded that of 1914, the highest on record, by 66,041, reaching 1 for every 75 of the population, as against 1 for every 85.

Bombay.—Institutions rose to 162,417, an increase of 473 as against an increase of 8,492 in 1914. The average duration of contested suits rose from 191 to 213 days. Appeals increased, but arrears in appeals were reduced from 7,227 to 6,885.

Sind.—Institutions rose from 27,107 to 30,520. The average duration of contested and uncontested suits in the District Courts was 373·23 and 226·49 days respectively, as against 150·74 and 96·31 in 1914.

Bihar and Orissa.—Institutions decreased by 2,026 to 163,529, but disposals fell from 178,059 to 157,737. The number of pending suits increased from 78,126 to 87,744, of which 2,352 had been pending more than a year.

Assam.—Institutions rose by 292 to 41,118, but pending cases fell from 12,220 to 10,411. The average duration of cases tried under ordinary procedure increased.

North-Western Provinces.—The number of suits instituted, 145,597, exceeded that of 1914, the largest previously recorded, by 23,002. Though the outturn was probably the highest recorded, the average duration in contested and uncontested cases falling from 83 and 45 to 65 and 40 respectively, the pending file rose by 2,648.

Oudh.—Institutions increased from 59,173 to 67,701, after a drop for the last 2 years. The pending file rose by 1,647, or about 19 per cent.

Punjab.—The number of suits instituted rose by 3,900 to 199,166, about 7,000 above the average of the last 12 years. 2,353 applications under the Provincial Insolvency Act, III. of 1907, were dealt with, and work under this Act, which has proved unsuitable to the Punjab agricultural population, continued to increase. The average duration of suits and civil appeals showed a disappointing increase. The Punjab Panchayat Act came into practical operation. It has produced good results in some districts, but has not appreciably diminished litigation in courts, and though it is yet too early to pronounce upon its working, opinions as to its ultimate success are not very favourable, the principal objection to it being that a system which gives the option of refusing to submit to a panchayat will not succeed. The ideal to which Government looks forward, namely, that the great mass of the petty disputes (which for want of a better agency are now brought into court) should be settled by some suitable local machinery, is not yet attained.

Burma.—The total number of suits before the courts rose by over 6,500 to 56,981 in Lower Burma; in Upper Burma by 1,600 to 21,188. The pending file rose to 7,963. The number of appeals decreased in all courts, and the number of long pending appeals was reduced by more than one half. Imprisonments for debt reached the highest figure since 1910, Lower Burma contributing 659 and Upper Burma 114.

North-West Frontier Province.—In spite of the war and of unrest on the frontier, suits instituted rose to the record number for the province of 28,926, or 131 per 10,000 of the population. The average duration in contested cases dropped from 36 days in 1914 to 31, and the percentage of pending suits (2,487 in number) from 8 to 7.

Central Provinces and Berar.—Institutions rose by 12,880 to 110,502. Though the pending file increased, the number of suits pending over 6 months was reduced. The duration of original suits fell.

Coorg.—The number of suits filed was 242 more than in 1914, and the average value of a suit Rs. 52 more.

Crime and Police.

The political and economic unrest prevalent in a period of external war, high prices, acute scarcity in the latter half of the year, and severe plague, acted as a stimulus to the disorderly elements of the community in the Punjab, and the resultant lawlessness expressed itself in the most violent forms in the *Ghadr* conspiracy—a

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conspiracy instigated by the *Ghadr* newspaper, published in California—and dacoities which occurred in the spring in the south-west portion of the province. But by putting into operation the special legislation of the Ingress into India Ordinance and the Defence of India Act the Lieutenant-Governor, Sir Michael O'Dwyer, was able to keep a check on violent crime; large numbers of potential criminals of desperate character were effectually disarmed by temporary restraints on their liberty of movement and action, and the *Ghadr* and other lawless movements were promptly quelled and there was no recrudescence either of political crime or of widespread lawlessness.

Rumours of the overthrow of the British Government similarly brought about a state of lawlessness in Bengal and a considerable outbreak of revolutionary crime. A deputy-superintendent of police, two sub-inspectors, and a Calcutta police constable were ruthlessly murdered, and there was a large number of cases of dacoity.

These revolutionary movements in the Punjab and Bengal were connected by like activity in Benares by the *Ghadr* party.

Difficulty in recruiting for the police is reported from many parts, and the necessity for larger expenditure. The recent increases in the pay of the Bengal Police have had their effect in reducing vacancies. Improved pay is to be introduced in the Punjab next year. Buildings in Bengal and Bombay are reported to be in a bad state. A river police district was constituted in Assam.

Delhi.—On the whole there was less crime. The province was fortunately free from dacoities of a political nature, in spite of the share of certain residents in revolutionary conspiracy. Preventive measures were freely used. 1,934 true cases were dealt with by the police as compared with 2,417 in 1914 and 2,839 in 1913.

Bengal.—The important feature in the criminal history of the year was the outbreak of revolutionary crime in connection with the attempts at an insurrectionary movement due to German instigation referred to above. Twenty-four dacoities, 2 attempted dacoities, 9 murders, in Calcutta and elsewhere, and 1 attempted bomb outrage were believed to be connected with the revolutionary movement. In none of the murder cases was sufficient evidence for a trial obtained; but 5 Bengali revolutionaries were brought to bay in Orissa (*q.v.*) and dealt with there. Three of the dacoities were tried by special commissions, and 8 persons sentenced to transportation for life, others to shorter terms. 19 persons were arrested and detained under Regulation III. of 1818. Serious crime of all kinds except rioting showed a considerable increase. Burglary cases increased from 30,294 to 39,812; theft from 17,730 to 21,552; and dacoities from 289 to 653. The increase in dacoity was unprecedented all over the presidency, but the most serious outbreak occurred in Bakarganj, where 158 cases were reported. A special commission constituted under the Defence of India Act sat for over six months, and tried 44 cases, of which 41 ended in conviction, 163 persons being sentenced. Action under this Act and under the preventive sections of the Criminal Procedure Code was successfully taken in other cases, but though it weakened the revolutionary movement it did not succeed in destroying it. Cases under the Arms Act proved that a number of "poor whites" and Anglo-Indians were supplying the revolutionary party with arms, and indicate insufficient control of this traffic. Increased activity in circulation of seditious literature was responsible for much mischief. Registration under the Criminal Tribes Act was energetically carried out; 17 tribes were dealt with, bringing the total declared up to 22; cases against 6 others were completed, and 11 more instituted. Experience proves the necessity of an additional staff for surveillance to make this registration of value.

The number of true cases of crime reported increased by 14,011.

Calcutta.—95,583 cognizable cases were reported as against 96,488 in 1914. Several cases of political dacoity occurred.

Madras.—Grave crime increased by 1,424 cases, chiefly housebreaking and cattle theft, the increase being most marked in Ganjam and Vizagapatam, but murder, dacoity, and ordinary theft were practically stationary. The year was, on the whole, uneventful, but although there were no serious riots, unrest among the Mappillas, evidenced since early in the war, culminated in February in an outbreak of fanaticism in parts of the Ernad and Walluvanad taluks of the Malabar district, and a conspiracy to murder the district magistrate. It was suppressed without military assistance, though not without loss of life. The total of true cases of cognizable crime under the Indian Penal Code increased, probably to some extent as the result of improved reporting. The percentage of detection rose from 23.9 to 24.4.

Bombay.—There was an increase in cognizable crime, reported and true, (though the figures were less than for 1913); a slight rise in the percentage of persons con-

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victed to persons tried (from 62·6 to 63·06); a slight falling off in the percentage of convictions to cases tried and to true cases disposed of; and a rise in undetected cases; all, however, ordinary fluctuations. Several gangs of criminals were detected and dealt with. An escaped convict, who organised a gang of Bhils in the Central Division, which committed a series of crimes, was arrested and sentenced to a year's rigorous imprisonment. Three tribes were notified as Criminal Tribes.

City of Bombay.—The heavy additional duties imposed by the war (removal of hostile aliens, their repatriation *via* Bombay, surveillance of incoming and outgoing vessels, &c.) were effectively discharged by the police in addition to their ordinary duties. The normal increase in reported crime received a notable check, probably as the result of measures taken to clear the city of undesirable characters during the war. 43,686 cognizable offences were reported, an increase of 2,577, mainly due to the registering of certain cruelty to animal cases. Seditious and inflammatory literature, and 10 copies of the proscribed *Ghadr* newspaper were confiscated.

Sind.—Reported crime rose abruptly from 10,745 cases to 12,208, the highest figure on record, with a marked increase in serious crime, four of the murders reported from the Hyderabad district being of an unusually brutal and daring character. Pending cases, however, fell from 1,444 to 1,332. The police were short-handed throughout the year, but though special police had, notwithstanding this handicap, to be posted all along the frontier to cope with the dacoits and other habitual criminals, who, taking advantage of the war tried to disturb the peace, the record in dealing with general crime, was satisfactory. The more serious dacoities ended in arrests and convictions. Recruiting of the police was difficult.

Bihar and Orissa.—There was an increase in crime against property, but a decrease in offences against the State and person, except in the case of murder. The closest watch was necessary to prevent the province from becoming a refuge for revolutionaries from Bengal, 5 of whom were captured near Balasore, 2 being killed. Of the survivors, a special tribunal sentenced 2 to death and the third to transportation for life. Four Bengali conspirators found to be closely connected with these were interned under Regulation III. of 1818. Action was also taken in various cases under Ordinances III. and V. of 1914-15, the Foreigners' Act, and the Defence of India Act. Cases of dacoity increased from 93 to 146, the most marked increase occurring in the Hazaribagh and Manbhum districts, where the police succeeded in breaking up the gangs responsible, who were notified under the Criminal Tribes Act.

United Provinces.—The total volume of reported crime was not appreciably higher than in 1914, but the number of murders was again abnormally high. Dacoities were numerous, particularly in the western and central districts, but the type known as political dacoity was absent; villagers made a more effective resistance, and the Criminal Tribes Act is slowly beginning to prove an effective weapon. Nine gangs were proclaimed, but much remains to be done, especially in proclaiming mixed gangs. Gypsies have been made over to the Salvation Army, whose settlements progressed well. Political work was heavy. The connection between the Punjab *Ghadr* party and the Bengal anarchists was found to have been effected from Benares, and after a long and patient investigation the Benares conspiracy case was instituted on the 2nd September. After a trial lasting three months, 11 accused were convicted out of 16 sent up for trial. Dissatisfaction with the existing conditions of police service reached a point when men of an undesirable stamp have to be accepted. The continued decline in the matter of successful detection was, perhaps, evidence of this.

North-West Frontier Province.—There was an increase of 8 per cent. in the more serious offences, due to the disturbed state of the border. True cognizable cases of all kinds fell from 4,566 to 4,485. The work of the Criminal Investigation Department was particularly heavy, largely owing to the wholesale return of emigrants, but the percentage of convictions to trials rose from 71·5 to 72·3. The increase of pay granted in November is already stimulating enlistment of recruits and producing withdrawal of resignations. The sanctioned force was increased in consequence of the policing of the railways being taken over by the administration.

Punjab.—The total number of true cognizable cases of crime decreased from 47,375 to 46,656, but there was a significant advance in serious offences against property, 10,628 convictions being recorded as against 9,096 in 1914. Murders decreased, and the steady decline in cases of rioting was maintained. An unprecedented outbreak of dacoities and disorder occurred in February and March in the Jhang, Muzaffargarh, and Multan districts, resulting in the conviction by special tribunals or regular courts of some 700 offenders implicated, and the quartering of punitive police in the disturbed areas. The beginning of the year found the province infested

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by anarchist revolutionaries, many of them returned emigrants from America and the Far East. From headquarters in the Manjha, Malwa, and Doaba tracts they were conspiring to stir up insurrection in the Punjab and beyond. A series of outrages resulted; raids on the Kapurthala State Treasury and Central Jail, Lahore; the murder in Hoshiarpur and Amritsar of two active supporters of the administration; the Walla Bridge murders and the assassination at Padri of a witness. Nearly all the principals were brought to justice. The now historic trials known as the Lahore conspiracy and supplementary conspiracy cases lasted continuously for 11½ months, and in these and 23 smaller cases connected with the revolutionary movement, 304 persons, mostly returned emigrants, were concerned, of whom 48 were condemned to death, 93 to transportation for life, and 55 to imprisonment.

An invasion of the province by criminal tribesmen from the United Provinces made itself felt throughout the year, and seems to have been due to activities of the special police staff appointed in the United Provinces to deal with criminal tribes. 216 tribesmen from the United Provinces were arrested. The Frontier Crimes Regulation is in force in the Dera Ghazi Khan and Mianwali districts and the Leiah Tahsil of the Muzaffargarh district.

Assam.—Crime against property increased, but murder remained stationary, and true cases of dacoity fell from 17 to 7. Owing to vigilant preventive measures there was no gang case. The notorious Kamargaon gang of river dacoits in Sylhet was reduced to inactivity; other gangs were proclaimed under the Criminal Tribes Act. Thefts of arms were reported. There was no political crime. The military police were energetically engaged in training men for service with the regular army; no military operations were undertaken.

Central Provinces and Berar.—Again, as in 1914, the rise in reported crime was serious, from 37,570 to 40,683, or rather over 8 per cent., the highest on record since the famine of 1900. But riots decreased from 260 to 228, and murders remained practically stationary. Dacoities, however, increased by over 60 per cent., from 55 to 89, apparently as the result of delay, owing to lack of funds, in putting into operation the Criminal Tribes Act, and the consequent influx of criminal gangs from bordering provinces where it is at work.

Burma.—Cognizable crime increased by nearly 10 per cent. to 45,067 true cases, a record for the province, this increase taking place mainly in Lower Burma, and consisting of offences against the person and property. The number of violent crimes increased, but was not greater than in 1913, and was considerably less than in 1912. The Indian Arms Act was administered with vigour, and the number of fire-arms seized increased. The unfavourable economic conditions of the year reduced shortage in the police force, and the standard of conduct was on the whole well maintained. Early in the year the military police, assisted by regular troops, suppressed a serious rising of Kachins in the Miyitkyina and Putao districts.

Criminal Justice.

Delhi.—The general situation remained much the same. True cases increased by 1 per cent. The percentage of conviction and composition rose from 80 to 83, and the average duration fell from 8 to 7 days.

Bengal.—331,362 offences were reported, or 11,039 less than in 1914. 276,559 were true cases as against 279,775, and 228,547 were brought to trial. 229,953 were disposed of. Of 6 persons tried in Bakarganj and 7 in Calcutta for offences against the State, 10 were convicted and 3 acquitted. There were 29 sentences of death and 101 of transportation.

Madras.—Cases instituted declined by 6,445 to 338,387, but crimes of violence increased in certain districts. 43 persons were sentenced to death and 247 to transportation. Appeals rose from 9,845 to 10,619. A Bill for the constitution of Village Panchayat Courts is proposed.

Bombay.—161,053 offences were reported, as against 161,502, and 156,805 cases were disposed of as against 159,283. 54 persons were condemned to death and 235 to transportation, as compared with 62 and 204 respectively. Sentences were confirmed in 44·6 per cent. and reversed in 17·2 per cent. of appeals disposed of.

Bihar and Orissa.—98,229 offences were reported, or 5,824 less than in 1914, about two-thirds being under the Indian Penal Code. There was a decrease in offences against the person other than murders, but a rise in those against property. The percentage of cases found to be false, or withdrawn before trial, fell from 22·6 to 20·9, that of persons convicted, to accused rose from 49·2 to 51·3.

(Criminal Justice.)

Assam.—41,951 offences were reported as against 44,819 in 1914. 19,416 cases were brought to trial. 77 appeals were preferred before the High Court; 80 were disposed of, leaving 3 pending; 3 resulted in reversal and 10 in variation.

Punjab.—202,220 offences, or about 2,600 less than in 1914 were reported, but true cases increased, those of robbery and dacoity rising from 474 to 702, mainly where the activities of the *Ghadr* party were most marked. Murder cases and offences against the person generally again showed the decline continuous since 1912, apparently as the result of a robust policy in dealing with such offences. 144 sentences of death and 205 of transportation were pronounced. Appeals rose from 21,944 to 22,320. Applicants for revision were fewer by 1,600.

North-Western Provinces.—Offences reported under the Indian Penal Code decreased from 111,452 to 106,881, true cases from 80,591 to 77,590, and persons under trial for such offences from 158,296 to 152,682. 97 persons were sentenced to death and 340 transported for life. The number of appellants and applicants for revision were 20,083 and 4,114 as against 20,145 and 4,319 in 1914.

North-West Frontier Province.—The disturbed state of the frontier was reflected in a rise in serious crime. The only district excepted was Kohat, mentioned in last year's report as having the highest percentage, where decline probably resulted from vigorous action under the Frontier Crimes Regulation. 23,762 offences were reported as compared with 23,723; and 77 per cent. were again admitted to have occurred. Disposals increased. There was a further satisfactory decline in appeals. 25 persons were sentenced to death and 68 to transportation.

Oudh.—55,324 offences were reported and 43,330 cases brought to trial, as against 57,676 and 44,552 respectively in 1914. 42,544 cases were disposed of as against 43,994. Of 1,193 appellants 998 appeals were rejected and 105 sentences reversed.

Central Provinces and Berar.—The number of offences reported was 38,508 as against 42,189. 500 offences against life were reported. 50 persons were sentenced to death and 124 to transportation. 29,811 cases were disposed of. 5,962 persons appealed, 2,602 appeals being rejected and 1,235 sentences reversed.

Burma.—There was an increase in the number of true cases, and a rise in crimes of violence and against property. In Lower Burma 83,240 cases were brought to trial as against 80,145 in 1914, and in Upper Burma 28,473 as against 26,237.

Coorg.—The number of offences reported, 4,046, increased by 922. Trials increased by 963 to 3,911. The percentage of convictions was 42·06 as compared with 40·46 and 41·65 in the two previous years.

Jails.

The number of admissions to jails during the year was 568,280, and 558,008 persons were discharged, leaving a population on the 31st December 1915 of 122,287. The daily average number of prisoners, which had steadily decreased since 1908, rose in 1914 to 108,181 from 103,090, and in 1915 to 117,734. The percentage of previously convicted prisoners was 19·67 as against 19·82 in 1914, while the number of youthful offenders again fell, from 505 to 418. The number of convicts admitted was 180,466; 168,992 were released, and 1,486, as against 1,319 in 1914, transported beyond the seas, leaving a population on the 31st December 1915 of 107,811.

Not exceeding one month	-	45,065	99,922 of the convicts admitted came from the classes engaged in agriculture and cattle-tending, and 151,756 were returned as illiterate. The marginal table shows the nature and length of sentences of convicts admitted to jails in 1915. The number of offences by convicts increased. The total daily average convict population for 1915 was 102,342; the total of offences dealt with by criminal courts was 193, and by Superintendents 179,112. The corresponding figures for 1914 were 95,260, 192, and 176,277 respectively. The total number of corporal punishments again showed a decrease, viz., from 352 to 327. The total number of cases in which penal diet (with and without solitary confinement) was prescribed, fell from 7,594 to 7,324.
One month to six months	-	69,299	
Six months „ one year	-	34,747	
One year „ five years	-	24,755	
Five years „ ten „	-	2,984	
Exceeding ten years	-	242	
Transportation beyond seas :—			
(a) for life	-	1,309	
(b) for a term	-	1,189	
Sentenced to death	-	828	

Total expenditure rose from £618,588 to £669,578; total cash earnings from £109,845 to £127,689; resulting in an increase of £32,768 in net cost.

The death rate increased from 17·84 per mille in 1914 to 18·35 in 1915. The admissions to hospital rose from 565·28 to 597·09 per mille; the daily average number of sick from 25·36 to 26·77 per mille.

(Form of Accounts.)

CHAPTER III—FINANCE.

(For further details, see *East India Financial Statement; Accounts and Estimates, Explanatory Memorandum; Statistical Abstract for British India, Tables 44 to 89.*)

Form of Accounts.

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

Revenue and Expenditure.

The Gross Revenue and Expenditure in 1914-15 and 1915-16 were as shown in the margin. In these figures all receipts are included in the total of revenue

	1914-15.	1915-16.
	£	£
Revenue - - -	81,157,666	84,413,537
Expenditure - - -	82,942,936	85,602,198
Deficit	<u>£1,785,270</u>	<u>£1,188,661</u>

and all outlay in the total of expenditure, except that the working expenses of railways and the surplus profits paid to certain railway companies are treated not as expenditure but as a deduction from Revenue. Net Revenue and Expenditure are arrived at after deducting the interest charges as well as the working expenses of the railways, the interest charges and working expenses of irrigation works, the cost of the cultivation and manufacture of opium, and the charges against other revenue-earning departments (excluding cost of collection) from revenue, and the receipts of spending departments from expenditure.

The net revenue of 1914-15 and 1915-16 and the expenditure charged against the revenue of those years were divided into Imperial and Provincial as follows:—

	1914-15.			1915-16.		
	Imperial.	Provincial.	Total.	Imperial.	Provincial.	Total.
	£	£	£	£	£	£
Net Revenue - -	27,951,570	25,231,859	53,183,429	30,153,135	25,801,613	55,954,746
Net Expenditure - -	29,736,840	25,231,859	54,968,699	31,341,794	25,801,613	57,143,407

The equilibrium between Provincial Revenue and Provincial Expenditure, which is shown in these figures, is due to the fact that, if the Provincial Governments spend less in any year than their income, the saving is added to their balances and treated in the general accounts prepared by the Government of India as though it had been spent, and that similarly excess expenditure by Provincial Governments, being met from their balances, is not charged in the accounts prepared by the Government of India against the revenues of the year. In 1914-15 the Provincial Governments drew on their balances to the extent of £2,190,152, in 1915-16 they added to their balances £130,940.

(For fuller information regarding Provincial Finance, see *Decennial Report, 1911-12, pages 145-8.*)

Home Charges.

The net expenditure in England chargeable to revenue was as follows:—In 1914-15, £19,525,856; and in 1915-16, £19,403,939.

(Capital Outlay on Public Works.)

Capital Outlay on Public Works.

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

	1914-15.	1915-16.
Capital not charged against the Revenue of the year:—	£	£
Railways - - - - -	10,509,858	4,776,112
Irrigation - - - - -	1,123,180	812,953
New capital of Delhi - - - - -	360,361	331,274
Defrayed from Revenue:—		
Railways - - - - -	— 852	1,070
Irrigation - - - - -	570,509	526,270
Outlay by companies - - - - -	1,342,253	439,753
Total Capital Outlay on Railways, Irrigation, and Capital at Delhi - - - - -	£ 13,905,309	6,887,432

Debt.

Amount of Debt.—The total debt of India outstanding on the 31st March 1915 and the 31st March 1916 amounted to:—

	1915.	1916.
(a) Permanent debt*:—	£	£
Total of Public Works debt - - - - -	274,317,907	276,816,459
Debt incurred on new capital at Delhi - - - - -	927,381	1,258,655
Balance, being ordinary debt - - - - -	1,296,083	736,562
Total permanent debt - - - - -	276,541,371	278,811,676
(b) Temporary debt - - - - -	14,333,333	11,333,333
Total debt (permanent and temporary) on 31st March - - - - -	£280,874,704	£290,145,009

1915-16.—In England £500,000 India bonds and £407,500 Indian Midland Railway Company Debentures were discharged during the year. £2,500,000 India bills were also discharged in May without immediate replacement. No sterling loan was raised, but £3,500,000 sterling bills were issued in September and a similar amount in November, both with a currency of twelve months. Of the former issue £1,500,000, and of the latter £1,000,000, were in replacement of the bills which, as mentioned above, were discharged in May. The remainder were in replacement of bills maturing. In addition £3,500,000 was raised by means of Railway debenture stock.

In India a 4 per cent. rupee terminable loan of 4½ crores (£3,000,000), exclusive of applications through the Post Office, was issued in July at par, and £3,000,000 of the outstanding loan of £7,000,000 from the Gold Standard Reserve was repaid.

The borrowing powers of the Secretary of State for India in Council are regulated by Acts of Parliament, the last being the East India Loans (Railways and Irrigation) Act, 1910, under which powers were granted to borrow in the United Kingdom, as and when necessary, up to £25,000,000 for the purposes of Indian public works.

Currency and Exchange.

The rupee (180 grains of silver, eleven-twelfths fine) and the half rupee are full legal tender for the payment of debts. The coinage of rupees is restricted to the amounts that are from time to time decided by Government to be sufficient to meet the requirements of the public. The English sovereign is also legal tender in India, at the rate of one sovereign to fifteen rupees (i.e., 1s. 4d. to the rupee).

* The total permanent debt is classified in the accounts as (1) Public Works Debt, (2) Debt incurred on new capital at Delhi, (3) Ordinary Debt. The amount entered as belonging to the first category is the equivalent of the total capital expenditure which has been incurred on public works by the State, together with the amounts advanced to railway companies for capital expenditure; the "Ordinary Debt" consists of the remainder of the debt, less debt incurred on Delhi. In any year in which, owing to the use of surplus revenue or deposits for the construction of public works, the capital expenditure of the year exceeds the amount of debt incurred in the year, the effect is to cause a decrease to be shown in the amount of the Ordinary Debt.

(Currency and Exchange.)

Gold Standard Reserve.—From the 1st April 1900 the net profit from the coinage of rupees has been held as a special reserve, apart from the ordinary revenue, to secure the maintenance of exchange at the rate of 1s. 4d. to the rupee. It may serve this purpose either (1) by providing the Secretary of State with funds enabling him to dispense with sales of Council drafts when the demand for these is weak, or (2) by enabling him to meet drafts sold on London by the Government of India for the support of exchange. The constitution of the Reserve on the 31st March 1916 was as follows:—

	£
Sterling securities held in England (estimated value)	16,218,692
Cash placed by the Secretary of State for India in Council at short notice	5,792,631
Sovereigns held in India on account of the Reserve	238,734
Temporary loans to Treasury balance, India	4,000,000
Due to the Fund from Treasury balances in India	1,326
Total	£26,251,383

(Further information regarding Currency, Exchange, and the Gold Standard Reserve will be found in the Decennial Report, 1911-12, pages 164-9, and in the Report of the Royal Commission on Indian Finance and Currency, Cd. 7068, 1913.)

Exchange and Remittance.—During the years 1913-14, 1914-15, and 1915-16 the sale by the Secretary of State of bills and telegraphic transfers on India was as shown in the margin.

	Amount.	Average Rate.
	£	Per rupee.
1913-14	31,200,827	1s. 4·070d.
1914-15	7,748,111	1s. 4·005d.
1915-16	20,354,517	1s. 4·087d.

The regular demand for the bills and telegraphic transfers sold by the Secretary of State is due to the fact that they enable merchants and bankers to make the payments in India which are required mainly in consequence of the normal excess of India's exports over her imports. Reverse drafts on London were sold to the amount of £4,893,000 in June to September 1915.

Paper Currency.—Under the Indian Paper Currency Act, 1910 (II. of 1910), which consolidated and amended the law relating to paper currency, notes of the following denominations, viz., Rs. 5, Rs. 10, Rs. 50, Rs. 100, Rs. 500, Rs. 1,000, and Rs. 10,000 are issued to the public. The issue of 20-rupee notes has been discontinued.

There are seven currency circles having their headquarters at Calcutta, Cawnpore, Lahore, Bombay, Karachi, Madras, and Rangoon respectively.

Prior to the passing of the Paper Currency Act of 1910 the 5-rupee note alone was legal tender throughout India and payable at any office of issue in the country; notes of higher value were legal tender only within the currency circles in which they were issued. The Act of 1910 "universalised" notes of a denominational value of 10 and 50 rupees, and thus marked an important stage in the development of the paper currency system of India. The 10-rupee note was also made universal from the 1st April 1911. A reserve is held against the notes equal to their full value in (1) gold, (2) silver, and (3) securities (value taken at cost price). The law in force at the end of the year under review provided that securities of the Government of India and of the British Government might be held as part of the reserve up to a limit of £17,333,333 (Rs. 26,00,00,000), of which the British Government securities might not exceed £10,666,667 (Rs. 16,00,00,000); the remainder of the reserve must be held in gold or silver coin or bullion. On the 31st March 1916 the note issue amounted to Rs. 67,73,00,000. The constitution of the Paper Currency Reserve was as follows:—

	£
Gold	16,112,000
Silver coin	15,710,000
Securities of the Government of India	6,666,663
Securities of the British Government	6,666,962
Total	£45,155,625

CHAPTER IV.—LAND REVENUE.

(Land Tenures.)

(For further details see *Statistical Abstract of British India, Tables 45 to 49 and 120.*)**General.**

From time immemorial a share of the produce of the land has been the chief source of public revenue, and the land revenue now constitutes more than one-third of the total net revenue.

The early settlements of land revenue were permanent, but at length over the greater part of India a system of periodical settlements was established, under which the State demand is revised at recurring periods of 20 to 30 years, the latter period prevailing in all the larger provinces except the Punjab, the Central Provinces, and Burma, where settlements are usually made for 20 years. No alteration in assessments may be made during the term of a settlement, though the amount leviable year by year may vary according to the area actually cultivated or the condition of the harvest. A table showing the incidence of land revenue assessments in the different provinces is given in the *Statistical Abstract*. Under the system of periodical revisions the State secures a share in increased rental value arising from the general progress of the community, and the opportunity is afforded of reducing the assessment in villages or tracts which have declined in prosperity, and of correcting inequalities.

Tenant Right and Land Legislation.

Delhi.—There were 34 successful applications for enhancement of rent. In 147 cases ejection of tenants without a right of occupancy was ordered. The Punjab Alienation of Land Act continued to work satisfactorily.

Bengal and Bihar and Orissa.—Though there was no dispute of outstanding importance between landlords and tenants, ill-feeling was again in some instances roused by the withholding of rent receipts and by the levying of illegal cesses. Out of 26 cases of failure to grant rent receipts in Bengal in which action was taken, 24 ended in the imposition of fines. In Bihar and Orissa cases were reported from every district but Purnea. The number of money orders issued for the payment of rent increased in Bengal and decreased in Bihar and Orissa. In Gaya (Bihar) the system of produce rent still proved a fruitful source of irritation. No practical difficulty was experienced in giving effect to the new Orissa Tenancy Act.

United Provinces.—Cases of concealment of rents were reported or suspected, and complaints of the prevalence of the system of *nazrana* were received from certain districts in Oudh. The gross area under the protection of the Agra Tenancy Act rose by 125,246 acres to 14,569,500 acres, continuing the unbroken rise since 1901-2.

North-West Frontier Province.—Permanent alienations under the Punjab Land Alienation Act were sanctioned in 15 cases, temporary in only two. No attempts to evade the law were reported except in Bannu, where 5 cases were suitably dealt with.

Madras.—The provisions of the Madras Estates Land Act, 1908, are becoming better known to the people, and this Act and the Madras Land Encroachment Act (Act III. of 1905) appear to be working smoothly. Though on some estates strained relations between landlords and tenants were on the whole satisfactory.

Assam.—The relations between landlords and tenants in certain parts of the Goalpara district were not satisfactory, and sections 93 to 100 of the Bengal Tenancy Act were introduced into the permanently settled portion of this district.

Bombay.—Relations between landlord and tenant were smooth. The area of land held on restricted tenure increased.

Revenue Surveys and Settlements and Land Records.

Delhi.—Inspection work was satisfactory. The disposal of mutation work still leaves something to be desired.

Bengal.—In December the Assam Surveys were separated from those of Bengal, and sections of the Survey Department were reorganised. Out of the settled area of 63,893 square miles in which the Bengal Tenancy Act is in force, the record-of-rights has now been finally published in respect of 17,027 square miles.

Bihar and Orissa.—Settlement operations were in progress in six districts. The boundary between Champaran and Gorakhpur in the United Provinces was re-surveyed by the Settlement Officer, North Bihar, and an officer deputed by the government of the United Provinces, and their recommendations accepted by the local governments.

Assam.—As a result of the separation of the Assam Survey Department from that of Bengal, the Assam surveys were experimentally entrusted to the Survey of India.

United Provinces.—Schemes for the redistribution of patwaris' circles in Etawah and Fatehpur were sanctioned and took effect.

(Revenue Surveys and Settlements and Land Records.)

Punjab.—Settlements were brought to a close, and the filing of the new Record-of-Rights completed in 4 districts; revision is in progress in 4 others. During the year the pending file of mutations increased by nearly 8,000; but the number of partitions left pending at the end of the year fell below 4,000 for the first time in ten years, and, though there was an increase in institutions, more cases were decided than in any year except 1913-14.

Punjab Canal Colonies.—Survey and demarcation work was carried out in Upper Chenab and Lower Bari Doab colonies, but not in Lower Jhelum Canal Colony.

Central Provinces and Berar.—Settlement operations were in progress in five districts, and map correction preparatory to settlement in two. The local Traverse Survey Party completed the sub-traverse of 620 villages, and carried out the traverse of three towns in addition to special work in connection with boundary disputes affecting Native States. The Record-of-Rights for all the villages held on the ordinary ryotwari tenure in Berar was completed with willing help from the ryot, and without cost to Government.

Madras.—Orders were passed on most of the recommendations of the Survey Committee. Settlement operations were proceeded with by 6 parties.

North-West Frontier Province.—No survey operations or boundary demarcations were carried out. The number of mutations for disposal during the year increased, but the number unattested at the end of the year decreased.

Burma.—The area under supplementary survey fell slightly to 51,496 square miles, mainly owing to the introduction of fixed assessment in 2,625 square miles of scattered cultivation in the Yamethin district and to a decrease of 42 square miles in Pegu. The cost of the department amounted to 4.42 per cent. of the revenue assessed. In addition to surveys executed by the local Land Records staff, 585.37 square miles of revision surveys with an occupied area of 245,324 acres were executed by the Special Staff, who also surveyed mining leases in Tavoy and an oil-bearing area in Thayetnyo.

Bombay.—A large amount of settlement work was carried out with considerable temporary assistance. Staffs were reduced at the end of the year.

Collection of the Revenue.

The fluctuations in the gross land revenue receipts (exclusive of those credited to

Year.	Land Revenue Receipts.
	£
1906-7 to 1910-11 (5 years' average)	20,096,000
1911-12 (single year)	20,765,000
1912-13 " " "	21,232,000
1913-14 " " "	21,392,000
1914-15 " " "	21,222,000
1915-16 " " "	22,031,000

irrigation) in past years may be seen from the marginal table. Increase in land revenue has resulted from bringing new land under cultivation and from settlements, these, owing to the generally enhanced values of land, usually increasing revenue. Irrigation canals have enabled the cultivable area to be greatly extended, especially in Sind and the

Punjab.

The land revenue receipts in 1914-15 and 1915-16 were made up as follows:—

	1914-15.	1915-16.
	£	£
Ordinary land revenue	20,468,456	21,376,539
Assessment of alienated lands, less quit-rents*	643,285	637,036
Sale of proprietary right of Government in land†	56,233	59,408
Capitation tax, or house tax levied in lieu thereof‡	653,201	663,144
Sale of waste lands and redemption of land revenue	222,853	185,403
Recovery of survey and settlement charges§	120,042	160,286
Fisheries and other receipts	725,333	723,065
	<u>£22,889,403</u>	<u>£23,804,881</u>
Deduct portion of land revenue due to irrigation	1,667,864	1,773,720
Total land revenue	<u>£21,221,539</u>	<u>£22,031,161</u>

The charges in 1915-16 included £1,772,320 for district administration, £479,345 for survey and settlement charges, £999,654 for land records, and £657,409 direct charges of collection. The total charges were £3,902,729.

The advances made by Government to cultivators during 1915-16 (for the relief of agriculturists, for the improvement of land and for loans to co-operative

* Mostly from Bombay.

† Mostly from the Punjab.

‡ Mostly from Burma.

§ From Bengal, Burma, and Bihar and Orissa.

(Collection of the Revenue.)

societies) amounted to £899,503, and the advances outstanding at the close of the year amounted to £3,045,269.

Delhi Province.—The area of 65 villages was added by transfer from the Meerut district of the United Provinces, resulting in an increase in the fixed land revenue roll. The figures regarding coercive processes were more satisfactory.

Bengal.—The revenue demand, excluding arrears, amounted to £1,840,145, including £1,438,664 from 91,850 permanently settled estates, £113,340 from 3,348 temporarily settled estates, and £288,140 from 2,274 estates held direct by Government. The percentage of total collections on total demand (including arrears) was 93·82 per cent. as against 93·04 in 1914-15. The number of estates, &c. which became liable to sale for non-payment of Government revenue fell from 13,713 to 12,498, of which 1,087 were actually sold as against 861 in 1914-15. 45,825 certificates were filed for recovery of arrears of revenue, exclusive of 50,814 certificates filed for the realisation of cess arrears. Sales actually took place in 1,841 and 2,110 respectively.

Bihar and Orissa.—The total current demand was £1,008,310, i.e., £711,875 from 95,537 permanently settled estates, £175,534 from 10,702 temporarily settled estates, and £120,901 from 293 estates held direct by Government. The percentage of total collections on total demand was 95·71, the lowest for the last five years. Out of 9,222 estates, shares, and interests liable to sale for non-payment of Government revenue, 384, or about 4·2 per cent., were sold. The total number of certificates, exclusive of those for cesses, filed under the Bengal Public Demands Recovery Act, increased from 32,608 to 35,575. Sale was necessary in 1,651 cases.

Assam.—The current revenue demand was £495,042, of which 91·90 per cent. was realised, as against 94·27 in 1914-15. Expansion of cultivation, especially in the Assam Valley continued, and was most marked in the district of Kamrup, where the area and revenue increased by 19,397 acres and £1,802. The total amount advanced under the Agriculturists' Loans Act was £142,814, of which nearly £136,666 were distributed in the Surma Valley in consequence of disastrous floods.

United Provinces.—The year ending 30th September 1915 witnessed some recovery from the adverse conditions of 1913-14, but rainfall was unfortunately distributed, and remissions and suspensions to the extent of nearly £53,333 were necessary. £4,593,511 was collected. The demands of the previous year for agricultural advances under the Loans Acts resumed comparatively normal proportions.

Punjab.—Fixed land revenue demand for the year ending 30th September 1915 was £1,446,963, of which 98·8 per cent. was collected; fluctuating demand was about £853,333. 7,017 acres were acquired for public purposes, of which 2,581 were for railways, at a compensation of Rs. 198 per acre, and 3,723 for canals, at an average rate of Rs. 82.

North-West Frontier Province.—The fixed land revenue demand was practically the same as in 1914-15, £124,034; 98 per cent. was again realised. Fluctuating land revenue increased by £1,871, of which the greater part was contributed by Dera Ismail Khan. 2,557 coercive processes were issued as compared with 2,103 in 1914-15.

Central Provinces and Berar.—The current demand increased, owing to settlement changes, to £1,270,000. The net demand, after remissions and suspensions, was recovered with no greater difficulty than was to be expected in view of the heavy arrears both of land revenue and agricultural loans.

Burma.—In spite of damage to crops by floods, and in the dry zone districts of the Meiktila division by failure of the rains, the total land revenue demand rose, owing entirely to revised rates of assessment following settlements. The difficulties of collection resulting from the war were not so severely felt, and the total collections improved by nearly £38,333. The number of coercive processes increased.

Bombay and Sind.—In 1914-15, the last year for which information is available, there was satisfactory recovery from the unfavourable conditions of 1913-14. Of £2,290,000, the land revenue finally demanded in the Presidency proper, after remissions and suspensions, 99·7 per cent. was collected. In Sind, 96·6 per cent. of the current demand of £758,333 was collected. Takavi advances were considerably reduced.

Madras.—In the year ending 30th June 1915, ryotwari holdings rose by about 216,000 acres to 25·55 million acres. The total cropped area was 39,090,000 acres. £4,947,839, or 98·7 per cent. of the gross current demand, was collected, against 98·8 per cent. in the previous year. After steadily decreasing for several years, the number of coercive processes rose from 1,161,568 to 1,513,159, but only 2,042 sales were necessary, the amount thus recovered being £2,649, or $\frac{1}{17}$ per cent. of the total land revenue collection.

(Salt.)

CHAPTER V.—REVENUE FROM TAXATION AND OPIUM.

SALT.	PROVINCIAL RATES.	INCOME TAX.	REGISTRATION.
EXCISE.	STAMPS.	CUSTOMS.	OPIUM.

(For further details see *Statistical Abstract for British India, Tables 43, 45 to 47, 50 to 58, and 61 to 64.*)

Of the eight heads shown above, seven comprise the tax revenue, and furnish about two-fifths of the total net revenue of the Indian Government.

Salt.

General.—The salt revenue is raised by a duty on all salt imported into, or manufactured in, India. The general rate of duty, except in Burma, has been Rs. 1 per maund since 1907, but on 1st March 1916 it was raised to Rs. 1½ per maund, certain locally produced salt in Burma continuing to pay 12 annas. It had already been ordered on 11th January that the duty on and price of salt removed from the various salt sources in India should be levied uniformly at the rates in force at the actual date of delivery to traders, and as withdrawals on a large scale from bonded warehouses had begun in anticipation of the enhancement of duty, an ordinance had been promulgated on 21st January empowering the restriction of removals of salt. Certain concessions sanctioned with a view to stimulating the production of saltpetre, for which India became the chief market when potash salts were no longer obtainable from Germany, had an excellent effect on production, and many fresh areas were tapped. Exemption from duty is granted under certain conditions for salt used in manufacturing processes. The gross revenue from salt amounted to £3,647,587, as against £3,910,790 in 1914–15. Of this over 26 per cent. was derived from imported salt. The charges amounted to £376,722, exclusive of £258,001 paid under treaties as compensation, principally to Native chiefs who have assigned their salt sources to the Government of India.

The duty is levied on salt at the place of manufacture, or at the port of importation. Some of the salt sources belong to, or are worked under the direct control of, local governments; others are owned or leased by private individuals. The salt supply of India is not a Government monopoly, and the importation of salt is unrestricted. Manufacture is not allowed where the circumstances are such as to render collection of the duty impracticable.

Salt affairs in Upper India are controlled by the Northern India Salt Department, which is under the direct administration of the Government of India. The maritime local Governments have their own salt departments. Bihar is under the Northern India Salt Department, but Orissa has its own.

Northern India.—The salt sources controlled by this Department are: (1) The Rajputana sources, including the Sambhar Lake and the brine springs at Pachbadra and Didwana, and (2) the Punjab sources, including the Mayo, Warcha, and Nurpur mines, the Kalabagh quarries, the Mandi mines, the brine springs at Sultanpur, and the Kohat mines (N.-W. Frontier Province). The most important are the Sambhar Lake and Mayo mine, but the sale and popularity of Pachbadra salt steadily increase. 11,239,247 maunds of duty-paid salt were sold, or 9.93 per cent. less than in 1914–15, a year of abnormal sales in anticipation of enhanced duty. The gross revenue, £910,714, showed a decrease of 6.61 per cent. The average retail prices were higher in Bihar, the N.-W. Frontier Province, Punjab, Delhi, United Provinces, Central Provinces and Berar, Rajputana and Central India. 51,805 licences to manufacture saline substances (an increase of 4,110) were issued, the increase being the result of the concessions referred to above and of the high prices prevailing; 23 more refineries were worked than in 1914–15. The output of refined saltpetre was 608,524 maunds, or 91,839 more than in 1914–15. 232 persons were prosecuted for offences against the Salt Act, and 95.36 per cent. convicted. Owing to shortage of officers, the Punjab border near the Bikaner State was not patrolled during the year.

Bengal.—The salt consumed in Bengal is imported from abroad or from other parts of India. The average wholesale price per maund rose from Rs. 2 a.5 p.10 to Rs. 2 a.15 p.8. The total quantity of salt which passed into consumption was 7,855,974 maunds, exclusive of 4,782,859 maunds, the net export by rail, road, or river. 223 cases were dealt with under the Salt Law as compared with 13 in 1914–15; of 170 cases sent up for trial, 133 were disposed of, and all ended in conviction. The Excise and Salt Departments under the Commissioner of Excise and Salt were amalgamated during the year.

(Salt.)

Orissa.—There is no direct import of salt from foreign countries. The scheme previously sanctioned for amalgamation with the Excise establishment was kept in abeyance. The total imports were 1,160,192 maunds (266,785 from Calcutta, 892,625 from Madras, and 782 from Bombay). 299 offences against the Salt Laws were reported as against 79 in 1914-15. 232,871 maunds of refined saltpetre were produced as against 222,123.

Madras.—The number of Government factories was reduced from 20 to 19, and the number of Excise factories from 45 to 44. Owing to heavy rains in the Central and Southern divisions, only 9,411,028 maunds were manufactured as against an average annual total outturn of 10,946,962 maunds during the previous five years. Imports of duty-paid salt by sea from Bombay increased from 1,400,307 to 1,536,569 maunds, and by rail from Bombay and Goa from 384,671 to 627,113 maunds. The total issues for home and inland consumption of salt, locally manufactured and imported by sea and rail were 9,179,918, 1,539,396, and 627,113 maunds respectively, as against 10,549,184, 1,404,296, and 384,671 maunds in 1914-15.

Bombay.—Bombay is supplied with salt from three sources: (1) Baragra or Rann salt, made from brine wells on the Lesser Rann of Cutch, named the Pritchard Salt Works, Government property and worked departmentally; (2) sea-salt, made within the Presidency, at factories the majority of which are owned as well as worked privately, but a few are leased by Government to private individuals, and one at Dharasna is both Government property and worked departmentally; (3) imported salt, mostly from sea-salt works in Goa territory. The outturn of Baragra salt, owing to favourable climatic conditions and the return of many of the old Agrias to their ancestral occupation, as the result of the prevailing scarcity and improved housing conditions near the works, was the highest on record; that of sea-salt decreased by 14 per cent., partly owing to the early onset of the rains; and the quantity of imported salt increased. The total quantity of salt manufactured declined to 13,024,417 maunds, or 6·7 per cent. 3,637,263 maunds were retained for local consumption, or 13·5 per head as against 13·7 in 1914-15. The average selling prices showed no very marked fluctuations. The development of a new industry in the local production of magnesium chloride from "bitterns" removed from the Kharagoda works produced 9,418 cwts. crude and 1,622 cwts. semi-refined magnesium chloride. There was a slight decrease in expenditure, and the gross receipts were the highest attained since the reduction of the duty 10 years ago, with the exception of 1914-15; net profits were considerably above the average.

Sind.—The measures taken to increase output at Maurypar Salt Works were continued with satisfactory results, and excavations at the natural salt deposits at Dilyar and Saran improved. Consumption rose from 457,998 to 517,699 maunds, making the average consumption per head 12·12 lbs. as against 10·69 lbs. in 1914-15. Financial results improved everywhere.

Burma.—A decrease in the imports of foreign salt by 895,944 maunds, or 38 per cent., to 1,462,524 maunds, resulted entirely from cessation of supply from enemy sources; the decrease in imports from the United Kingdom, Port Said and Aden, owing to tonnage shortage, being counterbalanced by increased imports from Indian ports, Spain, and elsewhere. Shortage in October resulted in a marked rise in the wholesale price and in decreased consumption. Local output had increased during the year, but could have been larger if the situation had been foreseen earlier; as it was, the proportion of the total salt revenue—one fourth—derived from local salt was the highest known. The proportion of Burma-made salt to the total salt consumed was 31·8 against 21·8 in 1914. The total estimated consumption fell from 2,453,791 to 2,156,112 maunds, and the average annual consumption per head from 16·67 to 14·64 lbs. 48 persons were convicted for illicit manufacture as against 53 in 1914.

Excise.

Excise revenue is derived from the manufacture and sale of intoxicating liquors, opium, and other drugs, principally hemp. There is also an excise duty on cotton goods produced in British India.

The whole question of excise administration as regards alcohol was reviewed in 1905 by a committee, whose recommendations included advances in taxation, the further concentration of distillation, the extended adoption of the contract distillery system, and improvements in the preventive and other establishments. Action has been taken, and, when necessary, legislation has been carried out to enforce the Committee's recommendations. The subject has recently been reviewed at length by

(Excise.)

the Government of India and Local Governments, and papers on the subject were published in 1914.* In a few remote districts the old "out-still" system of distillation continues under licence. Otherwise the whole of India is gradually being brought under the contract system. By this the dangers of unrestricted competition for the supply of liquor and the attendant difficulties of proper supervision are avoided, while the largest possible proportion of the monopoly profits are secured to Government. The number of retail spirit shops is being steadily reduced. Objections are invited from the public before any new retail shop is licensed, and the location of all the shops comes periodically under review by advisory committees in all towns of any size. Fermented liquors are taxed mainly by means of licenses for manufacture and retail trade. In Madras and Bombay a fixed tax per tree is levied on trees tapped for toddy. Spirits and beer manufactured in India on European lines are taxed at the same rate as the customs duties on similar liquors imported from abroad.

The excise revenue on opium is chiefly derived from duty and vend-fees. Opium smoking is subject to stringent legal restrictions. Hemp cultivation is restricted and controlled, and a duty and vend-fees are levied. *Charas* is now prohibited in some districts, and elsewhere is subject to a high duty. The habit of cocaine-taking has of recent years become common among certain classes in the larger towns of Burma, Bengal, Bombay, the Punjab, and the United Provinces. Any person found in possession of the smallest quantity without a licence is now liable to punishment, and large quantities of smuggled cocaine have been seized by the preventive officers. A conference to consider measures for the suppression of cocaine smuggling was held at Delhi in November 1914.

The following table shows the Excise Revenue from 1913-14 to 1915-16 under the different heads, as given in the Finance and Revenue Accounts:—

Year.	Licence and Distillery Fees and Duties for the Sale of Drugs and Liquors.					Other Duties, &c. on Indian Consumption of		Fines, Confiscations, Miscellaneous.	Total Revenue.	Charges.	Net Revenue.
	Foreign Liquors &c.	Country Spirits.	Toddy and Pachwai.	Opium and its Preparations.	Other Drugs.	Opium, &c.	Ganja.				
1913-14	£ 335,063	£ 4,820,213	£ 1,507,994	£ 377,086	£ 546,630	£ 914,401	£ 360,895	£ 33,018	£ 8,894,300	£ 437,529	£ 8,456,771
1914-15	358,141	4,660,291	1,566,897	414,245	576,963	887,293	353,126	39,925	8,856,881	459,685	8,397,196
1915-16	337,740	4,411,682	1,523,103	424,763	577,135	950,656	369,653	37,190	8,632,209	470,740	8,161,469

A sum of £785,986 was yielded by customs duties on exciseable liquors imported into India during 1915-16. The growth of the excise revenue in recent years is due largely to higher rates of duty and stricter excise control. The war and consequent depression of trade, with unfavourable agricultural conditions, and much enhanced duties, restricted consumption in 1915-16.

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

PROVINCE.	Population of Excise Area.	Number of Persons per Retail Shop Licensed in 1915-16 for the Sale of				Net Excise Receipts per 10,000 of Population in Rupees.
		Country Spirit.	Country Fermented Liquor.	Opium and its Preparations.	Narcotic or Intoxicating Drugs, other than Opium.	
Bengal	45,329,247	36,763	13,939	52,770	22,710	3,225
Bihar and Orissa	34,490,084	17,552	5,168	62,463	21,159	3,003
Assam	6,622,431	34,854	183,956	18,602	25,768	7,996
United Provinces	47,182,044	16,622	16,549	43,890	13,947	2,456
Punjab	19,548,126	27,150	888,551	22,599	38,330	3,471
North West Frontier Province	—	—	—	—	—	—
Burma	10,534,808	51,108	10,268	84,958	—	6,587
Central Provinces and Berar	13,916,308	835	26,865	13,067	12,549	6,773
Madras	41,480,193	490	3,195	59,441	91,863	8,030
Bombay	16,113,051	319	15,583	21,118	28,219	11,957
Sind	3,513,435	16,342	878,358	16,973	10,551	6,652

The principal features of the excise administration in 1915-16 were as follows:—

Bengal.—The total revenue, £1,008,705, again showed a decrease. In spite of considerable reduction in consumption there was a noteworthy increase in the revenue

* For the Report of the Committee of 1905, and for the orders passed by the Government of India thereon, see Parliamentary Papers Cd. 3327 and 3816, and House of Commons Papers 142 and 209 of 1907. For the later papers, see Cd. 7524 and 7604 of 1914.

(Excise.)

derived from opium, partly as the result of the increased treasury price introduced on 1st April, and partly owing to increased competition for licences. The consumption of *ganja*, the duty on which was increased on 1st April, decreased by more than 10 per cent. The revenue from country spirit was £422,233, from hemp drugs £235,834, and from opium £209,060. The reorganisation of the Excise Department was further carried into effect. A special staff has been organised in connection with the Excise Intelligence Bureau to cope with smuggling. The Customs officials effected two record seizures of opium; they also made large seizures of cocaine, whilst the Excise officers seized no less than 509 ounces of the drug, as compared with only 64 ounces in 1914-15. 1,140 prosecutions for illicit possession of cocaine were recorded in Calcutta.

Bihar and Orissa.—The total revenue, £731,424, again showed a decrease. The fall in country spirit was further increased by an interesting socio-religious movement among the Uroans of Chota Nagpur, who abjured its use, but instead drank home-brewed pachwai, the consumption of which correspondingly increased. The revenue from country spirit fell to £345,861, and that from hemp drugs to £172,440. The revenue from opium increased to £106,340, but consumption was less than in any previous year since 1907-8. The illicit trade in cocaine showed no marked decrease, and the Board was not altogether satisfied with the working of the special arrangements for the suppression of cocaine smuggling. It considers the curtailment of rewards a mistaken policy. The establishment of a neutral zone on the Nepal border worked well on the whole. Execution of the reorganisation scheme sanctioned for the department had to be delayed.

Assam.—Though the province was no exception to the rule of diminished consumption, there was a small net increase in revenue of £962, or 2 per cent. The number of stills was again reduced. The revenue from opium, hemp drugs and country spirits rose to £203,596, £55,073 and £101,627 respectively.

United Provinces.—The total revenue fell to £805,502, mainly through the fall in country spirits to £492,552. The consumption of *ganja*, after steady increase for seven years, declined, as did that of all intoxicants except *charas*, the consumption of which after three years' decline rose so considerably as to maintain the income from hemp drugs at practically the same figure as last year, £171,743. In spite of large decrease in consumption the revenue from opium rose to £89,610. Prosecutions for illegal manufacture of spirit rose from 309 to 688; cocaine prosecutions decreased owing mainly to diminished supply, but a certain amount seems now to be obtained from Japan. Offences against the opium laws continued to be lamentably frequent.

North-West Frontier Province.—The revenue, £23,574, showed a slight decrease. Expenditure increased to £1,026.

Punjab.—Revenue increased by about 1 per cent. to £467,258. For the large decrease in the consumption of country liquor by 13 per cent. to 331,603 gallons, the efforts of the administration to assist temperance reform has some responsibility. The number of country spirit retail licences was reduced from 748 to 720, licences at fairs were greatly restricted, no liquor shops were opened at the great Sikh fairs, temperance teaching was vigorously promoted, and the local and municipal bodies were constituted the regular advisers of the collector on excise policy. Measures were taken to check illicit distillation, 223 cases being detected. The increase in the issue price of excise opium raised receipts from sales by 38 per cent. to £58,353, but only decreased consumption by 3.9 per cent. The traffic in cocaine ceased to expand, but the sales at Lahore, which exceeded those of all the rest of the province, are to be especially investigated.

Burma.—Revenue fell by nearly 11 per cent. to £462,622. To this decrease all classes of liquor contributed, but the total opium revenue increased by 1.6 per cent. to £250,214. Opium smuggling appears to have been checked by the reduction of the steamer service from India, and energetic action was taken against opium dens in Rangoon, but the use of morphia continues to increase. The cocaine habit has been beneficially affected by stoppage of the German supply. 471 persons were convicted of illicit possession of *ganja*, of which a ton and a half was seized. Illicit manufacture and possession of country spirit and fermented liquors increased, and convictions exceeded those of 1914-15 by 1,117, or over one fourth.

Central Provinces and Berar.—Revenue fell to £635,732. Consumption of country spirit, fell from 1,016,700 to 920,800 proof gallons, a decrease of 9 per cent. following on a decrease of 13 per cent. in 1914-15. There was a satisfactory decrease in the consumption of *ganja*, but the far more deleterious *charas* seems to be gaining in popularity. Illicit distillation remains a common offence in the plateau district.

(Excise.)

The issues of opium fell in the Central Provinces by 3, and in Berar by 7 per cent. Those of cocaine increased. The advisory committees introduced under the new Excise Act performed their duties satisfactorily. The scheme for the reorganisation of the Excise Staff sanctioned in 1914 proved inadequate; a revised scheme was formulated.

Madras.—There was a slight decrease in revenue to £2,217,956. The consumption of opium, country spirits, and hemp drugs decreased. The rules relating to cocaine and allied drugs worked well. 216 cases were convicted under the Opium Act as against 202 in 1914-15, and 5 cases of opium smuggling as against 21.

Bombay.—Receipts increased (under every head) to £1,355,299; increased revenue from country spirits was accompanied by decreased consumption, which fell from 2,575,625 to 2,130,812 gallons. Revenue amounted to £1,216,823 as against £1,219,721. The beer brewing industry was extinguished by the closing of the Bombay and Dapuri industries. There was a large all-round decline in the importation of foreign liquors. The consumption of hemp drugs, except ganja (which decreased), increased. The amount of cocaine licitly imported and sold decreased.

Sind.—Gross revenue rose to £158,307 from £155,151 and net rose from £152,449 to £155,817.

Provincial Rates.

Since 1904-5 many cesses levied under this head have been abolished, and the revenue amounted in 1915-16 to only £41,845, as against £180,210 in 1913-14.

Stamps.

The stamp revenue is derived from two great classes of stamps, judicial or court fee and non-judicial stamps. The revenue from the former increases with the growth of litigation, and from the latter with the development of trade and industry. In 1915-16 the revenue declined under both heads. The gross stamp receipts for 1914-15 and 1915-16 were £5,082,043 and £5,433,632 respectively. In 1915-16 the sale of court fee stamps realised £3,733,743 and that of commercial and other stamps £1,657,482. Over one-fourth of the revenue is derived from Bengal.

Income Tax.

The gross revenue from income tax in 1915-16 was £2,090,109, as compared with £2,036,733 in 1914-15. Ordinary collections produced £1,683,894 and Government salaries and pensions, £322,197.

Customs.

The revenue was collected during the first eleven months of the year as in 1914-15 (see Statement for 1914-15, p. 19), but in March 1916 the Indian Tariff Act of 1894

	1914-15.	1915-16.
Sea Customs, import duty :	£	£
Arms, ammunition, &c. - - - - -	35,633	37,938
Liquors - - - - -	811,247	785,986
Petroleum - - - - -	571,489	476,955
Cotton manufactures - - - - -	1,023,832	901,521
Silver bullion and coin - - - - -	1,030,068	637,130
Other metals - - - - -	328,167	245,315
Sugar - - - - -	293,144	404,439
Tobacco - - - - -	178,556	189,104
Other articles - - - - -	1,106,582	245,240
Export duty on rice, tea, and jute*	553,192	526,208
Miscellaneous - - - - -	28,559	31,579
TOTAL Sea Customs (gross receipts) - - - - -	5,960,469	4,481,435
Land Customs - - - - -	37,812	36,884
Excise duty on cotton manufactures	329,395	328,372
Miscellaneous - - - - -	19,524	27,196
TOTAL CUSTOMS REVENUE (gross receipts) - - - - -	6,347,200	4,873,887

was amended in order to increase revenue. The general tariff rate of 5 per cent. on imported articles was raised to 7½ per cent.; the rate of 1 per cent. on certain descriptions of iron and steel was raised to 2½ per cent.; special increased duties were placed on arms, beer, &c., and import duties were placed on railway materials, food grains, &c. hitherto free. The import duty of 3½ per cent. *ad valorem* on woven cotton goods was not revised. Export duties, previously levied on rice* only, were placed also on jute and tea.

The gross revenue from imports, salt excluded, already much diminished in 1914-15, decreased by nearly 9 per cent.

Registration.

General.—Offices exist in every district for the registration of documents, and for keeping copies thereof. *Ad valorem* fees are charged for registration, and a small

* Only the export duty on rice (in 1915-16 £508,379) is shown in 1914-15.

(Registration.)

fixed fee for searching the records. Documents relating to the sale, mortgage or lease of immovable property, compulsorily registrable, comprise the great majority of registrations. The gross registration receipts in 1915-16 were £518,879, as against £485,295 in 1914-15, and the cost of the registration offices was £259,840.

Opium.

The opium revenue is raised by a monopoly of the production of the drug in certain districts in the United Provinces, where opium is grown for use in India and for export. The cultivator of opium (known as Bengal opium) in these districts must hold a licence, and is granted advances for cultivation. He is required to deliver the whole of his outturn at a fixed price to Government agents, by whom it is despatched to the Government factory at Ghazipur. The supply of prepared opium required for India, "excise opium," is made over to the Excise Department, and Rs. 8½ per seer is credited to opium revenue for the amount. The chests of "provision" opium, for export, are sold at monthly auctions in Calcutta, or, in certain cases, direct to other Governments. The export of Bengal opium to China ceased early in 1913.

The opium revenue and expenditure in 1915-16 were £1,913,514 and £1,143,331 respectively as compared with £1,572,218 and £654,089 in 1914-15. The net revenue was £770,183 as against £918,129 in 1914-15. These figures exclude excise duties on opium consumed in India (shown under Excise). The number of chests sold by auction for export in 1915-16 was 10,020, at an average price of Rs. 1,719 per chest, while 90 chests were sold direct to the Hong Kong Government and 2,550 to the Straits Settlement Government.

(Season and Crop Reports.)

CHAPTER VI.—AGRICULTURE.

Season and Crop Reports: General Remarks.

Delhi.—The total rainfall was 15·75 inches as compared with an average of 27·52, and the season was a bad one.

Bengal.—The season was a fairly good one for the winter rice crop, but somewhat unfavourable for the autumn and spring crop. The total cropped area was 29,034,900 acres. Except in the districts where distress prevailed, the condition of the agricultural population was fair.

Bihar and Orissa.—The total outturn of crops was distinctly better than that of the previous year. The labour market showed signs of improvement, and the condition of agriculturists was on the whole satisfactory, except where crops failed owing to excessive rain.

Assam.—Floods of exceptional severity from June to August, followed by drought, reduced the outturn of rice, oil-seed, sugar cane, and jute to considerably below normal, and necessitated relief measures in the Surma Valley. In the Assam Valley, though the year was unfavourable to cultivators, there was no general distress.

Punjab.—Rainfall was unfavourable, and the sown area decreased. Of the autumn harvest the total matured area fell short of last year by 35 per cent.; the matured area of spring harvest was 29 per cent. short. The agricultural population stood the strain well.

Punjab Canal Colonies.—Progress in surveying showed a shortage of land suitable for completing colonisation in the Lower Bari Doab and Lower Jhelum Canal Colonies, and after the close of the year land in the Upper Chenab Canal Colony was allotted to disappointed grantees.

United Provinces.—The provinces were in some parts visited by the heaviest floods experienced for years. While in parts the rainfall was below normal, and the area sown in consequence short, others did well. The net cropped area rose by 70,531 acres, or 0·2 per cent. above the previous year, and 2·1 per cent. above normal. Harvests were satisfactory, and on the whole the year was a prosperous one.

North-West Frontier Province.—Owing to deficient rain the total sown area, 2,277,953 acres, was 863,832 acres below that of 1914–15, and 526,008 acres below normal. The yield of rice was 6 per cent., and that of barley 41 per cent., above normal; that of wheat 8 per cent. below normal. On the whole, prosperity was maintained, and the year healthy.

Central Provinces and Berar.—Weather conditions were on the whole not unfavourable, and the harvests produced 112 per cent. of the normal as against 97 per cent. in 1914–15. The condition of agriculturists was prosperous everywhere.

Burma.—A very favourable season in Lower Burma was somewhat spoilt by rains in November and December, which, however, helped to improve crops in Upper Burma, where they were at that date irregular owing to uneven distribution. There was nowhere any approach to scarcity; on the whole, conditions improved.

Madras.—The rainfall was on the whole favourable. The total cropped area of the year ending June 1915, 39,090,000 acres, exceeded the normal by 929,000 acres.

Bombay.—Frost and unsatisfactory rainfall adversely affected the crops in Gujarat, and in Sind rainfall was insufficient; elsewhere the season was favourable. The area under food grains expanded by about 10 per cent.; the total outturn of cotton was about 41 per cent. less than in 1914–15.

Agricultural Produce.

(For further details see *Statistical Abstract for British India, Tables 117 and 121.*)

The chief crops are rice, wheat, barley, various kinds of millets, pulses, maize, oilseeds, sugar, tea, cotton, and jute. Particulars for 1915–16 regarding some of the more important staples are given below. The figures are derived from returns of crop forecasts, and they include certain Native States as well as British India.

Rice.—Nearly 35 per cent. of the total cultivated area is under rice in India, which exports more rice than any other country, though only about 9 per cent. of the total production. Bengal, Bihar and Orissa, Burma and Madras are the principal producers, and Burma the largest exporter. The area under rice rose from 76,625,000 to 76,792,000 acres, and the estimated yield from 27,242,000 to 32,877,000 tons, exclusive of 300,000 tons from about 760,000 acres in British provinces for which no estimates are made. Exports decreased by 10 per cent. in value and 12 per cent. in amount.

(Agricultural Produce.)

Wheat.—Wheat occupies about 20 per cent. of the whole cultivated area, and furnishes about 10 per cent. of the world's supply. About 80 to 90 per cent. of the total yield is retained in the country. More than half of the total wheat area is in the Punjab and United Provinces. The area under wheat, 30,143,000 acres, fell below that of 1914-15, which was an exceptional year, by 2,332,000 acres, or 7 per cent.; the estimated yield, 8,518,000 tons, was less by 1,569,000 tons, or 16 per cent. The exportable surplus was taken over by Government in April. 652,879 tons were exported, as against 706,383 in 1914-15.

Sugar.—India is the greatest producer of cane-sugar in the world, but cannot meet her own demands. Diminution of area, continuous in recent years owing to the increasing imports of Java sugar, was beneficially affected by the prevailing high prices, and the total reported area rose in 1915-16 to 2,375,000 acres, or by 3 per cent. The estimated yield, 2,636,000 tons, was 7 per cent. above the final figure, 2,462,000 tons of the preceding year. 10 per cent. of the crop is grown in Peninsular India, and 90 per cent. in the Indo-Gangetic plain. Experiments in improved methods of cultivation are in progress, and some assistance in recovery is expected from the opening of new irrigation works and from the 10 per cent. customs duty on imported sugar. There is a large production of palm sugar in Bengal, Madras and Burma.

Tea.—The year was characterised by a large outturn coupled with high prices. The area, 636,200 acres, of which 383,000 acres were in Assam and 161,300 in Bengal, increased by 2 per cent., and the estimated production, 371,856,700 lbs., by more than 19 per cent. The total number of chests sold in 1915-16 amounted to 959,000 as compared with 680,000 in 1914-15 and 850,000 in 1913-14. Shipments to the United Kingdom (73½ per cent. of the total) increased by 12,986,000 lbs., and to Russia by 17,000,000 lbs.; but exports to France, Italy, America, Australia and New Zealand decreased. The net increase in exports was 12·5 per cent., or nearly 38,000,000 lbs. Owing to difficulties of tonnage much tea remained for shipment at the close of the year. The number of permanent employees increased by 20,207, and of temporary by 1,618. The capital of joint stock companies engaged in the production of tea amounted to about £20·7 millions, of which £17,670,760 was contributed by companies registered in the United Kingdom.

Jute.—Jute is by far the most important of the fibre crops of India, which has a virtual monopoly of jute. It is grown principally in Bengal, Bihar and Orissa, and Assam. Mainly owing to low prices due to the war, the total area, 2,377,000 acres, decreased by 29 per cent., and the estimated yield (7,345,000 bales of 400 lbs. each) by 30 per cent. In some important districts floods damaged the crops. Exports of raw jute rose from 2,828,532 to 3,360,633 bales.

Cotton.—The total reported area under cotton, 17,967,000 acres (of which 4,815,000 were in Bombay, and 4,061,000 in the Central Provinces and Berar), as well as the total outturn, 3,819,000 bales of 400 lbs. each, were about 27 per cent. less than in 1914-15, partly owing to seasonal and partly to price conditions. Exports of raw cotton showed a decrease of 14 per cent. in quantity and 26 per cent. in value, and amounted to 442,698 tons. Of this Japan took 295,883 tons as against 222,747 in 1914-15, and exports to the United Kingdom increased from 35,389 to 41,682 tons.

Oil Seeds.—The Indian export trade in oil seeds and vegetable oils is worth annually over £16½ millions, though only about one-third of the output is exported. The area under linseed and ground nut decreased; the yield increased by 19·4 and 7 per cent. The area and yield of rape, mustard, and sesamum decreased. Exports of oil seeds decreased by 27 per cent. to 699,963 tons, a decrease as compared with 1913-14 of 56 per cent. in quantity and 61 per cent. in value.

Co-operative Societies.

(For further details see *Statistical Abstract for British India*, Table 115.)

These societies were started by Government to enable the poorer classes, particularly the cultivators, to borrow at reasonable rates. The Co-operative Credit Societies Act of 1904 was amended by the Co-operative Societies Act of 1912 to cover all co-operative societies and recognise central unions or federations of societies. It leaves wide discretion to local Governments, and the types of society favoured vary considerably. The provincial registrars of co-operative societies are officials, and official aid is given in various ways, though loans by Government, whose policy has been one of abstention from financial aid, form a steadily decreasing proportion of the working capital. Aid is also forthcoming with increasing readiness from non-official local gentlemen. The accounts of every society must be annually audited by a person

(Co-operative Societies.)

approved by the registrar, who also has a certain discretion as to granting applications for registration.

The two main difficulties of village societies, proper supervision and the provision of funds, have been met by the "central societies," of which the type most generally approved is the "Central Banking Union" that prevails in Bengal and is being largely adopted elsewhere. These unions are federations of village societies; they maintain a staff of trained inspectors and also act as banks for their affiliated societies, forming a medium between the latter and the open money market, their chief advantage over the local money-lender. In Bombay there is a central co-operative bank for the entire province with a Government guarantee. In the autumn of 1914 financial aid was also given by Government in the shape of advances to meet the situation created by the war. The village societies are almost all on the unlimited liability basis. They may not distribute their profits among members save with the sanction of the local Government, but in some provinces (*e.g.*, Burma, the United Provinces, and the Punjab) it has been found that societies formed on a share-basis answer best, though dividends may not be distributed until 10 years after the first share-payment. In other provinces the strict Raiffeissen rule is observed, and profits on working (beyond what is required for the reserve) go to the reduction of interest on loans to members. The rates of interest charged by village societies vary from 9½ per cent. in Bombay to 15 per cent. in Burma and Bengal, and the average rate is far below that charged by money-lenders, who have indeed been forced to lower their rates. The loans to members probably represent a saving to the agriculturist of more than 10 per cent. The interest paid by the societies on deposits is usually 6 to 9 per cent.

The educative effect of the movement is considerable. The societies are in close touch with the Agricultural Departments, assisting in demonstrations of new staples, the supply of implements, distribution of seed, &c.

The urban credit societies are chiefly limited liability concerns formed among salary earners. There are also urban and rural societies for objects other than credit, *e.g.*, for purchase of seed or manure, or, in the case of weavers and other artisans, of raw material, and for marketing the goods of members. Their development is comparatively slow. In Burma cattle insurance societies have proved a success; they have been started in the United Provinces, where they are still in the experimental stage.

A Government Committee on Co-operation in India constituted in 1914 issued its report during the year.

The total number of co-operative societies in British India in 1914-15 (the latest year for which information is available) was 16,295 (of which 16,016 were agricultural), with a membership of 761,935 and a total working capital of £5,718,380. Of the total capital of the societies, £1,643,131 represents share capital and deposits of members, £3,621,832 loans and deposits of non-members, and other societies, £335,131 reserve, and £76,543 loans from Government.

The following is a brief account of the working of the movement in 1915-16:—

Bengal.—The number of societies rose from 1,992 to 2,243, membership to 121,833, and working capital to £829,905. Agricultural societies increased by 210; their working capital rose to £379,568; their percentage of over-due loans, though still excessive, decreased. Non-agricultural societies increased from 91 to 125. By the establishment of 2 new banks and the exclusion of one old one, Central Banks increased to 39; their dealings throughout the year were satisfactory, though perhaps over-cautious. Expansion, though it took place, was not encouraged, owing to difficulties created by jute trade and other conditions. Further expansion will not be practicable without increase of supervisory staffs.

Bihar and Orissa.—The number of societies increased from 1,087 to 1,296, membership from 54,647 to 61,410, and working capital from £243,126 to £288,500. The Provincial Bank supplied a real need, and secured the position of the Central Banks, now increased to 20. The number of societies affiliated to the Central Banks rose from 888 to 1,066. 204 new agricultural societies were registered, but no new society was allowed where the working of the Central Banks was not quite satisfactory. This showed marked improvement, and it is hoped the adoption of a regular system will in time be effected. Co-operation is still not known in parts of the province.

Assam.—Scarcity of money owing to floods, bad harvests, and cattle mortality, a certain unwillingness to invest, and inadequacy of staffs for supervising, rendered progress somewhat slow; but the number of societies increased from 301 to 315, and

(Co-operative Societies.)

membership from 16,022 to 17,981. With few exceptions, all showed profit on the year's working. The Jaintia societies are being wound up.

United Provinces.—The improvement in the financial position of the central societies (58) continued; all, with two exceptions, worked at a profit. The number of agricultural primary societies rose from 2,716 to 2,949; that of non-agricultural fell from 188 to 182. The total number of societies rose from 2,962 to 3,189, and membership from 116,283 to 118,864.

Punjab.—Progress, though substantial, was again checked by poor harvests and the inadequacy of the inspecting staff; proposals have been submitted to Government to increase the number of inspectors to 19. The number of societies increased to 3,393, with 148,043 members and a working capital of £1,370,895.

Central Provinces and Berar.—The number of societies increased from 2,297 to 2,685, membership from 44,084 to 60,538, and working capital from £484,088 to £580,612. Of 509 applications for the registration of new societies, 452 were accepted. The registration of 64 was cancelled. The Provincial Bank's deposits and reserve fund increased, and a 4 per cent. dividend was declared; the deposits with it from Central Banks increased from £11,285 to £31,576. One of the most satisfactory features of the year was the growth in strength of the Central Banks.

Burma.—After two years of consolidation, expansion was permitted, and the number of societies rose from 1,490 to 2,251, their membership from 39,134 to 51,356, and working capital from £565,123 to £712,114. The number of cattle insurance societies increased from 63 to 305, an excellent result in view of the extraordinary immunity from serious disease. Agricultural societies increased from 1,252 to 1,685, and with a few exceptions have been affiliated to unions, the number of which increased from 113 to 189. No great progress was made with urban societies. The Upper Burma Central (Provincial) Bank was satisfactorily managed, but showed a loss; the three district Central Banks would have been more successful had paddy prices been higher; the unions performed their well-defined duties well and showed themselves the mainspring of the movement. Colonisation on co-operative lines, though needing more control, made progress. Model byelaws for district associations, where co-operative societies are numerous, were prepared, and two associations were formed. Conferences were held in 14 districts.

Bombay.—The total number of societies increased by 18 per cent.; members by 24 per cent., and working capital by 19 per cent. A departmental conference was held at Poona on 16th March, under the presidency of the Director of Agriculture, and district conferences were also held. The Bombay Central Co-operative Bank emerged with credit from a year of some financial vicissitudes and considerable criticism. The turn-over of all five Central Banks was satisfactory, and steps have been taken to extend their number. Though in Sind the co-operative movement is still backward, the number of societies increased from 19 to 29, and they were soundly managed.

Coorg.—Societies continued to work satisfactorily; no new ones were registered.

(Forests.)

CHAPTER VII.—FORESTS.

(For further details see *Statistical Abstract of British India*, Tables 45 to 47, 59, 60, and 123.)

General.—The State forests are classified as “reserved,” “protected,” or “unclassified.” The reserved (including leased) forests, in which the control of the Forest Department is most complete, cover an area of about 97,600 square miles. Outside the reserves there are about 142,000 square miles of unclassified forests, including large tracts of unoccupied waste, and 10,400 square miles of protected forests. Forest revenue is raised by royalties on, or by the sale of, timber or other produce, and by the issue at specified fees of permits to graze cattle, or to extract for sale timber, firewood, charcoal, bamboos, canes, and minor forest produce. The gross revenue derived from forests in 1915-16 was £2,074,425, including £437,386, and £1,501,588 received for timber and other produce removed from the forests by Government agency and by consumers (or purchasers) respectively. The charges amounted to £1,242,867, leaving a net revenue of £831,558.

The following paragraphs treat of forest administration in each province for the forest year ending 30th June 1916.

Delhi.—On the Northern Ridge 395 acres were declared a reserved forest; on the Southern the experimental area was extended and maintained, and a complete scheme of afforestation was approved by the Government of India.

Bengal.—The yield of timber decreased to 5,881,098 cubic feet, that of fuel to 12,986,075. Net receipts rose to £38,930. Fire protection and detection of forest offences improved. 39 elephants were captured in the Tista division, 19 in Chittagong.

Bihar and Orissa.—Fire protection succeeded in 96·12 per cent. of the 1,112,147 acres protected, as against 88 per cent. Outturn of timber fell to 1,340,273 cubic feet, that of fuel to 16,414,357. Net revenue rose to £12,526. The percentage of forest under permanent management, 2 per cent. of the province, remains inadequate.

Assam.—The revised treatment of *sal* forests met with disappointing results. Elephant hunting was unusually successful; 279 were caught in the Goalpara-Bhutan Mahals, 124 in the Sibsagar division. The outturn of timber was 4,211,116 cubic feet, that of fuel, 7,544,465.

United Provinces.—Of 2,475,530 acres under fire protection only 89·9 per cent. were successfully protected as against 99·08. The outturn of timber was 8,838,559 cubic feet, that of fuel, 15,027,618. 1,200 gallons of turpentine and 1,300 maunds of rosin were exported to Java. The surplus revenue rose to £77,284.

Punjab.—The outturn of timber was 9,518,885 cubic feet, that of fuel, 29,822,252. Fire protection was extended to 687,103 acres, but percentage of area burnt dropped from 4·92 to 2·45. Net revenue rose to £53,015.

North-West Frontier Province.—36·5 of the fire-protected area was burnt in 1914-15, the latest year for which information is available, as against 3 in the previous year. The outturn of timber and fuel decreased; receipts and surplus decreased.

Central Provinces.—The outturn of timber fell to 7,154,911 cubic feet, that of fuel to 25,672,903. Net revenue again increased, reaching £101,715. Forest offences increased.

Burma.—The aggregate area of forest reserves rose to 28,566 square miles, that of unclassified fell to 113,755. A cyclone did much damage in Arakan. Teak planting was carried out in Arakan and Katha divisions. 315,239 tons of teak were extracted.

Madras.—The 76 forest panchayats managing about 56 square miles of land were increased to 147 managing nearly 210, and a Forest Village scheme was also started to encourage activity in the protection of the forest. There was a slight increase in forest offences, and a considerable rise in the percentage of failure of fire protection. The outturn of timber declined to 3,933,039 cubic feet, that of fuel to 19,874,951 cubic feet. Revenue and expenditure decreased and surplus increased.

Bombay.—There was a substantial increase in the forest revenue of the Southern Circle, and a smaller increase in that of the Northern Circle. In the Central Circle and Sind revenue decreased. The area of forest burnt decreased in the Northern and Southern Circles, but increased in the Southern and Sind Circles.

Coorg.—Efforts to promote natural and artificial reproduction of teak and sandal met with noteworthy success. Revenue and surplus were the highest on record. 380 tons of sandalwood were sold for £22,953, the highest price per ton obtained, except in 1913-14.

CHAPTER VIII.—MINERAL PRODUCTION AND MINING.

For further details see Statistical Abstract for British India, Table 218; also Quinquennial Review of Mineral Production for the years 1909 to 1913 and Report for 1915 in Records of Geological Survey, Vols. XLVI. and XLVII.)

Mineral Production.

General.—The value of the total production rose by 7 per cent. from £9,945,636 to £10,649,512. Only a few mining industries were adversely affected by the war, and many profited by enhanced prices. The production of coal was valued at £3,781,064, of gold at £2,369,486, petroleum at £1,256,803, manganese ore at £929,546, and salt at £660,254. No other mineral exceeded half a £.million.

Coal.—Production increased to 17,103,932 tons, of which 4,975,460 were raised in Bengal and 10,718,155 in Bihar and Orissa, the Jharia coal-field contributing 53·44 and the Raniganj 32·07 per cent. of the total. The prices at the pit's mouth in Bengal and Bihar and Orissa were 4s. 6½d. and 3s. 11½d. respectively. Exports rose from 577,944 to 751,801 tons, of which Ceylon took 554,885, and the Straits Settlements 99,363. The total number of persons employed rose to 160,086.

Gold.—Production rose from 607,388 to 616,728 ounces, of which 571,199 came from Mysore.

Iron Ore.—The production fell from a little under 442,000 tons to about 390,000, mostly derived from Bihar and Orissa. Manufactures amounted to 343,783 tons, and 2,658 tons of ferro-manganese were produced.

Petroleum.—Production, which had fallen by 7 per cent. in 1914 to about 259 million gallons, rose to a little over 287 million. For the first time an appreciable amount was returned from the Punjab, borings by the Attock Oil Company in the newly discovered field at Khaur producing ¼ million gallons.

Manganese.—This was one of the minerals adversely affected by the war, and production decreased from 683,000 to 450,000 tons, or 34 per cent.; the quantity exported falling from about 538,000 to less than 420,000 tons, or only a little more than half the quantity exported in 1913.

Salt.—Production rose from 1,348,225 to 1,745,521 tons, or nearly 30 per cent. Of this 179,792 tons was rock salt.

Saltpetre.—Production rose from 15,489 to 18,098 tons. Exports increased 46 per cent. About 70 per cent. of the quantity exported went to the United Kingdom.

Mica.—Production decreased from 40,506 cwt. to 27,139 cwt., or about 30 per cent. 22,195 cwt. were produced in Bihar and Orissa.

Wolfram.—The output increased from 2,326 to 2,645 tons. Steps taken by Government to develop the mines at Tavoy in Burma, the chief source of the world's supply, are expected greatly to increase output.

Rubies.—The output of the Burma Ruby Mines decreased from a little under 305,000 carats, valued at £43,000, to a little over 251,000 carats, valued at £36,300.

Other Minerals.—The production of lead, copper, silver-lead ore, and tin ore increased. The monazite industry at Travancore was found to contain considerable enemy interests, which were eliminated, and, after a period of disorganisation, its working is now placed on a satisfactory basis.

Mining Concessions.

The number of concessions granted in Government lands fell from 363 in 1914 to 307 in 1915 (261 prospecting and 46 mining leases).

Rights in respect of petroleum and of certain metals of importance in the manufacture of armaments may be granted only to British subjects.

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

Inspection of Mines.

The Indian Mines Act, 1901, applies to the whole of British India. The number of mines coming under the Act in 1915 was 1,121, employing 180,088 persons. There were 163 fatal accidents causing 188 deaths, as against 152 causing 191 deaths in 1914. There were 34 prosecutions in which 29 persons were convicted.

(Government and Industrial Development.)

CHAPTER IX.—MANUFACTURES.

(For further details see Statistical Abstract for British India, Tables 214 to 217.)

Government and Industrial Development.

The movement for promoting home industries, known as the *swadeshi* movement, has, in its legitimate forms, received official support. Measures have been taken to restore and develop technical trades and industries. Scholarships for the higher commercial and technical training of Indians abroad are offered by the Government and by private associations. Industrial conferences are held, some convened by the Local Governments, and others non-officially, such as the annual Indian Industrial Conference.

It had been decided to appoint a commission, to consider the question of the expansion and development of Indian manufactures and industries, and its composition was in process of completion at the close of the year under review.

Large Industries.

Cotton and jute are by far the most important of the larger industries. The following figures (for British India only) show their rapid progress in recent years.

Cotton Mills.—Of the 238 cotton mills at work in British India in 1915-16 Bombay City contained 86 and Ahmedabad 62.

Year.	No. of Mills.	Paid-up Capital.	Looms.	Spindles.
		000 £		000
1908-9	212	12,604	69,791	5,624
1912-13	241	13,776	85,676	6,101
1913-14	239	11,797	90,268	6,209
1914-15	233	12,270	96,869	6,209
1915-16	238	12,147	101,017	6,263

The number of persons employed was 271,913. The industry is to a large extent in the hands of Indians, and the capital is almost wholly rupee capital. In 1911-12 trade revived after temporary depression, and production in the next two years was at a high level. A further depression began at the close of 1913, and several mills stopped in 1914.

The outbreak of war increased the difficulties of the trade, especially in regard to dyes, chemicals, and coal supply, and some of the Bombay spinning mills went into liquidation in September 1915.

Although the trade in twist and yarn increased by 20 per cent. in quantity and 10 per cent. in value in 1915-16, it was still much below that of 1913-14. Bombay Presidency possesses 70.1 per cent. of the mills, 70.6 per cent. of the spindles, and 78.6 per cent. of the looms; it contributed 70.6 per cent. of the total output of yarn as against nearly 73 per cent. in 1914-15, and accounted for nearly 95 per cent. of the total exports abroad, the remainder being supplied by Madras (3½ per cent.) and Bengal (1½ per cent.). The outturns of yarn and of woven goods were the highest ever recorded. The exports of cotton piece goods increased by 69 per cent. in quantity and 55 per cent. in value. Cheap cotton blankets, &c. were manufactured during the year by Indian mills to replace those formerly imported from Germany.

The outturn of yarn and cloth in recent years in British India is shown in the table below.

Year.	Counts Nos. 1 to 25.	Counts above No. 25.	Total Output of Yarn.	Grey Cloth.	Other kinds.	Total Output of Cloth.
Average :	Million Lbs.	Million Lbs.	Million Lbs.	Million Lbs.	Million Lbs.	Million Lbs.
1901-2 to 1905-6	537.4	39.9	577.3	109.9	25.0	134.9
1906-7 to 1910-11	555.4	53.6	609.0	154.1	40.0	194.1
Year 1911-12	531.7	59.2	590.9	193.0	59.1	252.1
1912-13	589.1	61.5	650.6	196.1	71.5	267.6
1913-14	582.7	61.5	644.2	188.5	67.9	256.4
1914-15	557.1	57.9	615.0	198.3	59.9	258.2
1915-16	624.5	58.7	683.2	249.6	81.2	330.8

Iron and Steel Works.—The development of the iron or steel industry practically began in 1875 by the Barakar Iron Works Company, formed into the Bengal Iron and Steel Company, Limited, in 1889, whose operations have developed and progressed rapidly. The Tata Iron and Steel Company, Limited, floated in 1906, have gone even further in the development of the industry. Prior to 1915 the output of steel from these works was converted into rails and structural sections to the British standard specification; recently over 85 per cent. of the output has been commandeered for

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munition steel. The Indian production is said to be sufficient to supply the present requirements of India and to leave a fairly large tonnage available for the markets of Australia and the Far East, where it is beginning to command favourable prices. In 1915 the Tata Company produced 154,509 tons of pig-iron and 76,355 tons of steel (including 16,817 tons of steel rails), while the Bengal Company produced 87,285 tons of pig-iron and 25,634 tons of iron castings. The total production rose from 504,564 to 584,775 tons. In October 1915 one of the Tata Company's blast furnaces was put on ferro-manganese and produced 2,658 tons by the end of the year.

Jute Mills.—While the cotton mills are mainly situated in Western India, jute mills are nearly all concentrated in the vicinity of Calcutta, and are mostly in the hands of British firms. The jute industry has enjoyed almost uninterrupted and increasingly rapid progress, the number of looms and spindles having nearly doubled in the last decade. The demand for sandbags, &c., in 1915-16, brought jute a year of unique prosperity, and the mills increased production from 10 to 20 per cent. The number of persons employed was 254,143.

Year.	No.	Paid-up Capital.	Looms.	Spindles.
		000£	000	000
1903-4	38	4,954	18	377
1908-9	56	7,413	29	607
1912-13	61	7,977	34	709
1913-14	64	8,137	36	744
1914-15	70	8,058	38	796
1915-16	70	8,158	40	812

General.—There were 5 woollen mills at work at the end of 1915, containing 1,104 looms and 38,876 spindles, and producing goods valued at about £763,200 for the year. The growth of the industry is slow, but steady. There were 9 paper mills, producing during the year about 30,400 tons of paper, valued at £597,466. There were 18 breweries, which produced 2,532,933 gallons of beer. Silk filatures are found chiefly in Bengal and indigo and lac factories in Bihar and Orissa. Flour mills are most numerous in the Punjab, Bombay, and Bengal, and sugar factories in the United Provinces, Madras, and Bihar. Rice mills and saw mills (for teak) are numerous in Burma. They are mainly in European hands. Printing presses are numerous in Bengal, Bombay, and Madras. Iron and brass foundries (including engineering workshops) numbered 30 in Bengal and 22 in Bombay in 1914.

Factory Legislation and Inspection.

Act XII, of 1911, regulates the working of factories in India. It extends to all factories employing 50 hands and upwards in any part of the year, and may by order of any Provincial Government be extended to factories employing 20 hands and upwards. The Act was operative throughout British India in 1914 (the latest year for which information is available). A commendable effort was made by all concerned to ameliorate the conditions of factory life, the inspecting staff receiving the active co-operation of mill managers and agents. The staff of factory inspectors has been recently increased to 14. A separate staff is appointed for the inspection of steam boilers. The total number of factories returned in 1914 as registered under the Act was 2,936, including those belonging to the State and local bodies. The average number of hands employed daily was 951,000 including 144,000 women and 60,000 children. Of the 4,929 accidents reported most were not serious and many were not due to contact with machinery. There were 162 convictions for breaches of the Act, of which 56 were in the Central Provinces and Berar, 24 in Bombay, and 30 in the Punjab. The offences were chiefly the irregular employment of women and children and the failure to send in the prescribed returns, &c. The sanitary condition of the factories and the health of the operatives were generally good.

Patents and Designs.

A new Patent and Designs Act was passed in March 1911, providing a more effective procedure in regard to patents and reducing the fee for the registration of designs. It gives better protection to inventor and public. Of 445 applications in 1915 for leave to file specifications 334 were accepted. Of these applications 70 came from Indians and 105 from other residents in India. The subjects of the patents applied for in 1915 were chiefly chemical appliances and preparations, railways, electric contrivances and bicycles. Applications for registering copyright in designs fell from 1,440 to 904.

(Foreign Seaborne Trade.)

CHAPTER X.—TRADE.

(Detailed information regarding the Trade of British India is annually furnished in three Parliamentary Bluebooks: Tables of the Trade of British India, Review of the Trade of India, and Statistical Abstract for British India, Tables 134 to 172.)

Foreign Seaborne Trade.

The foreign seaborne trade of India has greatly increased during the last 15 years,

Year.	Imports.	Exports of Indian Merchandise.
Average—	000£	000£
1900-1 to 1904-5 -	55,745	87,336
1905-6 " 1909-10 -	77,281	111,874
For the year 1910-11 -	86,236	137,081
" 1911-12 -	92,383	147,879
" 1912-13 -	107,332	160,899
" 1913-14 -	122,165	162,800
" 1914-15 -	91,953	118,320
" 1915-16 -	87,560	128,356

as the marginal figures relating to private merchandise show (values in thousands of pounds at 15 rupees to the pound). In 1914-15, owing to the war, there was a decline as compared with 1913-14 of 24·7 per cent. in the imports and 27·3 per cent. in the exports. In the year under review this had still further increased to 28·3 and 21·2 respectively as compared with 1913-14. But whereas re-exports had in 1914-15 declined by 12·2 per cent., in 1915-16 they were 3·6 per cent. higher than in 1913-14.

The total trade (including re-exports, treasure, and Government stores) amounted to £238 millions as against £236 millions in 1914-15, and £327 millions in 1913-14, when the highest figure was attained.

Trade and the War.—Trade adjusted itself successfully to war conditions. There was no recurrence of the difficulties caused by its outbreak; railway earnings, a valuable indication of the general movement of trade, increased by 5 per cent., and the exchange position was satisfactorily maintained, in spite of many anxieties and the ill-effects upon trade prosperity of a not very favourable monsoon. The necessity of restricting and controlling trade to the advantage of the Allies by means of Government intervention increased rather than diminished.

Principal Imports and Exports.—The marginal table shows the values of the chief

Imports.	1914-15.	1915-16.
	000£	000£
Cotton goods (including twist and yarn).	32,666	28,850
Metals - - - - -	9,170	7,434
Sugar - - - - -	7,015	11,079
Railway material - - -	6,722	2,812
Machinery and millwork -	4,027	3,185
Mineral oils - - - - -	2,938	2,676
Hardware - - - - -	1,707	1,587
Woollen goods - - - - -	1,256	639
Silk manufactures - - -	1,293	1,839
Provisions - - - - -	1,405	1,408
Liquors - - - - -	1,218	1,249
Spices - - - - -	1,146	1,248

articles of merchandise imported and exported during the last two years. The expansion in the export trade compares very favourably with the condition of the import trade. While the increase in the exports of jute, raw hides, and skins is noteworthy, and those of tea, gunny bags and cloth, and raw wool reached a record figure, India's import trade declined more than that of any other country for which figures are available, with the exception of Russia.

Trade by Countries.—Imports are classified according to the countries whence they are consigned to India, and exports according to the countries to which they are consigned, i.e., to the countries of final destination so far as known.

Exports (Indian Merchandise).	1914-15.	1915-16.
	000£	000£
Cotton, raw - - - - -	22,326	16,619
Rice - - - - -	11,439	10,303
Jute, raw - - - - -	8,607	10,428
" manufactures - - - -	17,213	25,319
Seeds - - - - -	9,769	6,748
Wheat and wheat-flour -	6,159	6,374
Hides and skins - - - -	8,385	10,260
Tea - - - - -	10,352	13,321
Cotton manufactures - -	5,340	6,404
Wool, raw - - - - -	1,579	2,527
Lac - - - - -	1,070	1,145
Coffee - - - - -	1,102	658

The share of the United Kingdom in the total trade of 1913-14 in private merchandise was 40·7 per cent.; Italy, 2·3; Russia, 6; of France, 4·8; of the United States, 6·2; of Belgium, 3·8; of Japan, 6·4. The corresponding percentages for 1915-16 were: United Kingdom, 46·6; Italy, 3·4; Russia, 1·7; France, 3·5; United States, 8·8; Belgium, 1, and Japan, 7·9. Taking imports and exports separately for 1915-16, 59·4 per cent. of the import trade (exclusive of Government stores) and 38 per cent. of the export trade were conducted with the United Kingdom.

(Foreign Seaborne Trade.)

Treasure.—The net import of gold, which fell from £15,550,000 in 1913-14 to £5,093,333 in 1914-15, was changed into a net export of £773,333. Only three times in the previous 40 years has there been a net export of gold from India. Of the total exports the United Kingdom received £2,026,666 and Japan £2,120,000. The net import of silver fell from £5,914,000 to £3,220,000.

Shipping and Freights.

During 1915-16 the number of steamers and sailing vessels with cargoes and in ballast which entered from and cleared to all countries was 8,634, with a tonnage of 12,152,302 as compared with 7,960 with a tonnage of 12,857,885 in 1914-15. The figures do not include the large number of transports hired by Government owing to the war. Of the total, 98 per cent. was steam tonnage. Tonnage under the British flag represented about 83 per cent. of the whole. Of foreign nationalities Japan had the largest share, followed (in order of tonnage) by Norway, Holland, Italy, Russia, and Sweden.

Freights, which were low when war broke out, by the end of March 1916 were about 12 times the pre-war rates and more than twice the rates prevailing in March 1915.

Land Frontier Trade.

The statistics of land frontier trade shown in the margin include a great deal of trade that is not strictly foreign. Owing to difficulties of registration accurate returns are impossible, but there is a considerable trade with

Year.	Imports.	Exports.	Total.
	000£	000£	000£
1912-13	7,660	6,986	14,646
1913-14	8,013	6,280	14,293
1914-15	7,627	6,327	13,954
1915-16	7,893	6,333	14,227

Afghanistan, Nepal, Western China, Tibet, Bhutan, and Siam. The principal exports from India are cotton yarn and manufactures (chiefly foreign), metals, and provisions; and the chief imports into India rice and other grains, provisions, fruits, living animals, wool, hides and skins, oilseeds, and timber.

Joint Stock Companies.

(See also *Statistical Abstract for British India, Tables 212-3.*)

Partly owing to the war, and partly to the stringent provisions of the new Indian Companies Act of 1913, which came into force in April 1914, there had been a great decline in the formation of companies in 1914-15, only 107 with an authorised capital of £2,630,000 being registered in that year as compared with 345 with a capital of £44,270,000 in 1913-14. In 1915-16 the number of new companies registered increased to 126, with an authorised capital of £4,710,633. Since the outbreak of war there has been a steady increase both in the paid-up share capital and in the debenture capital of companies registered under the Indian Companies Act (VII. of 1913).

(Note.—Statistics of the working of the Merchandise Marks Acts hitherto given will be found in the *Statistical Abstract for British India, Table 183.*)

(General.)

CHAPTER XI.—PUBLIC WORKS.

General.

The operations included under the head of "Public Works" comprise Railways, Irrigation, and "other Public Works (Civil)." The Railway Department is under the control of the Government of India, exercised mainly through the Railway Board. The establishment employed on irrigation and on other public works (chiefly buildings and roads) is subdivided according to provinces, and controlled by the local administrations, in subordination to the Supreme Government. The strength, on 30th June 1916, of the superior engineer and upper subordinate establishments was 191 and 64 respectively for railways, and 761 and 1,197 respectively for irrigation, buildings, and roads, &c.

The annual expenditure on public works is met partly from money raised by loan and partly from the ordinary annual revenues. Borrowed money is expended mainly on railways and the large irrigation works, which are expected to yield sufficient net revenue to cover interest on the capital expended on them.

Railways.

(For further details see Annual Administration Report on the Railways in India and Statistical Abstract for British India, Tables 44 to 47, 68-9, 71, 74 to 78, 124 to 132.)

Finance.—In the financial year 1915-16 there was a net capital expenditure on railways of £4,777,182 for construction, rolling stock, &c. Of the permanent public

	India.	England. (Sterling converted at £1 = Rs. 15.)	TOTAL.
REVENUE.			
Railways—	£	£	£
State railways—(Gross traffic receipts)	38,173,243	2,950	38,176,193
Deduct:			
Working expenses	19,686,677	—	19,686,677
Surplus profits paid to companies	603,827	—	603,827
Net receipts	17,882,739	2,950	17,885,689
Subsidised companies—(Government share of surplus profits and repayment of advances of interest).	19,892	71,522	91,414
Total	£ 17,902,631	74,472	17,977,103
EXPENDITURE.			
Railway Revenue Account—			
State Railways—			
Interest on debt	4,266,440	3,657,230	7,923,670
Annuities in purchase of railways	—	3,357,691	3,357,691
Sinking funds	—	208,893	208,893
Interest chargeable against companies on advances.	17,703	81,250	98,953
Interest on capital deposited by companies.	58,736	2,073,126	2,131,862
Subsidised companies—			
Land, &c.	162,709	—	162,709
Miscellaneous railway expenditure	17,887	—	17,887
Total	£ 4,523,475	9,378,190	13,901,665

debt on 31st March 1916, £234,360,133 was on account of railways. The marginal table, taken from the Finance and Revenue Accounts of the Government of India, shows the railway revenue and the expenditure charged to revenue for 1915-16. The net gain to the State was £4,075,438. Expenditure includes all charges for interest on capital outlay. According to actuarial calculations the figures for "Annuities in purchase of railways" in 1915-16 may be divided into interest £2,428,265 and capital redeemed £929,426. The figures also include

charges for land required by the companies, and for miscellaneous items, such as headquarters establishment and surveys.

The aggregate gross earnings of all Indian railways, including steamboat service and suspense items, but excluding indirect charges, amounted to £43,106,933, the working expenses to £21,946,333, and the net earnings to £21,160,600. The return on the total capital outlay on open lines, amounting on 31st March 1916 to £353,321,933, was 5.99 per cent. as against 5.33 per cent. for 1914-15.

The length of line open on 31st March 1916 was 35,833 (of which 26,320 miles represented State lines), an increase of 548 miles since 31st March 1915. The mileage under construction or sanctioned for construction at the end of 1915-16 was 2,374. The number of passengers carried in 1915-16 was 476,000,000.

(Railways.)

of goods, 89 millions, showed an increase due to the revival of traffic and the recovery of trade after the outbreak of war.

Important Works completed and in progress.—During the year it became necessary to effect all possible retrenchment instead of endeavouring to utilise to the full the Budget allotment of £8 millions which had originally been granted. As a result, a number of works were suspended or retarded, renewals of permanent way were generally reduced, and replacements of rolling stock severely curtailed. Large quantities of rolling-stock and permanent-way materials were supplied from India to meet military requirements in the various theatres of war. Some 350 civil officers and over 2,000 subordinates have also been released for military service. Full particulars of works completed and in progress during the year, and of projects for new lines, are given in the Administration Report on Indian Railways for 1915-16. A few details of the principal works of the year are given below.

Of the lines opened for traffic, three only were constructed from funds supplied under the Government Railway Programme, viz., the Bokharo-Ramgarh extension of the Bengal Nagpur Railway, 21½ miles, to serve the Bokharo-Jherria and Bokharo-Ramgarh coalfields, the Samastipur-Khagaria chord of the Bengal and North-Western Railway, 53 miles, and the Guntur-Tenali chord of the Madras and Southern Mahratta Railway, 16 miles. Other lines constructed from capital raised in India included the Podanur-Pollachi Railway at the cost of the Coimbatore District Board, the Sialkot-Narowal, Mandra-Bhoun, Jullundur-Mukerian, Phagwara-Rahon and Murtajapur-Yeotmal lines under Branch Line Terms, and branches of the Jodhpur-Bikaner and Baroda State Railways by the Native States concerned. The hill section of the Assam-Bengal Railway was badly damaged by floods, but steps were taken for the necessary repair work to be carried out as expeditiously as possible.

Rolling-Stock.—Additions during the year were considerably curtailed owing to the restrictions on capital expenditure.

An "all steel" passenger train was brought into use on the Great Indian Peninsula Railway. The satisfactory results obtained with superheater engines has decided many railway administrations to fit all engines for main-line work with superheaters.

Final trials with oil fuel are now in progress.

Accidents.—The number of passengers killed during 1915-16 was 247, and the number injured 821. Of railway servants 433 were killed and 796 injured.

Railway Staff.—The total number of railway servants at the end of 1915-16 was 626,580, including 7,273 Europeans, 10,412 Anglo-Indians, and 608,895 Indians.

Branch Line Companies.—The Branch Line Terms are now well known and have led to satisfactory results throughout India. The prevailing financial stringency had not in any material degree adversely affected the business of these companies.

District Boards' Lines.—The District Boards of Madras Presidency continue to make greater use of their facilities for borrowing. No other province has, however, so far embarked on this form of local enterprise or enacted legislation for the levy of a railway cess.

Irrigation.

(For further details see *Statistical Abstract for British India*, Tables 44-7, 68-9, 71, 74 to 76, 119, and 133.)

Irrigation works may be roughly divided into canals and tanks, though these are frequently combined. Canals have been utilised on the largest scale and with the most successful results in the United Provinces, the Punjab and Sind, and the deltas of the large rivers in the Madras Presidency. Tank irrigation is the common system in Madras, Bombay, and the Central Provinces.

Financially considered, irrigation works are classed as "major" or "minor," the former class including those undertaken from borrowed money, in the expectation that they will yield sufficient net revenue to cover the interest on the capital expended. It also includes the works classed as famine protective, which are constructed not from borrowed funds, but out of revenue, mainly from the annual grant for famine relief and insurance. The capital expenditure on construction not charged to revenue in 1915-16 was £812,953. The expenditure on construction charged to the famine grant was £500,193. This was supplemented by a further grant from revenue, which amounted to £12,632 in 1915-16. The cost of constructing the "minor" works, as well as the annual expenditure on their working and maintenance, are met from ordinary revenues, and for most of these works distinct capital and revenue accounts are not kept.

(Irrigation.)

According to the Finance and Revenue Accounts of the Government of India the revenue from irrigation works in 1915-16 was £4,779,079, including £2,737,991 for direct receipts from "major" works, £1,773,720, portion of land revenue due to irrigation, and £267,368 from "minor" works and navigation. The expenditure charged to revenue was £3,721,096, including £1,374,920 for working expenses, £1,453,350 for interest on debt, the revenue grant of £12,632 for protective works, and £822,194 for minor works and navigation. Of the permanent public debt on 31st March 1916 £42,456,326 was on account of irrigation.

The area irrigated in 1915-16 by all classes of irrigation works for which capital and revenue accounts are kept was 17,340,633 acres, but the total area irrigated by all Government irrigation works was approximately 25,250,000 acres. The capital outlay (direct and indirect) to the end of the year was £37,472,116 on productive major works, £6,091,150 on protective major works, and £2,851,300 on minor irrigation works for which both capital and revenue accounts are kept. The net receipts on capital outlay for these three classes were 8·07, 0·49, and 7·58 per cent. respectively.

There are great differences in the financial success of the irrigation works in the various provinces. These are due to physical conditions, such as surface, soil, climate, and the absence or presence of large rivers with a permanent supply of water, as well as to differences in the character and habits of the people. There are also considerable differences in the manner in which the irrigation revenue is assessed and collected, which have an important bearing on the financial success of the works.

Efforts have been made to organise navigation services on some of the larger irrigation canals, without much success. A few canals which have been constructed for navigation purposes only are dealt with below.

The following are the chief features of the irrigation operations for 1915-16 in the different provinces:—

Bengal.—The major works in Bengal are the Midnapur Canal, for irrigation and navigation, and the Hijili Tidal Canal for navigation only. These canals made a slight profit in 1915-16, but the minor works for navigation purposes were, as usual, worked at a loss. There was an increase of traffic on account of the better outturn of crops in the area served by these works.

Bihar and Orissa.—In 1915-16 the Orissa and Sone canals, both of which are major productive works, for irrigation and navigation, irrigated 816,000 acres, a decrease of 92,500 acres as compared with 1914-15, due to the seasonable rainfall. The net revenue amounted to £83,333, but was insufficient to cover the interest charges, which exceed £120,000. While the Sone canals are now beginning to pay off the accumulated interest, the Orissa canals are never likely to do so. The Tribeni and Dhaka canals, protective irrigation works, recently completed, irrigated 60,700 acres, a decrease of 26,600 acres as compared with 1914-15. The minor works include a navigation canal, the Orissa Coast Canal.

Bombay, including Sind.—The deficient rainfall in Gujarat seriously affected the supply of water in the Hathmati and Khari systems and the area irrigated was only a tenth of the decennial average. In Sind the inundation of the Indus was exceptionally low. In Bombay proper, irrigation was less than usual owing to favourable rains. The Godavari canals and the Pravara Right Bank Canal were practically completed. Good progress was made on the Pravara Left Bank Canal and the Nira Right Bank Canal.

Burma.—The year was a prosperous one from an irrigation point of view; the area irrigated increased, the net revenue rose from £20,000 to £66,700, and the return on capital from 1·31 to 3·7 per cent. Good progress was made on the Ye-u canals. The working of the navigation canals yielded a small profit. The Sittarg-Kyaikto Canal was breached by erosion and abandoned. Progress on the Twante Canal continued, though the work has been somewhat delayed by the transfer to Mesopotamia of one of the dredgers employed on it.

Central Provinces and Berar.—The monsoon was favourable, but the area under irrigation slightly increased. The main canal of the Mahanadi project was pushed on towards completion, and irrigation operations from this work were commenced. The Weinganga Canal was approaching completion at the end of the year.

Madras.—The outlay incurred on irrigation works amounted to over £540,000, a decrease of £47,000 on the previous year, but the total area irrigated by all classes of works increased by about 200,000 acres, with a consequent increase in revenue of £78,000. The expenditure on capital account was incurred mainly on the Mopad and

(Irrigation.)

Bhavanasi Protective Works and on the Godavari and Kistna delta systems, the Kurnool-Cuddapah Canal, the Toludur project, and the Cauvery delta system. Progress continued to be made with the tank restoration scheme.

North-West Frontier Province.—Irrigation generally was restricted by want of water owing to the dryness of the year. The total area irrigated, however, showed an increase, mainly owing to the development of operations on the Upper Swat River Canal, which showed an increase in the area served from 7,304 to 78,506 acres. Construction work, though somewhat restricted, was continued on the Upper Swat River Canal, mainly on the Benton tunnel through the Malakand range.

Punjab.—The area irrigated was 8,884,811 acres, a slight decrease on the record of the previous year, due to drought and abnormally low supplies in the rivers. The net revenue from major works was £1,577,219, representing a return of 10·9 per cent. on capital outlay. The Upper Bari Doab, Lower Chenab, Lower Jhelum and Sidhnai Canals, and the Upper Sutlej Inundation Works continued to show excellent results. The year witnessed the realisation of the great Triple Canal Project, the Upper Jhelum Canal, after an unforeseen delay, being opened for irrigation. No irrigation was, however, done by this canal during the year, which accounts to some extent for the deficit in the income anticipated. A rapid expansion is, however, now expected. About £14,460,000 of Imperial funds has now been invested in the Punjab Major Canals.

United Provinces of Agra and Oudh.—The capital expenditure for the year exceeded £180,000. Progress was made with the Gorai Canal and with the construction of the new weir for the Ganges Canal at Bhimgoda. Under protective works, the Ghorri Canal, and the Majhgawan tank were practically completed. The financial results of the works in operation continued to be satisfactory. The important scheme for the Sarda-Kichha feeder and its adjunct the Oudh Canal was under consideration. The estimate for the former amounts to £1,333,000.

Buildings and Roads and other Public Works (Civil).

(For further details see *Statistical Abstract for British India, Tables 44-7 and 74.*)

This section embraces all operations of the Public Works Department other than Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of government buildings and many miscellaneous works of public improvement, such as lighthouses, harbours, embankments, boat bridges, ferries, and the water supply and sanitation of towns. The extension of local self-government has thrown a large portion of the smaller class of public works into the hands of the Local Boards, which generally maintain their own establishments, but in the case of any works of unusual difficulty have recourse to the professional skill of Public Works officers.

The operations of this branch are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The expenditure for 1915-16 amounted to £5,450,464, of which £822,182 was Imperial and £4,578,138 Provincial, while £50,144 was for expenditure in England. In addition £33,780 was expended by Civil officers from Imperial Funds. Receipts amounted to £304,035.

The following short account of Civil Works shows the most important works carried out during 1915-16 in the different provinces.

Delhi.—The capital expenditure on the new Imperial Capital during 1915-16 amounted to £331,274, and was incurred mainly on preliminary work and on buildings and communications in progress. The total expenditure up to the end of the year was £1,258,655.

In Delhi Province the expenditure from all sources amounted to £116,550, and covered the construction of a Durbar Memorial pillar, new police stations in the city and in the new cantonment, improvements to the Government of India camps, maintenance of water supply in the temporary capital, and other miscellaneous public improvements.

Bengal.—The salt *golas* and post office at Chittagong were practically completed. Work was in progress on a number of administrative offices, courts, jails, police barracks, colleges and schools, hospitals, &c. The improvement of many roads in the Duars was also in progress. A commencement was made in preparing the lay-out of the Victoria Memorial Gardens, Calcutta.

Bihar and Orissa.—In connection with the project for the new capital at Patna, the High Court building was completed and considerable progress was made with the construction of Government House and the Secretariat. A number of residences and

(Buildings and Roads and other Public Works (Civil)).

quarters for officers and clerks was also completed. A Judge's Court at Purulia, Jail Hospitals at Daltonganj and Ranchi, and a Training College at Bankipore, were completed. Progress was made with the Asylum for European lunatics at Kankey.

Assam.—The total expenditure on provincial civil works during the year amounted to £238,000. Of this £48,000 was spent on new buildings. New roads and bridges cost £32,600, while £84,000 was spent on the maintenance of existing communications.

Bombay.—The total expenditure during 1915-16 was £815,489. The new Custom Houses at Bombay and Karachi were still in progress at the end of the year. The Prince of Wales Museum and the Royal Institute of Science were practically completed. £50,000 were spent on educational buildings, and £30,000 on medical buildings. Communications involved an outlay of £142,000, somewhat less than in the previous year. The expenditure on miscellaneous public improvements amounted to £43,800.

Burma.—Expenditure decreased by £100,000 as compared with 1914-15. The balance of the special Imperial grant was devoted to road improvements. The demand for wolfram, created by the war, necessitated the urgent improvement of roads in the Tavoy and Mergui districts on which large sums were spent. An Advisory Committee was appointed to advise on the whole question of communications in Burma, including waterways.

Central Provinces and Barar.—Activity continued in the Public Works Department though the expenditure decreased from the record figure of 1914-15 by £67,000. Large sums were spent on buildings for almost every department of the administration. Communications accounted for £188,000. Steady progress was made with the water-works and drainage schemes undertaken by the Public Works Department for municipalities.

Madras.—Works in progress during the year included the Forest College, Coimbatore, which was completed at a cost of £40,500, a Stationery Office at Madras, an Engineering College at Guindy, a Technical Institute at Madura, and Collectors' offices at Madura and Vellore. The Kodaikanal Ghat road was completed at a cost of £44,000, and a bridge over the Indravati river at a cost of £36,000.

North-West Frontier Province.—The expenditure for the year was £175,600, a reduction of £33,754 as compared with 1914-15. Construction work was diminished owing to financial stringency. Improvements to roads in the Hazara district and to the Thal-Parachinar road continued.

United Provinces.—The actual expenditure during the year fell to £876,000. The principal buildings under construction were the new High Court at Allahabad, Civil Courts at Budaun, and several hostels and educational buildings. A new bridge was completed over the Suswa. A complete project was prepared for a hydro-electric scheme at Naini Tal.

Punjab.—In the year under review financial stringency necessitated considerable reductions in expenditure. The King Edward Memorial and the Veterinary College at Lahore were completed and opened by the Viceroy. The Simla Hydro-Electric Scheme was completed at a cost of £127,000, and its financial returns show encouraging results. £18,800 was spent on new roads and bridges and £87,000 on the maintenance and repair of existing communications.

CHAPTER XII.—POSTS AND TELEGRAPHS.

(Posts.)

(For further details see *Statistical Abstract for British India, Tables 45 to 47, 90 to 94, and 95 to 97.*)

The amalgamation from 1st April 1914 of the Indian Post Office and Telegraph Departments has resulted in greater efficiency. Receipts and charges on account of Posts and Telegraphs for 1915-16, as shown in the Finance and Revenue Accounts, were £3,787,478 and £3,149,680 respectively; net revenue was £637,798.

Posts.

Extent of Postal Operations.—At the close of 1915-16 there were 19,328 post offices, 49,684 letter-boxes, 95,746 postal officials, and 157,657 miles of mail lines, showing increases as compared with 1914-15 of 170, 394, 313, and 684 respectively. During the year 1,051 million articles (including 25½ million registered articles) were posted, an increase of about 8 millions as compared with 1914-15. Letters numbered 448 millions, postcards 478 millions, and parcels nearly 13 millions. Over 3 million articles were insured; £8,617,200 was collected on 9,653,000 value-payable articles.

Alterations in Postal Arrangements during 1915-16.—The new route *via* Talai-Manaar for the transmission of mails between India and Ceylon was adopted on 1st June 1915, and the mail steamer service between Tuticorin and Colombo abolished. Owing to the shortage of steamers, sailings between Karachi and Basra, Rangoon and Maliwun, Moulmein and Penang, and Chittagong and Rangoon were discontinued at different dates, and provisional arrangements for the delivery of mails made. Mail communication with Bulgaria was suspended. The letter mail service with the Bismarck Archipelago, Samoa, and the territory formerly known as German South-West Africa was resumed.

Foreign Correspondence.—The usual statistics were not kept owing to the dislocation of the foreign mail service. The number of foreign parcels sent and received rose from 793,733 to 1,011,222, more than half being exchanged with the United Kingdom.

Money Orders.—The number of inland and foreign money orders, ordinary and telegraphic, issued was over 32 millions, and their value was £39,000,000.

Savings Bank.—The number of accounts in the Post Office Savings Bank was 1,660,424, a slight increase on 1914-15. The total balance at the credit of depositors at the end of the year was over £10,200,000, an increase of 2.88 per cent. For the first time the help of the Post Office was utilised by the Government of India in the floating of a loan and a sum of nearly £330,000 was subscribed in this way.

Offences.—There were 28 cases of highway robbery as against 23 in 1914-15. The number of postal officials found guilty of criminal offences was 491, as against 476.

Sale of Quinine.—In 1915-16 16,136 lbs. were sold to the public through the Post Office, as compared with 21,812 lbs. in 1914-15.

The Post Office and the War.—Soon after the outbreak of hostilities the overland route *via* Brindisi was closed and the all-sea route *via* Gibraltar adopted. This arrangement continued until June 1915 when the overland route *via* Marseilles was adopted for letter mails with the United Kingdom and both letter and parcel mails with France. Parcel mails to and from the United Kingdom continue to travel *via* Gibraltar. Two of the P. & O. Steam Navigation Co.'s mail steamers, the "Persia" and "Maloja," were sunk on their way to India and the mails lost. The cross-channel steamer "Sussex," conveying mails from England to India, was also torpedoed, but a large part of the mails was recovered. The privilege of sending correspondence of all classes to India free of postage was continued to members of all the Indian Expeditionary Forces. Letters, parcels, and money orders were allowed to be sent free of charge from India to British and Indian prisoners of war interned in Europe. Postal articles for and from prisoners of war interned in India were accepted free of postage, registration or insurance fees, and money orders were transmitted without commission. Field post offices from India were maintained with all the Indian Expeditionary Forces, the chief base post office being at Bombay.

Telegraphs.

The following statement refers to the whole of the telegraph system under the direct control of the Government of India, but excludes that of the Indo-European Telegraph Department, for which, as usual, a separate account is given.

Extent of Telegraphic Operations.—The system on 31st March 1916 consisted of 86,067 miles of line and 337,720 miles of wire and cable.

At the end of the year there were 10,56 telegraph officials (150 being women), and 8,592 out of 10,482 telegraph offices were open for public business. 3,288

(Telegraphs.)

were combined post and telegraph offices, and 5,084 railway offices. The total number of inland telegrams transmitted was 16,077,300; the charges realised, £702,150, represented an increase of 8 per cent. in number, and 6 per cent. in value. The total number of foreign telegrams rose from 1,271,000 to 1,465,600, an increase of 15 per cent., and the number of words rose by 34 per cent., largely owing to the prohibition of code telegrams. The total receipts were £203,500, an increase of 18 per cent. State telegrams, both inland and foreign, show a considerable increase. With effect from 1st December 1915, a reduction of 12 annas a word was made in the rate for both State and private telegrams exchanged between India and Mesopotamia and of 2 annas a word in the rates for similar telegrams between India and Persia and the Persian Gulf. A new rate of 3 annas a word was also introduced for Press telegrams between India and Mesopotamia from 15th December 1915.

Telegraphists and stores were furnished to aid the military operations.

The total number of wireless stations rose from 18 to 19, including 10 coast stations. They worked satisfactorily.

Telephones.

On 31st December 1915 the number of departmental telephone exchanges was 226 with 4,556 connections, and the number established by licensed companies 13 with 10,766 connections. The gross rental obtained rose from £57,000 to £65,000. Royalties paid to Government increased from £6,100 to £6,700 in 1915.

Indo-European Telegraph Department.

This Department controls the system of telegraph lines and cables connecting the terminus of the Indo-European Company's telegraphs at Teheran and that of the Turkish telegraph lines at Fao with the Indian telegraph system at Karachi, and consists of 1,950 knots of cable, 2,810 miles of line, and 7,283 miles of wire. Included is a cable from Jask to Muscat, 219 knots in length. The Department also maintains a line from Teheran to Meshed, 568 miles, which is the property of the Persian Government. The reconstruction by the Department of the Persian telegraph line from Borasjoon on the Shiraz-Bushire line to Ahwaz and Mohammerah, with the branch line from Ahwaz *via* Shushtar to Dizful, was completed on 28th November 1915. The section from Mohammerah through Ahwaz and Shushtar to Dizful was taken over temporarily by the Mesopotamia Expeditionary Force. By arrangement with the Persian Government, the Department was given the use during the night of the Persian line from Teheran *via* Meshed to Seistan, which, by connecting with the Robat Seistan line, gave a rather uncertain connection between Teheran and Karachi.

The number of messages transmitted was 133,276, as against 173,016 in 1914-15. Of these, 36,783 were State telegrams, as against 15,356. The capital outlay to the end of 1915-16 was £1,027,869. The gross earnings were £173,057 as against £169,181 in 1914-15. The net profit was £79,293, as against £81,278 in 1914-15, and the return on capital was 7.71 per cent. as against 7.96 per cent. Under the Joint Purse Agreement, the share of the Department was £178,315, as against £175,140 in 1914-15. The amount paid into the Joint Purse was £85,738. The departmental receipts from the Australasian Message Fund for 1915-16 were £11,601, being £3,903 less than in 1914-15, but an increase of £5,366 on the receipts for 1889, on which the original Australasian Message Fund was based.

Reduced rates for the period of the war were introduced from 1st December 1915 for telegrams exchanged with Europe and India. There was no total interruption between Karachi and Teheran. Beyond Warsaw the route *via* Teheran to London has been totally interrupted since 31st July 1914. The Fao-Constantinople route has been totally interrupted since 3rd November 1914.

Owing to the disturbed state of the country, many places had to be evacuated by British State officials, and the telegraph offices closed. Several of the latter have, however, since been re-opened.

The staff of the Department have rendered valuable service during military operations.

CHAPTER XIII.—SCIENTIFIC DEPARTMENTS.

The Board of Scientific Advice.

This Board includes the heads of the Survey of India, the Meteorological, Geological, and Botanical Survey Departments, the Director-General, Indian Medical Service, representatives of the Agricultural, Forest, and Civil Veterinary Departments, and other authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry, and to advise the Government of India in the prosecution of practical research. The programmes of investigation are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done, as well as a programme of research for the ensuing year. The reports and the programmes are communicated to an Advisory Committee of the Royal Society. The Board held two meetings in 1915.

Survey of India.

The work of the Survey of India comprises the trigonometrical survey, topographical and forest surveys, special surveys and explorations, and map production. The total cost of the Department in 1915-16 was £144,867. In 1904 attention was drawn to the defective state of the topographical survey maps. A Committee then appointed reported on the subject. The Government of India finally decided that a scale of 1 inch to the mile would ordinarily be sufficient, reserved forests and special areas being surveyed on the scale of 2 inches and the $\frac{1}{2}$ -inch scale employed for waste and barren tracts. Of the total of 1,821,600 sq. miles included in the programme, 406,491 sq. miles were completed by September 1915. Of the 1-inch map, 154 sheets were published, making a total published of 1,190 out of an entire programme of 6,328. The total number of maps issued during the year was 425,008. During the year ending September 1915 field operations were carried on by 20 survey parties. Owing to shortage of officers through absence on military duty, field work was considerably curtailed. The 73 repeat stations of the magnetic survey were inspected and marked in a permanent manner. On the 26th April the Magnetic Observatory at Barrackpore was closed in accordance with the recommendation of the special committee, and the number of observatories reduced to four.

Other Surveys.

Geological.—The preparation of a general geological map of India was continued during 1915 by surveys in Bombay, Burma, Rajputana, Central India, Kashmir, Ajmer-Merwara, Hyderabad, Sind, and the Central Provinces. Economic investigations, which form an increasingly important part of the Department's work, were conducted into bauxite, manganese, coal, potassium salts, &c.

Botanical.—The botanical survey is under a Director. An economic botanist is attached to the Department, and the economic botanists of the Provincial Government are associated with it. During the year experiments were made in the cultivation of various medicinal plants. Much botanical work is done by forest officers and others outside the Department.

Zoological work is carried on by the Indian Museum, but proposals were under discussion for a regular Zoological Survey.

Marine survey work is under the Royal Indian Marine, who possess two specially-equipped vessels for the purpose.

Meteorological Department.

There are five first-class observatories, of which three publish separate annual reports. There were 274 observatories (of which 41 were non-departmental) at the close of 1915-16. Daily, weekly, and monthly weather reports, as well as seasonal forecasts and storm warnings, are issued. The number of warning messages sent from Simla in 1915-16 was 2,838 as compared with 2,060 in 1914-15 and 1,840 in 1913-14. The number of warnings for heavy rainfall sent from Calcutta was 909 as compared with 1,003 in 1914-15. The demand for warnings increased.

Agricultural Departments.

General.—The greater part of the scheme for the development of agricultural experiment and instruction formulated in 1905 has now been realised.

There are Agricultural Departments in every larger province under a Director of Agriculture with one or more Deputy Directors who are trained agriculturists.

(Agricultural Departments.)

in some cases the Principalship of the Provincial Agricultural College is a separate post. In Bengal there is a fibre specialist. The officers directly under the Government of India are the Agricultural Adviser, who is also Director of the Pusa Institute and Principal of the Agricultural College, and his assistant, 2 agriculturists, 2 entomologists, a pathological entomologist, 2 bacteriologists, 2 mycologists, 2 agricultural chemists, 2 agricultural botanists, and a cotton specialist. The posts of Second Imperial Economic Botanist and Second Imperial Mycologist were created in the year under review. A total of 16 new posts, bringing the total number of officers in the Indian Agricultural Service up to 86, resulted from these creations, and from the sanctioning of additional posts for assistant and deputy directors and for one superintendent of cinchona plantations. There are agricultural colleges in six provinces, besides the Central College at Pusa. In every province there are experimental farms. The Provincial Departments distribute selected seeds and manures, furnish advice as to implements and crops, conduct agricultural demonstrations, and publish agricultural information. There is a Board of Agriculture which suggests and reviews programmes of work. Agricultural memoirs and an agricultural journal are published.

Pusa Research Institute and College.—Experimental work was continued in cotton and sugar-cane growing, in green-manuring, grain storage, the protection of timber, bee and lac cultivation, &c. Progress was made with various wheat investigations, and very favourable reports were received of shipments of Pusa 12 sent to England, larger samples being asked for, in addition to samples of Pusa 4, the demand for which in India increased considerably. An examination of the composition of rices was undertaken. Work was continued on various plant diseases and insect pests, on bacteriological changes in the indigo steeping vat, the occurrence of saltpetre in Indian soils, silkworm disease, &c. The training of students in post-graduate courses was continued, and short courses were also given in cattle management and sericulture. Several visitors worked in the laboratories. The ninth meeting of the Board of Agriculture was held at Pusa in February.

Bengal.—Proposals were submitted for the revision of the Subordinate Agricultural Services. Selection and cross-breeding experiments with jute established the superiority of the fibre expert's pure-line selection Kakya Bombay No. 7. Experiments were also made with manures, deep-water paddy, and in sericulture. The Provincial Association held one meeting. Only two students sat for the Diploma Examination at the Sabour College in Bihar; both were successful. The post of Fisheries Expert was made permanent with effect from 5th December. 3 new co-operative societies of fishermen were established, making the total number 7.

Bihar and Orissa.—There was no change in the number of Government stations (five), but two new private demonstration farms were opened, one at Kendrapara and the other at Kanika, and placed under the control of the department. The resolutions passed at an Inter-Provincial Conference on Jute, held at Calcutta in August, were accepted by Government as far as applies to this province, and the necessary action taken. The reduction of the three years' diploma course of the Provincial College at Sabour, which is also the college for Bengal and Assam, from three years to two, resulted in an increase of students. Two obtained the diploma.

Assam.—There are five experimental stations, viz., 3 farms, a fruit station at Shillong, and a sugar-cane station at Khagrabari in Kamrup, at all of which apprentices are trained. Attempts were made to extend terraced rice cultivation in the Lushai and Abor Hills. Experimental and demonstration work with maize, sugar-cane, potatoes, manures, rice, &c. were continued.

Punjab.—Experimental work with wheat, sugar or cotton was carried on at the larger farms of Lyallpur, Gurdaspur, and Hansi; the smaller farms of Sargodha, Basal, Guruharsahai, and Jallalabad are mainly given up to demonstration or seed growing. The Lower Bari Doab Colony keeps in close touch with the department. The district boards of Sialkot and Amritsar started demonstration farms, from which most satisfactory results are expected. The area of cotton and wheat sown from the department's selected seed was extended, well-boring operations were successfully executed, experiments in the reclamation of saline lands progressed, and the sale of implements increased. The Agricultural College at Lyallpur had a satisfactory year; a demand is springing up among private landowners for holders of the College diploma as managers.

United Provinces.—The department was short-handed, and the reduction of the staff of the Agricultural College at Cawnpore coincided with a full entry roll. Work was

(Agricultural Departments.)

consequently handicapped, though the demand for seed distribution, pumping plant, &c. continued to grow. The number of private farms working in association with the department (at present largely confined to Oudh) increased. The cultivation of Pusa 12 wheat was greatly extended, and Pusa 4 was also distributed. Well-boring and the sale of implements decreased, owing to increased cost.

Central Provinces.—The new curriculum increased the popularity of the Nagpur Agricultural College, and the number of applications for admission necessitated the extension of the hostel. The completion of the new Agricultural Research Institute stimulated research. Valuable experiments and demonstrations in connection with the improvement of staple crops and such crops as sugar-cane and ground-nuts, and with tillage, manuring, and cattle feeding, continued. Four new wheat seed farms were opened for the propagation of Pusa wheat. Work was hampered by lack of staff.

North-West Frontier Province.—The introduction of new varieties extended the Peshawur peach and plum seasons by two months. Pusa wheat, No. 4, having proved superior to all others, was widely tried. Experiments with Egyptian clover proved successful. Beetroots grown at Tarnab obtained a gratifying success; their use to supplement the short cane season would do much to make sugar refining profitable.

Burma.—The biennial Agricultural and Co-operative Conference was held at Mandalay in August. Five experimental stations were maintained in addition to the principal farms, but the experimental garden at Myitkyina was given up. Experiments to discover suitable and remunerative alternatives to the one important crop of the province—rice—showed wheat, cotton, and sugar-cane to be the most promising.

Madras.—Ten stations were at work, and investigations in the green-manuring of paddy soil and with sugar-cane breeding, &c. were conducted. Better varieties of cane were more extensively planted. Great efforts were made to promote the sowing of better strains of cotton and diminish the rate of seed used for paddy cultivation. The department took a prominent part in the Madras Park Fair Exhibition held in December and January. The Central Agricultural Committee was dissolved. The standard for the diploma at the Agricultural College was rather higher; 12 out of 18 candidates succeeded. A bad year in 1914-15 was followed by a fish famine along the whole coast, and piscicultural work was confined to the fresh waters, where it met with a success, which, if continued, may soon make the department self-supporting. The demand for oysters increased.

Bombay.—The total number of students at the College (Poona) fell from 124 to 116, chiefly owing to the suspension of the annual practical course on account of space being needed for a war hospital. The three vernacular schools did well. Experiments in plant breeding, land development, and in combating disease and insects were continued, though under the difficulty of securing co-operation from those who object to taking life. In Sind American cotton did well, but the predilection of the cultivator for mixing Sindhi cotton with it has to be combated. Sugar-cane had a successful season.

Civil Veterinary Department.

This Department is responsible for all official veterinary work other than that of the army. Its duties are concerned with horse, &c., breeding, cattle-breeding, horse and cattle disease, and veterinary education. The total cost of the Department in 1915-16 was £211,508 (excluding expenditure by local bodies).

Horse, Mule, and Donkey Breeding.—In certain districts of the Punjab, Baluchistan, the United Provinces, and Sind, the control of horse, mule, and donkey breeding was, in 1903, transferred from the Civil Veterinary Department to the Army Remount Department, the work of the former being confined to cattle. Outside these districts the Civil Department controls all breeding operations. There were on the register at the end of 1915-16, 94 horse, 99 pony, and 111 donkey stallions. The total number of mares covered was 15,761. Most of the horse stallions are in the United Provinces, and most of the pony and donkey stallions in the Punjab.

Cattle Breeding.—Veterinary operations are directed towards improvement of the breeds of bovines, investigation of diseases, inoculation, and maintenance of veterinary dispensaries. There were at the end of the year 147 Government bulls, and 1,111 bulls owned by district boards, the great majority of the latter being in the Punjab. There are provincial cattle farms in the United Provinces, Assam, Bombay, Central Provinces, Bengal, Bihar and Orissa, and the Punjab. The Hissar Government Cattle Farm in the Punjab is the most important centre of cattle breeding. It issued during the year 181 bulls and 6 donkey jacks to district boards in the Punjab, and 25 ordnance and transport mules, as well as 1 donkey stallion, to the Army Remount Department. A considerable number of cattle fairs and shows were inspected.

(Civil Veterinary Department.)

Disease.—(a) *Equines*.—Of 138 reported deaths from glanders, 80 were in Bengal. There were 248 deaths from surra, 145 being in Bombay, 54 from anthrax, and 326 from other contagious diseases.

(b) *Cattle*.—Owing to the difficulty of collection, statistics of mortality from contagious diseases are defective. The number of reported deaths was 180,122, as against 236,360 in 1914-15. The deaths from rinderpest numbered 95,159, as against 111,629. There were 395,318 inoculations against rinderpest.

The veterinary hospitals and dispensaries at which 863,218 animals were treated during the year, numbered 456. Sera and vaccines were issued from the Muktesar laboratories, where researches into rinderpest, anthrax, &c. were also carried out. The camel specialist was at work on surra and other diseases.

Subordinate Staff.—110 inspectors and 1,008 assistants were employed.

Veterinary Instruction.—109 students graduated in 1915-16 at the four veterinary colleges of the Punjab, Bengal, Bombay, and Madras, and the Burma Veterinary School. There were 437 students under training at the close of the year.

Archæological Department.

The primary function of this Department is the conservation of monuments of historic and architectural interest under the Ancient Monuments Preservation Act, but exploration is undertaken so far as means and opportunity permit. In 1915-16 a donation from the Royal Asiatic Society was applied to work at the buried university of Nalanda in the Patna district of Bihar. In the North-West Frontier Province excavations were continued at Taxila, and at Sirsukh five bastions and the intervening stretch of city wall, a few buried houses and two outlying Buddhist religious establishments, with many valuable antiquities, were excavated. Excavations were undertaken at Nagari and Hathi-bada, near Chitorgarh in the Udaipur State, Rajputana; at the latter place a shrine, stated to be the earliest dedicated to Vaishnava worship, was unearthed. In Burma, excavation in the Prone and Pagan districts brought to light inscriptions of great chronological importance. No excavation work was undertaken in Madras.

Medical Research Institutes.

In 1907 the bacteriological laboratories in India were placed on a definite footing. In 1911 was instituted a Central Research Fund for research into epidemic diseases, with a government endowment. The fund is under a Scientific Advisory Board. The Research Fund Association publishes a quarterly "Indian Journal of Medical Research." During 1915-16 researches were undertaken into kala azar, cholera, goitre, leprosy, ancylostoma, malaria, tuberculosis, diabetes, plague prevention, &c. At the Central Research Institute, Kasauli, vaccines and sera were prepared as usual for Government and private institutions, pathological and other specimens were examined and classes were held in bacteriological method and technique. Investigations were made into snake venoms and rabies. The Bombay Bacteriological Laboratory is the headquarters of the Plague Research Commission. A large quantity of its output of anti-plague vaccine goes to countries outside India. The total amount of work was increased by the examination of articles for the Supplies and Transport Department to the largest yet recorded. At the King Institute of Preventive Medicine, Madras, the number of pathological samples submitted declined; that of samples of water supply increased.

**Imperial Forest Research Institute and Forest College
Dehra Dun.**

The work of the Institute comprises tuition and research in silviculture, forest economy, zoology, botany and chemistry. During 1915-16 investigations were undertaken with a view to the utilisation of many kinds of forest produce, such as antiseptics for timber, railway sleepers, wood for matches, &c., resins, tan-barks, grasses and bamboos for pulp. The zoologist studied *sal* insect pests in Bengal.

In the Forest College on the 30th June 1916 there were 74 students attending the Rangers' classes and 23 attending the Provincial Service Classes.

CHAPTER XIV—EDUCATION.

(For further details see *Statistical Abstract for British India, Tables 45 and 46 and 103 to 113.*)

General.—Educational institutions in India are of two classes :—

- (1) Those in which the course of study is prescribed by the Department of Public Instruction or by the University, and which satisfy one or both of these authorities that they attain to a reasonable standard of efficiency. They are open to inspection, and their pupils are ordinarily eligible for admission to public examinations and tests held by the Department or the University. These institutions are called "public," but may be under either public or private management. To the latter class, for example, belong those "aided schools," receiving grants from Government or from local or municipal boards, which occupy so important a place in the system of Madras, Bengal, and other provinces.
- (2) Those which do not fulfil the above conditions, and are called "private."

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

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

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

The general educational policy of the Government of India was declared at length in a Resolution published in March 1904, of which some account was given in the issue of this Statement for 1903-4; and more recently in the Resolution of 21st February 1913, published in the Sixth Quinquennial Report on Education in India, Cd. 7486 of 1914. A brief narrative of educational progress is now published annually by the Government of India, to supplement the Quinquennial Reviews. That for 1915-16 records the arrangements made to replace enemy aliens engaged in educational work who were interned in July; the difficulty of recruiting professors and inspectors from England; the depletion of the profession in India by transfer to military service; the postponement of new schemes for financial reasons. But, in spite of adverse circumstances, provinces continued quietly to work out their programmes. The number of scholars in all institutions rose from 7,448,419 to 7,617,496, of whom 5,871,184 males and 1,112,024 females were in public institutions. The percentage of scholars to population of school-going age rose from 20·4 to 20·9. In 1914-15, 5·1 per cent. of the male, 94 of the female, and 3·06 of the whole population was under instruction; in 1915-16 the figures were 5·2, 1·0, and 3·1. The total expenditure on education in British India now amounts to £7,338,800, and the total increase in the last two years, during 20 months of which the Empire has been, at war, has been £907,000. There are now 189,248 educational institutions in British India, which represents an increase of 4,192 in 1915-16. A new development in University organisation was made with the Benares Hindu University Act, which established a denominational university of a unitary nature, founded to meet a popular demand, backed by large private contributions, and in some respects more independent than the five existing universities. The scheme for an Aligarh Moslem University met with less success, a section of the Muhammadan community disliking the Benares Act on which it would be modelled. Progress was made with schemes for universities in Patna, Burma, and the Central Provinces.

No new developments were reported in religious and moral instruction as a result of the recommendations of the committee called to consider the matter in the provinces, save the change from English to vernacular as the medium in Bombay. The use of the vernacular as the medium of instruction in general up to a comparatively advanced standard was much discussed in the Press. When action was taken, however, in the United Provinces, singularly little interest was evinced. The year's record shows that the school-leaving certificate is gradually growing in popularity.

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Serious occurrences in Bengal institutions reflected conditions in the province. There were strikes in the Presidency and Engineering colleges, and in two privately managed colleges; a Government high school headmaster was murdered, and it was found necessary to arrest and intern certain Calcutta students. A serious strike broke out also at the Government High School at Rangoon.

System of Management.—The Department of Education in the Government of India was created in 1910. There is, further, in each province, save in Coorg, a department of Public Instruction, subject to the Local Government, which advises as to educational needs, administers the funds allotted, inspects, examines, frames rules and prescribes curricula. Its controlling powers, however, are shared, as regards higher education, with the universities, and, as regards elementary education, with the civil authorities and the local and municipal bodies. The great majority of institutions are maintained by the boards or by private agencies, which in turn may receive aid either from the board or from the department. The inspecting agency is, with minor exceptions, included in the Government services. The civil authorities are concerned with education as being in general charge of all branches of administration in their jurisdiction. The bulk of elementary education is in the hands of municipal and district boards, which not only maintain schools but also disburse grants to schools maintained by private bodies or persons. In the discharge of their duties of control, including the closure of their own schools, the appointment and dismissal of staff and the disbursement of aid to privately managed schools, the boards are guided by rules issued by the Local Government. The curriculum is that prescribed by Government; and the scale of grants to aided institutions must be generally in accordance with the departmental rules. Private agencies are a factor of great importance in the educational system, and include missions, Indian societies and committees, and individual managers, who are generally also the teachers. The Universities frame courses, conduct examinations for diplomas and degrees, affiliate and inspect colleges, and prescribe the curricula in the upper classes of high schools preparing for the matriculation examination. Finally, there are a number of committees (text-book, visiting, ladies' for girls' schools), as well as governing bodies for the detailed control of individual institutions.

Cost of Education.—The total cost of the educational system is shared almost equally between public and private funds. By the former are meant provincial revenues (i.e., the revenues of the Local Governments), enhanced from time to time by grants from the Imperial Government, and municipal or district board funds. Municipal and district or local boards levy cesses, but the income so resulting is generally increased by Local Governments, either by equilibrium grants or by special grants. Of the total expenditure in 1915-16, £4,144,600 was provided from public funds; £2,023,400 was derived from fees. It is important that the growing appreciation of education on the part of the public evidenced by increase in pupils should take the shape of financial support. The average cost of education in an ordinary arts college is Rs. 150 per student, in a secondary school it is less than Rs. 27, and in a primary school about Rs. 5.

Where fees were paid in primary schools, the average annual fee in the quinquennial period 1907-12 was 14½ annas; the proportion of free pupils admitted varied in the different provinces. Though salaries have been enhanced, and staffs increased in recent years, much of the expenditure has necessarily been upon buildings and furniture, which still leave much to be desired. In 1915-16 expenditure upon buildings and furniture decreased, while expenditure on maintenance and establishments increased. The year's record does not, however, contain any further measures for raising the pay of teachers. The incompetency and discontent of underpaid teachers must be held responsible for some of the success revolutionary propaganda have had among students and teachers.

The following is a short summary of the year's record in the several provinces.

Delhi.—At the end of the year 8,640 boys and 1,980 girls were receiving education in 101 public schools and colleges for boys and 21 public institutions for girls. The largest class of scholars was that of non-Brahmin Hindus, Muhammadans coming next. Examination results showed improvement.

Bengal.—The total number of scholars in all institutions rose from 1,799,889 to 1,844,541, of whom 1,504,648 males and 273,850 females were in public institutions. Of public institutions for males, the number of primary schools* increased from

* Variation in the case of primary schools in all provinces has to be considered with the reservation that it results in some cases from re-classification.

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28,335 with 999,112 pupils to 31,617 with 1,067,782; that of high schools from 599 with 192,032 pupils to 627 with 200,382; the number of arts colleges was reduced from 31 to 29, but in these colleges scholars increased from 15,808 to 17,100. Of public institutions for females, the scholars in the 3 female arts colleges increased from 113 to 126; high schools were reduced from 28 with 3,764 pupils to 26 with 3,691; primary increased from 7,627 with 225,130 to 8,793 with 259,640. The percentage of scholars in public institutions to population of school-going age rose in the case of males from 42.3 to 42.9; in that of females from 7.6 to 8.2. Expenditure rose from £1,695,600 to £1,711,866.

Mention has been made above of grave occurrences in colleges and in a Government high school. Against these has to be set the success of Hastings House School modelled on English public school lines, which was opened during the year. Other satisfactory features of the year were the attempts in three mission high schools to make the instruction for girls less unsuited to their needs by including the teaching of hygiene and domestic subjects; courses in home nursing, cookery, &c., given to 934 students by the Y.W.C.A. in Calcutta, and arrangements through the Y.M.C.A. for the supply of directors of physical instruction. An unfortunate decline in the numbers at the David Hare Training College and a decrease in upper primary schools (the latter apparently owing to the unpopularity of purely vernacular education) are significant.

Bombay.—Plague, and the closing of schools owing to poor attendance, appear to have contributed to the reduction of public primary schools for males from 9,929 with 551,987 pupils to 9,797 with 545,461 pupils. It should perhaps also be noted in this connection that the conversion of ordinary into rural schools continues to excite some agitation, and is under re-consideration. The decrease reduced the percentage of male scholars in public institutions to male population of school-going age from 40.4 to 40.3, though the total number of scholars in public institutions rose from 750,602 to 754,622 owing to the increase of female scholars in public institutions from 129,738 to 134,833. The total of scholars in all institutions rose from 789,709 to 799,273. The total of male pupils in public high schools (the number of which increased from 110 to 111) remained practically stationary, 37,615 as against 37,600. 106 female students were reading in arts colleges for males, and the percentage of female scholars in public institutions to female population of school-going age rose from 9.2 to 9.5. It was the verdict, however, of the Director that "outside of Bombay and Poona secondary schools for girls would not exist in the central division without the help of missions, and those that do exist have very few girls in them." The number of public high schools for girls remains 31; their pupils decreased by 115 to 4,600. Complaint was made of the failure of teachers to avail themselves of opportunities for training, not a single school from the city sending a teacher to be trained at the secondary training college. Expenditure rose from £1,025,800 to £1,027,400. Systematic arrangements for the medical inspection of pupils were made, and the appointment of five doctors in certain classes of schools sanctioned.

Madras.—Of public institutions, primary schools numbered 28,166 for males (with 1,048,380 pupils) and 1,619 for females, with 280,558; high schools, 183 for males with 97,993 pupils, and 35 for females with 6,223; in 37 arts colleges for males there were 8,409 students, and in the 3 for females 98. The Government College for women amply justified expectations and was raised to the first grade. 5,276 secondary school-leaving certificates were completed, and 3,195 candidates took a supplementary course to improve these, as against 5,529 and 2,339 respectively in 1914-15; a list of such certificate holders as were eligible for admission to university courses was for the first time published by the university. The percentage of scholars in public institutions to population of school-going age rose from 37.3 to 39.2 in the case of males, and from 8.8 to 9.3 in that of females. Expenditure rose from £1,290,200 to £1,376,800, of which £716,600 was derived from public funds, £364,666 from fees, and £295,533 from other sources.

Bihar and Orissa.—The number of scholars in all institutions continued to decline, and fell from 836,209 to 831,430. This was mainly owing to the decrease of male scholars in public primary schools from 557,041 to 547,721, and was attributed *inter alia* to unskilful concentration of schools and unwise allocation of funds. It was accompanied by a decrease in private schools and their pupils. The decline of Islamic learning was reported with regret. The percentage of scholars in public institutions to population of school-going age fell in the case of males from 26.8 to 26.7; it rose in that of females from 4.2 to 4.3. Total expenditure fell from £571,933 to £563,733; more than a third was contributed from provincial revenues.

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Punjab.—Primary schools for boys increased by 205 to 4,757, with 234,762 pupils; those for girls by 44 to 922 with 40,591. Secondary schools increased by 34 to 484. In the 9 arts colleges for males, students increased by 377 to 3,880, and this increase was accompanied by improved examination results. Male students in the professional colleges increased by 87 to 922. The number of normal schools rose from 6 to 9. The proportion of trained teachers continues to rise; applications for admission to the Central Training College were the highest numerically and of the most satisfactory type on record. The percentage of scholars to population of school-going age was in the case of males 24·4, in that of females 5·21. The number of Muhammadans in all schools increased, but is still unsatisfactory. The new system of medical inspection of secondary schools was introduced. Expenditure rose from £714,588 to £747,784.

Central Provinces and Berar.—The number of high school and vernacular middle school pupils increased, but the percentage of matriculation successes fell from 41 to 36. In primary education there was a decrease of 24 schools and 1,128 pupils, partly owing to the closing of 51 small indigenous schools in Berar and to epidemic disease. A scheme was drawn up for an extension of normal schools, and of the Training College at Jubbulpore; the foundation of an arts college at Amraoti was proposed, pressure on the existing colleges continuing to increase. University results showed a decline in the percentage of passes. The report complains of the mediocrity and sameness in the methods of teaching. Expenditure rose to £319,039.

United Provinces.—The number of institutions decreased by 170. Aided primary schools for boys not having reached a reasonable standard of efficiency were either closed or converted into board schools, resulting in a decrease of 489; primary schools for boys, of a public character, falling from 10,537 to 10,471, with an increase, however, of 31,775 scholars in board schools, and a decrease of 17,023 in aided schools. The disappearance of certain aided lower primary schools accounts mainly for the reduction of schools for Indian girls from 1,402 to 1,384, but here again the number of pupils increased (from 46,279 to 47,368). Upper primary schools for boys managed by district and municipal boards increased by 308, and their scholars from 64,718 to 80,613; secondary schools for boys increased from 594 to 611. Special measures were sanctioned during the year by the Local Government for the extension of Muhammadan education, and in the increase of pupils in the primary schools the Muhammadans show the largest increment, though in the high and middle schools this falls to the Hindus. The percentage of scholars to population of school-going age increased, the figures being: for 1914, males 20·96, females 1·88; for 1915, males 21·15, females 1·94. There was an increase of over 9 per cent. in the enrolment of students in arts colleges, and pressure on accommodation in the intermediate classes continues. Expenditure fell to £927,937.

Burma.—Expenditure fell to £434,275. Students at the Government College, Rangoon, increased from 391 in 1913–14 to 567. The total gain of pupils in collegiate and secondary schools was 6,551; in the upper primary 6,856; and in the lower primary 1,280. The percentage of male and female scholars to male and female population of school-going age rose from 47·19 and 12·66 to 48·07 and 13·18. The percentage of institutions to number of towns and villages was 69·88. The serious "strike" in September at the Government High School, Rangoon, was quelled by the newly-arrived principal with the help of some members of his staff and Burmese parents.

Of 19,511 monastery schools in Burma, with 267,936 pupils, only 3,413 containing 102,098 pupils, are registered; the remaining 16,093, with their 165,838 pupils, not yet up to the standard of registration, offer a promising field for expansion, but without more lay schools, many children would even then remain without educational facilities.

North-Western Frontier Provinces.—The disturbed state of the Frontier was reflected in a decrease of Hindu scholars, and among all religions increase was at a lower rate than in any of the preceding five years. Public institutions increased by 51; private decreased by 36. There was heavy decrease in the number of vernacular schools and of schools teaching Arabic and Persian, or the Al Quran. The staffing of district board schools was much improved by the increased output of teachers from the Normal School. A training school for female teachers is badly needed. Two Christian students at the Church Mission College joined the army. The number of students at the Islamia College again increased; a new science block was built, and the college was affiliated by the Punjab University up to the F.Sc. Standard. This college did particularly well in examinations, and won the Football Championship for the second time in the Northern Circle of the University Tourna-

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ment. The Mehtar of Chitral, two of whose sons are pupils in the school which forms part of the institution, succeeded the late Nawab Colonel Sir Aslam Khan as president of the governing body. The attendance of 67 boys from across the border in a year of military operations against a border tribe within 15 miles, speaks well for the reputation the college is gaining among the trans-frontier peoples. The examination results in both colleges much improved. 39 out of 57 students were successful in the F.A. Examination, as against 18 out of 50 in 1914-15, and the number of successful candidates for the degree of B.A. increased from under one-third to over one-half. The Provincial Athletic Tournament was held successfully at Peshawur in December. The percentage of institutions to towns and villages was 31·8; of male and female scholars to male and female population of school-going age 24·9 and 3·4. There was a slight decrease in expenditure.

Assam.—Expenditure rose from £176,950 to £179,171. Students at the two colleges increased from 551 to 593. The Murarichand College was advanced to the degree standard, thanks to a public-spirited provision of funds by some leading inhabitants of the Surma Valley, and the first place in the Intermediate Arts Examination was secured by a student; the affiliation of the Cotton College to the B.A. Honours standard justified itself by the success of six candidates. The Erle Law College was formally opened on 8th July, and the average daily attendance rose from 11 in 1914-15 to 29. High schools increased by one, but their enrolment fell from 12,158 to 12,085, the decline occurring in the primary department; middle English schools increased from 110 to 117, but enrolment fell from 12,469 to 12,353; middle Vernacular schools for boys increased from 64 to 91, and pupils from 7,385 to 10,347. Primary schools for boys decreased from 3,926 to 3,859 owing mainly to the development of primary to middle Vernacular schools, and to the closure by the missions of schools in the Khasia, Jaintia, and Garo Hills, but the decline in enrolment was only 130 (175,414 to 175,284). There was a fall in the percentage of average daily attendance to average monthly enrolment in the lower primary, upper primary, and middle Vernacular schools from 75·8 to 71·1; 80·3 to 75·2; and 81·6 to 76 respectively, but it was a year of heavy floods and consequent disease in Assam. The percentage of examination successes in the secondary schools showed a slight improvement, in which the Surma Valley maintained its lead over the Assam Valley. The demand for more and better text-books continues. The inspecting staff remains inadequate. The percentage of institutions to the number of towns and villages was 17·56; of scholars to population of school-going age, males 40·21, and females 5·81, or 23·58.

Coorg.—No material change occurred in the educational institutions of the province one training school, one upper secondary, and one lower secondary girls' school at Mercara, and one lower secondary school at Virajpet, and 98 elementary schools. Staffs were inadequate, and attendances decreased.

(Municipalities.)

CHAPTER XV.—LOCAL SELF-GOVERNMENT.

General.

In most towns of any importance there are municipal committees, while in rural districts there are local boards, which are under the control of general district boards or send delegates to a district council. The systems vary in different provinces. In some provinces there are also non-elective local bodies discharging similar duties in the smaller towns, described as "notified areas," which are not fitted for full municipal responsibilities but require organised measures for sanitation and other purposes. In the chief ports specially constituted boards or "trusts" have charge of harbour works, port approaches, and pilotage. Bombay, Calcutta and some other cities also have "Improvement Trusts," distinct from the Municipal Corporations, for the purpose of clearing congested areas and making street improvements.

On 28th April 1915 the Government of India, in view of the recommendations of the Decentralisation Committee, published an important resolution on local self-government policy, recommending an expansion of the elective and non-official elements on local bodies, the concession to them of fuller financial powers, the substitution for octroi of direct taxation or terminal taxes in towns, and the levy of a cess on land for the promotion of light railways by district boards.

Municipalities.

(For further details see *Statistical Abstract for British India, Tables 99 to 101.*)

General.—The municipal bodies exist, raise funds, and exercise powers under enactments which provide separately for each province and the three Presidency capitals, Bombay, Calcutta, and Madras. In the municipalities as a whole rather more than a half of the members are elected by the townsfolk; in every town some, and in a few minor towns all, of the members are appointed by the Government. In almost every municipal body one or more Government officials sit as members. The number of Indian and non-official members, however, in every province largely exceeds the number of Europeans and officials. The municipal bodies are subject to Government control in respect of new taxation, loans, large public works, rules and byelaws.

There were 712 municipalities at the end of 1914-15 (the latest year for which complete figures are available), containing within their limits about 17 million people, or 7 per cent. of the total population of British India. Generally speaking, the income of municipalities is small.

Municipalities other than Calcutta, Bombay, Madras, and Rangoon get their loans chiefly from Government. The sources of municipal revenue, apart from loans and Government contributions, fall mainly under the two heads, "Taxation" and "Municipal Property and Powers apart from Taxation." Of the taxes the most important are octroi duties, levied in the United Provinces, the Punjab, the North-West Frontier Province, the Central Provinces and Berar, and Bombay, and the tax on houses and lands, which holds the chief place in the other provinces, as well as in Bombay city, and also contributes a considerable share of the receipts in the provinces named above. These two taxes each yielded about one-fifth of the total income of municipalities in 1914-15. There are also water, conservancy and lighting rates, tolls on roads and ferries, taxes on animals and vehicles, and in some places a tax on professions and trades. Steps have been taken in some cases to abolish octroi or reform its working, or to substitute for it direct taxation. The other sources of income include cattle-pound receipts, rents of municipal property, such as markets and slaughter-houses (an important item in Burma), and fees of various kinds. The objects on which municipal funds are spent are, mainly, water supply, roads, hospitals, vaccination, conservancy, drainage, lighting, fairs and markets, and education.

Delhi.—Actual net income rose from £74,024 to £76,033, and expenditure from £78,518 to £78,815. There was a slight falling-off under house-tax, but a gain from octroi.

Bengal.—Calcutta.—Revenue receipts amounted to £762,939, and payments to £739,901. The war affected the finances of the Corporation less than was anticipated, but loan liability increased to £3,344,473. The Calcutta Improvement Trust closed the year with a surplus of £609,133. Five schemes of improvement were sanctioned, and certain sections of the Calcutta Improvement Act were extended to the Mauiktolla Municipality. A town-planning exhibition was held in November and December at the expense of Government and the Trust.

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Interior of Bengal.—The right to elect municipal commissioners was given to nine municipalities, and, after the close of the year, the right to elect their chairman to 11. General elections were held in 64, and the majority were contested. Expenditure on lighting, water-supply, and conservancy increased; that on drainage decreased. Revision of assessment was effected in 24 of the 112 municipalities, resulting in every case in increase of income. The total actual income decreased by £14,768 to £360,421.

Assam.—Expenditure increased to £37,892, chiefly under the heads water-supply and conservancy. Income fell to £37,501, mainly through reduction in grants. Cases of embezzlement proved the need for more careful accountancy. The occurrence in no fewer than 4 of the 14 municipal offices of serious irregularities is unsatisfactory.

Bihar and Orissa.—Municipalities numbered 55, as in 1914. The privilege of electing their own chairman was granted to 8, but 15 stated this would be unsuitable to local conditions. General elections were held in 32, and in most cases keenly contested. Receipts decreased to £311,018. Revisions of assessment resulted in every case in increased revenue. Cases of embezzlement were brought to light.

United Provinces.—The aggregate municipal income rose and was almost identical with that of 1912-13. Expenditure was the second largest on record. Net octroi income rose from £196,328 to £209,511, though the number of towns where it is in force fell from 37 to 35. Opposition to its abolition persists, though where this has taken place, it is already in some places, as at Orai and Mau, stated to have promoted business. Increased interest in elections is not unaccompanied by the growth of malpractices and the shirking of work after office has been secured.

Punjab.—Municipalities were reduced to 100 by the change of 3 into notified areas. The elective principle is not yet introduced in 29, some of which, on inquiry, were found not to desire it. Though some elections were keenly contested, the percentage of vacancies contested fell from 46 to 30.5, and undesirable practices, such as sale of votes and impersonation have grown up. A tendency for committees to lapse into apathy after election, to prefer private to public interests, and to show jealousy of their own officers was marked, and cases of embezzlement and the inadequate punishment of peculation and extortion point to want of control over employees. On the whole there was steady progress in sanitation and the amenities of life. Income and expenditure decreased, but the rise in octroi to £257,776 indicated general recovery of internal trade. Boundaries were revised in several municipalities.

North-West Frontier Province.—Income from taxation rose from £30,609 to £34,132, mainly owing to the rise in octroi from £29,959 to £33,782. Expenditure decreased by £3,731 to £45,523. Municipal administration may, on the whole, be said to be successful. There was a quickening of corporate life, better sanitation, and improved water-supply.

Central Provinces and Berar.—Additions were made to the number of elected members in Nagpur, and in the Arvi and Bilaspur municipalities. Real income from municipal sources increased from £177,010 to £185,638. Government contributions consisted mainly of grants for sanitary purposes. Expenditure amounted to £242,966.

Madras.—**Madras City.**—Receipts decreased and expenditure increased; debt fell from £574,300 to £565,459.

Interior of Madras.—2 municipalities began work on 1st April, and 3 unions were subsequently constituted municipalities, making the total 67, with 86 *ex-officio*, 431 nominated, and 502 elected councillors. Receipts declined and were exceeded by expenditure.

Bombay.—**Bombay City.**—Income rose by £94,513 to £922,071, and expenditure by £21,015 to £853,591. A large increase under town duties pointed to a partial restoration of trade to normal conditions; in spite of the war, the increase in the assessable value of properties was maintained. Work on the Lovegrove Sewage Works was continued; the raising of the Tansa Dam was completed, and the Currey Road overbridge over the G.I.P.R. (except the approach along De Lisle Road). The area disposed of by the Bombay Improvement Trust beat the record for all years except 1913-14. It is now in possession of one-tenth of the island, accommodating one-tenth of the population. Progress in acquisition was unusually slow.

Interior of Bombay.—The Bombay Decentralization Act (III. of 1915), which amended the Bombay District Municipal Act (III. of 1901), became law. The income of the 157 city and town municipalities was £832,505. The incidence of taxation decreased from Rs. 2-8-3 to Rs. 2-7-7. per head. The Rajapur municipality continued under suspension, but the Ahmedabad and Dharangaon municipalities were reinstated. The Hyderabad municipality had to be superseded and temporarily

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replaced by a committee of management. Several municipalities received the privilege of electing their own presidents.

Burma.—Rangoon.—Re-metalling roads, water-supply, and fire protection was proceeded with as far as financial stringency allowed. One old insanitary market was closed, a new one established, and proposals for the provision of a much-needed central market are under consideration. Ordinary income and expenditure increased.

Interior of Burma.—Income fell to £307,384, expenditure to £451,022. Of the 44 Municipal Fund Accounts, 6 were left unaudited; in one of these and in 3 others, embezzlements were found.

District and Local Boards.

(For further details see *Statistical Abstract for British India, Table 102.*)

General.—In rural areas district and local boards perform the duties assigned to municipalities in urban areas. In each district, generally speaking, there is a board, subordinate to which are two or more local boards. In Madras the Union Committee or Panchayat is again subordinate to the Local Board. In 1915-16 there were 398 of these with 3,843 members. There are some Union Committees also in Bengal and Bihar and Orissa. The boards contain a varying proportion of elected members. Elected members form a large majority on the boards in the United Provinces and the Central Provinces and Berar. On all boards the great majority of members are Indians. The total number of all these boards in 1915-16 was 1,134. There are no local boards in the United Provinces and the N.W. Frontier Province.

The funds of district and local boards are largely derived from rates or cesses levied upon agricultural land over and above the land revenue. In addition, Government makes grants in aid to all boards. At the close of 1913-14, Government announced their intention of making assignments to the Provincial Governments to enable them to forgo certain amounts which had hitherto been appropriated for provincial use from the cess on land. The boards have also other sources of income, such as cattle pound receipts, educational receipts, medical receipts, tolls from ferries and bridges, and contributions for specific purposes from the provincial funds. Their expenditure is chiefly for roads and bridges, hospitals, vaccination, conservancy, drainage, water supply, primary education, markets, and resthouses.

Delhi.—As in 1914-15, the one district board continued to do useful work in education, rural sanitation, and medical relief. Income rose from £4,163 to £6,599.

Bengal.—There was no change in the number or powers of District and Local Boards; 82 Union Committees were established. The areas under them are continuous with the Panchayati Unions, members of the Chaukidari Panchayats being also members of the Union Committees, with a view to the ultimate fusion of the two bodies. The District Administration Committee's recommendations that the Public Works Cess should be utilised for financing Union Committees, and the desirability of spending large sums of money from the Public Works Cess on the excavation of tanks in rural areas were impressed on all district boards. Though 23·3 per cent. was spent on water-supply (almost double the previous year), this amount was by no means sufficient.

Assam.—The 19 local boards in the province were reconstituted under the newly-passed Assam Local Self-government Act on the 1st January, and the boards thus attained a legal status with increased powers and responsibilities. A promising beginning was made with the experiment of organising village authorities under experienced sub-deputy collectors, formally constituted in two circles.

Bihar and Orissa.—The number of district and local boards remained unchanged; that of union committees was doubled by the formation of 12 new unions. Income fell to £551,234. The closing balance was £131,990. The activities of the district boards were on the whole well sustained, especially in matters educational and medical. Those of the local boards showed a less encouraging development.

United Provinces.—Receipts declined to £744,027 and expenditure increased to £745,194, but the closing balance still stood undesirably high. This was due partly to the economy enjoined on public works expenditure, but mainly to spending incapacity and inability to reach the standard laid down two years before by the local government. Attempts to carry out sanitation in villages through *panchayats* were on the whole fairly successful. Delegation in a few districts of limited financial powers to local committees produced some promising results.

Punjab.—Inquiries carried out with a view to extending the elective system to the 11 districts of the Western Punjab where it is not in force, disclosed considerable

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apathy; but on the whole attendance at meetings improved, and intelligent interest in public affairs made progress. Proposals to increase the resources of the district boards by taxation are still stoutly opposed, and the maximum local rate has been imposed in only 11 districts. Income decreased, but expenditure rose.

North-West Frontier Province.—There were no changes of importance either in the constitution or jurisdiction of the district boards, and their working, though generally satisfactory, gives little evidence of active interest in local affairs; it is hoped that a delegation of financial responsibility, inaugurated in Peshawar, by allotting money for roads to each *tahsil* and making its members responsible for its expenditure may stimulate this. Income fell to £37,207, expenditure to £37,312.

Central Provinces and Berar.—Income and expenditure rose by £6,200 and £25,666 respectively, and Government contributions for education and civil works increased by £6,533. Measures taken in Berar resulted in a substantial reduction of the excessive balances of district boards, and a programme of road construction was drawn up which will to a large extent absorb the surplus funds of these bodies.

Madras.—The actual strength of the 25 district boards at the end of the year was 773 members, as against 779 in 1915. Of these 357 were elected by the taluk boards, and 668 were Indians. The sanctioned strength of the 96 taluk boards was raised from 1,702 to 1,753, and actual membership rose from 1,652 to 1,661; in 240 elections only 63 were actually contested, while in 34 the vacancies had to be filled by nomination. There are union *panchayats* in the more important villages in all districts except South Canara and the Nilgiris, and their total rose from 398 to 408; the elective system was in force in 24; vacancies occurring in 11 cases, only one candidate each appeared in 9; in the 2 others none. Receipts fell to £1,191,369. The closing balance was £85,321.

Burma.—There are no local boards, but there are district funds in Upper and district cess funds in Lower Burma, administered by the Deputy Commissioners. The aggregate receipts of the district cess fund in Lower Burma increased owing to increase in the amount derived from the cess on land revenue. The aggregate expenditure rose owing principally to increased expenditure on public works. The aggregate income of the district boards in Upper Burma was nominally less owing to the contribution for road improvement made from provincial funds in 1914-15, which being expended in 1915-16, nominally increased expenditure under public works. All the district cess and district funds were solvent at the end of the year.

Bombay.—The income of the 26 district local boards and 216 taluka local boards was £564,984, and expenditure £562,831.

Coorg.—The receipts of the board amounted to £6,793, and expenditure to £6,239.

Port Trusts.

(For further details see *Statistical Abstract for British India, Table 184.*)

General.—The larger ports are administered by Port Commissioners, who are charged with the provision of suitable dock accommodation and other services necessary to shipping. The members, who include both Europeans and Indians, are for the most part appointed by the Local Governments, and represent the local commercial communities. Except in Calcutta the elected members are fewer than the nominated members. Port trustees are empowered, subject to the control of the Government, to levy dues on shipping and goods, to charge fees for services rendered, to contract loans for port improvements, to maintain the harbour and its approaches, and to erect warehouses, jetties, harbour lights, and docks. The chief ports are alone dealt with here.

Calcutta.—Receipts, excluding war surcharges, rose to £882,518; expenditure fell to £993,800. The debit balance of £72,566 was thus reduced to £4,002. The net tonnage of the port, 2,967,798 tons, was 30 per cent. less than that of 1913-14 (4,256,987 tons), and was lower than that of 1914-15 (3,705,160 tons). Capital debt rose to £7,169,953, against which the Commissioners hold properties valued at £9,404,670. A new debenture loan, at not more than 4 per cent., was authorised.

Bombay.—Actual revenue, including war surtaxes, but excluding special receipts, beat the previous year, itself a record, and was £875,584, or £112,702 in excess of the estimate, mainly owing to revival of the ordinary import and export trade—a feature of which was the expansion of import trade with Japan—and to Government traffic. A net deficit of £18,889 was met from the reserve fund. The trade of the year was £93,831,000, or, excluding Government transactions, approximately 6 per cent. less than in 1914-15. A 4 per cent. debenture loan of £366,666 was raised for the new

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docks construction, and the Mazagon Sewri Reclamation, including the Port Trust Railway. The total debt was £9,857,716.

Karachi.—Again, as in 1914-15, the trustees did not raise charges. Revenue fell to £218,022; expenditure to £249,798. Capital debt decreased to £1,741,463.

Rangoon.—The effect of the war was much less serious than anticipated, and rigid economy resulted in a gross surplus of £36,847 instead of an estimated deficit, without enhanced charges. Foreign, coasting, and sea-borne trade declined, but river-borne trade increased. Receipts on revenue account amounted to £302,512, and payments to £265,665. The capital debt amounted to £1,990,800.

Madras.—The revision of the Port Trust Act (of 1905) was completed, and the amended Act became law on 26th July. Receipts decreased by 7·20 per cent. to £77,780, largely owing to the rapidity with which imports were cleared. Actual working expenses came to 50·81 per cent. of actual harbour earnings as against 44·44 per cent. in 1914-15. The value of the port's trade, in which there were considerable changes, exceeded that of 1914-15 by 6 per cent., and has only been surpassed in 1912-13 and 1913-14. Progress was made with the west quay and with well-sinking. A large number of motor-boat drivers and driver mechanics were examined and trained for military service by the Trust at the request of the authorities.

CHAPTER XVI.—CONDITION OF THE PEOPLE.

Vital Statistics.

(Detailed information on Vital Statistics, Sanitation, &c. is contained in the annual Report on Sanitary Measures in India, published as a Parliamentary Paper, and in the Statistical Abstract for British India, Tables 101-2 and 196 to 201 and 203.)

Registration.—The statistics given below are based on the 1911 census figures. Accurate figures, especially of the causes of death, are unobtainable owing to the difficulty of securing accurate registration. It is more difficult, especially in towns, to obtain information about births than about deaths. The actuarial reviews of the census returns show that the registered birth and death rates are understated. The high Indian birth-rate is due, not to exceptional fertility, but to the large proportion of married women. The high infantile death-rate is partly due to the weakness of the children of immature and ignorant parents, the prevalence of malaria, and faulty midwifery, but to some extent it is only apparent, being calculated on imperfect returns of births.

Birth and Death Rates.—The population of the areas in which births and deaths were registered in 1915 was 238,527,877. 9,021,825 births and 7,142,412 deaths were

Province.	Birth Rates (per mille).		Death Rates (per mille).	
	1914.	1915.	1914.	1915.
Delhi	48.86	47.91	37.98	28.97
Bengal	33.86	31.80	31.57	32.83
Bihar and Orissa	42.30	40.4	28.30	32.2
Assam	32.94	33.60	24.66	30.86
United Provinces	44.93	43.48	33.46	30.04
Punjab	46.30	43.6	31.96	36.33
N.W. Frontier Province	32.70	31.7	25.75	23.61
Central Provinces and Berar	51.37	47.95	36.69	35.91
Madras	33.50	31.2	25.00	22.0
Coorg	26.23	25.33	34.05	31.08
Bombay	37.43	37.10	29.48	26.12
Burma, Lower	34.69	33.39	22.99	25.12
Burma, Upper	36.69	38.01	26.22	32.72
Ajmer-Merwara	46.90	43.78	30.33	26.03
Total	39.61	37.82	30.00	29.94

registered; the rates per mille being 37.82 and 29.94 as compared with an average of 36.39 and 28.61 respectively for the previous five years.

The birth-rate was lower in every province except Assam. The largest excess of births over deaths was shown in the United and Central Provinces, nearly 13½ and 12 per mille respectively, though the birth-rate of the Central Provinces was the lowest since 1904. In Bengal 1.03 less births than deaths were registered, and in Coorg, 5.75 births less.

The death-rate, though lower in 8 provinces, was kept practically stationary by the considerable rise in the remaining 5, the largest increase, 6.20 per mille, being in Assam.

Chief Diseases.—There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indications of scurvy widely prevail. The table below shows the number of deaths from all causes and from each of the principal diseases in British India and death-rates per 1,000:—

Years.	Deaths from all Causes.	Cholera.	Small-Pox.	Fevers.	Dysentery and Diarrhoea.	Plague.	Respiratory Diseases.
1912	7,090,991	407,769 1.71	89,357 .37	3,936,085 16.49	292,216 1.22	263,037 1.10	247,736 1.04
1913	6,845,018	294,815 1.24	98,155 .41	3,983,112 16.71	246,578 1.03	198,456 0.83	237,229 1.00
1914	7,155,771	280,730 1.18	76,590 .32	4,092,345 17.16	278,225 1.17	266,588 1.12	261,149 1.09
1915	7,142,412	404,472 1.70	83,282 .35	3,990,287 16.73	261,800 1.10	380,501 1.60	257,721 1.08

Cholera is much less prevalent than formerly, and the increased mortality from this disease occurred in provinces where water-supply had been contaminated by floods, the highest rate of death per mille, 4.46, being reached in Assam; in Bengal, where the greatest number of deaths, 130,679, occurred, infection is reported also to have been spread by throwing dead bodies of cholera patients into the rivers; in the Punjab, where the number of deaths, 13,196, was the largest in any year since 1903,

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the infection was spread by pilgrims returning from fairs. Bengal contributed the largest increase to the rise in small-pox mortality, 32,785 cases occurring there as against 9,935 in 1914, and an average of 9,095 for the previous three years. With the exception of the small province of Coorg, Bengal had the highest fever death-rate, 23·47. "Fever" was responsible for more than 55½ per cent. of the total mortality, only three provinces—Bombay (11·48), Burma (8·64½), and Madras (7·3) having a fever death-rate of less than 14½ per mille. The term, however, covers many causes of death, and many diseases much more fatal than malarial fever. The malaria section of the Indian Research Fund Association is housed at Kasauli, but has a field-laboratory in Delhi where classes are held. Anti-malarial operations and mosquito surveys are being carried out by special officers in practically all the provinces. The measures adopted to fight malaria are the sale of quinine at cheap rates and the extirpation of mosquitos by such methods as drainage, petrolage and jungle clearing.

Plague mortality increased considerably. In the Punjab, however, where the greatest number of deaths, 221,966, occurred, the epidemic, which, after heavy rains in March and early April, was the worst since 1907, practically disappeared in June with abnormally dry weather, and only re-appeared later on a small scale. The plague death-rate in this province was 11·48 per mille, but the only other provinces to reach 1 per mille were the United and Central Provinces and Bombay, with 1·24, 1·46, and 2·24 respectively. In Bombay the number of deaths increased from 20,060 to 43,824. There were 27,241 deaths or 7 per mille in Behar and Orissa. In Assam and Ajmer-Merwara no deaths occurred from plague.

The marginal table shows the mortality in all India since 1896, when the present epidemic broke out at Bombay. The highest number of deaths for India as a whole, 1,315,892, was recorded in 1907, after which the mortality declined enormously.

Vaccination.—The total number of vaccinations performed among the civil population during 1915-16 was 9,572,083, being an increase of 109,182 operations on the previous year's work. Of primary vaccinations 92·52 per cent., and of re-vaccinations 57·76 per cent., were successful: about 34·21 per mille of the population were successfully vaccinated. The number of infants under a year old successfully vaccinated was 4,348,450 or 48·2 per cent. Calf lymph is now supplied from Government vaccine depôts.

Sanitation.

General.—Every major province has its sanitary commissioner, and (except for the N.W. Frontier Province) its sanitary engineer. In addition there were in May 1914, 26 deputy sanitary commissioners, 16 deputy or assistant sanitary engineers, and nearly 150 health officers. In May 1914 the Government of India issued a comprehensive resolution on Indian sanitary policy.* The following paragraphs give some account of the chief sanitary works undertaken in the various provinces in 1915-6:—

Delhi.—Many improvements, including an effective anti-fly campaign, were effected.

Bengal.—Rules were issued regulating the powers and duties of sanitation committees; also the duties of health officers and sanitary inspectors outside Calcutta. The Bengal (Sanitary Officers' Act) Act III. of 1914 was extended, and is in force in 83 municipalities. Unsatisfactory vaccination conditions were remedied. Measures were taken for improving village sanitation.

Assam.—Of the total income of municipalities 27·60 per cent. was spent on sanitary works, as compared with 28·58 per cent. in 1914. In spite of obstruction, distinct improvement in urban water-supply and some improvement in conservancy were effected. £7,536 was expended on rural water-supply. No anti-malarial measures could be undertaken except at Lumding. The first separate sanitary commissioner was appointed on 1st July.

Bihar and Orissa.—Two assistant sanitary engineers were added to the superior staff of the sanitary engineer; the subordinate establishment was reorganised. An Imperial grant of £19,266 was distributed between drainage and other measures.

United Provinces.—£113,861 was spent on original sanitary works and £41,876 on the maintenance and repair of open waterworks. 18 tube wells were sunk; 17 were entirely successful. Work was started on the Meerut anti-malarial scheme.

Punjab.—Sewage, drainage, and water-supply improvement works were continued or put in hand, but the activities of the board had to be to a great extent suspended for the latter part of the year, owing to the withdrawal of funds by Government.

* Presented to Parliament in 1914 (Cd. 7540).

(Sanitation.)

North-West Frontier Province.—£11,088 was spent on sanitary works. Popular feeling remains averse to sanitary progress and measures for prevention of disease.

Central Provinces and Berar.—Town sanitation continued to progress, but in several districts large balances from special grants for water-supply remain unexpended. Six more villages came under the Village Sanitation Act.

Madras.—Grants were made for town extension, and for the improvement of municipal and rural water supplies and other sanitary works.

In Madras City the first year of the new water-supply works was completed on 17th December. The death-rate fell from 47·1 to 36·4.

Bombay.—27·57 per cent. of the combined municipal income was expended on water-supply, drainage, and conservancy. Sanitary committees were at work in 348 towns and villages.

Burma.—Progress was made with water-supply, drainage, conservancy, and other sanitary works. Inspection of sanitary conditions and of vaccination was actively carried out, and an inquiry was made into an outbreak of malarial fever.

Medical Institutions.

Hospitals, Dispensaries, &c.—In 1915 the number of aided civil hospitals and dispensaries was 2,995 as against 2,856 in 1914. The number of in-patients increased to 541,549 and of out-patients to 33,032,052, and the number of operations rose to 1,356,841. There were also 856 State-special and railway hospitals with a total of 2,730,986 patients and 714 private non-aided institutions with 5,063,947 patients.

Travelling dispensaries are employed in some provinces. The Bengal Nursing Association has begun to train Indian women as nurses in Mofussil hospitals. A similar scheme was brought into force in Burma. In the United Provinces and Burma the system of charging fees to well-to-do patients was continued with success.

Medical Colleges.—There are five medical colleges (Bombay, Madras, Calcutta, Lahore, and Lucknow), the students in which numbered in 1915, 2,096, including 79 women. There are also 17 medical schools, the students in which numbered 2,936. There is an X-ray institution at Dehra Dun where a class of instruction was attended by 20 students. Branch installations opened at Delhi and Simla are obtaining a large number of patients.

Pasteur Institutes.—There were Pasteur Institutes for anti-rabic treatment at Kasauli (Punjab) and Coonoor (Madras). The number of patients treated in the former increased to 5,046, in the latter to 1,490. A Pasteur Institute was opened at Rangoon in July; the foundation stone of another was laid at Shillong in November.

Lunatic Asylums.—The treatment of lunatics at asylums prevails on a comparatively small scale; but the asylum population is steadily increasing. The number of asylums in 1915 was 21. The number of patients admitted was 2,339, as against 2,083 in 1914. The total asylum population of the year was 8,978.

Leper Asylums.—There are many leper asylums, among which may be mentioned the Madras Government Leper Asylum, the Matunga Leper Home, Bombay, the Trivandrum State Leper Asylum, and the Calcutta Leper Asylum. There are also many asylums or homes, frequently under some sort of Government supervision, including about 50 asylums of the Mission to Lepers.

Emigration.

(For further details see *Statistical Abstract for British India, Tables 194 and 195.*)

Emigration from India, so far as it is brought under the cognizance of Government, is mainly regulated by Act XVII. of 1908 and the Rules issued under its provisions. Emigration to Ceylon, to the Straits Settlements, and for employment under Government only in British East Africa and Central Africa is, however, excepted from the restrictions of the Act. By this Act, natives of India are permitted to emigrate, under contract to labour for hire, only to such countries as have satisfied the Government of India that sufficient provision is made in them for the protection of Indian immigrants; and a similar protection is extended to natives of India engaged to emigrate, individually or in small parties, to work as artisans, entertainers, servants, &c. Emigration, otherwise than under contract to labour or work in one of the above capacities, is not controlled by legislation. Emigration under the Act is now confined to certain British possessions, chiefly in the West Indies, and to Surinam.

On 20th March 1916 the Governor-General announced in the Legislative Council the acceptance of a policy for the eventual abolition of the system of indentured emigration. In the interim certain transitional arrangements affecting relations with the Colonies are to be worked out.

(Emigration.)

Calcutta.—Three emigration agencies collected and despatched emigrants on behalf of the British colonies, but the agency for the Dutch colony of Surinam suspended operations. In 1914 it had received a much higher proportion of its demands than the British, to whom, in 1915, owing, again, to the scarcity of steamers, only 2,314½ out of 5,486 emigrants requisitioned could be supplied. Of these, Fiji secured more than half. 90·71 per cent. of the emigrants registered were recruited in the United Provinces. The number of licences issued diminished by 87 to 556. 16 were cancelled as against 35 in the previous year. 1,155 emigrants returned as against 2,961. Of these, 6, who returned from Fiji, and 2 from Natal were suffering from leprosy. Only 112, or 9·70 per cent., brought back savings, which aggregated £14,144. An important feature of the year was the delegation to the Protector of Emigrants of the power vested in the local government to grant licences to masters of emigrant vessels.

Madras.—Regulated emigration to Fiji continued till July, 1,115 emigrants being despatched. Recruitment for British Guiana began on 7th July and continued till the end of September, 737 emigrants being despatched. There was no emigration to Trinidad, the French Colonies, Mauritius or Seychelles.

The increased demand for non-regulated labour in the Straits Settlements, Burma, and Ceylon, resulted in increased emigration, but it is impossible to distinguish genuine emigrants from ordinary passengers.

Bombay.—Emigration by sea was more than doubled owing to the large demand from the Anglo-Persian Oil Company, 475 emigrants proceeding to Persia. The other main foreign market for Indian labour was the Uganda Railway, and 146 were despatched to British East Africa. From Karachi 41 emigrants left for Uganda, and 291 for Persia. The restrictive immigration laws in South Africa continued to curtail emigration.

Migration.

Assam.—The recruitment, engagement, and emigration of labour is now carried on under the Assam Labour and Emigration (Amendment) Act (VIII of 1915), by which the licensed contractor and the penal labour contracts of the Act of 1901 are abolished, sardari recruiting only, male permissible, and the Assam Labour Board constituted for its supervision. Operation of clause 7 of the Act (which had become law on 25th March) was postponed until 1st July. Notifications were issued during the year for the purpose of regulating and encouraging recruiting by genuine sardars, and three supervisors were appointed under the board, which was in full working order during the year, and achieved excellent results. The total labour population at the close of the year was 953,127, or 73,797 more than in 1914. The number of "Act" labourers remaining was further reduced to 5,062, or '08 per cent. of the total adult labourers. The number of immigrants rose from 63,638 to 110,376.—Time-expired coolies held 221,161 acres of Government land, and 30,978 acres in the province as sub-tenants. 15,803 acres of Government land were held by managers on special leases to provide coolies with cultivation.

Bengal.—The number of emigrants embarked at Goalundo was the highest on record, this being probably partly due to scarcity, partly to abolition of the labour contract.

Prices.

(For further details see *Statistical Abstract for British India, Tables 206 to 211.*)

The marginal table of prices during the seven years to 1915 has been compiled from Government returns showing the index numbers of the prices of: (a) 11 articles

Year	Index Number for Articles imported.	Index Number for Articles consumed or exported.	Index Number for Food-grains (Retail Prices).
1873	100	100	100
1909	99	133	195
1910	109	127	168
1911	113	136	161
1912	117	145	189
1913	117	154	199
1914	114	160	222
1915	146	155	218

imported; (b) 28 articles consumed in India or exported; (c) food-grains. The prices under (a) and (b) are wholesale, and under (c) retail. The index number of each year represents a simple average of the separate price ratios of the selected articles. In showing the variations the prices of 1873 are taken as 100. Prices were high in 1908 owing to the widespread failure of crops in Northern India. In 1909 and 1910 there was a general decline and foodstuffs continued to fall till 1911. During 1912-13 the price of agricultural produce showed a general tendency to rise, and this tendency continued on the whole in 1913-14. In 1914-15,

(Prices.)

before the outbreak of war, prices of cereals, pulses and oilseeds (except linseed) were on the whole higher than in 1913-14, while raw cotton and jute prices were lower. The restriction of exports due to the outbreak of war which curtailed or stopped demand in European markets led to a general fall in Indian staples, such as oilseeds, raw jute and raw cotton. The two latter, which were so injuriously affected in 1914-15, had risen respectively 25 per cent. and 39 per cent. in March 1916 above the prices of March 1915, though still 17 per cent. and 5 per cent. below the pre-war rates. Oilseeds again declined. The price of wheat gradually declined after Government intervention to 5 per cent. below the pre-war rate; that of the inferior food-grains also declined. The average price of rice in March 1916 remained the same as in March 1915, and was 12 per cent. below the pre-war rate, although during the months September to November the price was considerably higher than in the corresponding months of the previous year. In the Punjab the bad harvest caused a rise in all prices except those of wheat, maize, and rapeseed. In Madras the staple food-grains were generally cheaper than in 1914-15, but the average retail prices continued above normal. In Assam the severe floods, which damaged the harvests and temporarily interrupted communications, sent up prices. In Delhi, owing to unsatisfactory rainfall, the prices of all staples were considerably above normal. Satisfactory harvests in Central Provinces and Berar reduced prices of foodstuffs, while out-turn and prices of cotton were handsomely increased.

Wages.

(For further details see *Statistical Abstract for British India, Tables 204 and 205.*)

Quinquennial wage-censuses have been established for the different provinces, and the results of the first of these censuses, taken in 1911, were summarised in the Moral and Material Progress Report for 1912-13. The general tendency in most provinces is for wages to rise gradually in response to the gradual economic development of the country and the consequent demand for labour.

Except for considerable rises in the brewing industry in the Punjab, and tea industry in Assam, there were no fluctuations of importance in 1915-16. There was no marked change in the wages of the cotton, paper, mining, and rice industries, and notwithstanding the heavy war orders in jute and wool, a plentiful supply of labour, especially in the jute mills, prevented a great rise in the wages paid. In Bengal, the supply of labour greatly exceeded the demand, and wages remained comparatively low, though with a tendency to rise in response to raised prices. In Bihar and Orissa the demand was on the whole sufficient, and the rates generally maintained. In the North-West Frontier Province, wages continued to show an upward tendency. In the Punjab there was no lack of employment, and wages maintained their level. In the United Provinces the year was a prosperous one for labour. In Burma, the general rate of wages paid to operatives remained much the same. In the Central Provinces and Berar employment was ample at fairly high rates of wages.

Famine or Scarcity.

Bengal.—Owing to failure of the crops distress prevailed in Bankura, Tippera, and Noakhali, and relief works were opened. In Noakhali, however, the period of relief only lasted from June till August.

Bihar and Orissa.—Relief works were opened in Singhbhum and Manbhum.

Bombay.—Relief works were opened at Kathiawar.

Ajmer-Merwara.—Relief works were opened in the autumn.

(Army.)

CHAPTER XVII.—ARMY AND MARINE.

(For further details see *Statistical Abstract for British India, Tables 45 to 47, 70 and 185 to 193.*)

Army.

The established strength of the European and Indian armies in India for 1915-16 (exclusive of Indian artificers and followers), was: European army, 2,291 officers and 72,475 warrant and non-commissioned officers and privates; Indian army, 3,197 European officers and non-commissioned officers and 159,858 native commissioned and non-commissioned officers and privates, or a total establishment of 237,821.

During 1915-16 the army of India was engaged in operations of war in France and Belgium, West Africa, East Africa, Egypt, Somaliland, Aden, Mesopotamia, Persia, and on the North-West Frontier of India.

The net expenditure on the army in 1915-16 was £17,876,836 for effective charges and £3,076,421 for non-effective charges, or £20,953,257 in all, as against £19,240,368 in 1914-15. In addition, £772,332 (net) was spent on military works and £13,514 on special defences.

The expenditure covered the full ordinary maintenance cost of the troops, &c., employed with the overseas Indian Expeditionary Forces, as, in accordance with parliamentary resolutions, Indian revenues continue to bear ordinary pay and other charges of these troops.

Health of the British and Indian Armies.—The following table shows the sickness and mortality of the British and Indian troops (excluding officers) in India. During 1915 the death-rate of the British troops in India showed a further rise over the rate for 1914, and over the rate for 1913, which was the lowest on record. There was a further rise in the admission rate. For the Indian troops both death-rate and admission rate show an increase. These increases are no doubt in large part due to the treatment in India of troops evacuated sick from Expeditionary Forces.

	Ratio per Mille of Strength.							
	British Troops.				Indian Troops.			
	Average 1908-12.	1913.	1914.	1915.	Average 1908-12.	1913.	1914.	1915.
Admissions into hospital	638.4	580.5	614.1	723.1	578.3	581.7	566.5	744.4
Constantly sick	60.3	29.7	31.6	39.1	20.9	21.4	20.9	33.9
Deaths	6.1	3.3	4.3	5.95	5.4	4.0	4.2	8.55

Marine.

The net expenditure on marine services amounted to £522,250 in 1915-16 as against £265,255 in 1914-15. In this amount are included the cost of the Royal Indian Marine and the annual contribution of about £100,000 towards the expenses of His Majesty's ships employed in the Indian seas.

On the 31st March 1916 the Royal Indian Marine consisted of three troopships and six other sea-going vessels, three inland vessels, three flats, and a number of small steamers, launches, &c. There was an establishment of about 2,130 officers and men.

CHAPTER XVIII.—FRONTIERS AND NATIVE STATES.

The War.—Among the generous contributions of money and personal assistance in the war by which India testified its loyalty to the Empire, those of the Native States were again conspicuous. Despatches from the commanders in the various theatres of war testified to the gallantry and staunchness of the Indian troops and chiefs present, and the gifts received from chiefs and people included fighting aeroplanes, armoured motor-cars, railway and munitions and other war material, hospital ships, hospitals in England and India, army remounts, and generous subscriptions in money and kind to relief funds, St. John's Ambulance Association, &c..

Baluchistan.—The province as a whole satisfactorily stood the severe test of the war, although not entirely unaffected by the contagion of unrest on the Persian border. The behaviour of the tribes on the whole Afghan border from Zhob to Quetta was exceptionally good, probably owing to the energetic measures of the Amir and his Government; serious raids only took place from the lawless Afghan district of Shorawak (marching with the Quetta district), and in Zhob. On the Persian border it was very different. In the isolated Jhalawan country, which is in close touch with Mekran (the scene in 1914-15 of frequent raids from Persian territory), disturbances early in the year necessitated the despatch of troops to a short distance beyond Kalat. There were raids, too, in the Chagai district, which borders on Persia and on Jhalawan. In July the Marris and Bugtis also started raids in pursuance of private feuds. In September, Bahram Khan, of Bampur, in Persia, ravaged the Kej Valley for many miles. The whole of the western portion of the valley was looted by lawless tribesmen, who, probably at the instigation of German agents, had been raiding Mekran since early in the war. Further north, many outrages were committed by the Damanis until severe punishment was inflicted by a military force despatched to deal with them.

Against these unfortunate occurrences must be set the satisfactory condition of the Las Bela State, the excellent attitude of the Sarawan chiefs, and the marked advance of the Kalat State in financial and administrative reform.

North-West Frontier Province.—The participation of Turkey in the war produced the inevitable consequences. It was popularly expected that Persia would join Turkey, and that the Amir of Afghanistan would be forced to do the same. The absence of the troops despatched to Europe, and the tales of German frightfulness and invincibility brought back by invalided soldiers gave rise to the belief that the British Government was destined to disappear, and to hopes of a great Islamic renaissance. The tribal mullas, eagerly seconded by the mullas of Southern Afghanistan, began to preach *jihad*, and were joined by many trans-border tribesmen in the Indian army. By March 1915 attacks by the people of the Afghan province of Khost, on the Tochi and Kurram, had been engineered by the fanatics. These were successfully repelled, but were only the forerunners of others. On 17th April about 4,000 Mohmands invaded the Peshawur district. They were promptly attacked, but with indecisive results. In June they were joined by the Babra Mulla. The unrest spread to Swat and Bunar, and the Hindustani fanatics became active. The employment of troops on a large scale became necessary. On the 17th August about 4,000 Bunerwals were driven back from British territory by the Ambela Pass; on the 20th others were repelled at the Malandri Pass; and shortly after the lashkars collected under the Sandiki Mulla, now joined by the Sartor Faqir, attacked the pickets of the Malakand Movable Column with 5,000 men, and were only dispersed after a determined attack on the Landakai spur, and the destruction of their fort of Kak. By September some 10,000 Mohmands were brought to the Shabkhardar border by the Babra Mulla. They were driven back on the 5th with losses estimated at about 1,000 dead and wounded. Mir Sahib Jan Badshah, of Kunar, one of the most important mullas of Afghanistan, joined them with about 1,000 followers, and early in October appeared on the Shabkhardar border with the Babra and Chaknawar mullas and about 9,000 Mohmands, who again threatened the Peshawur district, but were completely dispersed, after the loss of about 100 killed. Smaller demonstrations later in the autumn were easily driven off by the Chakdara Column, and the Mohmands, Upper Swatis, and Bunerwals were then placed under blockade for the winter. A series of raids by the Mohmands in the Peshawur district, in reprisal, culminated in December in a serious attack on Charsadda. Some 1,300 cis-border Mohmands and others suspected of assisting raiding gangs were thereupon arrested and about 300 kept as hostages, after which raiding ceased.

(Frontiers and Native States.)

Throughout all these events on the Peshawur border, the loyal adhesion of the Afridis to the Government, in spite of very great efforts by nullas and Afghan emissaries to seduce them, was of the greatest value, and strikingly justified the grant of double allowances to them in 1915.

In the south of the province our troops and militia were attacked by Mahsuds, who throughout the summer and autumn raided Dera Ismail Khan until the northern half of this district was almost ruined; Mahsuds and Wazirs severely raided also the neighbouring district of Bannu.

In all districts there have been evoked real proofs of devotion to Government, which, considering the uncertainties of the time, could hardly have been expected. A false alarm of an impending attack on the Hazara border called forth practical exhibitions of loyalty from the leading men of that district.

Assam Border Tribes.—Relations with the tribes remained entirely satisfactory. A state of war still exists between the Minyong, and as soon as it is possible a strongly escorted tour will be advisable for preventing disturbances among the Abor tribes. Trans-frontier tribes were inclined to fight among themselves, but anxious to preserve friendly relations with Government.

Burma.—In the Chin Hills proper the year was uneventful, and the behaviour of the inhabitants excellent. The tribes on the borders of the Akyal and Kyaukpyu districts gave no trouble. Raids occurred in the unadministered territory between the Chin Hills and Arakan, and were not dealt with. The south-western boundary of the Chin Hills was finally demarcated, thus completing the demarcation of all the boundaries of the district.

In the Shan States the year on the whole was both prosperous and peaceful, little affected by the war, by events in China, or by the disturbances in French territory on the Mekong. The chiefs maintained, in many instances at considerable expense, a watch and ward of the greatest value on all important roads and ferries to prevent the entry of hostile or seditious elements. The newly opened railway carried more than half of the trade of the Southern Shan States.

On the North-Eastern Frontier the peace remained undisturbed, and good progress was made. In the newly formed district of Putao boundaries were fixed, unexplored tracts visited, headmen appointed, and relations with the tribesmen improved by means of frequent tours by frontier officers.

Jammu and Kashmir (including Poonch).—The effects of serious drought in Jammu with which the year opened, and the inflated prices of food grains, were countered by remissions of revenue, by maintaining the prohibition on export of grain, and other measures. Kashmir was visited by cholera and Jammu by plague. There were no overt acts of hostility on the part of trans-frontier tribesmen.

Hyderabad.—The services of the Nizam's Minister, Nawab Salar Jang, were definitely dispensed with, and his duties temporarily undertaken by the Nizam. Revenue was in excess of the average, owing to the general excellence of the crops. Local trade, after considerable dislocation, was completely restored.

Mysore.—Rains were ample and timely, and an addition to the revenue resulted from the construction of the Cauvery Reservoir dam. A local university was established, and schools, especially primary schools, showed an increase of strength. The non-official element in municipal councils was increased, their powers extended, and procedure regulated.

Baroda.—Failure of rains resulting in scarcity and the necessity for considerable relief measures diminished revenue; but a notable increase in the revenue obtained from the railways resulted from increased traffic. Nearly 27 miles of State-owned railway were opened, and other extensions were under construction. The Baroda Hindu Parohit Act was passed, and is perhaps the first Act of its kind aiming at furnishing well-qualified Hindu priests instead of the present ignorant class.

Rajputana.—Rainfall was generally unsatisfactory and crops poor, necessitating migration of cattle, remissions of revenue and other measures, short of relief works, to assist distress. In Jodhpur, wolfram deposits were discovered and worked by a company which gave Government first call on the output. The Maharaja of Jodhpur was invested at the age of 18 with ruling powers on 22nd February, shortly after his return from France, where he had spent some nine months with the Jodhpur Imperial Service Lancers and the Regent, Maharaja Sir Pertab Singh.

Central India.—Harvests were mostly satisfactory. Large numbers of cattle from Rajputana were provided with grazing. Plague became epidemic in Indore, but cholera decreased from 10,075 to 795 deaths, which occurred chiefly in Baghelkhand.

(Frontiers and Native States.)

Trade prospered, the cotton market recovered a good deal, and wheat fetched high prices. The "Eastern States of Central India Export Trust" was formed by six Baghelkhand and Bundelkhand States, which combined to develop their resources, especially lac, tannin, and hides. Five States combined to engage a joint agricultural adviser, and appointed to the post Mr. Coventry, late agricultural adviser to the Indian Government.

Bengal.—In Cooch Behar the total revenue rose from £175,279 to £204,561. Heavy rains did damage at the beginning of the year, but winter crops yielded a good harvest.

In Hill Tippera, cultivation suffered from floods, and for a time food grains had to be imported.

Bihar and Orissa.—The release of the State of Bonai from Government management was sanctioned, subject to certain conditions. On the death, in March 1916, of Raja Tribhuvan Deo, Feudatory Chief of the Bamra State, the succession of his eldest son, Raja Sudhal Deo, was recognised by the Lieutenant-Governor in Council.

Assam.—The year was politically uneventful. Under the influence of the Political Officers the behaviour of the tribes throughout the frontier was generally satisfactory.

Madras.—In Travancore shortage of tonnage, &c., depressed trade, and expenditure exceeded revenue. A Regulation was passed by the Council establishing Village Panchayat Courts. The railway from Shencottah to Quilon continued to work at a loss. In Cochin a fall in receipts necessitated reduced expenditure, and, owing to depression of trade, relief works had to be opened in the southern part of the State. Five more Village Panchayat Courts were constituted here. Banganapalle had a fairly prosperous year. In Sandur no income was derived from mines, owing to their closing through the war, and revenue decreased. Rainfall was mostly favourable.

Punjab.—In Patiala scarcity of fodder, owing to lack of rain, necessitated State relief in the southern districts. In Jind both harvests were very poor. In Bahawalpur administrative progress in many directions was made under the Council of Regency. The new scheme of State administration worked well in Faridkot. Tikka Vidyadhar Singh was formally installed as chief of Kumharsain. Raja Bijai Sen of Keonthal died and was succeeded by his son, Tikka Hamendar Singh, a minor. Nawab Jallab Khan, C.I.E., chief of the Gurchani tuman, died in October, and his son, Sardar Lashkar Khan, was formally installed in November. A long-standing dispute between the Mazari and Drishak tribes about some land on their border was decided by *jirga*; a feud between sections of the Gurchani and Bugti tribes was happily settled.

Bombay.—The season was generally favourable in all the States, except those situated in North Gujarat, where rainfall was scanty, and in the Khairpur State, in Sind, where rabi crops were adversely affected by low inundation. No appreciable progress in educational development was made. Wages continued high. Maharana Shri Sir Chhatrasinhji Gambhirsinhji, K.C.I.E., Raja of Rajpipla, died, and was succeeded by his son, Maharana Shri Vijayasinghji Chhatrasinhji.

APPENDIX.

LIST OF INDIAN OFFICIAL REPORTS, &c.

(MOSTLY ANNUAL.)

General.

Statistical Abstract relating to British India (Parliamentary Paper).

Statistics of British India:—

Vol. I.—Commercial.

Vol. II.—Financial.

Vol. III.—Public Health.

Vol. IV.—Administrative and Judicial.

Vol. V.—Educational.

Census Reports (Decennial), India, Provincial, and Native States.

Administration Reports: Madras, Bombay, United Provinces, Punjab, Bengal, Central Provinces and Berar, Burma, Bihar and Orissa, Assam, North-West Frontier Province, Delhi, Coorg, Andaman and Nicobar Islands, Civil and Military Station of Bangalore, Ajmer-Merwara, Baluchistan Agency.

Legislation.

Acts of the Imperial and Provincial Legislative Councils.

Justice and Police.

Report on the Administration of Civil Justice for each Province.

Report on the Administration of Criminal Justice for each Province.

Report on Jails for each Province.

Reports on Police for each Province, and for Bombay Town and Island, Calcutta, and Rangoon.

Finance.

Finance and Revenue Accounts of the Government of India.

East India Financial Statement (Parliamentary Paper).

Return of Net Income and Expenditure for eleven years (Parliamentary Paper).

Accounts and Estimates: Explanatory Memorandum (Parliamentary Paper).

Home Accounts (Parliamentary Paper).

Loans raised in England (Half-yearly Parliamentary Paper).

Loans raised in India (Half-yearly Parliamentary Paper).

Mint Reports for Calcutta and Bombay.

Paper Currency Department Reports, India and Bombay.

Statistics compiled from the Finance and Revenue Accounts.

Land Revenue, &c.

Land Revenue Administration:—Provincial Reports for Lower Provinces (Bengal), Bihar and Orissa, Assam, United Provinces, Bombay Presidency (including Sind), Punjab, Central Provinces and Berar, Burma, and Madras.

Report on Land Revenue Administration, Land Records, Settlement Operations, Alienation of Land Act, &c. for North-West Frontier Province.

Madras Survey, Settlement and Land Records Department Report.

Reports of Land Records Departments for Bombay, Burma, Bengal, United Provinces, and Punjab.

Report on Settlement Operations, Punjab.

Reports on Survey and Settlement Operations, Bengal, Bihar and Orissa, and Assam.

Reports on Operations of the Land Records and Settlement Departments, Central Provinces and Berar.

Report of the Talukdari Settlement Officer, Bombay.

Provincial Reports on the Administration of Estates under the Court of Wards.

Report on the Punjab Canal Colonies.

Separate Revenue (Salt, Excise, &c.).

Salt Department Reports: Northern India, Madras, Bombay, Sind, Bengal, Burma, Bihar and Orissa.

Excise Report for each Province.

Report on the Operations of the Opium Department.

Stamp Department Report for each Province.

Registration Department Report for each Province.

Income Tax Report for each Province.

Agriculture and Veterinary.

Report on the Progress of Agriculture in India.
 Report of the Agricultural Research Institute and College, Pusa.
 Bulletins of the Agricultural Research Institute, Pusa, and of the Provincial Departments of Agriculture.
 Memoirs of the Department of Agriculture.
 Proceedings of the Board of Agriculture.
 Agricultural Journal of India (quarterly).
 Reports of the Department of Agriculture for each Province.
 Reports on Agricultural Stations, Experimental Farms, and Botanic Gardens for each Province.
 Season and Crop Report for each Province.
 Agricultural Statistics of India.
 Area and Yield of certain Principal Crops.
 Report on Production of Tea in India.
 Report on Tea Culture in Assam.
 Reports of the Civil Veterinary Departments for each Province.
 Statistics compiled from the Reports of the Provincial Civil Veterinary Departments.
 Report of the Camel Specialist.
 Report of the Imperial Bacteriologist (Veterinary).

Co-operative Societies.

Statements showing Progress of the Co-operative Movement in India.
 Reports on Co-operative Societies for each Province.
 Reports of Conferences of Registrars of Co-operative Societies, India and Provincial.

Forests.

Annual Return of Statistics relating to Forest Administration in British India.
 Report on Forest Administration for each Province.
 Reports of the Forest Research Institute and the Imperial Forest College, Dehra Dun.
 Quinquennial Forest Review.
 Indian Forest Memoirs.
 Indian Forest Records.
 Forest Bulletins.

Mineral Production and Inspection of Mines.

Review of Mineral Production (in Records of Geological Survey).
 Report on Production and Consumption of Coal in India.
 Report of the Chief Inspector of Mines.

Trade and Manufactures.

Annual Statements of Sea-borne Trade and Navigation, India and Provincial (Madras, Bombay, Sind, Bengal, Bihar and Orissa, Burma).
 Review of the Trade of India (Parliamentary Paper).
 Tables of the Trade of India (Parliamentary Paper).
 Provincial Reports on Maritime Trade and Customs (including working of Merchandise Marks Act) for Bengal, Bihar and Orissa, Bombay, Sind, Madras, and Burma.
 Accounts relating to the Sea-borne Trade and Navigation of British India (monthly and for calendar year).
 Accounts relating to the Trade by Land of British India with Foreign Countries (monthly).
 Annual Statement of Coasting Trade of British India.
 Report on the Trade and Navigation of Aden.
 Accounts of Trade carried by Rail and River in India.
 Report on Inland, Rail-borne, or Rail-and-River-borne Trade for each Province.
 External Land Trade Reports for Bengal, Bihar and Orissa, Assam, Burma, United Provinces, Punjab, North-West Frontier Province, Sind, and British Baluchistan.
 Indian Trade Journal (weekly).
 Statistics relating to Joint-Stock Companies in British India and Mysore.
 Report on the working of the Indian Companies Act for each Province.
 Report on the working of the Indian Factories Act for each Province.
 Report of the Chief Inspector of Explosives.

Public Works.

Administration Report on Railways.
 Reports on Public Works (Buildings and Roads) for Madras, Bombay, Punjab, North-West Frontier Province, and Burma.
 Review of Irrigation.
 Report on Irrigation Revenue for each Province (except Madras).
 Administrative Reports on Irrigation, Madras and Bombay.
 Report on Architectural Work in India.

Posts and Telegraphs.

Report on the Posts and Telegraphs of India.
Report of Indo-European Telegraph Department.

Scientific Departments.

Report on the Operations of the Survey of India.
Records of the Survey of India.
Records and Memoirs of the Geological Survey of India.
Report of the Indian Meteorological Department.
Indian Weather Review, Annual Summary.
Rainfall Data of India.
Memoirs of the Indian Meteorological Department.
Report of the Meteorologist, Calcutta.
Report of the Director-General of Observatories.
Memoirs and Bulletins of the Kodaikanal Observatory.
Report of the Board of Scientific Advice.
Report of the Archaeological Survey of India, and Provincial Reports.
Report and Records of the Botanical Survey.

Education.

Education Reports for India and each Province.
Quinquennial Review of Education (Parliamentary Paper).

Local Self-Government.

Reports on Municipalities for each Province and for Calcutta, Bombay City, Madras City, and Rangoon.
Reports on District and Local Boards or Local Funds for each Province.
Reports of Port Trusts of Calcutta, Bombay, Madras, Rangoon, Karachi, and Aden.

Medical, Sanitary, and Vital Statistics.

Report of the Sanitary Commissioner with the Government of India.
Report on Sanitary Measures in India (Parliamentary Paper).
Report of the Sanitary Commissioner for each Province.
Vaccination Report for each Province.
Report on Civil Hospitals and Dispensaries for each Province.
Report on Lunatic Asylums for each Province.
Report of the Chemical Examiner and Bacteriologist for each Province.
Scientific Memoirs by Officers of the Medical and Sanitary Departments.
Reports of the All-India Sanitary Conferences.
Reports of the Imperial Malaria Conferences.
Indian Journal of Medical Research (Quarterly).

Emigration and Immigration.

Calcutta Port Emigration Report.
Bengal Inland Emigration Report.
Assam Immigration Report.

Prices and Wages.

Prices and Wages in India.
Variations in Indian Price Levels.
Reports of Provincial Wage Censuses.

EAST INDIA (PROGRESS AND CONDITION).

STATEMENT

EXHIBITING THE

MORAL AND MATERIAL PROGRESS AND CONDITION

OF

INDIA

DURING THE YEAR 1916-17.

FIFTY-THIRD NUMBER.

Presented to Parliament by Command of His Majesty.



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NOTE.

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REPORT

INTRODUCTORY CHAPTER.

Preliminary.—The record of the moral and material progress of India must be sought in the history of the administration and development of individual provinces. The problems of Government, social, economic and administrative, vary widely in different areas, nor is the rate of advance by any means uniform in all. It is accordingly difficult to take a comprehensive survey of Indian progress within the narrow limits of a single year, and we have thought it best to set forth the great part of the year's report in the provincial chapters which follow, and to confine this introductory chapter to a few general remarks, together with a brief account of those branches of the administration, as for instance military matters, for which the central Government of India is solely responsible. A separate chapter deals with Imperial finance, distinct from provincial finance, and another contains a list of the laws and ordinances passed during the year.

The war.—2. Indian affairs, like those of most countries, continue to be dominated both directly and indirectly by the war. It will be as well, therefore, to describe briefly the part played by the Government and the country in the universal struggle during the year under report—a part which is perhaps greater and worthier than is generally ascribed to India.

Recruiting.—3. The first and most important obligation is the supply of trained men for the forces of the Empire. During the year recruiting for the regular armies continued vigorously among the fighting races of India. In addition to the very heavy drain of men required for the reinforcement of existing Indian units in all the various theatres of war, no less than 13 fresh battalions of Indian Infantry were placed at the disposal of the War Office for service in Mesopotamia; 12 new battalions were raised and 12 more existing battalions, the bulk of which had been captured at the fall of Kut, were reformed and brought up to strength in India. Three new Indian battalions were furnished to Egypt. A Royal Field Artillery battery of Anglo-Indians was formed and despatched for service to Mesopotamia, and various new Sapper and Miner and Signal units were raised, the strength of existing units being at the same time increased. The establishments of Indian cavalry regiments were raised to 800 Indian ranks, and 796 horses and camels, and depôts were raised to 275 Indian ranks each. In order to facilitate the recruitment and supply of followers for service with field forces overseas, central depôts were established at Meerut, Kirkee and Lucknow. Central reserve depôts from which departmental and regimental followers could be furnished for service overseas were also formed at Meerut and Ahmedabad. Six labour and three porter free corps were raised for service in Mesopotamia, and we accepted the liability to find 50,000 labourers for France. It must be remembered in this connection that there is a serious shortage of labour in India itself which has greatly hampered certain important industries especially coal. Thirty-five new transport units (mule, bullock, pony and camel) were formed, and, with the exception of some mules, all animals have been obtained in the country. Two Indian Mechanical Transport companies were raised and equipped. In order to expedite the enrolment of recruits and save the trouble of sending them to a station where there was a medical officer residing and of returning them to their homes if rejected, instructions were issued that medical officers should, when possible, accompany recruiting officers on recruiting duty.

With a view to stimulating recruiting for the Indian Army, so as to maintain the supply of recruits required to make good the wastage in the field and to admit of the formation of new units, it became necessary to offer improved terms of service. It was accordingly decided to increase the pay of Indian ranks except sepoy, sowars, gunners and sappers, and at the same time to grant free rations to all Indian ranks, including the above. This concession was announced on the 1st January 1917. Pending the completion

of arrangements for the supply of rations, a temporary ration allowance of two rupees a month was granted to all combatant ranks in India not on furlough or leave, and not already in receipt of free rations with effect from the same date.

The Indian Defence Force.—4. Towards the end of the year the Indian Defence Force was constituted under a special Act of the Imperial Legislative Council. The object of this measure was a more extensive use of volunteers and other European British subjects resident in the country to replace regular troops on internal security dispositions, and to release British troops for service overseas. Enrolment was made compulsory for all European British subjects in India between the ages of 18 and 50, those between the ages of 18 and 41 being liable for military service anywhere in India and those above the age of 41 for local military service. At the same time the Act provided for persons other than European British subjects who should offer themselves for general military service to be enrolled in the local corps specially constituted. This part of the measure, especially, was hailed with approval by all sections of Indian opinion, as granting an opportunity to Indians to take part in home defence without liability for service overseas. The response, however, was somewhat disappointing.

The Indian Defence Force is now in full swing but the Act did not come into practical operation until after the close of the year under report.

Training of officers.—5. The expansion of His Majesty's forces in India, and the necessity for replacing casualties among commissioned officers on active service have necessarily resulted in an enormous increase in the demand for trained officers of that class. The demand has been met in two ways, by the establishment of cadet colleges and training schools and courses for training, and by the recruitment of civil officers of Government and non-official gentlemen into the Indian Army Reserve of Officers.

In the first connection cadet colleges were established at Quetta and Wellington for training cadets from England before entering the Indian Army. Classes of instruction for non-commissioned officers of Territorial battalions in India to be trained in drill and field duties up to the leading of a platoon were formed at Secunderabad and Kuldana. A class was also formed at Abbottabad for the instruction of selected officers and non-commissioned officers of Territorial battalions in mountain warfare. A staff school was established at Mhow for the instruction of selected officers in staff duties in war in the appointments of General Staff officers, second and third grade, Deputy Assistant Adjutant Generals, Brigade-Majors and Staff Captains. A school to hold a hundred and fifty young officers previously attached for three months to a British unit in India was opened at Ambala in February 1917. In the same school were also incorporated classes for the training of officers on first appointment to the Indian Army Reserve of Officers. A cadet school was opened at Sialkot for the training of non-commissioned officers who were candidates for commissions. During the winter of 1916-17, a school of gunnery was held at Akora, and co-operation between artillery and aeroplanes was also practised. A machine gun training centre was established at Campbellpore, and a bombing school at Lahore.

The Indian Army Reserve of Officers.—6. Recruitment for the Indian Army Reserve of Officers continued apace, and the total number of that establishment are now approximately 3,500—a very creditable figure in view of the comparative numerical paucity of the European officers of Government and the commercial community from which two classes the reserve is almost entirely drawn—as a consequence of the large number of young civil officers who have been permitted to join the reserve during the year under report, and subsequently the shortage in the junior ranks of the administration in all its branches has now probably reached the last degree compatible with safety and efficiency. References to this shortage will be found in some of the provincial chapters, and there is no doubt that the position is the same all over the country. It must be remembered that the tendency in the various civilian services in India even in normal times is towards under—rather than over—manning, and that the war has not in any way diminished but has on the contrary increased the work and responsibilities of the administration.

Medical administration in war time.—7. The year was marked by an unprecedented and almost unlimited growth in military medical administration. There is not space in this report to record in detail the list of new hospitals instituted or taken over by Government, the great expansion of many existing hospitals, the large number of fresh medical units established for service overseas or in India itself, the immense additions made to *personnel* and equipment, and the special preventive measures organized against infectious and epidemic diseases, flies, heat, glare, and other discomforts incidental to campaigning in the East. We can mention here only two matters of particular interest. The first is a new departure in the foundation of orthopædic institutes for the treatment of wounded and disabled soldiers. A large and very fully equipped institute of this kind is being established at Dehra Dun, and the King Edward Hospital at Cawnpore has also been taken over for conversion into a special orthopædic hospital for Indian soldiers. Another such institute has been founded in Bombay. The second matter is the increasingly difficult problem of providing trained medical officers. The civil side of the Indian Medical Service is not only the Government channel of medical administration and instruction for the whole of India but it forms also the reserve of medical officers for the Indian Army on mobilization. All Indian Medical Service officers liable to surrender from civil employ were returned to the Army in the very early stages of the war, and many others not technically liable were returned with or soon after them. Only the barest minimum of officers was retained to occupy the most important of the administrative and executive charges, and to maintain at full working pressure the medical schools and colleges on which practically the whole supply of medical practitioners, official and non-official, in this country depends. Even so the numerical strength of the service proved far below military demands, and has had to be supplemented by the grant of temporary commissions to numbers of civil assistant surgeons and private practitioners. Still greater difficulties beset the provision of subordinate medical officers for the Army. Exceptionally favourable terms have been offered to induce civil sub-assistant surgeons to enter military employ, but the number of candidates is still far short of requirements. On the other hand, there is a point beyond which the medical needs of the vast population of India cannot be sacrificed and we have every reason to believe that the response already made to military demands has reduced the available medical *personnel* in most provinces to that point. Government has in this matter a responsibility to the civil population of India which it must discharge, and were a wide-spread increase of plague or other epidemic to find it unprepared and inadequately equipped, the consequences would be disastrous.

Indian Munitions Board.—8. The Indian Munitions Board was created as a department of the Government of India from the 1st March 1917 to control and develop Indian industries with special reference to the needs of the war, to regulate contracts, to limit and co-ordinate demands for articles not manufactured or produced in India and to apply the manufacturing resources of India to war purposes with the special object of reducing demands on shipping. The activities and rapid expansion of this department belong, however, to the period following that now under report.

Voluntary and private aid towards the war.—9. No account of India's contributions towards the war during the year would be complete without some mention—it would be impossible to give a statement—of the immense contributions in labour, money and materials voluntarily supplied by the Princes and people of India. A great part of the donations made and of the regular subscriptions and contributions instituted, dates from the years 1914 and 1915. But during the year 1916-1917 the generosity and enthusiasm of all, from the highest to the lowest, showed no signs of flagging. An attempt was made in 1916 to calculate very roughly the amount of aid of all kinds voluntarily given since the outbreak of war, but even such figures as were collected only represented those contributions which had passed through some Government channel; or had been formally made to Government, as, for instance, the liberal gifts of the Ruling Chiefs. Reference will be found in the provincial narratives to the contributions in troops, funds and in kind literally poured out by the last mentioned, and hardly a day passed but some new and muni-

ificent gift from one or other Chief testifies to the continual and devoted loyalty of that class. Of the various funds we may mention the following (the figures represent the sums received, so far as could be ascertained, up to the autumn of 1916.)

	Sums received.
	£
1. Imperial Indian Relief Fund	829,875
2. St. John's Ambulance Association—	
in cash	91,000
in kind	127,000
3. Bombay War Relief Fund	819,000
4. Madras War Fund	288,000
6. United Provinces War Fund	200,000
6. Punjab Aeroplane Fund	100,000
7. Calcutta Motor Ambulance	45,000
8. Bhagalpur Motor Ambulance Fund (Subscribed by the inhabitants of the districts of the Bhagalpur Division)	17,800
9. Bengali Hospital Flat	8,700
10. Belgian Relief Fund in India	27,000
11. Gifts from Ruling Chiefs (exclusive of other items above)—	
in cash	1,190,000
in kind (roughly estimated)	200,000

Details of such aid as the loan of houses for hospitals, for convalescent homes, and of all kinds of voluntary war work, are not available, but most generous and wide-spread assistance of this kind has been received. Towards the end of the year under report a letter appeared in the "Times" from Lady Chelmsford which gave an account of the organization and activities of the various Comforts for Troops Funds, now co-ordinated with the Central Indian Comforts for Troops Fund, and of the Red Cross Fund in India. The facts brought to light in that letter must have dispelled any idea that may have prevailed in England—and there is reason to believe that such ideas did exist—that private charity towards war purposes was not forthcoming in India, or that the ladies of this country, Indian and English, did not take their share in voluntary war work.

Agricultural Conditions.—10. Of matters not directly connected with the progress of the war, the most important to the vast majority of the population is agriculture. In this respect the year was a good one and except for a certain amount of local scarcity in Bankura and Tippera districts in Bengal, the Manbhum and Singhbhum districts of Bihar and Orissa, in Ajmer-Merwara, in Kathiawar, Bombay and in the Karauli and Kishengarh States in Rajputana, there was practically no agricultural distress during the year. Famine was actually declared in one of these tracts only, namely, an area of 2,621 square miles in the Bankura District of Bengal, the maximum numbers on relief works and gratuitous relief being 22,558 and 25,724 in June and May, respectively. A good monsoon improved the situation and by November relief measures were closed in all the affected areas. Special railway concessions were granted for the carriage of fodder in the Punjab, Delhi, Rajputana, Ajmer-Merwara and Bombay and an experiment was made of granting a similar concession for the transfer of cattle by rail from Ajmer-Merwara, but little advantage was taken of it. A special officer was appointed during the year to investigate the actual working of the system of granting reduced railway rates for the carriage of fodder during times of fodder scarcity, to point out its chief defects, and to suggest the means of avoiding them in future. His report has now been received and is under examination.

The provincial Governments have their own agricultural departments and colleges. Remarks on the progress of the agricultural instructions and research will be found accordingly in the provincial chapters of this report. The Government of India have also an Agricultural Research Institute at Pusa in Bihar, where experimental and demonstration work is carried on. The Pusa wheats are rapidly replacing country varieties in many tracts, especially in the United Provinces, where the area under these types has risen to a hundred thousand acres.

As a consequence of the stoppage of supply of German dyes, the cultivation of indigo has been very greatly resuscitated, and efforts are now being made to place natural indigo in a position to compete with the synthetic product. An Indigo Research Chemist has been appointed temporarily to the staff of the Imperial Department of Agriculture in India for employment on research work in connection with the manufacture, standardization and purification of indigo. A committee representative of expert knowledge in England has been formed for the purpose of providing the Chemist with expert criticism on his results and guidance in his investigations. About half a ton of indigo paste containing 18.75 per cent. of indigotin has been prepared by the Chemist and shipped to England for trial by dyers.

Among fibre crops, the type of jute isolated by the Fibre Expert in Bengal has from various trials been proved to possess heavier yielding powers than those of local varieties, and arrangements are being made to organize agencies for the growing and distribution of its seed in jute growing districts. All sections of the jute industry are co-operating with the department in the improvement of the crop.

The Scientific Department of the Indian Tea Association continued to do excellent work and the annual grant of B15,000 to the Association towards the maintenance of this Department was renewed for a further period of five years.

There is a consensus of opinion that meetings of agricultural experts from the various parts of India should be more frequent than at present, and the question of holding more frequent meetings of workers on particular branches of agricultural science has been referred to the Board of Agriculture in India. As an experiment, a meeting of Mycologists and Entomologists was held at Pusa in February 1917. The experiment proved to be a success; the meeting was largely attended, and much useful work was done.

Irrigation.—11. Closely allied to agriculture is the subject of irrigation, which is, however, dealt with in the provincial chapters. We invite attention specially to paragraph 6 of the Punjab chapter, which gives an outline of the progress in irrigation made in that province. The total expenditure on productive irrigation works in the year under report was B76,81,248, or £512,083. It may be convenient here to mention the chief irrigation schemes now under construction or consideration. They are—

- (a) In Madras the Cauvery Metur Reservoir Project is under consideration. It is estimated to cost 409.5 lakhs of rupees and is designed to secure 371,000 acres of new irrigation while affording complete control over the present fluctuating supplies to the million acres already irrigated in the Cauvery delta.
- (b) In Bombay the Nira Right Bank Canal and the Pravara River Canal Project, estimated to cost 258 and 127 lakhs respectively, are under construction. When completed they will add some 275,000 acres to the irrigated area of the Presidency and will protect tracts at present peculiarly liable to famine. A project for the construction of a barrage across the Indus at Sukkur with the object of converting the existing inundation canals in Sind into perennial canals is also in course of preparation.
- (c) In the United Provinces the Sarda Canal Project is under consideration. This system entails the construction of 5,000 miles of channels, is designed to irrigate nearly 2½ million acres and is estimated to cost 857 lakhs of rupees.
- (d) In the Punjab four large projects are being examined. The Sutlej Valley Project is expected to irrigate about 3 million acres (of which 1.7 million will be new irrigation) at a cost of 990 lakhs of rupees. The Haveli Project has been prepared with a view to securing new irrigation, to the extent of about 200,000 acres, in precarious tracts on either bank of the Chenab river, below its confluence with the Jhelum, and to improving the existing Multan inundation canals, the cost of the scheme being estimated at 165 lakhs of rupees. The Sind-Sagar Project is under investigation with the object of bringing the Sind-Sagar

desert under cultivation by means of canals from the Indus, while the Bhakra dam scheme is being prepared to utilize the surplus flood water of the Sutlej in the precarious districts of Rohtak and Hissar. These are all projects of the first magnitude and, if constructed, will increase the area under irrigation in the Punjab by nearly 5 million acres, while improving the supplies of several existing canals, at a total capital cost of about £18½ million sterling.

- (e) In Burma, a project for the embanking of the left bank of the Irrawaddy, estimated to reclaim about 500,000 acres of land, to cost about 62 lakhs of rupees, and to yield a net revenue of nearly ₹13 lakhs.

The Industrial Commission.—12. Turning to trade and industries, we have first of all to record an event of the first importance in May 1916, when a Commission was appointed to examine and report upon the possibilities of further industrial development in India. The specific points of reference were—

- (a) Whether new openings for the profitable employment of Indian capital in commerce and industry can be indicated.
- (b) Whether, and if so, in what manner Government can usefully give direct encouragement to industrial development—
- (1) by rendering technical advice more freely available;
 - (2) by the demonstration of the practical possibility, on a commercial scale, of particular industries;
 - (3) by affording, directly or indirectly financial assistance to industrial enterprises; and
 - (4) by any other means which are not incompatible with the existing fiscal policy of the Government of India.

Sir Thomas Holland, who was appointed President of the Commission, arrived in India early in May 1916 and was engaged on preliminary work until the following October when the Commission assembled in Delhi. They toured through India in the winter of 1916-17, but did not complete their labours that season. In November 1917, they re-assembled in Bombay, and are expected to submit a report in the spring of 1918.

External trade—Jute, tea and coffee.—13. The steps taken in the United Kingdom to secure economy of tonnage were severely felt in some quarters in India, though the situation became acutest after the close of the year under report. The raw jute and tea trades suffered to some extent and the coffee trade heavily; but the jute industry has since been considerably helped by the introduction of a system for purchase of the raw jute required by the War Office and by re-opening exports on private account to the United Kingdom, and the tea trade is now in a more secure position as all the tea required for consumption in the United Kingdom will in future be obtained from India and Ceylon, while Australia has prohibited the import of all foreign tea. A special Controller has now been appointed in India for the tea trade. The importation of foreign coffee into India has been prohibited and certain other measures have been suggested to His Majesty's Government for the assistance of the coffee trade.

Salt and coal.—14. The shortage of shipping reacted also on two other considerable trades, namely, salt and coal. The great decrease in the normal imports of foreign salt encouraged speculation in salt and this forced up prices to an abnormal height. We have since taken powers which will enable them to improve the distribution of salt manufactured in India by giving preference to the indents of local authorities or other agencies selected by local Governments as against the speculative dealers. Measures on these lines were first taken in the year under report by the Government of the Punjab where depôts were opened by local authorities for the distribution of salt at cost prices. We are now taking all possible steps to increase local output of salt and additional plant is being installed in the great Mayo salt mines at Khewra.

The production and distribution of coal was seriously affected by the exceptional demands for naval purposes and for essential industries and by the cessation of the coastwise carriage of coal from Calcutta to Bombay and Karachi. At the same time the labour position at the coal fields was exceptionally difficult both in 1916 and 1917 and raisings were curtailed in consequence. It, therefore, became necessary, in order to provide full supply of coal for certain industries, to prohibit the export of coal and coke except under a license and to requisition the supplies of all first-class coal under the Defence of India Act, 1915. In December 1916, an executive committee was appointed in Calcutta and empowered to issue instructions to the railways with regard to the supply of wagons at the coal mines, and in this manner was enabled to regulate the supplies of coal to private consumers in accordance with the recommendations of authorised commercial bodies, such as Chambers of Commerce, through whom all indents for coal had to be passed.

Indentured Labour.—15. During the year, His Majesty's Government accepted the recommendation of the Government of India to abolish indentured emigration of Indians to the Colonies. After the close of the year, in June 1917, an inter-departmental Conference, at which we were represented, was held in London, to devise an alternative system. The Conference in its report has formulated a scheme of assisted emigration, the cardinal feature of which is the prominence given to provisions for encouraging the settlement of Indians in the Colonies concerned under favourable conditions and with the same political rights as the other inhabitants. The scheme is still under our consideration.

Production of commodities required for purposes of war.—16. During the period under review we were much occupied with increasing the production in India of materials needed in connection with the war and with the regulation of their shipment to the necessary destinations. Special measures have been taken to secure an increased supply of mica, wolfram and saltpetre.

The output of saltpetre was greatly stimulated by the increase of price and the very satisfactory total of 21,777 tons was produced in the year 1916. The prices of saltpetre are, in the interests of His Majesty's Government, restricted to maximum rates.

The increased production of wolfram entailed development work in very difficult country, the attraction of new capital and the gradual improvement of mining methods. The Government of Burma took the work vigorously in hand with the assistance of officers in the Geological Survey, with very good results. The rate of output has more than doubled, and, the amount produced in 1916 was no less than 3,806 tons.

The main problem in the case of mica has been to secure a greatly enhanced output of certain comparatively uncommon grades. The first measure taken was to appoint Messrs. Chrestien and Company of Kodarma in Bihar and Orissa as Government agents for the selection and purchase of the higher grades of mica; and it was provided that no such mica should be exported save through the Government agents, while exports of mica of lower grades were limited to approved consignees mainly in the United States. These measures, however, were not sufficient to secure the quantities required. Consequently the export of mica except to the United Kingdom was prohibited in order to prevent the leakage of higher grade mica and since March 1917 the Government of Bihar and Orissa have taken measures of development similar to those adopted in the case of wolfram. Trade with the United Kingdom is now open, but the local Government have taken under their direct control the production of mica in some of the most productive areas.

A special officer was appointed to arrange for the purchase and shipment to Europe of wheat and hides and the Director-General, Commercial Intelligence was placed in special charge of the arrangements in connection with sandbags, raw jute and shellac. Effect has now been given to an important scheme for the purchase of rice in Burma and its shipment to the United Kingdom.

The control over the import and export of goods to and from British India is exercised under the Import and Export Goods Act, XI of 1916, which was passed for this purpose. The restrictions imposed in the earlier stages of the war were aimed chiefly at preventing supplies from reaching the enemy. More

recently the object has been in most cases to conserve supplies for Britain and her allies or to retain in India the commodities which are required for the production locally of war supplies.

Opium.—17. Before the war our opium with its low morphine content had little chance of competing in the market for the manufacture of morphia; but in 1915, on the cessation of the supplies from the Ottoman Empire, a demand sprang up in London for the Indian commodity and the export to England has now reached considerable dimensions. A profitable and legitimate outlet will be secured for Indian trade if Turkey can be ousted permanently from her predominance in the market for medical opium, and investigations, which already promise success, have therefore been started for improving the morphine content of our opium.

The policy of supplying opium direct to the Governments of importing countries in the Far East instead of selling it by auction to private traders was steadily pursued; a larger measure of control over the trade in the non-China markets is thereby secured. A five-yearly agreement was concluded with the Netherland Indies similar to those made towards the end of Lord Hardinge's Viceroyalty with the Governments of Hongkong and the Straits Settlements, while at the close of the year negotiations which shortly afterwards terminated successfully were in progress for the ratification of similar agreements with Siam and British North Borneo. The internal control of opium production was also facilitated by the co-operation of the Gwalior and Indore Darbars, and of some of the smaller Darbars in the Malwa opium-producing tract, in a scheme for the direct supply to Government of opium obtained from that area.

Regulation of shipping.—18. The increasing shortage of freight and the concentration of manufactures in the United Kingdom on war supplies has rendered it more and more difficult for India to obtain her normal requirements of manufactured articles from that country. At the same time there has been equal difficulty in meeting the demands of countries bordering on the Indian Ocean which are in part dependent on India for supplies. Great importance, therefore, is attached to measures for the better regulation of shipping in Indian waters. During the year under report we had chiefly to consider how the tonnage taken up for military purposes might be economized and used to the greatest possible advantage and with the least possible interference to trade. For this purpose Advisory committees were established at Bombay, Calcutta, and Rangoon to assist in avoiding waste of tonnage and unnecessary interference with shipping. But as the shortage of ships became worse and as a result of the measures taken by the newly established Shipping Controller in England, our line of action had to be changed and it became very desirable to centralize the control of purely commercial shipping in Eastern waters in a single officer, who should act in India as agent and deputy to the Shipping Controller. Recommendations to this effect were made and accepted. These events do not, however, belong to the year under review.

Enemy trading.—19. Reference may here be made to the action taken against hostile trading interests. In July 1916, the Enemy Trading Ordinance gave Government wide powers in regard to firms of hostile constitution or associations, and under these powers rules were issued prescribing the method in which enemy business concerns were to be wound up. In September 1916, this Ordinance was re-enacted with certain conditions as Act XI of 1916. Steps were taken to eliminate completely those firms which contained a considerable hostile element and to apply stricter control, when necessary, in cases where winding up order did not appear to be advisable. 143 firms were wound up and 14 were permitted to trade under stricter conditions. The amount of enemy property held in India has been investigated and as a result we have been able to vest in the Custodian of Enemy Property a large amount of property in which it was considered undesirable that enemies or hostile foreigners should retain any interest.

Railways.—20. The progress of railway construction was necessarily affected in the period under review by financial considerations and by the difficulty in procuring materials. The majority of the extensions which it was found possible to proceed with were financed either by Branch Line Companies

or Native States. The gross earnings of all Indian Railways during the year 1916-17 amounted to ₹7,068.42 lakhs (between £46 and 47 millions) against ₹6,466.04 lakhs in the previous year or an increase of ₹602.38 lakhs (about £4 millions) while the working expenses were ₹48.37 lakhs more than 1915-16. The net earnings amounted to ₹3,728.10 lakhs (between £24 and 25 millions) against ₹3,174.09 or an increase of ₹554.01 lakhs (about £3,700,000) and yielded a return of 6.96 per cent. against 5.99 per cent. in the previous year. The large increase in the gross earnings was chiefly due to the movement of troops and special traffic in grain and coal on account of the war and the comparatively small increase in the working expenses principally to the temporary interruption of ordinary renewals consequent on the difficulties in procuring materials. During the year 1917-18 gross earnings continued to expand.

Of 690 miles of railways opened only about a fifth was financed by Government, the outlay being devoted entirely to urgent works in connection with lines in progress before the war. The most important lines opened were the Sara-Sirajgang Railway (52.23 miles), the Laki-Pezu-Tank Railway and the Burdwan-Howrah Chord of the East Indian Railway, 55½ miles.

During the period ending 31st December 1917 it was again found necessary to restrict expenditure on open line improvements for financial reasons, while at the same time the choice of works on which the available funds should be spent was seriously hampered by the difficulty of obtaining materials. For the same reason no large programme of renewals has been taken in hand during the period.

The question of the construction of a permanent harbour at Vizagapatam has been under discussion intermittently for the past 58 years. There is at present on the long coast line between Madras and Calcutta no port at which vessels of large size can take shelter at all seasons of the year. Moreover, the development of a large tract of country lying to the south of the Nagpur-Khargpur section of the Bengal-Nagpur Railway has been retarded, owing to the want of convenient access to a first class port. Vizagapatam was indicated as the most convenient site, as the natural conditions there are eminently adapted to the construction of an internal protected harbour. The Bengal-Nagpur Railway accordingly have, with the sanction of the Secretary of State, had a project prepared for the improvement of Vizagapatam harbour. This project is roughly estimated to cost ₹60 lakhs. Detailed estimates are in course of preparation. It is noteworthy that the port will be constructed and directly controlled by the Railway Company.

The outstanding feature of the period has been the difficulty of transporting all the traffic which Indian railways were asked to carry. Soon after the outbreak of war, the difficulty of obtaining shipping for the coastwise trade steadily increased until the whole of this traffic, a very considerable portion of which consisted of coal, had to be carried by railways. In the spring of 1917 the difficulties in regard to the movement of traffic were further accentuated by the heavy demands made on behalf of Government for the transport of wheat and other essential food grains for export to the United Kingdom. The Railway Board have since appointed a "Controller of Traffic", whose duties are to take such steps on behalf of Government as will result in the most economical use of the limited transport available on railways, and to control traffic over railways in the best interests of national and general purposes.

In view of the practical impossibility of obtaining sufficient supplies of railway material from England, the reduction of passenger train services in India became imperative. Certain mail and a large number of passenger trains have been reduced, all possible measures being adopted to minimise the inconvenience caused to the public.

The development of military operations in Eastern Theatres involved increasing contributions of permanent-way materials, rolling-stock, plant and equipment from Indian Railways, and, in addition to the Mesopotamian, East African and Aden fronts, for which India was the base of supply for railway materials, considerable quantities of permanent-way and sleepers were supplied to Egypt. Railway workshops continued to be extensively employed on the provision of ambulance trains and munitions of war of various classes.

The scarcity of materials for the maintenance of railways and rolling-stock has been a matter of considerable anxiety and as already stated led to the necessity of reducing train services early in 1917. The standard of maintenance also had to be lowered in several respects, and the result has been some considerable deterioration in the equipment of railways.

The New Capital.—21. The expenditure on new Delhi for the year 1916-17 amounted to about R10 lakhs, or R10 lakhs less than in 1915-16. The saving was attained by a smaller work programme and a considerable reduction in the engineering staff. The aim during the year was to leave untouched the larger schemes which require the use of fresh imported materials but to continue such work on the central buildings and other features of the new city as could be carried on without the use of materials which had become difficult or expensive to procure owing to the war, and to maintain the output of brickfields and quarries and the preparation of sites and roads. A moderate rate of progress was maintained in the construction of Government house, the Viceroy's Court, the Secretariats and the Great Palace. It was definitely decided in the course of the year, with the concurrence of His Majesty's Secretary of State, that no material part of the project of new Delhi should be abandoned as a consequence of the war, but that the whole scheme should be carried to its conclusion substantially on the lines already approved by His Majesty's Government. The rate of progress however must inevitably be delayed to a very great degree by the conditions arising out of the war.

Constitutional reform.—22. We turn from material to moral progress and conditions. The question of constructive constitutional reform with the object of enabling Indians to take a larger and ever increasing share in the government of their country, had occupied for some few years past, the attention of officials no less than of politicians. If there were any doubts that the time was not yet ripe for a considerable advance in this direction, such doubts must have been set at rest by the events of the war in which the loyalty and worth of India, as a whole, have been so spontaneously and efficiently displayed. Lord Chelmsford, the first year of whose Viceroyalty synchronizes exactly with the period covered by this report, took up the question from the outset of his term of office, and we were occupied throughout the summer of 1916 in considering and devising lines along which we could propose an immediate advance in the constitutional development of India. Towards the end of the year we embodied our conclusions in a despatch to the Secretary of State. The contents of that despatch and the details of our recommendations have not been made public, but the despatch and the deliberations which preceded it have already borne their fruit, in the announcement, made in the House of Commons, by the Secretary of State on the 20th August 1917, foreshadowing the grant of a measure of responsible Government, and in the present visit of the Secretary of State and his deputation to India.

Meanwhile in September 1916, the nineteen elected non-official members of the Imperial Legislative Council took the opportunity afforded by the Simla season to frame a joint manifesto, which they submitted for the consideration of the Secretary of State, setting forth a list of constitutional changes, which, they considered, were the minimum which should be granted to India in the matter of political reform. The most important measures advocated were: (1) that the number of Indians in executive councils should be increased to

one-half, and that these members should be elected: (2) that the Legislative Council should be very considerably enlarged, and constituted with an elective majority; and that the Imperial Council should control the Budget: (3) that the Secretary of State's Council should be abolished, and his salary placed on the British estimates: (4) that provincial Governments should be made autonomous (in what respects was not said): (5) that all the major provinces should have Governors and Executive Councils: (6) that a full measure of local self-government should be granted (here again no particulars were suggested): (7) that commissions in the Indian Army should be given to Indian youths under the same conditions as those which now apply to Europeans. This programme also has become more or less merged in the later developments.

During the last few months of 1916 the Committees of the Indian National Congress and of the All-India Moslem League also were occupied in framing a joint scheme of constitutional reform. This scheme was somewhat on the same lines as that of "the Nineteen", but it aimed at an even more rapid and complete subordination of the executive authority to the elected element in the councils. The adoption of this programme was the most important event of the annual meetings of the Congress and the League, which took place at Lucknow at Christmas 1916.

Political Movements.—23. The Home Rule movement initiated by Mrs. Besant first came into prominent notice towards the end of 1915. The Congress and the Moslem League both of which met at Bombay in December of that year, after some debate formally withheld countenance from it, but they passed resolutions recommending a considerable advance in the same direction. Mrs. Besant subsequently continued her propaganda in Madras, while Bal Gangadhar Tilak organized a parallel movement known as the Nationalist Home Rule League in Bombay. Both Mrs. Besant and Mr. Tilak delivered violent speeches which brought them into contact with authority. Mrs. Besant was, under the Defence of India Rules, excluded from the Presidency of Bombay, and later from the Central Provinces, in each case by order of the local Government. Mr. Tilak was prosecuted under the Criminal Procedure Code and ordered by the District Magistrate of Poona to execute a bond in twenty thousand rupees, with sureties, to be of good behaviour for one year. The order was, however, cancelled by the High Court of Bombay on the ground that the speeches taken as a whole were not likely to create disaffection against Government. The Home Rule League did not appear to make much progress outside Madras and Bombay until Christmas 1916, when the Congress and the Moslem League met at Lucknow. At these meetings the followers of Mrs. Besant and Mr. Tilak carried the day and the Congress agreed to countenance the propaganda of local Home Rule Leagues and Committees. From that point the influence of the League in various parts of India increased considerably. The aim of the League, it is hardly necessary to state, is the attainment of complete self-government for India in the immediate future.

The Congress seemed to be in a transition stage. Extremist views, represented by Mrs. Besant and Mr. Tilak and their following were predominant generally, but the moderate leaders still retained their strong position in the various Congress Committees. There was a distinct *rapprochement* between the forward wing of the Hindu party which had captured the Congress and the advanced Muhammadans represented by the Moslem League. The latter, as already stated made a joint demand with the Congress for constitutional reforms, and has become little more than an adjunct of it. It may be mentioned that the old Punjab provincial branch of the Moslem League under the leadership of Khan Bahadur Mian Muhammad Shafi adopted a more conservative attitude, and disaffiliated itself from the main body.

The political events narrated in this paragraph, affect only a very small, though potentially important, fraction of the population in India. As far as the great masses were concerned, the year was prosperous and uneventful and there was no widespread political movement or agitation. Still less, if we except one province, was there any serious disorder in any part of the country. The course of anarchical crime in Bengal is dealt with under the Bengal chapter of this report. We need only remark here that the question

was the first to occupy the attention of Lord Chelmsford and his Government after he became Viceroy, and that the year saw the beginnings of a resolute and hitherto strikingly successful attempt on the part of the Bengal Government to grapple with and master the danger. The internment of active conspirators has led to protests. But we have satisfied ourselves by careful and regular inquiries, that the prisoners are treated with consideration and indulgence, and that none is detained for longer than is necessary to the public safety.

There was no revolutionary crime to speak of in other provinces.

Conference of Ruling Chiefs.—24. Lord Chelmsford, soon after his arrival in India, was impressed with the need for the establishment of some organic connection between the Government of India and the Ruling Princes and Chiefs, enabling them to have a voice in the settlement of questions concerning them, their States and their people; and with this object in view, he ordered that the question of the establishment of a Council of Princes should be examined in the Political Department of the Government of India. As a preliminary step towards the institution of such a body he decided to hold an informal Conference of Ruling Princes and Chiefs at Delhi in October and November 1916, to discuss certain matters connected with the Native States, to which all Ruling Princes and Chiefs enjoying a permanent or personal salute of 11 guns or over, excluding minors, were invited. Despite the fact that attendance at the Conference was optional, the Chiefs who assembled at Delhi were fully representative of their order and no less than 40 were present.

Social and moral progress.—25. Several important subjects affecting the social and moral welfare of the people are, for reasons already explained, omitted from this brief chapter. Municipal and rural board administration, education, the protection of children and the reform of youthful offenders, the reclamation of criminal tribes, public health, the drink question—all these belong to the sphere of provincial government, and are dealt with, where the year's record contains any noteworthy feature, in the provincial narratives. We need hardly explain that in such matters the function of the Government of India is chiefly to suggest and control policy, and to act as the medium for obtaining the sanction of the Secretary of State to expenditure exceeding certain fixed limits. It may be hoped that in the future an increased devolution of power will consign these branches of purely domestic administration still more fully to local Governments. Two educational events of the year under review were, however, of general importance and may be recorded here. A recurring sum of Rs 30 lakhs a year was made available from Imperial revenues and allotted to local Governments for the training and pay of teachers in primary and secondary schools: and a conference of the directors of public instruction from all India was held at Delhi in January 1917 under the presidency of the Education Member. The Viceroy opened the proceedings and addressed the conference. Several important aspects of educational work were discussed, and the results were both useful and encouraging.

CHAPTER II.—FINANCE.

Faced with a prospective deficit of over two and a half million pounds, we had, at the close of 1915-16, raised our general customs duties and reduced the free list, imposed an export duty on the two important staples of jute and tea, enhanced the salt tax by twenty-five per cent., and introduced a graduated and higher scale of income-tax. We had thus been able finally to budget for an Imperial surplus of a little less than a million pounds at the close of the year with which this report deals. In the event a much larger surplus was secured. An exceptionally bountiful monsoon; a recovery, in spite of scanty freight and war restrictions of the export and import trade; the high prices of commodities liable to *ad valorem* customs duties; a growing demand from England for medicinal opium; and a brisk market for provision opium in Calcutta; and most important of all, a phenomenal increase in railway receipts due to good rains, favourable trade and market conditions, and the absence of the normal competition from the coasting trade—to these causes was due an excess over the anticipated revenue of nearly ten million pounds. Military expenditure, it is true, was about three million pounds larger than was expected, and there was some extra political outlay in Persia; but the final Imperial surplus for the year fell little short of seven and a half million pounds. This improvement in the revenue position, aided in some degree by increased deposits in the Post Office Savings Bank and by lower capital expenditure on railway material, enabled us to discharge seven million pounds of temporary debt, which the Secretary of State had been constrained to raise in the early days of the war, and to repay four million pounds which had been taken at the same period from the Gold Standard Reserve. We thus strengthened our position for undertaking at the close of the year a gift of a hundred million pounds to His Majesty's Government.

2. It was not then by any anxiety lest our revenues should fail us that we were beset during the year 1916-17; the difficulties which assailed us, and they were many, lay in securing a proper distribution of our resources between England and India. These difficulties arose in the following way. Firstly, we were called upon to purchase in India war material and supplies for the Home Government costing over 37 million pounds; and we could not obtain payment in India for these purchases without requiring the export of specie thither, and consequently endangering larger interests by trenching on the Empire's central stock of gold in London. We therefore accepted payment for this recoverable war expenditure in England. The second reason is to be found in the trade conditions of the year. In normal years the primary object of the Secretary of State's sales in London of Council Bills payable in India is to place him in funds to meet his English expenditure; in 1915 the recovery of thirty-seven million pounds from the Home Government, which has just been mentioned, was more than sufficient to meet the thirty-one and a half million pounds which he required, and he was consequently under no obligation to sell any Council Bills for this purpose. But under war conditions the demand for India's exports was insistent and was subjected to but slight check from considerations of price, of freight or of quantity, while the same conditions restricted the volume of her imports, and precluded or impeded the alternative methods by which payment for her exports could be made. There was thus a heavy balance of trade in India's favour, a balance which has been estimated at sixty million sterling, and, after allowing for the various expedients by which the payment of part of this balance could be effected or postponed, a large residue remained to be liquidated if the Indian export trade was not to suffer a serious setback. At the same time a very considerable portion of India's exports were of national importance for the prosecution of the war, and it was necessary to provide for their continuance. For this purpose remittances to the extent of thirty-three million pounds were placed at the disposal of trade by the sale of Council Bills.

3. The result of these operations was the transfer, from India to England, of no less than £70 million, or a sum more than double the remittances

effected through the Government of India in any two consecutive years since 1899 when the gold standard system first became effective. To the extent of about £31½ million the funds so transferred were applied in England to meeting the normal home charges of the Government of India, a certain amount of capital outlay in England, and the discharge of debt of which mention has already been made. In order to provide in India the balance of £28½ million required in connection with these transactions and in no way with our own immediate needs, it was necessary to take special measures.

4. The measures we adopted were of two kinds. The prosperity of India and the buoyancy of her trade—perhaps, too, the shortage and dearth of imported goods on which the cultivator could spend the money received for his produce—caused an absorption of thirty-three and a half crores of rupees, and in the course of the year we provided the equivalent of about twenty million pounds in new currency by the coinage of silver purchased for us in England. The remaining nineteen million pounds we withdrew from the metallic reserve which covers our currency notes in India, increasing by an equivalent amount the English investments on behalf of the reserve. Steps which had been taken in the preceding years to increase the facilities for encashing currency notes and otherwise to popularise their use now bore fruit; and the increase in the fiduciary portion of the Paper Currency Reserve was rendered possible without danger by an increase of no less than fourteen crores in the active currency note circulation.

5. The resources which the Secretary of State thus obtained in excess of his needs for meeting home charges and repaying debt were devoted partly to the purchase of silver for the fresh Indian coinage, and to the extent of nineteen million pounds to investment in Treasury Bills on behalf of the Paper Currency Reserve. Nor was this the only sum which was lent to the Home Government in the course of the year and thus made available for the prosecution of the war. The four million pounds which our favourable revenue position enabled us to repay to the Gold Standard Reserve, and a further sum of four and a third million pounds representing the profits from new coinage, were also invested in Treasury Bills. In effect, therefore, out of about thirty-eight and a half million pounds which were spent on purchases for the Home Government, over twenty-seven million pounds were re-lent to them by investment in their war securities.

6. For our own needs we required to raise a loan of at least £4 million, and in order to leave the Home market free for the Home Government's war securities, the borrowing operations were conducted entirely in India. The borrowing took the form of a 4 per cent. loan, issued at par and repayable at par in 1936 with an option of redemption from October 1931 onwards, and certain rights of converting securities of the existing 3½ per cent. and 3 per cent. rupee loans were attached to it. In all £4,450,000 were obtained from the loan. Its flotation afforded a further opportunity of establishing a connection between Government and the small investor, and, in addition to a post office section which had been a feature of the previous year's loan, facilities were introduced for the receipt of applications at district treasuries and for the payment of the initial deposits on account of subscriptions at district sub-treasuries. To meet the convenience of a certain class of investors, it was also decided, in the course of the year, to introduce bearer bonds transferable by delivery as a form in which the Government of India securities could be held, and arrangements were made for the ready interchange of these bonds with any other form of Government security.

7. At the beginning of 1917, as has been explained, we had ceased to be hampered by a load of temporary debt; Savings Bank deposits had recovered from the drain at the outset of the war; our revenues were flourishing and the deficits of the two previous years had been changed into a surplus; and weakness of exchange no longer formed one of our anxieties. We had reached a position in which we could undertake fresh obligations, and we therefore offered to the Home Government a special contribution of a hundred million pounds towards the cost of the war. So much of this sum as could be

raised by a loan in India was to be made over direct to the Home Government, and the balance would be liquidated by taking over a portion of the home war debt.

The Indian War Loan raised in fulfilment of this promise was only open to subscription for seventeen days in 1916-17, and an account of it belongs more properly to the succeeding year. We may, however, mention here the steps which were taken to meet the annual charge of India's total contribution, which was calculated at £6 million a year, allowing for the gradual extinction of the debt by a sinking fund. In the budget for 1917-18 it was calculated that there would be a surplus of about two and three-quarter million pounds, and to meet the loan charges, it was, therefore, necessary to raise more than three million pounds by additional taxation. This was done by the imposition of a super-tax on incomes in excess of fifty thousand rupees which was expected to bring in £1,350,000, by doubling the export tax on jute, by raising the import duty on cotton goods from $3\frac{1}{2}$ per cent. to $7\frac{1}{2}$ per cent., and finally by imposing a surcharge on railway goods traffic. The increase in the cotton goods duty was estimated to provide an additional £1 million, and the enhanced export tax on jute and the surcharge on railway goods traffic £500,000 apiece.

8. The pre-occupations of war finance did not entirely check the improvement of administrative machinery on the financial side. The sanction of the Secretary of State was received to a comprehensive scheme of financial delegation whereby the powers of Provincial Governments were defined and enlarged, and powers of further delegation to their subordinate officers were granted. The methods of distributing famine expenditure between the Imperial and Provincial Governments were also overhauled and simplified. Lastly a Paper Currency Reserve Depreciation Fund was created to meet the depreciation in the value of the $2\frac{1}{2}$ per cent. consolidated stock held in the Paper Currency Reserve, so that it might be possible to replace the entire holdings of this stock by more suitable securities as opportunity offered. The fund consists of allocations from the receipts of interest on Paper Currency investments, and is invested in British Treasury Bills.

CHAPTER III.—LEGISLATION.

1. The following is a list of the Acts passed in the Indian Legislative Council during the official year 1916-17:—

1916.

- No. X. The Enemy Trading Act.
- „ XI. The Import and Export of Goods Act.
- „ XII. The Indian Lunacy (Amendment) Act.
- „ XIII. The Amending Act.
- „ XIV. The Indian Bills of Exchange Act.
- „ XV. The Hindu Disposition of Property Act.

1917.

- No. I. The Inland Steam-vessels Act.
- „ II. The Motor Spirit (Duties) Act.
- „ III. The Indian Defence Force Act.
- „ IV. The Indian Army (Suspension of Sentences) Act.
- „ V. The Destruction of Records Act.
- „ VI. The Indian Tariff (Amendment) Act.
- „ VII. The Indian Income-tax (Amendment) Act.
- „ VIII. The Super-tax Act.
- „ IX. The Indian Bills of Exchange (Amendment) Act.
- „ X. The Indian Army (Amendment) Act.
- „ XI. The Indian Paper Currency (Temporary Amendment) Act.
- „ XII. The King of Oudh's Estate Validation Act.
- „ XIII. The Freight (Railway and Inland Steam-vessel) Tax Act.
- „ XIV. The Prevention of Cruelty to Animals (Amendment) Act.

Ordinances.

2. The following Ordinances were made and promulgated by the Governor General under section 72 of the Government of India Act, 1915:—

1916.

- No. IV. The Import and Export of Goods Ordinance.
- „ V. The Enemy Trading Ordinance.
- „ VI. The Indian Paper Currency (Further Amendment) Ordinance.
- „ VII. The Second Indian Paper Currency (Further Amendment) Ordinance.
- „ VIII. The Indian Legislative Council (Election Inquiries) Ordinance.

1917.

- No. I. The Registration Ordinance.

Nos. IV, V and VII of 1916 were replaced respectively by the Import and Export of Goods Act, 1916, the Enemy Trading Act, 1916, and the Indian Paper Currency (Temporary Amendment) Act, 1917. No. VI of 1916 was repealed by No. VII of the same year, and No. VIII of 1916 lapsed after the statutory period of six months. The provisions of No. 1 of 1917 were continued with slight modifications by the Indian Defence Force Act, 1917.

3. The Arakan Hill District Laws Regulation, 1916 (No. 1 of 1916), which received the assent of the Governor General under section 71 of the Government of India Act, 1915, came into force during the period under report.

4. The following Acts of provincial legislatures received the assent of the Governor-General during the period under report :—

No.

Act.

Madras.

- II of 1916 The Madras Irrigation Cess (Amendment) Act.
 III of 1916 The Madras Civil Courts (Amendment) Act.
 IV of 1916 The Madras District Municipalities (Amendment) Act.
 V of 1916 The Madras City Civil Court and Presidency Small Cause Courts (Amendment) Act.

Bombay.

- IV of 1916 The Bombay Medical (Amendment) Act.
 V of 1916 The Bombay Landing and Wharfage Fees (Amendment) Act.
 VI of 1916 The City of Bombay Municipal (Further Amendment) Act.
 I of 1917 The Bombay Tramways (Amendment) Act.
 II of 1917 The City of Bombay Police (Amendment) Act.
 III of 1917 The Bombay Abkari (Amendment) Act.

United Provinces.

- I of 1916 The United Provinces Prevention of Adulteration (Amendment) Act.
 II of 1916 The United Provinces Municipalities Act.
 I of 1917 The United Provinces Public Gambling (Amendment) Act.

Punjab.

- II of 1916 The Punjab Medical Registration Act.

Burma.

- I of 1916 The Burma Prohibition of Inoculation and Licensing of Vaccinators (Amendment) Act.
 II of 1916 The Burma Ferries (Amendment) Act.
 I of 1917 The Burma Water Hyacinth Act.
 II of 1917 The Burma Salt Act.

Central Provinces.

- I of 1916 The Central Provinces Medical Registration Act.
 II of 1916 The Central Provinces Land Alienation Act.

Assam.

- I of 1916 The Assam Medical Act.
 II of 1916 The Assam Local Self-Government (Amendment) Act.

CHAPTER IV.—MADRAS.

Governor.

THE RIGHT HONOURABLE LORD PENTLAND, P.C., G.C.I.E.

Members of Council.

SIR A. G. CARDEW, K.C.S.I.

H. F. W. GILLMAN, C.S.I.

DIWAN BAHADUR P. RAJAGOPALA ACHARIAR, C.I.E.

The War.—1. In spite of the disturbing effects of the war, the year 1916-17 was for the Madras Presidency unmarked by striking events. Since the beginning of the war, the Madras War Fund has raised nearly 55 lakhs of rupees, and amongst its chief activities may be mentioned the equipment and maintenance of two hospital ships, the raising of a corps of gardeners for Mesopotamia, and the despatch of continuous supplies of comforts to the troops serving in the East. Though the influence of the war was, to some extent, felt in every department of life, owing especially to the absence of European officers, the difficulties of transport by sea and rail, and the financial restrictions imposed both by policy and circumstances, nevertheless the people at large seem to have suffered little. The season was generally favourable with ample rains and excellent crops. Litigation shows only a slight decrease and revenues are on the increase. Notwithstanding the material prosperity the political outlook was disturbed by an outburst of nationalist agitation, led by the journal *New India*—an agitation confined for the present to a section of the educated classes and closely linked to the neo-Hinduism of the Theosophical Society. Among the effects of this agitation has been the creation of a strong anti-Brahman opposition. The people at large appear to be apathetic and uninterested.

Native States.—2. With the exception of the little State of Banganapalle, which suffered severely from a sudden flood whereby a large portion of the capital was swept away, and the State of Sandur where the closure of the manganese mines resulted in half the revenue of the State being unrealised, the Native States of the Presidency were generally prosperous. Travancore and Cochin continued to be progressive. In spite of the fact that His Highness the Raja of Pudukottai has found it necessary to spend the greater portion of the year abroad, the administration of that State was on the whole satisfactory.

Court of Wards.—The Court of Wards, at the close of the year, had charge of twenty estates, which the proprietors, owing to their youth or for some other reason, were unable to manage. The present policy of the Government as regards these estates is to expend the balances as far as possible for the permanent advantage of the estate or its tenants and to avoid handing over a large sum in cash or investments to the young zamindar when he comes of age. With this object in view the Court of Wards carried out on the estates under its control works which accounted for 16 per cent. of the total ordinary charges.

Local Self-Government.—3. The immediate object of local self-Government in India has been in the past, and probably will be for some time to come, rather to educate the people politically than to improve the administration. Its success must, therefore, be judged by educational standards, more especially by the degree of interest taken in local politics by the people of the towns and villages. From this point of view it would seem that while there has been progress, the pace has not, so far as the mufassal is concerned, been very rapid. For instance, during the year under review 340 seats in taluk boards were thrown open to election, but there were only 271 contests

and in these the poll attracted only 33.6 per cent. of the registered voters. There were also 17 seats for which no candidates at all were forthcoming, so that the vacancies had to be filled by nomination. Possibly the interest in local bodies would be greater if their finances were more satisfactory; but, in the present state of affairs, it has been found necessary to restrict Government grants to a minimum, and the local bodies have therefore, for the most part, been compelled to mark time and have been debarred from adopting a very progressive policy. Thus, the outlay of local boards on public works fell during the year by nearly Rs. 20 lakhs and even on education there was only a slight increase of expenditure. Similarly with the municipalities there was a fall of over Rs. 6 lakhs in Provincial grants, balanced, however, by an increase in general income. A considerable amount of work was done on municipal water-supply and drainage schemes, but there are many projects still to be carried out. It is gratifying to note that the past year has witnessed a very marked improvement in the public health of the City of Madras, and that for the first time since 1914 the recorded birth-rate exceeded the death-rate. How far this improvement is the direct result of the efforts of the City Health Department, it is impossible to say, but the fact that the malaria death-rate is less than half that of the previous year is significant in view of the recent efforts to diminish the number of mosquitoes.

Agriculture.—4. The chief industry of South India is, of course, agriculture; in fact, most of the Presidency's industries are more or less connected with agriculture, so much so that there is some difficulty in delimiting the spheres of the Departments of Agriculture and Industries. The year has been one of continuous, and for the most part successful, effort along old established lines. The improvement of sugarcane cultivation by the distribution of the best varieties of seed has met with considerable success. Much educational work has been devoted, as in previous years, to the introduction of improved methods of fertilization and transplantation of paddy, on which a great deal of research has been and is being done. Direct help to the ryots has been given by the department in the eradication of pests, notably the palmyra disease in the Gōdāvāri district. One of the most interesting features of the year has been the battle waged against the cultivation of the inferior but prolific *pulichai* cotton, by which the better strains of Tinnevely cotton were in danger of being ousted. The department was able to offer to the ryot a cotton which is not only better in quality but more prolific than *pulichai*, so that with the help of the chief buying firms, who pledged themselves not to purchase the inferior crop, *pulichai* has been greatly reduced. The Government Cinchona Factory has succeeded in maintaining a plentiful supply of quinine both for the use of India and for the consumption of the armies in the East. The increased output combined with a great improvement in extraction resulted in a profit of over five lakhs.

Industries.—5. Government enterprises under the Department of Industries have not been so successful in spite of the natural protection afforded by the conditions incidental to the war. Largely owing to the impossibility of procuring expert supervision and proper plant the experiments in glass-making and in the manufacture of lime sand-bricks have been reluctantly closed down. On the other hand the pencil factory started by the department has succeeded in producing satisfactory pencils on a commercial scale, though not with indigenous materials. The Department of Industries has also given help to private firms, but the efforts to promote the resuscitation of the use of indigenous dyes have been relaxed, since it has been found that synthetic dyes are preferred by the consumer even when their price is apparently prohibitive. The chief extension of manufactures by private firms has been under the heads of rice-milling and cotton-ginning. Army work has kept the leather and tanning trades busy, but the shortage of tanning barks proved a great difficulty and has necessitated the prohibition of the tanning of skins with a view to ensure that the supply of tanned hides shall not suffer. A feature of the year was the recrudescence of ship-building, nine wooden ships averaging 200 tons each having been built on the West Coast. The various industries promoted by the Department of Fisheries continue to prosper. The tinned fish industry has now got beyond the stage of experiment and is working on a fairly

large scale. Chunk and *bêche-de-mer* both gave a profit; while the progress of the soap manufactory has been rapid and the various products of the Government factory are now firmly established on the market.

Co-operative Societies.—6. With regard to the co-operative movement in the Presidency, an interesting and satisfactory development towards the ideal of co-operative control is to be recorded. The chief features of the year were the inauguration of a central provincial bank, with its shares held largely by societies, and a wide extension of the system of local administrative unions. The object of the former is to render the movement financially independent, while the administrative unions will, it is hoped, before long relieve the Government of part of the work of superintendence, while at the same time encouraging a spirit of self-help and mutual reliance among the societies. Coincident with and perhaps consequent on these developments there has been during the past year some improvement in the collection of arrears.

Forests.—7. The policy recommended by the Forest Committee and adopted by Government has been put into effect during the past year by the completion of the classification of the forests in the Presidency and the disafforestation of some 44 square miles of the less valuable reserves. Some progress was made in the preparation of working plans, but, owing to the number of forest officers away on military duty, this important branch of work must for some time to come receive less than the attention it deserves. For the present all that can be done is to prepare and keep up to date the working plans of the most important forests. A subject which is being carefully examined by a special officer of experience is the possibility of improving the facilities for the commercial exploitation of the forests. The difficulty of transporting foreign timber by sea and the exhausting effects of the war on the timber resources of the world have made it imperatively necessary to search the forests of India and extract from them such woods as are necessary for trade. With this object a careful examination has been made of all the chief indigenous timbers with special reference to the commercial point of view. The number of forest panchayats has increased, and their working is reported to be on the whole satisfactory. Efforts have been made to extend the successful 'kancha system', whereby the grazing rights of the village forests are sold subject to certain restrictions to a leading ryot, who sublets the grazing to villagers and is responsible for the protection of the forest and its preservation during the close season. There has been during the past year a considerable increase in the area over which cultural operations were carried on, but regular planting chiefly with teak was as usual confined within narrow limits. With a view to make possible the exploitation of the more remote forests, there was an increase of expenditure on communications, and the Mount Stuart tramway, which worked during the year at a considerable profit, was extended for $1\frac{1}{2}$ miles. In all, more than 400 miles of forest roads were constructed during the year. It is satisfactory to note that, owing to the restriction of expenditure and the good prices realized by forest produce, the department realized on the year's working the record surplus of nearly Rs. 20 lakhs.

Sea-borne trade.—8. As was to be expected, the sea-borne trade of the Madras Presidency has been determined very largely by war conditions. It is nevertheless at first sight remarkable that the restrictions due to the war have not prevented an increase of 12 per cent. in the total value of maritime trade as compared with the previous year's figures. This increase is, however, more apparent than real, since it is an increase in value and not in volume. Similarly, it is at first sight surprising to find a large increase in the number of ships engaged in the foreign trade of the Presidency, but the improvement in this respect also is illusory, since the gross tonnage of the vessels is much less than that available in 1915-16, the difference being due to the large number of small native craft plying in the place of the steamers which have been requisitioned by the Government. It is nevertheless true that the import trade of the Presidency during the past year was, if not normal, at any rate very much better than might have been expected. So much cannot be said for the export trade, which was handicapped severely by the serious shortage and prohibitive prices of freight to the Mediterranean ports, which in normal

times receive a very considerable portion of the agricultural produce of the Presidency. The war has, however, affected the direction of trade much more than its volume. Prior to the outbreak of hostilities 28 per cent. of the foreign trade of the Presidency was with the Continent of Europe. This percentage fell in 1914-15 to 12 per cent. and in 1916-17 to 10 per cent. The bulk of this decline is due to the stoppage of trade with Germany, Belgium and Austria-Hungary, but there has been a considerable falling-off in the export trade with France, more especially underground-nuts and coffee. On the other hand, there has been a great increase in exports to the British Isles, due especially to large shipments of tanned hides on behalf of Government. Another noteworthy change is the remarkable expansion in the trade with the United States which was almost double the pre-war total and formed nearly 8 per cent. of the aggregate trade of the Presidency. This increase was mainly due to extensive imports of motor-vehicles, railway plant, and mineral oils and to much larger exports of tanned skins. An equally remarkable, but not unexpected, expansion has to be recorded in the trade with Japan which absorbed very large quantities of raw cotton and tanned skins. Imports of cotton goods which form a third of the total imports into the Presidency and come largely from the United Kingdom increased in value by 17 per cent. The chief feature of this increase was the speculative buying of coloured goods in anticipation of a scarcity of dyes. The most remarkable feature of the export trade was the great increase in the volume and value of trade in skins and hides, exported largely under Government control and for military purposes. Forty-five per cent. of the maritime trade of the Presidency passed through the port of Madras which has recently increased its accommodation for large ships and greatly improved the facilities for handling goods.

Public Works and Railways.—9. The Public Works Department has felt the effects of the war to a greater degree than almost any other department of Government. No less than 39 of its officers and upper subordinates were absent on military service, but the shortage of the staff was not of such serious moment as it would have been, were it not for the restrictions of expenditure on new works, necessitated by financial conditions. On the other hand, a very considerable amount of work has been done departmentally for the Army. Though the manufacture of high explosive shells has been discontinued, the departmental workshops are engaged in turning out many of the minor munitions of war such as are produced in times of peace by the various arsenals. The difficulty of getting materials and machinery from Europe has been an obstacle in the way of completing those other works which financial conditions have allowed to continue. This was especially the case with railways. Thus, the two district board railways which were completed during the year could not be opened owing to the lack of rolling stock. War conditions are responsible for the suspension of work on the railway from Tinnevely to Tiruchendūr and also for the stoppage of survey work in connexion with several other projected railways. The shortage of rolling stock on the railways has caused considerable attention to be given to the chief canals; but the difficulty and expense of improving waterways, which, since the spread of railways, have been largely neglected, make it out of the question to deepen considerable lengths of these canals unless there is a prospect of their being permanently popular. Such expenditure as was incurred on new buildings was almost entirely involved in the completion of works begun before the war. The most important work under construction was the new Engineering College at Guindy. Nearly three lakhs were spent during the year on the college building, which is to cost Rs. 15 lakhs. The Agricultural College, Coimbatore, the estimate for which exceeded Rs. 10 lakhs, was nearing completion at the end of the year. Under irrigation works there was a decline of nearly 10 lakhs in the expenditure and a similar fall in the revenue realized. Of the four major protective works three were in course of construction, while one—the Rushikulya system in Ganjām—is already in operation. When deductions have been made on account of interest on capital outlay, the working of the Rushikulya system during the year shows a deficit of over half a lakh. The chief productive work under construction is the Toludur project, but some expenditure was incurred on improvements to the great delta systems. The three and a half

million acres irrigated by major productive works yielded a profit of 6.54 per cent. on the capital outlay in spite of a considerable loss on the Kurnool-Cuddapah canal.

Finance.—10. Notwithstanding the fact that the gross revenue of the Presidency, both Imperial and Provincial, increased by Rs. 131 lakhs, the financial policy of the Government as determined by war conditions continued to be one of extreme conservatism, expenditure being confined to the most necessary objects. Deducting expenditure charged to revenue, the surplus of the year excluding some of the Imperial heads amounted to Rs. 1,233½ lakhs, exceeding that of the previous year by Rs. 151¼ lakhs. The net receipts from State railways increased by Rs. 30½ lakhs owing chiefly to the raising of fares and freights. Higher rates of duty and increased sales account for an improvement of nearly Rs. 13 lakhs in the salt revenue. There was an increase of Rs. 281 lakhs in the revenue from customs partly owing to the revised tariff and partly owing to the prevailing high prices, which are reflected in the enhanced receipts from *ad valorem* duties. The increase of Rs. 20¾ lakhs in the excise revenue is the result of a general increase in consumption which is ascribed to the good season and the consequent prosperity of the people. On the other hand, the rise of Rs. 19½ lakhs in the income-tax receipts is due to the introduction of enhanced rates of taxation. Other items of revenue show less variation from the figures of the previous year. Land Revenue (both Imperial and Provincial) realized Rs. 700 lakhs, a satisfactory figure approximating closely to that of the previous year. In contrast with the general rise of income there was in the majority of cases a fall of expenditure. There was, however, under Provincial expenditure an increase of Rs. 6 lakhs under Education, while the cost of the Police Department rose by Rs. 4¾ lakhs owing to the revision of the pay of the constabulary rendered necessary by shortage in recruitment. The chief decrease in Provincial expenditure was under Sanitation, under which head there was a fall of Rs. 16½ lakhs owing to the policy of curtailing expenditure on all works which are not immediately necessary. There was a deficit of Rs. 9½ lakhs under Local funds, which, however, compares favourably with the deficit of Rs. 16½ lakhs in the previous year.

Education.—11. The progress of education in the Madras Presidency has, of necessity, been hampered by the financial difficulties of the times, but its claims have been less stringently regarded by the authorities than have those of most other departments. It must be remembered that the shortage of funds affects not only the Government, but also the various missionary bodies which play such a large part in Indian education. The stoppage of expenditure on schools and colleges would, it is obvious, do much more lasting harm to the cause of progress than the withdrawal of funds from other departments whose schemes are more capable of postponement. It has, therefore, been the endeavour of Government to find the money for some degree of expansion of educational facilities, and thus to prevent the period of the war from proving a period of retrogression or stagnation, even though the rate of progress be slower than would otherwise be desirable. The result of this policy is illustrated by the fact that during the past official year the number of public schools and colleges rose by 2.6 per cent., while the increase of strength was even greater. There was also a small but welcome increase in the proportion of children attending school. That this proportion is still regrettably small can be seen from the fact that in 1916-17 only 6.5 per cent. of the male population and 1.55 per cent. of the female population were in receipt of instruction. When it is remembered that very many of those who do for a time attend school relapse as they grow older into complete illiteracy, the urgency of the need for educational expansion will be apparent. During the year under review, in consequence of the ease with which many who were not properly equipped for more advanced study managed to secure a secondary school-leaving certificate rendering them technically eligible for collegiate education, it was found necessary to demand a higher qualifying standard in certain subjects as a preliminary to entry on a university course. On the other hand, the Intermediate examination which is the half-way house to graduation was made more easy by a new rule, which allowed the separate parts of the examination to be taken up one by one. In consequence of the formal change there was a

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Crime and Police.—12. There was in 1916-17 a decrease of nearly 3 per cent. in the number of grave crimes investigated by the police. Whether this decrease is, as claimed by the police, due to the successful supervision of known criminals and the segregation of professional thieves in criminal settlements, or whether it is the natural result of the prosperity of the masses owing to a succession of good years, it is impossible definitely to pronounce. Much enthusiasm has been concentrated both by Government officers and by philanthropists of the Salvation Army and other bodies on the work of the criminal settlements, but it is too early to judge how far these settlements have been really successful. Most of them have had great difficulties to contend with, chiefly in finding suitable labour for large numbers of untrained and often unwilling workmen. In the jails all convicts are classed as casual or habitual offenders, and the two classes are as far as possible segregated. Juvenile convicts are, in the great majority of cases, sent to the Reformatory, while the adolescents are treated under the Borstal system at Tanjore. Efforts to prevent crime by increasing the efficiency of the police were continued. A revision of the pay of the constabulary does not appear to have had much effect so far on recruitment, but there have been fewer desertions and resignations. The system of selecting sub-inspectors from candidates nominated by local committees in the districts was brought into force, but the results so far are inconclusive. The help of local gentlemen has also been enlisted to a much larger extent than heretofore in the administration of justice. More than half the cases instituted in the Presidency town were disposed of by honorary magistrates, and there was a large increase in the number of bench courts in the mufassal. The efforts of the Government to increase the usefulness of the village courts have not met with much success; whether it be that the villager doubts the impartiality of the headman, or whether he prefers the glamour and publicity of the regular courts cannot be said, but the fact remains. That the lack of cases in village courts is not due to any lack of complainants can be seen from the statistics, which show that there was a slight increase in the number of criminal cases instituted in the regular criminal courts. The number of civil suits, though slightly less than the record figure of the previous year, is undoubtedly large, representing as it does a ratio of one suit for every 78 persons in the whole Presidency and one for every 29 persons in the Presidency town. That the plaintiffs were successful in 75 per cent. of the contested suits would seem, however, to show that litigation in the large majority of cases is not purely speculative.

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charge of important hospitals. During the year 1916-17 more than seven million patients were treated in the public hospitals and dispensaries maintained or aided by the State and by local bodies. There was a very large and satisfactory increase in the number of medical students, due partly to the opening of a new medical school at Calicut. The Pasteur Institute treated a record number of patients, and efforts are being made to collect reliable statistics as to the efficacy of the treatment. In Madras City, a careful malaria survey has been made and preventive measures have been taken on a fairly large scale against this disease. By means of itinerating dispensaries something is also being attempted in the mufassal, but the huge area over which malaria prevails precludes any possibility of concentrations of effort such as have been successful in the cities of Europe and America. Great differences of opinion exist as to the efficacy of the measures taken in the Madras Presidency for the prevention of the spread of plague, but the fact remains that the larger part of the Presidency has enjoyed a comparative immunity from the disease, which may—or may not—be ascribed to the working of the plague passport and notification systems. As regards cholera, there has for some time been a tendency for epidemics to be less serious and more local. It is hoped that the improvement of water-supply and the spread of education in hygiene will, in a very few years, reduce the mortality from cholera to much smaller dimensions.

CHAPTER V.—BOMBAY.

Governor.

THE RIGHT HONOURABLE LORD WILLINGDON, G.C.I.E., G.C.B.E.

Members of Council.

SIR M. B. CHAUBAL, K.C.I.E., C.S.I.

G. CARMICHAEL, C.S.I.

G. S. CURTIS, C.S.I.

The War.—1. The war naturally and inevitably dominated the year, and its influence and effects were felt in every branch of the administration. Progress was hampered, and the introduction of reforms delayed by the economy and curtailment of expenditure which it necessitated. In many departments the absence on war work or service of a large number of officers belonging to their higher ranks not only prevented expansion, but made the discharge of ordinary work and the maintenance of existing standards only possible by the strenuous and loyal efforts of the depleted staff. The administrative history of the year has therefore, apart from war work, few events of importance to record. The loyalty of the Native States of the Presidency was again displayed in connection with the war. The Imperial Service Lancers of the States of Junagadh, Nawanagar and Bhavnagar continued to be at the disposal of Government, and His Highness the Rao of Kutch again paid the cost of an Indian Infantry regiment at the front. Large contributions were made by the Chiefs and their States to the Indian war loan, and the several war funds were also the recipients of generous assistance from the Chiefs in money and in kind.

General Conditions.—2. The year was one of substantial prosperity for most classes of the population. In the Presidency proper the season was favourable, and rainfall above the normal, a deficiency in the month of July being more than counterbalanced by an excess in the succeeding months. A fall of almost unprecedented violence in the end of October and beginning of November did widespread damage in the Karnatak districts to dwellings, standing crops and grain in pits, and caused some loss of life. Relief measures were promptly undertaken through both official and non-official agency. The area of serious damage was fortunately confined to two districts, and, apart from their misfortunes, the year had no untoward events to record and was a prosperous one from the agricultural point of view. Favourable inundation and seasonable rains resulted in a large increase in the area of cultivation in Sind, but elsewhere the rise was inconsiderable. Prices were high, though less so than in the previous year in the case of food-grains generally. The area under food crops decreased in the Presidency proper, mainly on account of the large area transferred to cotton owing to the high prices obtaining for that crop. The additional area sown with it amounted to no less than one million acres. Fluctuations in its price were considerable, but at times extraordinarily high prices were secured and the cotton-growing districts benefitted largely. In Sind the increase in cultivation was shared by both food and non-food crops, and here again there was a marked increase in the area under cotton.

Prices of other commodities, and especially of imported articles, continued to rise, and the increase in the expense of living was severely felt by all classes whose incomes are fixed. The supply of both skilled and unskilled labour in the Presidency proper was unequal to the demand and wages remained high. The scarcity of labour and the high remuneration it commanded were everywhere amongst the chief causes of difficulty in securing recruits for the army and for labour corps.

Agriculture.—3. The Agricultural Department had another successful year, and besides numerous other activities initiated a promising and important

work in connection with the improvement of seeds. That on cotton seeds is perhaps the most important in this branch of the activities of the department. In Surat the selected strains yielded a higher return than the ordinary variety, but in Sind results as regards American cotton have been disappointing and its cultivation there, in view of the decision of a cotton-buying syndicate to discontinue its buying operations owing to the poor outturn and the small quantity of cotton received, has for the moment ceased to have a commercial aspect. While the physical conditions of Sind seem to be suitable if and where water can be supplied throughout the year, the economic conditions are difficult. In the Southern Maratha country attention is being given to selected strains of Kumpta and Upland American cottons, which show considerable advantages both in quantity and quality over the local varieties. The value to the cultivator of superior strains is largely bound up with the question of marketing, but extensive fraudulent mixing of long and short staples renders the market insensitive to any alleged superiority in staple.

The advantages of the improved agricultural implements supplied or advocated by the department are becoming more appreciated and considerable sales of these took place. Iron ploughs are now freely used in most localities. A promising scheme for the improvement of cattle has been initiated, while the important question of manures was under investigation with valuable results.

The conditions of the year were unfavourable to the development of agricultural engineering, but some progress took place. The demand for power plants still continues and many purchasers make good use of them. Well-boring operations again showed a large proportion of successes. Formal shows and village demonstrations, ploughing and standing crop competitions, the publication of bulletins and leaflets and informal propaganda were other branches of the department's activities. A few new agricultural associations came into existence during the year. Many of these associations, it is reported, did useful work, but in the absence of funds it was of a spasmodic nature and was carried on by individuals rather than by associations in their corporate character.

Co-operative Societies.—4. The co-operative movement made remarkable progress, and, while the year was a record one in the matter of statistical results it was not less marked by the growth of the spirit of mutual help. The number of societies, the number of members and the amount of working capital all show an advance of twenty-five per cent. on the figures of the previous year.

The number of members in all classes of societies in the Presidency of Bombay now amounts to 128,000, commanding a working capital of ₹122 lakhs or £813,000. This capital is barely sufficient to finance the current needs of agriculture and to purchase necessary stock, and, while this primary duty of the societies is still not completely fulfilled, they have been unable to deal with questions connected with debt redemption and land improvement. Agricultural societies made a distinct advance during the year and local deposits by members and non-members were almost double those of the previous year.

The salient fact of the year for this movement, as for so many other departments of public life, has been the war. Rates of interest have been creeping up everywhere, and the Indian war loan caused a sharp rise in the price of money. This has not, however, led to any reduction in the rate at which the movement is spreading nor to any slackening in the steady increase of the funds obtained from the public. The restriction of credit by the Provincial Bank, due to a tight money market and an enhanced lending rate, made it possible for the first time to organise local central banks with a reasonable prospect of success. Three new banks were formed during the year and made a promising beginning. These local banks should be of much value in tapping the local money markets for the benefit and needs of co-operative societies.

A departure of much importance and promise was the formation of guaranteeing unions which will relieve the department and the central banks of detailed duties, which with the growth of the movement were becoming too heavy. Such unions will furnish a convenient unit of administration and, it is hoped, provide efficient and responsible local supervision.

The movement has not been confined to the credit aspect of the rural

problem only. Co-operative dairies, societies for the purchase of implements, cake manure and so forth, for the sale of cotton and jaggery, and for cattle-breeding and cattle insurance have made a very promising beginning. Forty-two societies have been formed for the purchase of agricultural necessaries and the sale of agricultural produce. Such societies need more attention and business ability than ordinary credit societies, and it is too soon yet to say whether this side of the work is likely to prove permanently successful. But in the opinion of the Governor in Council all the omens are favourable.

The urban problem has not been neglected. Non-agricultural societies were more affected by the war than those dealing with agricultural needs, but continued in general to make satisfactory progress. Weaving societies were much hampered by the adverse conditions for the hand loom industry arising out of the war and though useful work was done, the further organization of such societies has ceased till conditions improve. Several large People's Banks are doing well. Among artizans and the mill population generally the need for co-operative societies is clear and urgent, but the number so formed barely yet exceeds one hundred. The migratory habits of these classes, their lack of real property, and the scarcity of public-spirited workers willing to give time and trouble to their needs hampers progress. However, with the help of institutions like the Servants of India Society, the problem is being gradually tackled on a more adequate scale. Co-operative stores and housing societies are beginning to make their appearance, and these cannot fail to have a beneficial effect. The attitude of the public towards the movement is consistently friendly and sympathetic, and the number of volunteers for honorary work in the districts on behalf of co-operation is growing rapidly. In Sind the number of societies doubled itself, and there also the year has been a remarkable one in point of the growth of the co-operative movement.

Internal Trade.—5. The internal trade of the Presidency has fully recovered from the depression which accompanied the early stages of the war and the uncertainty and unrest which prevailed in the sphere of trade and commerce at that period have now practically disappeared. The improvement in conditions was reflected in a small increase in the number of documents registered and a rise in stamp revenue and, although the war continues to affect the flotation of new companies, and no large increase in these is likely until the return of normal conditions, there was a distinct improvement in this respect. The number of companies newly registered rose, while liquidations were considerably fewer, and the paid up capital of share capital companies increased.

Industries.—6. The cotton industry is by far the most important in the Presidency, and in Bombay alone supports over eighty mills. In spite of the high prices of mill stores, accessories and raw material the year was one of exceptional prosperity for the cotton mills, and lessened competition and new markets enabled handsome profits to be earned. Ginning and pressing factories also had a good year, and the number of those at work showed a large increase. The lack of dyes and chemicals continued to be severely felt, and the high prices of the former and of yarn affected the handloom industry very adversely and inflicted great hardship on handloom weavers. The match, copper and brass work, silver and gold thread and other minor industries also suffered severely from the war, but paper, flour and oil mills had a prosperous year.

The restriction of imports which arose from the necessities and vicissitudes of the war has given a great stimulus to the movement for the expansion of Indian industries, and in the year under review the subject received much attention both from this Government and the commercial and industrial leaders of the Presidency. The duty on Indian denatured spirit was abolished with the object of encouraging the use of such spirit for commercial purposes. Similarly arrangements were made for the levy of a lower duty on Indian-made rectified spirits used in industries seeking to replace imported chemicals by local manufactures. Encouragement was given to a private company which undertook the removal of salt bitterns at Kharaghoda salt works. This company manufactures a large quantity of magnesium chloride and is proceeding to make Epsom salts and refined salt for industrial purposes.

Shortly before the beginning of the year under review, in accordance with the wishes of prominent business men in Bombay, Government appointed a

strong committee, representing the chief interests in the commercial and industrial circles of Bombay, with an official secretary, to advise Government on the question of the development of indigenous industries. This committee made careful inquiries into the condition and possibilities of several of the secondary industries of the Presidency, such as the oil-seed, leather, match and glass industries, and submitted reports to Government on these and other industries. It advised certain courses of action, and issued, under the authority of Government, press notes with the object of attracting public interest to some industries that seemed to present prospects of success. Government have unfortunately been unable to take active steps to carry out the suggestions of the committee, partly owing to the need of economy and the shortage of personnel on account of the war, but chiefly on account of the presence in India of the Indian Industrial Commission, whose proposals and recommendations it was not thought advisable to anticipate, particularly in the direction of creating a new and costly provincial department of industries. Since the close of the year, however, an officer has been placed on special duty as Director of Industries, to carry on and supplement the activities of the committee and to prepare the ground for the creation of the department of industries.

External Trade.—7. The gaps in the Presidency's markets due to the war have in considerable measure been filled, in particular by a larger trade with Japan and the United States and by a material increase in exports to the United Kingdom. Trade with Mesopotamia and East Africa and the Red Sea littoral has also expanded, especially in the case of cotton piece-goods of Indian manufacture.

Exports expanded largely both in volume and value, while imports rose slightly in volume and considerably in value. The value of the total foreign trade in private merchandise was in excess of the figures of any previous year except those of 1913-14, while that of exports of Indian produce and manufactures exceeded even the figures for that year by almost a crore and a half of rupees or £1,000,000. The most noteworthy increase is in the exports of cotton piece-goods of Indian manufacture, which rose in quantity by 130 million yards and in value by almost Rs. 2½ crores. Aden, Zanzibar, Turkey in Asia, Persia and East Africa all show striking increases in their purchases. The very favourable season contributed largely to this result, which was arrived at in spite of dear and scanty freight, the loss of markets in hostile countries, restrictions dictated by the necessities of the war, and exchange difficulties. High prices, and abundance of produce and the encouragement of the export of articles of national importance were the main factors operating in the opposite direction. The share of the British Empire in the total trade showed a slight falling off, while the shares of Continental Europe and non-British Asia somewhat improved. In land trade a marked expansion took place in imports of Indian coal.

The total value of the sea-borne trade of the province of Sind also shows a substantial rise. Exports of wheat alone rose in value by Rs. 142 lakhs, or nearly a million pounds, owing to a shortage in other countries and a surplus in India from the the previous year. Exports of raw hides and skins and of seeds were also large. The share of the United Kingdom in the total trade receded while that of allied countries in Europe expanded.

Port Trusts.—8. The year was one of much activity for the Port Trusts of Bombay, Karachi and Aden. All ordinary work was naturally subordinated to military requirements but mercantile traffic reached an unexpectedly high level. In Bombay receipts rose to a record figure due to the activity of the export trade and the large amount of Government traffic. The number of vessels entering the docks was also the highest ever recorded and the tonnage figures of ships which were dry-docked was almost double that of any year before the outbreak of the war. Four and a half million tons of cargo were handled. It is impossible to speak too highly of the importance and value of the war work done by the Trust. The handling of Government stores and munitions and of coal for Government vessels, troops and personnel and of sick and wounded were some of the directions in which assistance was rendered. It was most fortunate, in the interests of India and the Empire, that important extension works were ready to be brought into service a few months after the outbreak of the war, and it was due to them that the vast amount of material

and personnel moved in connection with the war was successfully dealt with. Prior to the war no coal came to Bombay by rail, but in 1915 the whole coal trade not only of Bombay City but of all the shipping of the port took that route. Had it not been for the Port Trust reclamation and its railway, this traffic could not possibly have been handled. Valuable war work was also done by the Karachi Port Trust, and its new offices continued to be occupied as a war hospital.

Politics.—9. In the year the political truce which had been loyally observed in the early stages of the war was gradually being replaced by demands for constitutional changes and agitation in other directions. The movement and its causes were imperial rather than provincial and need not be analysed here. There were, however, some aspects of its development in this Presidency which are worthy of attention.

During Mr. Tilak's imprisonment political agitation in the Presidency of Bombay had taken a decided turn for the better. In June 1914 he was released and early in 1916 took up the Home Rule movement and started on a lecturing tour in the Maratha country. One of the theories developed by Mr. Tilak and other agitators of this movement in their lectures and newspapers was that any attack on the "bureaucracy" was permissible so long as it was accompanied by an expression of loyalty to the Crown and the British Government, and the speeches made by Mr. Tilak in the course of his tour were full of invective against Government officials. On 12th August 1916 Mr. Tilak was bound over by the District Magistrate of Poona to be of good behaviour for a year. The High Court of Bombay, however, set aside the Magistrate's order on the ground that, though Mr. Tilak's speeches were had in places they were not to be wholly condemned on that account. This was naturally hailed as a victory by the Home Rule party and political agitation of this type received the greatest encouragement.

The question of Hindu-Mahommedan relations is one of imperial interest, but it has a special local interest for the Presidency of Bombay, as it was when the Indian National Congress and the Moslem League met in Bombay in December 1915 that the Hindu-Moslem *entente* first began to take shape; it was greatly strengthened by the Bombay Provincial Conference held at Ahmedabad in October 1916, where Mr. Mahomed Ali Jinnah, at that time president-elect of the ensuing meeting of the Moslem League, presided over a conference of the Hindu Congress party which had been hitherto almost exclusively Hindu. The Ahmedabad Conference was also of considerable importance as being the first regular Congress gathering in which the extremist Hindu politicians had taken part since they seceded from the Congress when it broke up in disorder at Surat in December 1907. The year, in short, witnessed a coalition of the leading political parties which aim at a greater measure of self-government, and a very considerable accession of strength to the more advanced sections of these political bodies, both Hindu and Mahommedan.

Local Self-Government.—10. There were few notable changes in the working of the Bombay Municipality during the year, as was inevitable with capital expenditure severely curtailed on account of war conditions. The work of district municipalities, which number 155, was also restricted by financial considerations, which involved the curtailment of Government grants and consequently of new works. The right of electing their presidents was granted to certain towns in Sind and the status of city municipality conferred on various non-city municipalities.

The whole question of the constitution and administration of local boards had been the subject of inquiry and report by a committee appointed in the previous year and important changes were effected in connection with its recommendations. The general policy of Government has been to stimulate and strengthen the bodies entrusted with local self-government and to entrust their administration in a larger degree to non-official agency. In pursuance of this policy the proportion of elective members of district local boards was raised from one-half to two-thirds in the case of sixteen districts, and, on the expiry of the term of office of the remaining boards in the presidency proper, a similar measure will come into effect in their case.

Non-officials were appointed as presidents of six district boards and in both district and taluka boards substantial progress was made in replacing officials by non-officials as vice-presidents. An extension of the elected element in the taluka boards also was under consideration and has since been sanctioned. Towards the close of the year a special officer was appointed to investigate the possibilities of further advance in this sphere. The constitutional changes were the most important features of the local board administration during the year, while in other respects the work of the boards was carried out on the same lines as in previous years.

Public Works.—11. In the Public Works Department a large number of officers were absent on war work. No new works of any magnitude were undertaken. A forest engineer was engaged on the development and opening up of large forest areas in the Kanara jungles. Owing to the natural difficulties of the country in which the work lies, absence of labour, shortage of food and lack of shelter, progress was slow but some very useful pioneer work was done. A survey of a railway line opening up a considerable area has been made and the execution of the work taken in hand. Important improvements and additions to the water-supplies of Ahmedabad, Poona and Hyderabad were carried out. In spite of the financial stringency the construction of the extensive system of protective canals, which is being provided for the Deccan, has not been interrupted. Some of these works have practically been completed, others are approaching completion and those in connection with the Nira Right Bank canal, the most important work of its class in India, are in full swing. These canals are not intended to give a full return in the ordinary commercial sense but are and will be of the utmost value in securing large areas of cultivation against the vicissitudes of the seasons and in preventing the famines which have been of constant recurrence in the tracts they irrigate.

Forests.—12. There was a substantial increase in the revenue from forests and in the surplus of revenue over expenditure. As mentioned above, steps are being taken to improve the communications in the forests of the southern circle without which their resources cannot be utilised. A criminal tribe settlement was started in the forests of the southern circle to meet in some small degree the lack of forest labour which is, after the paucity of communications, the most serious difficulty, and three new saw mills were established. From the Sind forests very large quantities of fuel were supplied for the army in Mesopotamia, but the consequent depletion of stocks, and the hardships to the population of Sind, which is also dependent on these forests for their fuel supply, created a difficult situation as regards prices and supply.

Excise.—13. The policy and administration of the Excise Department were the object of careful attention and consideration during the year. The intoxicant most used in this presidency is country spirit. The policy of Government as regards it has been to restrict consumption by increased taxation and a reduction in the number of shops and at the same time to render the liquor consumed less harmful by lowering its strength and substituting the weak variety for the stronger liquor. The consumption of toddy, which, when fresh, is a wholesome and harmless drink, is also encouraged. The taxation on country liquor and, as a consequence, its retail price have been enhanced in recent years as rapidly as was possible without unduly stimulating illicit distillation. In the year 1916-17 this policy was steadily pursued. The number of shops for the sale of liquor was reduced; that of shops licensed for the exclusive sale of weak spirits was increased and the duty on strong spirits was raised.

In spite of a decrease in the number of liquor shops, the inducement given to the consumption of weak and less highly taxed liquor and restrictions on the use of intoxicating drugs, the excise revenue, which had been practically stationary in the preceding three years, showed the very considerable rise of nearly ₹32 lakhs due mostly to an increased consumption of country spirit. The favourable agricultural season and the high wages prevailing for unskilled labour were the main reasons for the increased receipts. The increase in sales and revenue has been met by a large increase in still-head duty which will take effect in the current year.

Public health and medicine.—14. The year was far from being as healthy as its predecessor and the number of in-door and out-door patients treated in hospitals and dispensaries showed a further increase. Among in-door patients this occurred chiefly among cholera, small-pox and malaria cases, while malaria was the chief disease amongst out-door patients. Eight sub-assistant surgeons were placed on special duty in the most malarious parts.

The second half of the year was marked by a rise in plague mortality which reached its maximum in December. The Deccan districts, the Southern Mahratta Country and Bombay City were most seriously affected, but deaths were reported from all except three districts. Special inoculators were sent to the badly infected districts and inoculations were performed on a larger scale than in 1915-16. As usual, these resulted in a much lower incidence of attacks of and mortality from the disease amongst inoculated persons and confidence in inoculation is steadily increasing. Work and investigations in connection with rat destruction were continued and hydrocyanic acid gas was tried as a suitable poison for rats and fleas in houses and grain stores. From cholera the heavy mortality of almost twenty thousand deaths was recorded. East Khandesh and other districts, to which the disease spread from it, were the chief sufferers.

In sanitary matters arrangements have been made for the examination of drinking-water, the supplies of various important towns have been improved, and a committee investigated the problem of the sanitation of pilgrim centres which are a fruitful source of epidemic diseases. Small-pox cases were more numerous than in the previous year, but less than the decennial average. Vaccination is voluntary except in the larger towns and is being popularised by the use of glycerinated calf vaccine. District sanitary associations have been formed and have done useful work, while a sanitary demonstration held at Belgaum was largely attended.

A new civil hospital was opened and another completed during the year. Six taluka dispensaries were also opened and many additions and improvements made at civil hospitals. To spread a knowledge of the danger of tuberculosis instruction to school teachers and children was given and lectures and demonstrations were held.

Owing to the war the medical services have been depleted to the utmost extent and the loss of staff and curtailment of expenditure make present progress difficult. No fewer than 43 officers in the medical service out of the sanctioned staff of 58, the entire staff of military assistant surgeons employed on civil duties, almost one-third of the civil assistant surgeons, a large number of civil sub-assistant surgeons and many of the nurses and the trained servants of civil hospitals were surrendered to meet military requirements. In spite of this depletion a large military hospital in Bombay was worked by a civil medical staff and various civil hospitals have undertaken the treatment of military cases.

Education.—15. The institutions which provide higher professional and technical education had a successful year. The constitution and the working of the Law School have been investigated by a committee and the school is now to be reorganised and its staff increased. In spite of very doubtful prospects the number of candidates for the legal profession is increasing and apparently will continue to do so indefinitely. For the more promising and less congested commercial sphere instruction of an advanced type is provided in the Sydenham College of Commerce which, though handicapped by a lack of suitable accommodation, is growing in popularity.

The number of students in the various institutions affording technical education showed a slight fall. Industrial schools in general have not so far achieved any great success. Promising developments are taking place in the School of Art, Bombay, especially in its pottery and architectural departments.

The number of middle and high schools and that of pupils in them increased. The most obvious defect in secondary education is the wholly inadequate provision for the training of secondary teachers.

The number of local fund and municipal board schools, which comprise the greater proportion of primary schools, increased, and that of pupils

showed a small decrease in British districts, as did the total number of primary schools. Much has been done in spite of war conditions during the last few years to provide suitable buildings and equipment, especially in local board schools. Primary education still suffers from the insufficiency of trained teachers and the inadequacy of the pay of untrained and lower grade trained teachers. These questions were under consideration in 1916-17 and considerable sums have now been allotted to improve the conditions of trained and untrained teachers.

Finance.—16. The Provincial budget for the year 1916-17 was characterised by an even more rigorous control over expenditure than in the previous year. All proposals for new expenditure were closely scrutinized and only expenditure of imperative necessity or of an immediately remunerative character was sanctioned. Both Imperial and Provincial revenues rose considerably, the total increase amounting to over three crores of rupees equal to £2,000,000. Increased taxation in the form of enhanced customs duties, income tax, and salt tax accounted for the rise in Imperial revenues, while Provincial revenues profited from an increase in excise receipts and in their share of the income tax. Imperial expenditure showed a slight increase, mostly on recoverable items, while Provincial expenditure was further curtailed.

Crime and Police.—17. The year, though free from any outbreak of serious crime, was a strenuous one for all branches of the police force. In Bombay City there was some increase in cognizable crime, but in the area dealt with by the mofussil police it showed a considerable decrease, which was specially notable in the case of dacoities and robberies. The total recorded under these heads was the lowest for the quinquennium. Another satisfactory feature of the year was the fall in the number of theft cases in the same jurisdiction and the improvement in the percentage of property recovered. While the statistical returns are at least as good as in past years the continued depletion of the ranks of the constabulary and the general unsatisfactory conditions of service have now become a subject of grave concern.

A more extensive and satisfactory use was made of the provisions of law allowing the discharge of youthful offenders with an admonition or their delivery to parents and guardians, a policy which has been steadily impressed on magistrates by Government. Towards the end of the year the sentences of 1,066 prisoners were remitted conditionally on their undertaking to serve in a labour corps in Mesopotamia. A Prisoners' Aid Society commenced operations in Bombay during the year but has been limited in its activities by want of funds. Another similar society was at work in Bijapur.

CHAPTER VI.—BENGAL.

Governor.

THE RIGHT HONOURABLE LORD CARMICHAEL, G.O.I.E., K.C.M.G.*

Members of Council.

P. C. LYON, C.S.I.

• NAWAB SIR SYED SHAMS-UL-HUDA, K.C.I.E.

N. D. BEATSON-BELL, C.S.I., C.I.E.

Introductory : the war, the press and political tendencies in Bengal.—1. The province was on the whole affected in a singularly slight degree by the great struggle in Europe. The enhanced prices* of many imports have caused some inconvenience to the middle classes, but the great bulk of the population—simple agriculturists whose wants are few—has pursued the even tenour of its way, absorbed in the economy of its daily life and aloof and remote from the maelstrom of war. In certain areas flood and drought brought famine or distress, while expenditure on original works or on the improvement of administration has been curtailed, but on the whole the harvests were bountiful, prices good and the *raiyat* prosperous. In its political life the province has in some measure responded to the spirit of the times; the Allies as the champions of nationalism have furnished a new rallying cry to the extremists, who claim the speedy realization of an “India for the Indians” without perhaps appreciating its practical difficulties.

Apart from some Urdu publications, which have shown sympathy with Turkey, the Bengali papers have generally adopted a loyal attitude in respect of the war; but questions of Indian politics continue to monopolize almost entirely the interest of their readers, and their columns are devoted day after day to a somewhat clamorous political propaganda. Hostile criticism of the actions of Government is, however, no new thing in Bengal, and this lack of perspective which the Indian press displays is hardly surprising in a province in which the realities of war are so little manifest.

It is not easy to determine how far the Bengali press is a popular one and to what extent the extravagant demands it reiterates reflect the sentiments of the educated public as a whole. There can be little doubt that the constant attacks upon Government must colour and bias the views and feelings of immature and impressionable students, and there are signs of the cordial good will and steady loyalty of sober moderate Indians being undermined and weakened by the incessant flow of criticism.

Among the political tendencies of the year, there was noticeable an attempt on the part of the Congress leaders to win the adherence of the more prominent members of the Muhammadan community. The latter are less interested in politics than in their own particular religious, educational and economic problems, and even the younger and more ambitious men from time to time find themselves divided between their allegiance to political propaganda and the interests of their community.

Moral and material progress.—2. The wider diffusion of a sound elementary education is at present checked by financial difficulties, but it is hoped that larger grants will be available when the war ends. It is estimated that at present less than one-fifth of the boys of school-going age, who should be receiving elementary instruction, attend the primary schools. The municipalities unfortunately spend less on primary than on secondary education.

The improvement of village sanitation and water-supply has not yet, owing to financial reasons, been seriously grappled with; the development of village self-government referred to hereafter offers the best hope for the solution of this problem.

Labour has been abundant, and the huge profits which the jute mills gained are reflected in the construction of additional quarters of a good sanitary

*Till the 27th March 1917, when he was succeeded by the Earl of Ronaldshay, G.C.I.E.

type for the housing of their coolies. Owing to the want of ships, emigration to the colonies declined.

Land Revenue.—3. Over the greater portion of the province the Permanent Settlement prevails; any large increase from year to year in the Government land revenue is therefore impossible. The increase (Rs. 1,84,839) in last year's demand was due in the main to the settlement of newly-formed or waste lands, and to resettlements and the normal increase of demands in Government properties and in temporarily settled estates. Many estates, *e. g.*, those granted for services rendered to the State or those redeemed by the capitalization of the revenue due, are exempted from the payment of revenue, but from others (97,607 in all) the sum of Rs. 2,77,47,134 was realized, being 14 per cent. of the gross revenue of the Presidency (Rs. 20,64,73,000) in a year when receipts from opium and customs were abnormally high.

In spite of the financial restrictions imposed by the war, the great task of preparing for the whole settled area (63,893 square miles) a complete record-of-rights under the Bengal Tenancy Act was continued by the Survey and Settlement Department; by the end of the year the cadastral (field-to-field) survey had covered 19,486 square miles. The record is a modern Domesday Book and a monumental record of local rights.

An area of 6,639 acres was compulsorily acquired by revenue officers at a total cost of Rs. 71,17,478 mainly for railways, district boards, municipalities and the Calcutta Improvement Trust.

Under the Agriculturists' Loans Acts loans were granted to the extent of Rs. 8,39,291, chiefly in the district of Bankura, where famine prevailed, and in Burdwan and Naokhali, where floods caused severe distress. Cultivators repaid Rs. 11,29,929 advanced under this Act from time to time.

Condition of agriculturists.—4. The condition of the cultivators was on the whole good; an excellent winter rice crop was harvested, restoring prosperity even to those districts which had suffered from famine or severe distress. The area under cultivation throughout the province was estimated at over 29 million acres, of which over 21 million acres were under rice. The prices of rice were not high; the market for jute, the great mercantile staple of Bengal, which covers nearly 2 million acres, remained steady.

The Agricultural Department, which for some years has laboured against conservatism and apathy, received indifferent support from the public for a scheme to provide an elementary training in agriculture for the sons of land-holders. There are signs of increasing interest in its work, but closer and more practical relations with the actual cultivator will only become possible with an increased staff. The post of a third Deputy Director has recently been sanctioned. The last Inter-provincial Jute Conference recommended certain improvements in the cultivation and production of jute; it foresees no great extension in the acreage under jute, unless prices advance.

A jute seed selected from 500 seeds after careful experiments in the Government farms has since been tested in a variety of soils with encouraging results, and a certain amount of the "Indrasail" paddy seed, selected after the careful testing for several years of 2,000 varieties of paddy, has been distributed to cultivators. A demand for these two varieties of jute and paddy seed has already sprung up and steps are being taken for their wider distribution.

Co-operative movement.—5. There has been a notable expansion of the co-operative credit movement, and the prospects of thus solving the great problem of the Indian peasant's indebtedness grow brighter year by year. The movement began at the beginning of the century by the foundation of some 50 pioneer societies, of which a considerable number directed by more zeal than knowledge have long disappeared. To-day there are 47 central banks with a working capital of Rs. 58,89,950, 2,857 agricultural and 169 non-agricultural co-operative credit societies with a working capital of Rs. 67,06,628 and Rs. 25,64,868, respectively, and 18 supervisory unions, *i. e.*, federations of rural societies formed for guaranteeing one another's loans; the central banks have a membership of 6,668, while the agricultural and non-agricultural societies have respectively, 110,961 and 25,582 members.

Co-operation is no novelty in the village community and where a society is small and its members well-known to one another, public opinion imposes a simple code of honour which deprives joint unlimited liability of half its

terrors. For some time past the necessity of founding a provincial bank has been recognized, but there are obvious difficulties in financing such a project at present; in the meantime, steps are being taken to unite the central banks into a federation so as to provide a better machinery for financing them from the capital which is freely available in Calcutta.

At the present moment, it is considered prudent to restrict rather than encourage the formation of new rural societies, unless adequate control can be secured by their affiliation, with a central bank, while the appointment of paid secretaries for these banks is considered desirable for rendering such control more efficient.

The Departments of Agriculture and Co-operation were formerly—in 1907—in charge of one officer; this arrangement is no longer practicable, but the desirability of co-ordination of effort between these departments, which both aim at ameliorating the lot of the cultivator, is fully recognised; during the past year, the one department supplied the means and the other the direction and advice for the extension of potato cultivation and a wider employment of manures. The number of weavers' societies (a depressed and indigent community) increased from 17 to 34; nine new societies were formed by fishermen. It is a melancholy fact, illustrating the futility of socialistic uniformity, that some of these societies used the increased prosperity and capital which co-operative sale and the elimination of the middlemen had won for them, to become middlemen themselves and in their turn to exploit the labour of their less fortunate brethren, who had remained outside the co-operative pale.

Fisheries.—6. The importance of conserving and developing the fisheries of the Presidency on modern scientific lines has received fuller recognition since the initial enquiry of 1906. The Fisheries Department, which was made separate from the Agricultural Department in 1917, is now concentrating upon the improvement and multiplication of the supply in the inland fisheries of Bengal. Much useful work has been done in supplying the public with carp fry for stocking the tanks or large artificial ponds which form the main source of the water-supply in the interior of Bengal.

The importance of developing the inland fisheries is obvious when it is remembered that nearly four-fifths of the total population of the Presidency consists of people who may eat fish, but to whom meat is taboo.

Commerce and trade.—7. In the third year of the war the paucity of tonnage and exchange difficulties left their mark on the foreign trade of the Presidency. The value of its sea-borne trade shows a remarkable uplift,—11 per cent. above that of the previous year and 6 per cent. over the figures of the last quinquennial average,—but the volume of imports has for the most part declined. This tendency is illustrated in the imports of metal, machinery and mill-work, hardware and cutlery, foreign mineral oils, salt and cotton manufactures. The United Kingdom's share in the import trade (merchandise) was 63·8 per cent. against 65·2 per cent. in the previous year; Japan obtained a firmer hold of the piece-goods trade and supplied almost 70 per cent. of the glass and glassware imports,—an advance of 57 per cent. on her trade of 1915-16.

The export trade increased in value, mainly by reason of the unparalleled prosperity of the jute trade, which, however, early in 1917 was so severely affected by the cancellation of Government orders and the difficulties already described that an agreement to work short time at the mills was considered necessary.

Tea had some reverses; the crop was smaller than in the previous year, and though prices reached a high level in Great Britain transport difficulties, restrictions on export and high freights caused some depression in the trade.

The export of hides to the United Kingdom attained dimensions unknown before, although the total volume of the hide and skins trade decreased; the metal and ore trade, particularly the export of manganese ore, flourished; the area under indigo was more than doubled, and the output of coal in Bengal, Bihar and Orissa was nearly 16 million tons.

The United Kingdom took 32 per cent. of the exports, as against 36·1 per cent. in 1915-16; the purchases of the United States increased from 19·6 per cent. to 25½ per cent.

The-frontier trade with Sikkim, Nepal, Tibet and Bhutan continued to expand; imports (chiefly live animals, fruits, vegetables, nuts, *ghee*, raw wool, grain, pulse and spices) amounted to Rs. 91 lakhs and the exports (chiefly cotton goods) to Rs. 36 lakhs.

Industrial development.—8. The restriction of imports from Europe, which has enabled the enterprising Japanese to increase their export trade with Bengal a hundredfold, led at first to no spontaneous development of new or minor industries; some expansion of mulberry cultivation and silk weaving and some increased prosperity in petty sugar industries make up the meagre tale. Other factors, however, have since been at work which may have far-reaching consequences in the industrial development of Bengal. Deprived of a market for some of her raw materials, the Presidency has turned to manufacture both for its own needs, and also to assist the over-worked industries of the United Kingdom. Her great hide industry is a case in point. For many years India has exported its hides and its vegetable and tanning materials in the same ships, and not less than 60 per cent. of the total export went to the Central European powers. The Allies want leather, but England cannot cope with the quantity of raw hides which India exports. Bengal has been driven to tan her own hides, and already large tanneries are springing up in Calcutta, new processes of chemical tannage are being examined, and new uses being found locally for Bengal leather. The manufacture of munitions of all kinds, from shells to bolts and nuts, for the armies in Mesopotamia and East Africa is a work of great magnitude, and it has called into being new and important enterprises for producing, with modern machinery, articles which were formerly purchased abroad. What has been already achieved is remarkable; its potentialities can hardly be over-estimated.

Finance.—9. The revenues of the province increased; the five crores increase in the Imperial receipts (Rs. 13,97,31,718) was due mainly to the abnormal yield of the customs dues and the handsome prices realized at the opium sales. The provincial receipts (Rs. 6,67,41,000) show an increase of Rs. 32,81,000, while expenditure declined by more than Rs. 25 lakhs. Income-tax (Rs. 163 lakhs), thanks to the enhanced rates of taxation, yielded more than double the revenue of the previous year. Its incidence is extremely restricted; only 58,338 persons out of a population of 45½ millions were taxed, one person in 1,207 outside Calcutta paying an average tax of Rs. 69, and in Calcutta one person in 52 paying on an average Rs. 609 each.

Police and Crime.—10. In spite of some slight increase the police force of the Presidency is still inadequate, and the proportion of police to the population remains much lower than in other provinces.

The subdivision of large, unwieldy investigating centres and the provision of suitable accommodation for the district police are urgent needs. A building programme costing Rs. 90 lakhs has been approved, but only Rs. 9½ lakhs could be granted for this project in the past year. Recruitment was satisfactory and the health of the force improved—due in part to the distribution of iron cots and mosquito nets in malarious districts.

Several constables and officers were prosecuted by private persons on charges of torture, bribery and extortion; only one in every five cases actually brought to trial ended in conviction. In the opinion of the Inspector-General of Police, the general *morale* of the force is steadily improving.

Crime is still more prevalent than in pre-war days, but dacoities, which swept like a plague across certain districts in 1915, have notably decreased. The energy and skill of the Criminal Investigation Department have assisted the district police in breaking up and mastering several dangerous gangs. The stoppage of trade with Germany and Austria has reduced the illicit supply of cocaine, and led to a remarkable fall in the number of excise cases.

The Calcutta police force has been strengthened by the formation of a third company of civil armed police, and the Commissioner of Police relieved of much detailed administrative work by the creation of two semi-independent city areas under Deputy Commissioners, these again being each divided into two divisions in charge of Assistant Commissioners, who supervise all pure executive work.

Revolutionary Crime.—11. Revolutionary or anarchical crime was checked and to some extent held at bay in the latter half of the past year, but the tale of deliberate ruthless murders planned and executed by the misguided but implacable enemies of the present régime is still a long and melancholy one. In all, there were 24 crimes—murder or dacoity—attributed to the anarchists, as against 38 in the previous year.

In January 1916, a Bengali Police Sub-Inspector, attached to the Special Branch in Calcutta, which deals with the anarchical movement, was murdered in cold blood in one of the main thoroughfares of Calcutta; in June of that year, Deputy Superintendent B. K. Chatarji, who by his intimate knowledge of the movement and his faithful devotion to duty was marked out as the victim of those he pursued, was shot dead by five Bengali youths of the middle classes as he was cycling down an important street in Calcutta. An orderly head constable, who accompanied him, shared his fate. Two detectives were murdered in Dacca while on duty. Two persons suspected of aiding the police were assassinated and the head master of a school in a country town was murdered for the same reason in circumstances of the most atrocious cruelty. One of his pupils was ultimately convicted for this crime; his associates escaped. In the Tippera district, the villagers offered a brave and stubborn resistance in a political dacoity, planned to replenish the funds of the revolutionaries. They had no weapons that could cope with the revolvers carried by the dacoits and five of them were killed and five wounded; one of the dacoits, subsequently identified as a man who had absconded from the place of domicile assigned to him under the Defence of India Act, died from the injuries inflicted on him by the enraged villagers.

Several convictions were obtained on charges of conspiracy and other crimes, but in the vast majority of cases there are circumstances peculiar to Bengal, which preclude any hope of conviction by the regular courts, though the police may possess convincing evidence consisting of confessions often corroborated in the most unexpected and dramatic fashion by other confessions or incidents—where collusion or the exercise of undue influence by the subordinate police was unthinkable. The confession is withdrawn in the dock; the public, even those who condemn the evil on the platform or in the press will not as a rule give any assistance when actually brought into contact with it, but will, in most cases, prefer to slip away from the scene of a crime to which they might be required to depose; and the detectives before whom phases of the revolutionary movement lie exposed as an open book, are too valuable to be exposed by the publicity of a trial to the revolver of the anarchist. In these circumstances, Government has been compelled to use freely the instrument it possesses in the Defence of India Act—a war or emergency measure passed deliberately with the purpose of dealing with anarchical conspirators and other enemies of the King. The cases of persons against whom action is taken are submitted in every instance to a judge, who advises Government on the probative value of the evidence laid before him. The persons interned or restrained are treated with the greatest consideration; and at the time of writing Government has arranged for an independent tribunal, consisting of a judge from the English Bench and other high judicial and executive officers, to sit in judgment on the materials which the Intelligence Bureau possesses, to decide whether the organized and deep-seated conspiracy to subvert British rule does in fact exist, and if it exists, generally to advise Government on the measures to be adopted for dealing with the position.

Local Self-Government: 12. (a) *Municipalities, Mufassal.*—This Presidency offers examples both of good and of bad municipal administration. Some municipalities conduct their affairs in an efficient and business-like way, giving in their public services extremely good value for the moderate taxation they levy; others are disfigured by party factions, hampered by a fear of taxation and deterred through timidity or partiality from any vigorous exercise of power. The weaker municipalities have been content to levy and collect taxes and provide some of the elementary services for which a municipality primarily exists. They have rarely taken advantage of those provisions of the law, which, in the interest of public health and sanitation,

place irksome obligations on individuals. The exiguity of their resources is constantly urged as the bar to progress in rural municipalities, but the incidence of municipal taxation is everywhere low. In the early days of self-government in Bengal, much was expected from the educative value of self-taxation, but the history of some of the backward municipalities of Western Bengal shows that this influence has had little effect.

It is, however, gratifying to note that the measures taken in the past year to increase the financial responsibilities of Municipal Commissioners, to extend the elective system and generally to relax the slight official control, which can still be exercised, have on the whole been successful. In the past year, 11 of the few remaining municipalities, in which Government appoints the chairman, have been empowered to fill that post by election; three of these bodies preferred that Government should continue to appoint an official chairman, while one municipality, of which the Commissioners are appointed by Government instead of being elected by the rate-payers, protested against the introduction of the elective principle as being unsuited to local conditions. There was some improvement in the collection of rates and taxes, a branch of work in which few of the mufassal municipalities have excelled; the aggregate income amounted to nearly Rs. 57 lakhs, and the expenditure to Rs. 57½ lakhs. Original works of drainage and water-supply have been curtailed owing to difficulty in obtaining materials and to financial stringency. Of the aggregate expenditure on education (nearly Rs. 2½ lakhs) less than half was devoted to primary education.

(b) *Calcutta Corporation*.—Owing to the difficulty of floating a loan, rigid economy was necessary and original works were almost entirely stopped. The year closed with a balance of nearly Rs. 43 lakhs.

(c) *District and Local Boards and Unions*—District Magistrates have hitherto been appointed as chairmen of all Districts Boards (which correspond roughly with the county councils of England), and by virtue of their authority and local knowledge, naturally exercise great influence over the deliberations of the Boards. An important constitutional change was made towards the end of the year by the appointment by Government of an Indian non-official as chairman of one District Board, and at the time of writing the experiment is being extended by the election of non-official chairmen in five of the 26 districts of the Presidency. The District Boards have an aggregate income of nearly Rs. 107 lakhs, and in thus freeing several of these bodies from official control, the Governor in Council has given an earnest of his desire to open up a wider sphere of public work to the people of this province.

The Union Committees—smaller units which deal with groups of villages—have recently shown signs of a vigorous life. Their number increased in the year from 90 to 156. The majority are constituted on an elective basis, and no less than 67 have voluntarily taken advantage of the permissive section of the law to impose taxation within the areas they administer for the improvement of village roads, water-supply and sanitation. They disposed in all of over Rs. 1½ lakhs, of which a lakh was contributed by the District Boards. The Governor in Council believes that the wider scheme of village self-government which is now contemplated will afford in time a sure and stable foundation for an improved system of representative government.

Calcutta Improvement Trust.—13. The work of the Trust received a serious check owing to a High Court ruling (reversed after protracted litigation by a Full Bench), in which it was held that the Act did not authorize the acquisition of surplus lands for purposes of recoupment.

The beneficent and far-reaching consequences of the Trust's operations are already apparent, and it is a matter for satisfaction that the Indian members of the Trust, who were at first disposed to regard themselves in the light of a brake on the over-zealous and unsympathetic efficiency of its executive, have become the most ardent town planners. Building sites are at a premium in Calcutta, and its development demands the effacement and replanning of those insanitary congested areas for which the poverty of Calcutta's early municipal administration and some lack of imagination in more modern times are mainly responsible. The first scheme of the Trust is complete; a slum has been swept away and a splendid specimen of the new

Calcutta set down in its place. The scheme paid for itself. Two great thoroughfares, each over 100 feet in width, are under construction, and a large low-lying suburban area, which had grown up without a design, has been cleared, levelled and planned. The Board spent nearly Rs. 45 lakhs, and at the close of the year had a surplus of more than Rs. 100 lakhs.

Education.—14. No outstanding event marks the educational year. The scheme for establishing a model residential University at Dacca, which was approved by the Secretary of State in 1913, has been postponed, pending the report of the Commission on University Education in Bengal now sitting at Calcutta under the Chairmanship of Dr. Michael Sadler, Vice-Chancellor of Leeds University. The foundation at Rangpur of a new private college, which bears Lord Carmichael's name, may also be mentioned.

In collegiate education, the most pressing need is perhaps the provision of well-designed and well-supervised hostels. The increasing demand for University education every year sends thousands of students to Calcutta who clamour for admission into colleges, which are already overcrowded. Oxford and Cambridge have each some 5,000 students to house and control; out of 15,000 University students in Calcutta, there are nearly 5,000 over whose residence the University exercises no kind of control, and of these nearly 2,000 reside in overcrowded and insanitary lodgings which drive their occupants out to seek recreation and excitement in the temptations of a great city or the troubled politics of Bengal. The Government of India since 1911 have allotted no less than Rs. 26 lakhs for providing proper hostels in Calcutta, but some limit must be set to such expenditure by the State and it is hoped that the Commission may evolve some alternative scheme for coping with this growing evil.

Elementary education presents a problem of no less importance. In nearly 32,000 primary schools, instructing roughly 1,125,000 boys, there are 29,000 totally untrained teachers, whom it would take 40 years to instruct in the existing training institutions. In about 2,500 secondary schools instructing about 375,000 pupils, only 3,000 out of 17,000 teachers have studied in any degree the art of pædagogics. Elaborate schemes have been framed to remedy this serious defect in the educational system when normal financial conditions return.

The further expansion of female education is largely a question of funds. The number of institutions of all classes for Indian girls and women is nearly 9,000 with 270,000 pupils, of whom rather more than half are Hindus. The paramount need is a steady supply of trained teachers, and schemes for establishing more training schools and classes are ready.

CHAPTER VII.—UNITED PROVINCES.

Lieutenant-Governor:

SIR JAMES S. MESTON, K.C.S.I.

General Conditions.—1. Sharp as was the rebound in the previous year from scarcity conditions, there was still a margin for further advance, and the recovery was complete in all parts of the province, except in the least favoured districts of the west. In the western divisions, agriculture, which is the principal source of wealth of the provinces, suffered at the beginning of the year from shortage of rain and canal water, but Oudh and the southern and western divisions had an exceptionally good spring harvest. The monsoon of 1916 though more evenly distributed than that of 1915, was heavy, the crops at this season, with the exception of rice, were damaged by excessive rain, more particularly cane and cotton, and the yield on the whole was moderate. Floods caused considerable damage in the Ganges valley east of Allahabad. Measures of relief of rent and revenue were given in the areas affected. Prices eased off slightly from the high rates of the previous year, but not so as to deprive the cultivators of handsome profits, over crop areas that were, if anything, slightly, above the normal. The autumn rainfall was favourable to an extension of sowings of the next spring crop, and on the whole the cultivating classes had a good year. The condition of agricultural labourers improved, but the educated classes, especially those with fixed incomes, were hit by the high prices of necessaries.

Trade and Industries.—2. Trade again increased, but did not reach its pre-scarcity volume in 1912-13: the expansion was most marked under exports (mainly of agricultural produce, such as grain, sugar, and opium) which exceeded imports considerably. The war stimulated enormously the export of shellac, indigo, saltpetre, and hides, but that of wheat declined by one-third. This was in the main the result of short sowings—the heavy and late rain of 1915 had hampered the preparation of the ground over one-tenth of the harvest area—but was in part perhaps attributable also to the holding up of stocks. Sugar, which ranks second to grain as a staple export, also declined, but to a smaller extent, the produce and area both having been affected by unfavourable seasons in the principal cane districts. The indigo area was trebled, but dull markets in Calcutta deprived the manufacturers of the large profits expected, and the prices paid to the cultivators were not high. The cotton crop was a failure all over India, and in these provinces the failure hit the cultivators and factories alike. The latter were compelled, in fact, to reduce their output. In other industries, while the supply of raw material was adequate, inability to import machinery and plant was a serious handicap; sugar and oil mills and engineering work were the chief sufferers. In this respect the war has undoubtedly emphasized the dangers of too great a dependence on imports from foreign countries. The Cawnpore textile mills and tanneries were entirely occupied in the execution of military orders and had a prosperous year, particularly the latter.

Under imports the most notable increases were in coal for industrial purposes at Cawnpore and elsewhere, wool for war orders at Cawnpore, and brass for utensils for the general population, now recovering from the effects of 1913-14 scarcity; but against this has to be set a considerable decline in the volume of sea-borne imports such as iron, other metals and cloth. With reduced supplies the prices of these articles naturally rose; and in the case of cloth the rise has undoubtedly been a source of some hardship to the poorer classes. In some minor directions supplies were made good from America and Japan and to a lesser extent Australia. American motor cars and Japanese goods, such as matches, toys, sweets, beer, haberdashery, etc., were much in evidence. Government was also able to assist a few local industries, notably glass and bangle-making and also fruit packing and bottling, jam-making, and the manufacture of indigenous dyes to replace those of outside origin, the

supply of which had been cut off. Of more permanent importance perhaps is the special inquiry initiated by the Agricultural department into the possibility of manufacturing morphia from Indian opium. Asia Minor has hitherto been the source of supply for this article, but if the experiments now in progress are successful, the province will have secured a very valuable industry.

The War.—3. With the data now available it is possible to affirm that the war had considerably less effect on the prosperity of the general population than the scarcity immediately preceding it. Beyond the short supply of metals, cloth and other sea-borne commodities, and to a certain extent the high prices of food, the general public has felt the influence of the great European conflict but slightly. Some disorganization was inevitable on the outbreak of the war, but that stage is now past: the people have now settled down to their usual occupations and have adapted themselves to whatever changes have occurred. Had there been no scarcity in 1913-14 the war as an economic factor would have attracted less attention than it has done in previous years.

Apart from its economic aspect, the war has evoked a general spirit of loyalty to the empire throughout the province. Including combatants and non-combatants, its contributions in men amounted to double the number already in military service, and the improved arrangements since inaugurated have shown that, though before the war a minor recruiting area, it is prepared to furnish quotas of recruits far in excess of what a few years ago would have seemed possible. A large sum was subscribed by the public to the United Provinces War Fund, in addition to minor aid to the Imperial Indian War Relief, Red Cross, and other funds. The three native States supplied Imperial Service troops and other detachments, and a military hospital. There was no internal disorder arising out of the war and no prosecution for sedition, and the machinations of revolutionaries from Bengal and elsewhere were successfully countered.

Politics.—4. Amongst the educated classes interest centred chiefly round the possibility of a further extension of self-government, and the discussions on internal politics overshadowed and diminished concern in the war. In the press the Home Rule propaganda of Mrs. Besant, the memorandum of post-war reforms drawn up by the nineteen members of the Supreme Legislative Council, and the Congress and Muslim League joint programme were the chief topics. Political agitation, however, was generally restrained and repressive measures were few. The conservative Muslim organs advocated a policy of "nationalism" under the British flag, and practically all sections looked to the British Government for their future advancement.

Finance.—5. The budget of 1916-17 was, like its predecessors, a war budget; which aimed deliberately at retrenchments and economies all round. Expanding departments were compelled to maintain the *status quo* and numerous reforms, some of considerable urgency, were postponed. For reasons, however, which it was impossible to foresee at the time of its preparation, the forecasts on which it was based proved to have been unduly pessimistic. The budget had estimated for a slight excess of expenditure over income, but in fact the balance in hand at the close of the year was nearly ten times the prescribed minimum. One quarter of this balance included sums earmarked for education, sanitation, and general administration, which will be spent in due course. One-tenth is accounted for by unexpected additions to the opening balance brought over from the preceding year. There were also, however, considerable additions to income and savings that could not be foreseen at the time of preparing the estimates. The receipt side benefited considerably from the continued growth of the prosperity of the people in spite of war conditions, as is evident from the increased revenue under excise, and to a less extent under stamps and income-tax. The forest, for reasons explained below, produced an unprecedented income, and the strong demand for and full supply of water augmented the income from canals. The savings on the expenditure side, too, were considerable, though short of the unexpected increases in receipts. In actual practice, it was found possible in nearly all departments to carry economy farther than the budget had anticipated. There was, naturally, no expenditure on famine relief, and the grant for that purpose remained in hand. Moreover,

Government was hampered, equally with the public, by scarcity of iron work, machinery, and engineering plant generally.

The financial position of municipal and district boards also improved; in this sphere there was less need for retrenchment and expenditure rose a little, though the balance in hand did not decrease.

Litigation.—6. One of the chief features of the year was the growth in the volume of litigation in the revenue and civil courts. In part the explanation is to be found in the renewed prosperity of the province; but as regards the revenue courts at least it would be unwise to assign too great an importance to this factor. Other and more deeply seated causes are clearly here at work. The expansion is undoubtedly connected with the growing pressure of the population on the soil, and with the rise in prices which has been practically continuous since 1904. The new Tenancy Bill which is at present on the anvil, aims at mitigating the effects of these conditions. The rise in civil court litigation which has been more or less continuous for a considerable period is largely attributable no doubt to the growing wealth of the provinces, but here too other causes are probably in operation. Amongst these may be conjectured the movement towards individualism, the increasingly commercial character of relations between individuals and classes, and the advance in industrialization.

Excise.—7. The economic recovery of the province is reflected also in the record revenue under the head of excise, a result which has been attained by raising duties rather than consumption. While public opinion is not ripe for prohibition and facilities for illicit manufacture abound, the policy of Government is to control consumption and to supply a sound article for the moderate consumer.

Police and Crime.—8. The volume of crimes declined, especially under the head of offences against property. Unfortunately there was a further rise in the number of dacoities. The increase in this form of crime has been continuous since 1914 and constitutes a serious menace to the peace of the province. In itself the problem is far from being insoluble. A more efficient police force should be capable of handling dacoity effectively. But efficiency means better control and larger expenditure, and with a superior staff seriously depleted and in a period of forced economy these conditions have naturally not been fulfilled. Partial effect, indeed, was given to the scheme for improving the pay of constables, but the need for higher emoluments is not confined to the rank and file: it is no less urgent in the case of the gazetted ranks, and a very heavy expenditure will have to be incurred to secure the efficient and contented force which alone can guarantee the province against outbreaks of organized crime.

Agriculture.—9. Agriculture is and will always be the great industry of the province. It is therefore gratifying to find that the landed classes are more and more realizing the advantages of developing the resources of the soil: not a few private gentlemen now maintain their own experimental farms, and others are sending their sons to the Agricultural College which up to a few years ago had attracted only candidates for Government service. The educated classes of the towns, too, who have hitherto not displayed much interest in agriculture, are beginning to appreciate its possibilities as a profession.

A better seed and water-supply is one of the most urgent of our immediate agricultural needs, and it was decided, therefore, to utilize for the purpose the grant given by the Government of India from the proceeds of the wheat sales. Much attention has been devoted of late to improving the breeds of milch and plough cattle, and in this direction steady progress was made during the year. Efforts were also made to foster the breeding of horses and mules, the demand for which has been greatly stimulated by the war.

The Co-operative Movement.—10. Agriculture is likely to benefit greatly in the future by the growth of the co-operative movement. Members of the public interested in agriculture have begun to realize the possibilities of the societies in this matter, and have given the department much assistance. No attempt is being made at present however to add largely to the number of rural societies. The severe tests to which they have been subjected of late by the scarcity of 1913-14 and the rise in prices have shown that many of them were

lacking in stability; and for the moment consolidation and not expansion is the aim of the department. Members have still to learn to identify their interests with those of the society; till this lesson has been thoroughly mastered progress must inevitably be slow. But the movement has come to stay; the confidence of the investing public is undiminished, as is evident from the fact that deposits have had to be refused; and further developments are simply a matter of time.

Forests.—11. The cessation of imports led to a great demand for the timber and turpentine of our forests. Large quantities of timber and sleepers, tanstuffs, and materials for the extraction of acetone, acetic acid and methyl alcohol were supplied to the military and ordnance departments. The outturn of turpentine has already been greatly increased, and is capable of further expansion; and the provinces ought and undoubtedly can be made largely independent of foreign imports of timber and certain other materials. It is even possible that they may become a supply centre, as regards some products, for the rest of India. The financial results this year have been extremely gratifying and the growing revenues of the department promise in future to yield a very substantial addition to provincial revenues.

Public Health.—12. The health of the province was on the whole better than in the preceding year. The cholera prevention scheme, which was introduced as an experiment some years ago in 20 districts, broke down owing to the lack of disinfectants. It had given apparently good results in previous years, and there is at present no intention of abandoning it. Luckily the incidence of the disease was light. The mortality from plague also declined.

Local Self-Government.—13. In the sphere of administration the chief event of the year was undoubtedly the passing of the new Municipalities Act. This took effect from the 1st of July, 1916, and was thus in operation for nine months of the period under review. Its principal feature was the abolition of official chairmen, and direct official control. Central control has been retained; in this respect the Act merely follows the practice of all modern States; but in future the municipalities will enjoy a measure of autonomy at least as liberal as that permitted to urban authorities in any other country. Provision was made at the same time for certain internal reforms which experience had shown to be essential. Plurality of control is not conducive to efficient administration, and boards and committees are not capable of handling successfully the details of executive work. The new Act accordingly reserves to Government the power to insist on the appointment of an executive officer in the large towns, who will work under the control of the chairman. In the smaller municipalities the chairman can be his own executive officer, but the appointment of separate officers for this purpose is permissible, and several boards have already of their own accord made such appointments. The boards will still retain in their own hand the powers of legislation and general control, but they will be freed from a mass of details, and can devote themselves to matters of broad policy. On the whole the new Act was a popular measure. There were difficulties at the time of its passing on the subject of communal representation, and in some of the boards the ill-feeling generated took the form of resignations by the Hindu members as a mark of protest. The method adopted for securing the due representation of Muhammadans was the result of a compromise. The proportion of Muslim members was fixed on the basis of population, subject to certain additions where it fell below a certain figure. Devices of this kind are always open to criticism, but in the circumstances compromise was inevitable, and there seems now to be a general disposition to acquiesce in the *fait accompli*. The new constitution has been in force for too short a period to allow of any definite conclusion being framed, but it is hoped that the wide powers granted will evoke in the electorate and its representatives a corresponding sense of responsibility, and that the public will recognize that their interests will best be served by voting for men who will work for the common good. The educated classes are on their trial; and it rests with them to make the new departure a success.

Education.—14. The district boards were engaged throughout the year in carrying out schemes designed to give effect to the orders issued in 1914 on the subject of primary education. The main features of these schemes are the

provision so far as practicable of a school within three miles of every village, the adoption of the upper primary course as the minimum standard of elementary education, more adequate staffs of teachers, the lengthening of the Middle Vernacular course, a revised curriculum and a strengthened inspectorate. The last reform has had to be postponed owing to war conditions, and great difficulties are being everywhere experienced in obtaining an adequate supply of teachers. The schemes nevertheless mark a great advance. A considerable number of new teachers are being added, and in general the foundations of a sound system of elementary education have now been laid. In female education the outlook is less hopeful. As has been repeatedly pointed out, real and sustained progress is impossible without a change in the attitude of the people. The indifference, apathy and even hostility of the general public have hitherto largely nullified all our efforts. The history of the schools for girls maintained by the local bodies is mainly a record of wasted expenditure. Somewhat better results have been achieved by the secondary Anglo-Vernacular schools, but even here the results are disappointing. It has not hitherto been the practice for Government to start such schools of its own, and there is much to be urged in favour of leaving this branch of education to private effort liberally subsidized by State funds. But the logic of events has forced a reconsideration of the traditional policy in this matter. Such demand as there is for female education is to be found amongst the educated middle classes: the aided schools have not so far catered satisfactorily for this demand, and a Government institution with the larger resources of the State behind it might prove the starting point of a fresh and notable advance. In the budget debate in March, 1917, the Government accordingly announced its intention of establishing in Lucknow a high class Anglo-Vernacular boarding school for girls. The expenditure will be very considerable, but the experiment will at least furnish a test and a measure of the extent and sincerity of the demand for female education.

There is no subject on which complaints in the press and on the public platform have been more frequent than the supposed inadequacy of the accommodation in the high schools. In the case of Government schools very large sums have been spent of late years on the construction of new, and the extension of the existing buildings; and liberal subventions for similar purposes had been made to aided institutions. Nevertheless it has been continually alleged that annually crowds of students are refused admission and Government has been urged to open more schools, or in the alternative to lower its standard for admission. The report of the Committee appointed in March, 1916, to examine and report on the question was received towards the end of the year. The statistics attached to that document show clearly that the supposed shortage has, to say the least, been enormously exaggerated. Such congestion as exists is purely local. The widespread impression to the contrary is merely the result of the popularity of certain schools which attract a larger number of applicants than can secure admission. The Committee's figures have not carried conviction in all quarters, but arrangements have now been made to apply a definite statistical test which should set all doubts on the matter at rest.

CHAPTER VIII.—PUNJAB.

Lieutenant-Governor.

SIR M. F. O'DWYER, G.C.I.B., K.C.S.I.

The War.—1. During this year which saw the great war well on into its third year, the Punjab continued to justify her proud title of the Sword-arm of India. Fully one-half of the combatant forces of the Indian Army on the 1st January 1917 came from the Province and this proportion has been well maintained in the great recruiting rally of the past few months. The Punjab can claim a substantial share in the arduous campaign which culminated in the capture of Baghdad thus crowning the Mesopotamian winter operations of 1916-17, and the two Victoria Crosses won by Punjabis during the year are only the most notable among numerous other distinctions gained in various theatres of the war. Nor did the people of the Province lag behind their fighting men in loyal endeavour. Contributions in money and kind in aid of the war continued to pour in and by the end of the year more than 40 lakhs of rupees in money alone—not counting innumerable articles for the comfort of the troops—had been subscribed for the various objects mentioned in last year's report. One-third of this total was contributed by the Punjab Native States, the ruling princes and chiefs vying with one another in munificent gifts from their private and public revenues. In men too, as well as in treasure, the Native States have given of their best, from the thousands put in the field by populous and wealthy Patiala to the little band of fifty, under the unola of the chief, supplied by the ancient hill state of Suket. Of the 24,000 Imperial Service Troops in being at the commencement of 1917 no less than one-third belong to the Punjab, and the cavalry and infantry of Patiala, the infantry of Jind and Kapurthala, the camelry of Bahawalpur and the sappers of Maler Kotla, Faridkot and Sirmur, have won honour for their States and earned the gratitude of the Paramount Power. In other fields also than those of war, the Province has lived up to its reputation. There was a complete subsidence of political unrest, while the assistance rendered by the people in the suppression of crime, and their loyal co-operation have been assets of incalculable value. Nevertheless the task of administration has been no light one: the protraction of the world-wide conflict has brought with it a multiplication of serious problems and an enormous increase in work of all kinds, while the cessation of recruitment from home and the surrender of over 200 officers of various departments for the army, have put a serious strain on the services which they have, however, borne with devotion and success.

Crime.—2. There was no recrudescence of the lawlessness directly associated with the old revolutionary movement, and the second Supplementary Lahore Case, the Mandi State Case, and the Rawalpindi Bomb Case, in all of which justice was fully vindicated, were only the aftermath of the *Ghadr* conspiracy of previous years. The year in fact marks the complete disappearance of the serious disorder and lawlessness of 1915, and there is good reason to believe that the administration is gaining steady success in the struggle against crime and the criminal, the result of which up to 1912 was a cause of serious anxiety. Numerous reasons are advanced for this general improvement in the situation, such as the subsidence of political unrest, the special measures taken to cope with wandering criminal bands and the diversion of the energies of the wilder spirits into the various spheres of military activity. Full justice should, however, be done to the increasing support and co-operation afforded by the people themselves who have been quick to appreciate Government's serious pre-occupations elsewhere and to realize their own responsibilities in assisting to maintain law and order. Government for its own part has not been slow in according prompt and generous recognition of valuable service in the suppression of crime: large cash rewards, grants of State lands and remissions of land revenue have undoubtedly done much to encourage the people to accept the risks which resistance to and pursuit of dangerous criminals so often involve. But no increase in public confidence would have been obtained had not the police shown themselves worthy of it. Each succeeding year has displayed a notable

advance in the *morale* of the force and throughout the stress of the late critical times Government has been able to rely with confidence on its loyalty and efficiency. By the end of 1916 a strong central agency under a special officer had been formed to deal with the registration, restriction, and reclamation of the criminal tribes who were responsible for so much of the crime in the rural districts of the Province. In addition to existing settlements for the members of these tribes at Danapur (Lahore), Changa Manga and elsewhere, a central reformatory was established at Amritsar, and a large industrial settlement in connection with the New Egerton Woollen Mills at Dhariwal. Other industrial settlements were started at Shahdara near (Lahore) and Bhiwani in the Hissar District, and the formation of several agriculture settlements is contemplated. The new system should have far-reaching results: even in the short time which elapsed before the close of the year under report, the success attained was remarkable.

Agriculture.—3. On the whole the year was one of general prosperity and development for all classes in the Province. The monsoon of 1916 was unusually active and widespread and was followed in the beginning of October by heavy rains which were very favourable for the sowing of the spring crops. The result was that the harvests of 1916-17, though they fell short of expectation especially in the spring harvest which was prejudiced by the failure of winter rains, were a great improvement on those of the preceding year. There was a small rise in the price of wheat and cotton mainly owing to large exports; and prices generally still remained affected by the war. The average price of land continued to rise and the benefits of the Land Alienation Act are displayed in a further decrease in the area of cultivated land mortgaged. In a few districts, labour was scarce owing to continuous recruitment for the army, but wages were good, and in spite of the war, and perhaps to some extent in consequence of it, the agricultural condition of the Province was distinctly prosperous.

The Department of Agriculture is securing in a growing degree the confidence of the agricultural population. Its activities in the year under report were increasingly varied and extensive, and a great future is anticipated for it. The experiments and demonstrations in implements and methods at the Lyallpur and Gurdaspur farms, and the demonstrations at fairs and on private farms throughout the country are producing noticeably excellent results, while the success of the department in popularizing well-established varieties of seeds is evidenced by a quadruple increase in the area under American "4-F" cotton and Punjab "11" wheat. Attention is also now being paid to the important question of the transport and marketing of agricultural produce, and the first steps were taken in connection with cotton: representatives of the great cotton exporting firms and Indian growers and dealers were consulted, and measures were considered to prevent adulteration by producers and to secure an adequate price for Punjab American cotton in the wholesale market. A notable feature of the year's work was the successful completion of the experiment in reclamation of saline land at Narwala which marks a definite stage in the solution of a problem of enormous importance to Punjab agriculture. A scheme for the reclamation on similar lines of a very large area on the Lower Bari Doab Canal is under consideration.

Trade and Industry.—4. But though the Punjab is still mainly an agricultural province, it contains rapidly growing commercial and industrial interests, and these shared in the general return of prosperity. A record number of operatives was employed in the big railway workshops and numerous cotton ginning factories of the Province, owing to large war orders and a bumper cotton crop respectively. The balance of trade also, which was badly upset in the first year of the war, recovered somewhat in the second, and still more in the year under report, and though the total volume is still less than before the war, the value has owing to high prices practically regained its previous level. This general prosperity is further reflected in the increase in receipts from income-tax (not solely due to the enhanced rates) and non-judicial stamped documents, and in the remarkable expansion in the extent and value of registered sales and mortgages in the last few years. The increasing popularity of immoveable property—particularly of urban land—as a field for investment, shows how little the material prosperity of the Province has been affected by the war, and is a remarkable proof of the general confidence in the stability of existing institutions.

Public health.—5. The year was on the whole healthy as well as prosperous. There was an outbreak of malaria as a result of the heavy monsoon rains, but cholera was almost entirely absent and the incidence of plague was the mildest since 1900. Consequently the death-rate dropped to 30·7 *per mille* or 1 *per mille* less than the average of the quinquennium. The birth-rate rose to 45·6 *per mille* and was the highest recorded in India during the year and the highest in the Punjab for the past 14 years.

The number of dispensaries in the Province is still inadequate; but war conditions continue to hamper expansion in this direction, though much more could be done if District Boards and Municipalities insisted on the payment of fees by the well-to-do. Increasing attention is being paid to the treatment of women, and especially to augmenting the supply and improving the quality of women workers. The new Punjab Medical School for Women at Ludhiana has not hitherto attracted the number of non-Christian girls hoped for; but schemes are under consideration for the improvement of the female Sub-Assistants' service, the constitution of a Central Midwives' Board, and the establishment of a Midwives' Central Training School.

Irrigation.—6. The year was marked as the first complete year of working of all three canals of the Triple Canal Project and by the closing of their construction accounts with an expenditure of nearly £7 millions. The enormous extent of irrigation in the Punjab is indicated by the following figures. The gross revenue of the department during 1916-17 (over £2½ millions) was 38 per cent. of the whole of the revenues collected in the Province. The total area irrigated increased during the year by nearly three-quarters of a million to 9 million acres and the estimated value of the crops raised on this area by nearly £3 millions to over £20 millions. Of the irrigated area 8 million acres received water from perennial and 1 from inundation canals, through over 4,000 miles of main and branch canals and nearly 15,000 miles of distributaries. Further extensive developments are under consideration.

Land Revenue.—7. The re-assessment of one district was started during the year and that of four brought to a conclusion. Great leniency is shown in these assessments: Government has in many of its recently settled districts taken considerably less than half the theoretical standard of half net assets, and its share of the gross produce has of late rarely exceeded 10 per cent. Further when times are bad and seasons unfavourable, suspensions and remissions of the fixed demand are liberally granted.

Court of Wards.—8. The Court of Wards had 50 estates under management at the close of the year under report, with total assets of £2,850,000 and liabilities of only £86,000.

Co-operative credit.—9. Co-operative credit is a subject of growing importance. The year was again one of consolidation rather than expansion, there being no marked change in the number of societies or in the amount of capital invested in them. On 31st July 1917, the societies numbered 3,495 with 138,245 members and a working capital of £1,330,000. Practically all the societies were subjected to systematic inspection by the Registrar and his assistants, and their generally flourishing condition in spite of the abnormal financial conditions created by the war is evidence that they are working on sound lines.

Forests.—10. In the forests of the Himalayas and the irrigated plantations of the plains the Punjab possesses immense potential sources of wealth of which sufficient advantage has not yet been taken. Exploitation has no doubt improved of late years, but the gross income of £113,000 obtained in 1916-17 can only represent a fraction of what could be produced by the 7,211 square miles under the Forest Department's control. These facts have long been recognized, but the Department with its present staff has done all that was possible. The prospect, however, of a largely increased demand for timber after the war has produced the necessary stimulus; a scheme for the re-organization of the superior cadre has been approved by the Secretary of State and will be introduced gradually as finances permit, and provision has already been made for a second Conservator in 1918-19.

Excise.—11. Perhaps the most noticeable feature in the excise administration of the year was the greatly enhanced demand for Indian-made liquor, particularly beer: the result was a record liquor revenue of £336,000, and an

increase in the total excise revenue by eight per cent. to £500,000. Apart from beer, however, which is mostly drunk by British troops, there was no marked increase in the consumption of liquor: the consumption of country spirit has in fact declined by nearly 15 per cent. in the last four years. There is every reason for satisfaction with this rate of progress; it is no doubt largely due to the increase in the duty which took place in 1915, but in part also to the efforts made for some time past to discourage intemperance by the closing down of shops, the discontinuance of fair licenses and other similar measures, matters which command unceasing and anxious attention from Government. The opium revenue of just over £100,000 was slightly larger than in 1915-16, despite restrictions placed on the issue of excise opium in order to check smuggling. Excise opium fetches very high prices in Burma, and smuggling, especially through the Native States, is so profitable that a widely ramified organization has grown up to defeat the law. A special bureau is, however, at work, much valuable knowledge of the illicit traffic is being acquired and the whole question is receiving consideration.

Education.—12. Remarkable progress is disclosed in the current report of the Director of Public Instruction, dealing with the quinquennium ending 1916-17. The annual expenditure on education has risen from £460,000 to £726,000, the number of students from 381,000 to 477,000 and of institutions from 7,400 to 9,400. This expansion has been equally shared by all branches of education. The number of trained teachers has almost doubled and there has been a distinct improvement in their pay and prospects and consequently in the standard of their attainments and the quality of the teaching. The number of students in Arts Colleges has risen from 2,462 to 4,221 and the annual recurring expenditure on these institutions has increased by 78 per cent. The expansion in professional and technical education has been no less remarkable; the practical-minded Punjabi has learnt the value of the training given by the Medical, Veterinary and Agricultural Colleges, the Mayo School of Art, and the various technical and industrial institutions of the Province, and the demand for graduates from them increases every year. Steady progress is being made in the field of female education. The results already achieved are largely due to the improved efficiency of the schools (the number of women teachers under training has increased five-fold since 1911-12), and to the practical nature of the instruction given. Indian public opinion is now undoubtedly much more favourable, and education is beginning to be valued by parents as tending to improve the prospects of their daughters in after life.

Local Self-Government.—13. There is little of note to record in the sphere of local self-government: the attitude of both rural and municipal voters towards the colourless machinery of voting register and ballot box is still largely one of indifference or distrust, and keen contests—with their far too frequent accompaniments of bribery and corruption—are only witnessed when personal or sectarian feelings are aroused. Nevertheless the right men are frequently chosen, and local bodies are on the whole discharging their duties with moderate efficiency.

Suppression of bribery.—14. Towards the end of the year, Government, moved by the undoubted prevalence of bribery and corruption in the provincial and subordinate services, issued broadcast to every village in the Province a proclamation, in simple yet forcible language that all could understand, inviting the public to assist Government in the eradication of this evil. It was pointed out that bribe-taking could only stop when bribe-giving ceased, and that it was with the public therefore that the remedy rested. The proclamation went on to exhort the people to combine with one another in refusing to give bribes or perquisites to officials, and concluded with a warning against those who fabricated false charges of bribery. Various persons were prosecuted during the year for accepting bribes.

Finance.—15. The finances of the province are on a thoroughly sound footing. The total revenue raised in 1916-17 rose from six to nearly seven millions sterling, of which the Provincial share was almost exactly half; while expenditure fell from just over to just under four millions, the province being debited with a little over 3 millions. Thus with a substantial increase in income and a tight hand kept on expenditure the close of the year saw the provincial balance practically doubled. At the end of the year 1916-17 it stood at £814,000.

CHAPTER IX.—BURMA.

Lieutenant-Governor.

SIR S. H. BUTLER, K.C.S.I., C.I.E.

General Conditions.—1. The history of Burma in 1916-17 is that of a Province whose prosperity depends very largely on the demand in the world's markets for the commodities it produces in the third year of a war which, while it had profoundly disturbed the organization of trade, had caused a greater demand for these commodities.

It would be idle to claim that the Province enjoyed the same prosperity as in favourable years before the war. Though both crops and prices were better than in the previous year, yet, owing to the prolongation of the war, money was tighter. In Lower Burma there was a considerable increase in the area of land under mortgage, and, in consequence of mortgagees pressing for the return of loans, a striking increase in the area of land sold. Tightness of money and the high prices of imported articles cramped local trade. The high prices of imported cotton piece-goods and yarns were felt, to some extent at least, in every household. But, generally, the Province enjoyed conditions of comparative prosperity. The improved economic conditions synchronized with an improvement in the health of the people. The death-rate compares exceedingly favourably with that of the previous year, and was the lowest for the year for any Province in India except Madras. The only considerable epidemic disease was an outbreak of plague, confined to the towns. The Provincial birth-rate, for some unaccountable reason, was lower than in the previous year.

The wealth of the Province is made manifest by the raising during the year of a war gift of ₹29 lakhs, in addition to large subscriptions to the War Loans. The loyalty of the Province is evidenced by the fact that, in response to the desire of the Burmese to serve as soldiers and take a share in the war, a company of Military Police, a battalion of infantry and a labour corps were enlisted during the year, and additional battalions of infantry are now being and about to be raised. The keenness of the Burma Military Police to volunteer for war service continued unabated. A contingent of Military Police mounted infantry was sent on active service as a self-contained unit, in addition to numerous drafts sent to Indian regiments at the front.

Agriculture.—As the vast majority of the population depends on agriculture, the two main factors in the material prosperity of the people are the crops and the prices current for agricultural produce. In 1916-17 both crops and prices were distinctly better than in either of the two preceding lean years. In Lower Burma the monsoon was a favourable one, and, except in the Arakan Division, the year was a good one, much less damage than usual being caused by floods. In Upper Burma, in spite of unfavourable conditions at times and in places, as is inevitable in a country of sparse rainfall, the season was on the whole a fair one. The favourable weather conditions are reflected in the statistics relating to agriculture. The area under cultivation, 14,415,000 acres, and the area on which a matured crop was grown 13,745,000 acres, are both the highest on record for the Province. In Lower Burma the rice-crop was good. The general shortage of food-stuffs in the world combined with a recovery from the disorganization of trade that followed the outbreak of war, resulted in much better prices being realised than in either of the two preceding years. In Upper Burma, crops of sesamum and groundnut were good and realized excellent prices. In response to favourable prices in the previous year, the cultivation of both cotton and white beans had expanded, yields were good and, thanks to the strong demand from England, prices were phenomenally high. There was a marked increase in the area under both chillies and onions, and prices continued to rule high. So, throughout the Province generally, crops were good and prices good. For the second year in succession the toll levied by cattle disease was extraordinarily light. Thus the year was a prosperous one for the cultivator and the classes depending

on agriculture. The returns of railway traffic and the statistics for the registration of deeds bear witness to the improved conditions during the year.

Among numerous experiments with a multiplicity of plants, the most economically important research work done by the Agricultural Department was the development of improved strains of paddy which will combine high yielding capacity with suitability for the European market. The most promising result of experiments with imported cottons is a cross between Broach cotton and the long-lived Burma variety, which, it is hoped, will combine the finer and longer staple of the former with the larger outturn of the latter. Large quantities of seed of selected varieties of paddy were distributed during the year.

Co-operative Credit.—2. The Co-operative Department continued during the year, on a larger scale than ever, its work of teaching the value of organization and proper methods of business, and of demonstrating the benefits of co-operation, and so helping the Burmese to hold their own in rapidly changing economic conditions. The steady expansion of the movement, which has been so conspicuous in recent years, persisted in 1916-17, and there were at the close of the year a total number of 2,575 co-operative societies of all sorts. The vast majority of societies are, of course, agricultural credit societies. The expansion during the year would have been much greater but for the effect of the war in limiting the extent to which the Upper Burma Central Bank, which holds the fluid resources of the whole co-operative movement, could increase its funds.

Forests.—3. The exploitation of the natural wealth of the Province was prosecuted with energy. The year was a busy one in the forests. The urgent need of timber of all sorts in Mesopotamia, and the strong demand for teak in India owing to the requirements of the Military Department and the impossibility of obtaining metal building materials, combined with the fact that the season was a favourable one for the extraction of timber, resulted in a marked increase in the quantities extracted, both of teak and of other sorts of timber. There was also increased extraction of fuel, owing to the difficulty of obtaining coal for the railway engines and steamers of the Province.

Mines.—4. In mining, too, there was unusual liveliness. In the previous year, owing to the clamant need of wolfram for the manufacture of high-speed steel, there had been remarkable activity in wolfram-mining, especially in the Tavoy District. This activity was enhanced in 1916. The local Government took special measures to increase the output. The staff of officials was strengthened. The shortage of labour was met by the importation of Indian and Chinese coolies by Government agency. Large sums were expended on improving communications. In response to these measures the output of wolfram increased markedly. In the Northern Shan States, the Burma Mines Company, in spite of being hampered by difficulty in importing materials, made immense strides in developing the mines at Bawdwin. The output of both silver and zinc was vastly increased, and that of lead more than maintained.

The activity in tin mining, which has marked the last few years, was in 1916 more in evidence than ever. The expectation that this industry will expand very much beyond its present limits is made more probable by the discovery during the year of valuable deposits of tin in the Thaton District.

Apart from these new developments, the normal exploitation of the mineral wealth of the Province proceeded apace. The output of petroleum, 222 million gallons, is the largest on record. Prospecting for minerals, especially for wolfram in Tavoy, was remarkably active.

Trade.—5. In spite of the fact that a phenomenal rise in prices makes it difficult to compare the volume of trade with that of previous years, it is beyond question that, in 1916-17, the trade of the Province made an appreciable recovery from the set-back immediately ensuing on the outbreak of war. The aggregate value of the sea-borne external trade of the Province during the year was ₹69,88 lakhs, a figure 22 per cent. in advance of the previous year's, and exceeded only in the particularly prosperous years 1912-13 and 1913-14. The improvement in trade took place in spite of a falling-off in the total tonnage of the ships entering and leaving the ports of the Province. The

number of vessels actually increased, owing to a large rise in the numbers of small sailing craft engaged in the coasting trade. But the number of steamers continued to decline. Among these steamers the British flag was less in evidence than in the previous year, while the proportion of Japanese ships increased considerably, and that of Dutch ships strikingly. The noteworthy features of the year were a fall in exportations to the United Kingdom, increased importation of manufactured articles from Japan, and of cotton goods from India.

Among imports into Rangoon cotton goods easily held pride of place. The outstanding feature in the year's increased importations was the extent to which goods of Indian manufacture, both piece-goods and yarn, replaced Lancashire goods. The general increase in the cost of living caused a heavy fall in importations of silk, more or less a luxury article. Yet it is clear that all classes did not feel the need to economize, as the value of motor cars and motor cycles imported was nearly double that of any previous year. As was to be expected, there was a marked fall in importation of ores and metals. On the other hand, importations of hardware rose, Japan's contribution increasing strikingly. Shortage in the United Kingdom was responsible for a decrease in importation of provisions and also in importation of sugar from Java. The quantity of alcoholic liquors imported was very much smaller than usual. But importations of salt, in consequence of a threatened shortage, were the largest on record.

The real improvement in trade lay chiefly in increased exportation to countries other than India. Among exports from Rangoon, rice was easily first in importance. In spite of abnormally high freights and shortage of tonnage, the quantity exported, nearly 2½ million tons, was greater than in the previous year and surprisingly little less than in the years immediately preceding the war. Over a million tons went to India. The United Kingdom, taking over 300,000 tons, more than ever before, was the next best customer. The Straits Settlements, Ceylon and the Dutch East Indies took most of the remainder. Difficulty in importing oil into India from America and the Dutch East Indies, and the need of petrol for the military authorities in India and Mesopotamia were the prime factors in causing an increase in exportations of mineral oils to 156 million gallons, a record figure. Owing to the demand for paraffin-wax for making munitions in the United Kingdom, America and Japan, there was a substantial increase in exportations of that commodity. There was an improvement in the teak trade, too, mainly owing to the demand in India. A strong demand in the United Kingdom led to increased exportation of groundnut, oil, white beans, and also of cotton. War requirements were responsible for a strong demand for the rapidly increasing output of rubber and wolfram, and exportations of both these commodities were easily the largest on record.

The construction of the Twante Canal for the improvement of communication between the Government of Rangoon and the rich rice-producing lands of the Irrawaddy delta, was sanctioned in 1911. It was opened for traffic at the end of January 1917, having been completed at a total cost of nearly 54 lakhs. The net revenue from toll rates is estimated to give a return of over 6 per cent. on the capital outlay.

The value of trans-frontier trade, R948 lakhs, was substantially greater than in the previous year. The main factor in the improvement was an increase in the material supplied to, and in the output of metals from, the Burma Mines Company's property in the Northern Shan States. Apart from this, the actual volume of trade diminished, though the rise in prices obscures the extent of the decline.

Finance.—6. A large increase in the total revenue, accompanied by practically no increase in the total expenditure, is the feature of note in the finances of the Province for the year. The gross receipts of revenue were R12,72 lakhs, some R130 lakhs more than in the previous year, while the gross expenditure rose by only half a lakh to R876 lakhs. The most noteworthy increases in revenue were under the heads Customs, Salt, Forests, Land Revenue, Excise and Stamps. In consequence of reduction of outlay on public works, both Imperial and Provincial expenditure fell, the former by R11 lakhs to R62 lakhs and the latter by R5 lakhs to R559 lakhs.

The war has had very little adverse effect on the ordinary income of municipalities. The ordinary income of the Rangoon Municipality increased.

as did the total income of the minor municipalities. The expenditure of the minor municipalities decreased owing to enforced economics.

Practically all the other funds of the Province were in a healthy condition during the year.

Crime.—7. The year witnessed no diminution of the continuous increase of crime which has been the most disquieting feature in the administration of the Province. The volume of crime taken cognizance of by the police exceeded all previous limits, and the number of cases dealt with by the criminal courts showed a like advance. Violent crimes increased, murders, dacoities and burglaries being all more numerous than in the previous year. But the most marked increase was in cases of theft, due to poor harvests and depression of trade in 1915-16. The problem presented by the increase of crime received particular attention during the year. Special investigations into the causes of crime were made. In recognition of the fact that the best method of coping with crime probably lies in the improvement of village administration and bringing the administration of justice more into touch with local opinion, the local Government had under consideration a scheme for the formation of benches of headmen to exercise magisterial and executive functions in groups of village tracts. The increase of crime is doubtless in part attributable to the police being hampered by additional duties entailed by the war, and the absence of a large proportion of the officers on military duty. In spite of these disadvantages, the success of the police in the detection of crime, viewing all classes of crime as a whole, was maintained at the same level as in recent years, though there was a falling off in success in dealing with the most serious classes of offence. The overcrowding of the jails, the corollary of the growth of crime, continued, and would have been worse than ever before, had not special measures been taken in order to its reduction. Over a thousand prisoners, who were deemed fit subjects for clemency, were released during the year. Schemes for further relief by employing convicts on public works were under consideration. The repeated exhortations of the local Government bore fruit in a reduction in the number of sentences of imprisonment in the courts, notably in short-term sentences. In consequence of a fall in the number of first offenders released on probation, and of a considerable proportion of the fines imposed remaining unrealized, the local Government again called the attention of magistrates to the necessity of releasing first offenders in all suitable cases, and also of not imposing excessive fines. In the hope of reducing crime by the moral uplifting of youthful offenders, an interesting experiment was started by the opening, in conjunction with the Salvation Army, of a home at Rangoon for young released prisoners.

Education.—8. There were several notable new departures in the administration of education during the year. In order to bring the control of education more into touch with local opinion, both official and non-official, a Divisional School Board was created for each Division of the Province. These Boards took over from the Education Department the control of vernacular education in their several areas. The Rangoon School Board was formed to fulfil the same function in Rangoon. A committee was appointed to deal with the question of female education in the Province and made recommendations, mainly in the direction of emphasizing the importance of teaching girls domestic economy and needlework. Another committee considered the best methods of inculcating the Imperial Idea and fostering patriotism within the Empire among the Burmese. The training course for teachers in the Normal Schools was revised during the year. Apart from these novel features, the expansion of education took place at the normal rate. Both the number of public schools and the number of scholars in attendance increased, the increase being shared by all classes of institution except lower primary schools. The numbers of pupils passing the various school examinations were in every case considerably higher than in the previous year, as were the numbers who passed the Calcutta University examinations for degrees. Expenditure on education, in a year when the war imposed the necessity of the strictest economy on all Government departments, was a lakh and a half of rupees more than in the previous year, and amounted to R67 lakhs. A most gratifying feature, in view of the needs of the Province for doctors, engineers and

scientific experts of all sorts, and the aptitude of the Burman for such professions, is the increasing interest taken in scientific and allied subjects. The Science classes at the two colleges are expanding and attracting many of the best students. The number of graduates in Science increased strikingly. The number of students at the Government Medical School was much greater than in the previous year, and the educational qualifications of the newcomers are improving. Sixteen students, of whom ten, including one lady, were Burmese passed the final qualifying examination, a number more than twice the average of the last five years. The number of students at the Government School of Engineering at Insein has reached the maximum possible with the present inadequate staff and equipment, and the re-constitution of the school on a larger scale is under consideration.

Literature.—9. There was no cessation in the great decline in the publication of books that has accompanied the war. Curiously enough, the reduction is most marked in the case of books on religious subjects, while books dealing with the war are conspicuous by their absence. The most significant feature in the literary output of the year is the large number of novels, depicting modern Burmese life, written in language very near to colloquial Burmese and modelled on the pattern of the modern English novel. Most of these novels are crude pieces of work. Much of the psychology is borrowed from the English models, and the influence of the cinema is easily traceable in the construction. And a satisfactory compromise between the old-fashioned literary language and the vastly different colloquial language has not yet been attained. But the quality of these works is improving rapidly.

CHAPTER X.--BIHAR AND ORISSA.

Lieutenant-Governor.

SIR E. A. GAIT, K.C.S.I., C.I.E.

Members of Council.

SIR E. V. LEVINGE, K.C.I.E., C.S.I.

MAHARAJA BAHADUR SIR RAMESHWARA SINGH, G.C.I.E. OF DARBHANGA.

SIR W. H. H. VINCENT, Kt.

General conditions. (a) Agricultural.—1. The economic condition of the people remained good on the whole in each of the three parts of the province. The northern portion, Bihar, consists of a section of the Gangetic plain rising gradually from the Ganges to the Himalayan foothills on the north, and to the Chota Nagpur plateau on the south. North Bihar is a fertile and well-watered area intersected by rivers flowing from the Himalayas, while south of the Ganges the country is drier and crops are largely dependent on an elaborate system of artificial irrigation. The area is thickly populated, the average density of the population being over 800 to the square mile. The people are almost all agriculturists, living in closely packed villages and cultivating almost every acre of the land. Compared with the inhabitants of the other portions of the province they are prosperous and given to litigation and their economic position is remarkable for its stability.

The crops in this area were above the average. The early break of the rains ensured an abundant rice crop. Towards the end of the rains serious floods occurred. The rivers which issue from the Nepal hills rose and swept large areas in all the districts of North Bihar, while in September the abnormal floods on the Ganges did some damage in the districts which lie on that river. The effect of these floods on the crops was not serious. In many cases they destroyed the comparatively unimportant *Bhadai* crops, which were ripe at the time, but the retreat of the water left valuable deposits of silt, ensuring a splendid *rabi* crop. Much useful work was done by the local bodies of the Tirhut Division in conducting a drainage survey with the object of concerting scientific measures for dealing with these periodic floods.

Owing to the favourable character of the season the areas irrigated by canals were smaller than usual. There are two systems of canals in Bihar, the Tribeni Canal, of recent construction in Champaran, and the Sone system, which irrigates Shahabad and parts of Gaya and Patna. These canals take off from the upper courses of the Gandak and Sone rivers and distribute water for irrigation by means of distributaries and smaller village channels. The cultivators take leases for water either for one year or for seven years. The decrease in the irrigated area this year was due mainly to the fact that rain fell in time to enable the *rabi* crop to be sown and therefore no water was wanted for this crop which ordinarily requires little water after it has germinated. There was little change in the area irrigated for the rice crop, since cultivators require the water mainly when the crop is ripening and therefore cannot afford to run any risk of drought.

The condition of the people, especially those who are not cultivators and do not live on the produce of their fields, was improved by the general fall in the price of rice, which was caused partly by the excellence of the crop and partly by the reduction of exports on account of the war. Epidemic diseases were less severe than in previous years, though there were serious outbreaks both of plague and cholera. The work of preparing the record of agricultural rights and rents was practically completed during the year in Gaya, the last district in the programme of the Bihar Settlement which broke ground in Champaran more than twenty years ago, while the revisional operations,

commenced three years ago, continued in the districts of Champaran and Saran. According to the present policy of Government these records are prepared and revised at intervals of fifteen to twenty years. They aim at securing an exact and reliable record of the rights of all persons in land, the importance of which can hardly be exaggerated in a country where ordinary documentary evidence is seldom worth the paper on which it is written. It was found in Champaran that conditions had greatly changed since the writing of the previous record. The operations excited a good deal of friction between landlords and tenants, and the case work which followed the revision of the record was on an unprecedented scale. Serious differences arose in connection with the cultivation of indigo and the exaction of illegal demands in excess of the recorded rents. The strained relations between landlord and tenant came to a head in the spring of 1917, and led after the close of the year to the appointment of a committee to inquire into the agrarian conditions of the district. In Saran, on the other hand, the Settlement officers found that few changes had occurred; the old record was still a living force and the work proceeded with surprising speed and smoothness. South of Bihar lies the hilly plateau of Chota Nagpur, a sparsely populated area, largely covered with jungle and forest. With its semi-aboriginal population and the rapid development of its mineral resources it presents problems very different from those of Bihar. During the year there was a general scarcity of rainfall and the crops were poor, though it was only in the district of Singhbhum that the scarcity amounted to famine and relief operations on a considerable scale were necessary.

The policy of the Agricultural Department was reconsidered and it was decided to concentrate on the main crops of the area served by each farm and to draw the attention of the cultivators only to demonstration work and to results of approved value. The system of disseminating practical knowledge through the agency of trained agricultural labourers has been expanded with satisfactory results. The attendance at the Sabour College is still disappointing.

Further measures were taken for the protection of private forests in Chota Nagpur. An officer was placed on special duty to examine the private forests of Ranchi and Manbhum, and private owners are being encouraged to apply for the reservation of their forests under the Indian Forest Act. An inquiry was instituted into the causes of disafforestation in the Santal Parganas and Government are awaiting proposals for the better protection of the existing forests.

General Conditions. (b) Industrial.—2. The development of the mineral resources of Chota Nagpur has assumed special importance owing to the war. The large increase in the manufacture of aeroplanes has resulted in a great demand for mica, which is found chiefly in the northern part of the Hazaribagh district, though deposits also exist in the Orissa States and in the Gaya and Monghyr districts. More than half of the total output of mica in India comes from the Kodarma mines of Hazaribagh, and strenuous efforts are being made to increase the production. An officer was placed on special duty to superintend the disposal of the higher qualities of mica and was given power to control mica stocks. The eastern portion of Chota Nagpur is the centre of the coal mining industry and produced over ten million tons, or 65 per cent. of the total output of India. Not only are the railways and factories of India dependent on this source of supply, but the coal is also required for marine purposes at Bombay and Calcutta. The output of coal showed little change, a decrease in one area being compensated by an increase in another. Progress was made in grappling with the peculiar problems of the mining areas and in securing healthy condition of work for the mining population, though the year was marked by a serious outbreak of malaria and the progress of the important water-supply scheme which is now pending was disappointing. To cope with the administrative difficulties arising in the Jharis coal-field, which is difficult of access from the district headquarters, the Subdivisional Officer of Dhanbad was appointed Additional District Magistrate and given increased powers and a larger staff. In Singhbhum in the extreme south of the area, the year saw the further development of the important iron and steel industry which is centred

at Sakchi. The Tata Iron and Steel Works which were established there a few years ago have transformed a desolate jungle into a busy centre of industry of the Western type. Under war conditions this undertaking is practically the only source of supply for steel rails and girders in India. The Company have been given additional mining and prospecting licenses, and the land required for the expansion and control of the works is being acquired. The Cape Copper mines in the Rakha Hills show great promise, although their full working cannot yet be seriously undertaken for lack of the required machinery. The test extractions of ore have been entirely satisfactory. The rapid rise of these industries in the remote corner of a primitive district has given rise to administrative problems similar to those in the coal-fields.

Native States.—The Native States of the province lie, generally speaking in a mountainous tract of country on the south-west. Nine of these States are under Government management owing to the minority or incapacity of their Chiefs. The State of Rairakhol was released from management during the year, and the young Chief was formally invested by the Lieutenant-Governor at a Darbar held at Sambalpur. The remaining States, fourteen in number, are ruled by their own Chiefs. They are under the general supervision of the Political Agent at Sambalpur. An important change was the placing of the States of Kharsawan and Seraikela under the supervision of the Political Agent. Formerly, they had been under the charge of the Deputy Commissioner of the neighbouring British district. The change has done much to raise the status of these two States. The Chiefs of nearly all the States took the keenest interest in the war, and showed their patriotism and loyalty by large monetary contributions as well as by public prayers and thanksgivings. The Mayurbhanj State contributed ₹27,000 for an aeroplane and ₹12,000 for a motor ambulance. The Chief of Dhenkanal presented a motor ambulance, and the Chief of Bamra contributed ₹19,500 for various war purposes. The Maharaja of Sonpur organised a fund for the purchase of two aeroplanes to which most of the States contributed handsomely. The administration of most of the States showed continued progress. Though some of them are poor and lacking in resources, almost all did their best to raise the standard of their administration. Many of the States contain valuable mineral resources and European capital is being attracted to this field to an increasing degree.

Administration.—3. There is little change to record in the ordinary district administration. The most important feature of the year was the increasing difficulty in providing adequate staffs for district work under war conditions. This is a difficulty which will be felt to an increasing degree until normal conditions of recruitment are restored. An important event of the year was the amalgamation of the Excise and Salt Departments and the formation of a separate cadre which was recruited mainly from the Provincial Executive Service.

Police and crime.—4. The same difficulty was felt in the administration of the Police. Although work increased considerably owing to the dangers and anxieties attendant on a state of war, the work had to be faced by a staff in which nearly all junior officers were absent. One of the chief features of the year was the spread of revolutionary activity into the province from Bengal. Persistent attempts were made by the Bengal conspirators to establish branches of their organisation in Patna, Gaya and Bhagalpur, and to enlist recruits amongst Bihari students who had hitherto shown no leaning towards revolutionary crime. One of their recruits was convicted of sedition at Patna and a number of youths were arrested and interned under the provisions of the Defence of India Act. To cope with this work, a second post of Superintendent was sanctioned to strengthen the Criminal Investigation Department.

A feature of the year was the renewal of the agitation amongst the Hindus directed against the sacrifice of cows by the Muhammadans. Three serious riots occurred in the Patna Division, two of which were not suppressed without bloodshed; and there seems little doubt that the widespread agitation of the early nineties is being revived.

The year also saw the commencement of important reforms for the improvement of the conditions of the force. The sanction of the Secretary of State was received to the introduction of important schemes for improving the pay of the

lower ranks and for increasing the district armed reserves. Financial difficulties prevented the introduction of more than a small portion of the scheme, but the pay of over a thousand constables was raised by one rupee a month in districts where recruits are difficult to obtain. This reform has long been necessary owing to the fact that the pay of the police has not in the past kept pace with the general rise in the price of living, and that Bihar is a recruiting ground for the police of other provinces. It has in consequence become increasingly difficult to secure men of the requisite standard, and it is idle to expect that men entrusted with the powers of the police will refrain from abusing their position if they are not paid a fair living wage. The increase in the armed reserves is especially important in view of the fact that there is only one small cantonment in the province where troops are in garrison.

Public Works.—5. Progress was made in the construction of the new Trunk road which is to link Patna and Orissa. The Lieutenant-Governor opened the important bridge over the Baitarni river on the boundaries of Singbbum, and detailed plans were made for the last section of the road, which is to join Patna and Gaya. When completed, this road will be an important factor in linking up the three portions of the province. At present, partly owing to the natural difficulties of the country, but chiefly because the province was for so long ruled from Calcutta, the main lines of railway and road run east and west across the natural axis of the province. Considerable progress was made with the building of the new capital at Patna. Government House and the Secretariat were completed and a number of residences commenced, though the rate of progress was affected by the difficulties caused by the war.

Education.—6. In the sphere of education the backward condition of the people was one of the most difficult problems which faced the new Government when the province was constituted. The great extension of education in the Bengal districts and especially in Calcutta, had for years swallowed up a disproportionate amount of the available funds, and the interests of Bihar had suffered to a corresponding degree. The first care of the Local Government was to create a University of their own. After elaborate enquiries a scheme was drawn up which would have given the province a University of a residential type, greatly superior to any which had hitherto been established in India. The outbreak of war has indefinitely postponed the realization of this ideal, and it has been necessary to rest content meanwhile with an institution which is mainly of the examining and affiliating type. The necessary legislation was passed in the Imperial Council and the University has recently been inaugurated. Though for many years its work must be circumscribed, arrangements have been made for developing it into the type which was originally proposed. A site has been acquired to the west of the new capital and University buildings will be erected, where all post-graduate studies and most of the Honours courses will be concentrated. It is hoped that it will be possible gradually to extend these buildings so as to include several large residential colleges where the undergraduates will have the benefit of a true University atmosphere. The progress of collegiate and secondary education was hampered by the weakness of the superior staff as well as by financial stringency. Out of the small cadre of the Indian Educational Service no less than six officers were on deputation to war duty, and the execution of the schemes which had been matured for the improvement of secondary education was held up for want of funds. Such funds as were available were devoted mainly to the construction of school buildings and hostels, the provision of playgrounds and the improvement of equipment. In the field of primary education there was a general increase in the number of pupils. The increase was not great, but much attention was paid to the improvement of the teaching given in primary schools and the bettering of the conditions of the teaching profession. The local Government have preferred to make sure that the foundations of their educational system are sound, and that the existing pupils are well taught, rather than to press for mere numerical expansion of schools and pupils. One of the greatest blots on the system of primary education in the past has been the great proportion of boys who failed to acquire a permanent knowledge of reading and writing. It is hoped that now that the system

of teaching has been thoroughly overhauled, future expansion will represent a real advance in education and will not merely indicate that an increasing number of boys have passed through the educational mill.

Local Self-Government.—7. There is not much to be chronicled in the sphere of Local Self-Government. Municipalities are still largely controlled by legal practitioners. The legal element predominates also in the elected portion of the district boards, and these bodies are very far at present from being representative of the varied local interests committed to their charge. Nor can it be hoped that the personnel of the local bodies will improve as long as the higher classes consider it beneath their dignity to canvas for votes. In spite, however, of this lack of public interest, much useful and practical work was accomplished by the district boards and by several of the municipalities, as most of them include, besides an official element, a sprinkling of public-spirited non-officials who take on their shoulders the burden of administration. In the rural areas the progress of forming village unions for dealing with the local problems of sanitation continues to be very slow owing to the reluctance of the peasant classes to submit voluntarily to taxation for the improvement of their home surroundings, a reluctance which is largely due to their poverty.

The larger schemes of drainage and water-supply in which local bodies receive expert assistance from the Sanitation Department and subsidies from Government have been necessarily postponed until funds become available and the price of materials ceases to be prohibitive. But it is to be noted as a hopeful sign that the calls upon the services of the sanitary officers of Government have become more numerous and insistent and have necessitated constant increases in the practical staff.

Medicine.—8. The growing appreciation of Western medicine is noticeable everywhere in the statistics of attendance both of indoor and outdoor patients at the charitable dispensaries. Most district boards have now set before themselves a definite programme for increasing the number of their dispensaries, and at the same time private practitioners are becoming more numerous and enterprising, and Government service is by no means the only career open to successful medical students. The province has now established a Board of Medical Examiners and has adopted a Medical Act to control the registration of qualified practitioners and penalise practitioners who represent themselves as possessed of qualifications which they have not got.

Miscellaneous Revenue.—9. Of the expanding sources of provincial revenue, the two principal are Stamps and Excise. The growth of the former as indicating an increase in litigation is not an unmixed advantage. It may be ascribed to the establishment of the High Court at Patna which promises a cheaper and more prompt decision upon all civil questions than was obtainable when the court of appeal lay in Calcutta. The total excise revenue amounted to over 112 lakhs of rupees, being an increase of 2½ lakhs over the preceding year. How far the addition to excise revenue represents a higher taxation of excisable articles rather than an increase in the drinking habit will be demonstrable only when the system of private distillation of *mahua* spirit has been entirely superseded by the contract distillery system. The contract system is being rapidly extended and only in the wilder parts of the province, where it would be almost impossible to prevent illicit distillation upon a large scale, is the private manufacture of country liquor upon license still permitted. Local Advisory Committees were convened as before. These Committees now meet in December to advise Collectors on the Annual Settlement proposals and again in July to discuss general matters of policy concerning Excise.

An arrangement was made with the Central Provinces Administration to maintain a zone free of all classes of excise shops, two miles on either sides of the border, between British districts and Native States in that province, and British districts and Native States in Bihar and Orissa. A similar arrangement has been made with the Nepal Darbar, but certain details remain to be settled.

Fisheries.—10. The Department of Fisheries was organised as a separate department shortly after the close of the year, and the previous Deputy Director was appointed Director. The activities of the department were directed mainly to the investigation of the spawning habits of Indian carp in

rivers, the experimental culture of this fish in tanks, and the distribution of pure carp fry for which there is a continually increasing demand. Efforts were made to improve the economic condition of the fisher castes by the introduction of the co-operative principle, but they were not attended with much success.

Military Recruitment.—11. The aboriginal tracts of Chota Nagpur and the Santal Parganas proved a useful reservoir for the supply of recruits to the military labour corps of Mesopotamia and France. About six thousand Santals were recruited by military agency during the year for employment in the former area, and before the close of the year arrangements were in train which produced later a supply of seven thousand Santals, Mundas and Oraons for service in France. Combatant recruitment is confined to the two Bihar districts of Shahabad and Saran, and during the year a small number of men was enlisted in these areas. Towards its close the work of recruitment was placed on a much more highly-organised basis.

Co-operative Credit.—12. The co-operative movement continued to make steady progress, though attention was paid less to new extensions than to consolidation of the ground already gained. One new Central Bank and 221 agricultural societies were registered. The number of Agricultural Societies rose from 1,221 to 1,337, and their aggregate working capital from ₹20½ lakhs to ₹21¾ lakhs; non-agricultural societies showed an increase of nearly 20 per cent. in numbers and of 40 per cent. in working capital.

The provincial Bank was of great assistance to the Central Banks and in spite of a general rise in the rate of interest in the open market was able to meet all their requirements at the same rates as before. The Central Banks themselves are progressing towards efficiency, and the Directors are reported to be acquiring an increased sense of responsibility. As an instance of the indirect benefits of the co-operative movement the Agricultural Department is making more and more use of Central Banks and primary societies for the distribution of seed and manure and for other kindred purposes.

Finance.—13. The development of various schemes has been hampered by the financial stringency. When the province was constituted, a fairly liberal balance was given to the local Government with which to start operations. To make the best use of its opportunities, Government decided not to spend in a hurry but to wait for the preparation of mature schemes on which the outlay could be made to the best advantage. On the outbreak of the war orders were received to restrict expenditure (except on certain buildings in the new Capital) to the limits of the annual revenue and to avoid any large commitments for recurring expenditure. As a result of these conditions the province has still to its credit a large balance which it cannot touch until the present financial stringency ceases, and what money has been available after the bare necessities of administration have been provided has perforce been used not upon schemes of general administrative improvement but almost entirely upon buildings and roads and similar items of non-recurring expenditure, which would in normal times have been provided out of the provincial balances, leaving the growing revenues available for recurring expenditure. The unfortunate result has been the stunting of the growth of the administration from its very beginnings and the disappointment of the expectation that this backward part of the old Bengal province would make immediate and rapid progress when placed under a separate Government.

The Press.—14. The press as a whole continued to show moderation and loyalty. Nine new papers were started and five ceased publication. The local Press shows little sign of development and the effect of the stimulus given by the creation of the province appears to have worn off.

CHAPTER XI.—CENTRAL PROVINCES.

Chief Commissioner :

SIR B. ROBERTSON, K.C.S.I., K.C.M.G., C.I.E.

The War.—1. It cannot be said that the Province was much affected by the war, which, as time has gone on, has to a large extent ceased to excite interest among the people at large, though every effort has been made to spread a knowledge of the events at the front by the distribution of weekly summaries of war news in English and the vernaculars. At the same time there has been steadily manifested a desire to support the Government, when special calls have been made, as, for instance, in connection with the War Loan at the close of the year and the appeals in aid of the various War Relief Funds. This has been particularly the case among the rural population, who have repeatedly displayed their gratitude for the peace and protection they enjoy by readily responding, according to their means, to such calls. In the Chhattishgarh Division, for instance, when the War Loan was started, the cultivators spontaneously said that it was their duty to help the Government in view of all that had been done for them in the great famines. The number of small contributors shows how strongly this idea has taken hold amongst the people.

The Central Provinces has never been a military Province, and, with the exception of a few old military families in Berar, has supplied no men to the Army for many years past. Efforts were made to attract more Peraris into the Mahratta Regiments which recruit them, but it was not till after the expiry of the year under report that the territorial system of recruitment was extended by the military authorities to the Province and that definite efforts were made to recruit new classes both for the combatant services and for labour corps. A ready response was made by the convicts in the jails to the call for volunteers for the Jail Labour Corps for Mesopotamia, for which over 500 men volunteered at once, while further parties have since been despatched.

The Province, being almost entirely agricultural, cannot help much in the provision of munitions of war. A ready response was made by the owners of factories to a request to lend their lathes for munition work. Heavy demands were made late in the year for grass and timber supplies for military purposes. Although this demand did not come in till after most of the grass had been cut, the officers of the Forest Department threw themselves with such energy into the work that they were able to supply over 18,000 tons of grass, for the pressing of which the proprietors of cotton presses freely placed their presses at the disposal of the Government at reasonable rates. The baling, pressing and despatch of this large quantity of fodder made heavy demands on the time of many officers on the district staffs throughout the hot weather, but the experience gained has been most useful in connection with the still larger demands which have been made by the Army during the current year.

Agriculture.—2. The monsoon of 1916 broke early in June, gave abundant rainfall throughout the Province, and lasted unusually late. Excessive rain in September and October caused considerable damage to the cotton, juar and til crops, but rice gave a good outturn. The season was favourable to the rabi crops both in the Central Provinces and in Berar, and the rabi harvest was normal or slightly better than normal, although untimely rains after the crops were cut unfortunately did appreciable damage, especially to wheat on the threshing floors. The condition of the agricultural and labouring classes was good and the year was generally one of moderate prosperity. Prices, though higher than in the previous year, did not press with any severity on the working classes who found ample employment on good wages throughout the year.

The Department of Agriculture, though hampered by the depletion of its staff of experts, continued to do good work in research, experiment and demonstration. The success achieved in developing *roseum* cotton has, it is calculated, already put an additional annual profit of over a crore of rupees into the pockets of the cotton cultivators of the Province. An experimental Farm

was started at Chandkhuri, near Raipur, to test the possibility of growing long staple cotton under irrigation on the upland soil locally known as *bhato*, with most encouraging results. The Department also distributed to cultivators in the Northern districts seed of the new hardy wheat known as Pusa 88 sufficient to sow 200,000 acres, to the great pecuniary benefit of the cultivators. The growth of improved varieties of sugarcane and of groundnuts is becoming increasingly popular. Generally speaking, it may be said that the people are beginning to take a real interest in the teachings of the Department.

Co-operative Credit.—3. Co-operative Credit Societies made great progress, the total number of societies having risen from 2,685 to 3,627, and the capital of all societies having increased from Rs. 87,09,187 to Rs. 1,27,33,924. The Provincial and Central Banks are in a sound financial position and the outlook for the development and progress of co-operative credit is distinctly encouraging.

Trade and Industry.—4. Trade was active during the year under report, the net balance in favour of the Province being over nine crores of rupees or six million pounds sterling. The cotton mills had a very successful year owing to the rise in the price of imported piece-goods, but their prosperity has not resulted in the establishment of any new mills, as under war conditions it is impossible to obtain the requisite machinery. The development of the Central Provinces collieries has made some progress, and the manganese industry has recovered under the stimulus of the demand for munition purposes. The coal deposits in the Korea Feudatory State were under examination by the experts of Messrs. Tata & Co., and the quality of the coal is well reported on. The firm is arranging to take out a mining lease, but nothing can be done until a railway has been built to the field. Sanction has been given to the survey of a branch line from Venkatanagar on the Katni-Bilaspur Branch of the Bengal-Nagpur Railway, but field work on the survey has had to be postponed for lack of engineering staff.

Irrigation.—5. The year under report saw the first development of irrigation from the Mahanadi Canal system. Thanks to the co-operation of the Revenue and Irrigation authorities, an area of over 70,000 acres was irrigated from this source, and in view of the security provided by irrigation the people were encouraged to substitute transplantation of rice for the wasteful broad-cast method of sowing, hitherto practised in Chhattisgarh. It is calculated that a net profit of about Rs. 10 per acre is secured to the cultivators by this change, which had been introduced during the year under report over an area of 40,000 acres. An unfortunate set-back was given to the Wainganga irrigation scheme by the breach of a portion of a new dam on the Wainganga River in the heavy floods of September 1916. This breach has since been repaired, and it should be possible to make a start with irrigation under the system next season. The total area placed under irrigation from Government irrigation works rose from 52,000 to 135,000 acres.

Local Self-Government.—6. There is little to remark under this head Bills for the amendment of the Local Self-Government Act and the Municipal Act were under consideration in the provincial Legislative Council, both being designed to afford greater scope for the activities of local bodies and greater freedom from official control. A resolution proposing the establishment of village panchayats for the management of local village affairs was adopted in the Council and accepted. A notable feature has been the formation of Rate-payers' Associations in several places, which, if properly developed, should result in increasing that popular interest in and supervision over the operations of local bodies which is so necessary as a corollary to the relaxation of official control.

Education.—7. The total expenditure on education rose to 49 lakhs, of which the share borne by Provincial Revenues was over 31 lakhs. The Administration has endeavoured as far as possible to supply funds for educational development, even at the expense of other branches of administration. The most important features of the year were the submission to the Government of India of a scheme for the establishment of a Provincial

University and of a new Government College at Amraoti, the completion and occupation of new buildings for the Government College at Jubbulpore, the establishment of a Government High School for girls at Amraoti, and the adoption of a new and comprehensive scheme for the training of teachers. Concurrently the policy of raising the pay of vernacular school masters and of increasing the number of schools has been steadily pursued, and it is satisfactory to record that the District Boards of Berar have voluntarily agreed to increase the local rates on land in order to provide themselves with increased funds for educational purposes. A special education rate has at the same time been imposed on persons deriving income from sources other than agricultural.

Public health.—8. The year was an unhealthy one. There was a heavy death roll from cholera, plague and malaria, all of which were unusually prevalent, the unhealthy conditions caused by the long continuance of the wet season leading to a great deal of sickness from the last disease. The death-rate was 39.95 per 1,000 while the birth-rate was 43.85, the lowest on record for the last 16 years.

Public peace and order.—9. The year was marked by outbreaks of hostility between the Hindu and Muhammadan communities in several parts of the Province. At Burhanpur a series of riots occurred in August 1916 and punitive police had to be imposed on the town. Similar ill-feeling arose in Jubbulpore, but was kept within bounds by the careful handling of the local officers. In the Yeotmal District of Berar there was an ebullition of bad feeling between Hindus and Muhammadans at the Moharrum, which resulted in some disturbance of the peace. This rupture of the *entente* between the two communities, who had been living in amity for several years past, is most regrettable. It is worth remarking that those who are recognised as popular leaders were unable and failed to effect any reconciliation in these cases in spite of the encouragement given them by the local officials.

The favourable agricultural conditions of the year were reflected in a general decrease in crime which was 11 per cent. below that of the previous year.

Politics.—10. There was much political agitation during the year, mostly engineered from outside, with the object of spreading the cult of Home Rule and establishing branches of the Home Rule League in the Province. The Administration has no desire to interfere in any way with legitimate and properly conducted agitation for political reform in India, but it could not contemplate without anxiety, especially when the country is at war, a campaign conducted too often on the lines of exciting ill-will towards the Government. Accordingly, when it was brought to the Chief Commissioner's notice that Mrs. Besant intended to attend a Provincial Conference at Amraoti and to deliver lectures on political subjects, he thought it advisable to issue an order under the Defence of India Act forbidding her to enter the Province, as, judging by her speeches and writings, he believed that her visit would have an unsettling effect on the people of the Province and be prejudicial to the public safety.

CHAPTER XII.—ASSAM.

Chief Commissioner.

SIR ARCHDALE EARLE, K.O.S.I., K.C.I.E.

General conditions. The War.—1: The year, except for the occurrence of disastrous floods in certain areas, was uneventful. The high prices prevailing in many of the district bazars caused some disquietude and after the close of the year were responsible for disturbances in the district of Goalpara. Apart from such incidents, the attitude of the general populace was marked by patience and sobriety, and outwardly at any rate there was little indication that the inhabitants of the province were affected adversely by the abnormal conditions of the time. The continuance of the policy of rigid economy in the administration, and postponement of all schemes and projects with the exception of those which were imperative and unavoidable facilitated the release of a large number of Government servants for military duties. Up to September 1917, 129 officials and 217 non-officials had joined either the Indian Army Reserve of Officers or the regular army, while 3,028 officers and men of the Assam Military Police (now designated the Assam Rifles) and of the Civil Police had gone on service. A labour corps, 2,000 strong, for service in France was raised in Manipur and in each of the districts of the Naga Hills, the Lushai Hills, and the Khasi and Jaintia Hills, and a large number of Garos were recruited for a combined Garo-Sylhetti corps. Owing to a change of policy the last mentioned corps was not completed, but after the close of the year, one company, 500 strong, of Garos and Nepalis went to France, and the Sylhettis contributed three sections of a labour corps for Mesopotamia. A ready response was forthcoming from the province as a whole to the calls which were made upon it for subscriptions to the various war funds. Mr. R. Henderson, C.I.E., contributed a sum of Rs. 31,000 for the purchase of an aeroplane, and His Highness the Raja of Manipur was distinguished by the assistance which he afforded in raising the Manipuri Labour Corps and in the readiness with which he complied with every suggestion for the provision of help in men and money from the resources of his State.

Frontier Tribes.—2. No operations of importance were undertaken beyond the frontier. The Akas showed more signs of improvement than any other of the hill tribes. They have made good use of English vegetable seed and potatoes supplied to them, have built stone bridges on the mule track from their chief village to the plains, and have sent some of their young men to the Political Officer's headquarters to learn to read and write. There were two petty raids by the Eastern Daffas.

The floods.—3. Extraordinarily heavy rain in the Assam hills in the beginning of October caused floods of unprecedented severity in Cachar and Sylhet in the Surma Valley and in a restricted area of Nowgong in the Assam Valley. Fortunately there was little loss of life and the destruction of cattle was less than might have been expected; but the crops, including the important winter rice crop, were almost completely destroyed in the affected areas. In the Surma Valley the position was aggravated by the fact that the people had not yet recovered from the effect of somewhat similar visitations in 1913 and 1915. Relief measures on an extensive scale were promptly undertaken. Between fourteen and fifteen lakhs of rupees were distributed in the form of agricultural loans with a view to enabling the cultivators to carry on till the next harvest was secured. Whilst some Rs. 80,000 were paid in affording gratuitous relief to the destitute. Suspensions of revenue were granted freely, and test works were started in the cold weather in the Karianganj and North Sylhet sub-divisions, where the damage had been most serious and the people wanted employment, funds for this purpose being placed by Government at the disposal of the local boards. Relief committees were formed, and excellent work was done by them. Special efforts were made by the Agricultural Department to encourage the sowing of dry weather crops in the affected parts, but the cold weather was unfavourable for these crops owing to the want of seasonable rain, and in the result little advantage

was reaped from these measures. In Sylhet and Cachar unusually large numbers of people sought and obtained employment on tea gardens, while in Sylhet the success of the relief works seemed to show that successive calamities had undermined the reluctance of the cultivators to do earthwork for a wage. By the end of the year, however, encouraging signs of recovery were visible, and one good crop of winter rice will set matters right. Severe outbreaks of cattle-disease in Kamrup, and Sibsagar and the effects of the previous year's floods in the latter district, adversely affected the prosperity of the cultivating classes. Elsewhere the condition of the people was uniformly prosperous.

Weather and Crops.—4. The agricultural conditions of the year were on the whole favourable and the rainfall not markedly abnormal, except in October. The outturn of rice, the staple food of the province, was below the normal, but was an improvement on that of the previous year. The jute crop was satisfactory, and the yield of other crops of importance, such as sugarcane, mustard, and *matikalai*, was fair. In the Agricultural Department the most important experiment in progress was the growing of sugarcane and the manufacture of *gur* on a commercial scale at the Kamrup Farm, where some 500 acres were under cane. A magnificent crop was secured, but it was found impossible to convert it all into *gur*, and arrangements have been made to manufacture white sugar from it.

Co-operative Societies.—5. The number of co-operative societies increased from 315 to 344, the number of members from 18,232 to 19,700, and the working capital from R8,98,537 to R10,61,108. The financial stringency rendered it impossible to provide funds for the sanctioned appointment of a Registrar of Co-operative Societies and Director of Industries, or for an increase of the supervising staff. Any considerable expansion of the co-operative movement was therefore not to be expected, and the abnormal conditions prevailing in the Surma Valley in consequence of the disastrous floods would in any case have been unfavourable to the multiplication of societies on sound lines. Some progress was, however, made in the formation of societies for purposes other than the provision of credit. A society for the supply of weaving materials was registered at North Gauhati, and four new weavers' societies were formed in Sylhet. The Government weaving master was appointed an organiser and supervisor of societies of this kind. Assam offers a wide field in this direction for the application of the co-operative principle.

Forests.—6. The area of forest in the province at the end of the year was 22,072 square miles, of which 4,911 square miles were reserved. War conditions continued severely to hamper forest operations, but the financial results showed a great improvement, the gross revenue rising from R9,93,000 to R11,57,000, and the surplus from R2,66,000 to R4,77,000. The improvement was due to the curtailment of expenditure as well as to the increase in receipts from both major and minor forest produce.

Excise.—7. The total excise revenue increased by 2·4 per cent., the increase being due to the favourable settlement of the vend shops. Consumption was practically stationary in the case of country spirit and opium, and declined appreciably in the case of *ganja*. The depressing influence of the war on trade, the distress caused by the disastrous floods in certain localities, the various restrictive measures introduced of recent years, and the high retail prices necessitated by enhanced vend fees, all combined to prevent the normal expansion of consumption. Stringent measures were taken to check the spread of the opium habit in the Naga Hills, and the policy was continued in the Khasi and Jaintia Hills of steadily reducing the number of stills and enhancing the still fees.

Trade.—8. The principal imports into Assam were manufactured cotton, grain, pulse, iron and steel; and the principal exports tea (the value of which represented 71·4 per cent. of the total value of exports), jute, unhusked rice, hides and timber. Imports increased in quantity from 10,301,848 maunds to 10,457,233 maunds, but declined in value from 982 to 943 lakhs of rupees. Exports fell in quantity from 10,694,093 to 10,041,373 maunds, and in value from 1,801 lakhs to 1,198 lakhs. There was an expansion of the

import trade in rice, salt, machinery and mill work, but imports of apparel, foreign piece-goods, grain, pulse, kerosine oil, mustard oil, betelnuts, sugar, unmanufactured tobacco, and manufactured wood showed a falling-off. The export trade in jute, mustard seed, hides and raw silks expanded, while that in tea, rice in the husk, and raw cotton declined.

The total value of frontier trade fell from R22,80,387 to R20,28,738. The decrease which occurred both in imports and exports is attributable mainly to the contraction of trade with Bhutan owing to an outbreak of cholera at Darranga in Kamrup, the high prices of articles of export and the export of hill produce direct to Calcutta by the Bhutan Agent.

Tea.—9. The number of tea gardens increased from 781 to 786 and the acreage under tea from 382,824 to 389,172 acres. The weather was generally unfavourable in the Surma Valley and in parts of the Assam Valley, and the outturn of manufactured tea, which amounted to 242 million pounds, represented a decrease of 1.3 per cent. on the previous year's crop. Shortage of freight and the consequent impossibility of getting rid of stocks of manufactured tea were becoming a serious problem by the end of the year. Prices, however, remained high, and the industry was, on the whole, prosperous. That its prospects for the future are believed to be good is shown by the continued opening of new gardens. The investment of Indian capital in tea is reported to be increasing in Sylhet and a large number of applications from Indians for land for tea is reported from Lakhimpur. There was a considerable falling off in the recruitment of labourers for the tea gardens from other parts of India. Good crops in the recruiting districts, the increased demand for labour in those districts by industries connected with the war, the unusually heavy importations of the previous year, and the curtailment of expenditure owing to the difficulty of disposing of the crop, were all factors which contributed to this result.

Mines.—10. Coal was worked at Margherita in the Lakhimpur district and at Barjan in the Naga Hills, and oil at Digboi in Lakhimpur. Mineral oil was also for the first time obtained in considerable quantities at the Burma Oil Company's wells near Badarpur in Sylhet. Corundum was extracted in the Nongstoin State in the Khasi Hills for the manufacture of munitions. To judge from the number of applications for prospecting licenses filed and from the keenness displayed, the Cachar and Sylhet districts contain very valuable oil deposits.

Crime.—11. There was a general increase in cognizable crime in almost all districts of the province during 1916. The increase was most marked in burglary and theft cases, and is attributable chiefly to the scarcity consequent on the serious floods of the last two years and in part to the arrival of certain criminal tribes in the Assam Valley. Assam was fortunately free during the year from political crime.

Military Police.—12. The sanctioned strength of each of the four battalions of Military Police has been temporarily raised to 1,000 rifles with a view to facilitating drafts of volunteers to the regular army for war service. The total number of officers and men thus supplied during 1916 was 1,294. The number of recruits enrolled was 2,493 as against 1,597 in the previous year, 261 being Assamese and the remainder Gurkhas. No military operations were undertaken during the year, and the main energies of the force continued to be concentrated on the raising and training of the drafts for war service. The number of men required for the purpose was obtained without difficulty, and thanks to the unstinted efforts of the British and Indian officers of the corps, it was found possible to give more continuous and advanced training.

Public health.—13. From the vital statistics for 1916 it does not appear that the health of the province was seriously affected by the disastrous floods of October. There were cholera epidemics of some severity in Goalpara, Darrang, Nowgong, and North Lakhimpur, but on the whole the mortality from this disease was below the average. There was no change in the general death-rate from small-pox, but the increased efficiency with which the provisions of the Vaccination Act are administered produced a substantial reduction in the prevalence of this disease in urban areas. Fever was rather more severe than

usual in all districts. The mortality from *kala-azar* varied little from that of the preceding two years, but the tendency which this disease is showing to spread in the upper districts of the Assam Valley, which have hitherto been free from it, is a source of considerable anxiety.

In jails the death-rate *per mille*, which was reduced from 43.53 in 1914 to 21.49 in 1915, again fell to 18.51 in 1916, the last figure being the lowest ever recorded for the province.

Medical.—14. The number of hospitals and dispensaries in the province rose during the year from 205 to 215, of which 124 were supported by local bodies, 18 by private persons, and 73 by the State. Owing to the transfer of medical officers to military service and the difficulty of securing qualified substitutes, the total number of institutions at work is still less by ten than it was at the commencement of 1914. A Pasteur Institute and School of Research was opened at Shillong in January 1917 and has made a most promising start. The Assam Medical Bill, the object of which is to protect the medical profession and the public from imperfectly trained and irregularly qualified practitioners, was presented to Council in March 1916, and passed into law in May 1916.

Education.—15. Educational institutions suffered from the financial stringency and, in the Surma Valley, from the effects of floods and scarcity but on the whole steady progress was maintained.

In respect of collegiate education the aim of the local Administration has been to render Assam, so far as is possible, independent and to reduce to the minimum the exodus of Assam youths to Calcutta and other educational centres outside the province. The proposal to raise the Murarichand College, Sylhet, to the degree standard materialised during the year, the financial difficulties being overcome with the assistance of a number of the leading gentlemen of the Surma Valley, who offered to bear half the cost of the measure for two years. The Cotton College, Gauhati, which has since 1914 had a wide range of affiliation to the B.A. honours standard, for the first time sent up candidates for the M.A. degree during the year. The enrolment at the two colleges at the close of the year was 688, representing an increase of 95 in the course of the year. The Earle Law College, Gauhati, increased its enrolment from 35 to 45. All three colleges showed a satisfactory record of success at the public examinations.

The policy of the local Administration contemplates the maintenance of a Government high school at the headquarters of each subdivision, the expansion of each Government high school up to a limit of two sections in each class, and the encouragement and assistance of aided high schools, where a clear demand for these exists, with a view to their maintaining a reasonable standard of efficiency. This programme was necessarily interfered with during the year by financial considerations, but one additional institution was taken on to the aided list and new sections were added to existing Government schools, up to the limit laid down, wherever necessary. Three unaided middle English schools also advanced to the high school standard. Vernacular education has been made free to its highest stage, with the result that middle vernacular schools, which a few years ago appeared to be almost moribund, have taken a new lease of life. During 1916-17 schools of this class increased in number from 91 to 112 with a corresponding advance in enrolment. Primary schools received a temporary set-back in enrolment owing to the condition of scarcity prevailing in the Surma Valley.

Female education made little advance during the year.

Local Self-Government.—16. There was no change in the constitution of the nineteen local boards. Government grants amounting to R1,21,000 were placed at the disposal of local boards to finance the second year's work on the sanctioned five-year programmes for the improvement of rural water-supply. Otherwise, financial assistance had of necessity to be limited to amounts to which the Government was committed before the commencement of the war, and boards were consequently compelled to economise to some extent. The situation caused by the floods in the Surma Valley was cheerfully faced by the boards, whose co-operation in carrying out relief works financed by Government materially assisted the officers of the district administration in dealing with distress.

A number of village authorities were constituted under the Assam Local Self-Government Act in the jurisdiction of the Gauhati and Jorhat Local Boards, and, particularly in the Gauhati sub-division, made good progress. Much interest was shown in the construction and repair of village paths, the sinking and cleaning of tanks and wells, and the maintenance of primary school buildings. The results were substantial in themselves and are an earnest of the progress which can be expected of these bodies under wise and sympathetic guidance.

The election of Commissioners was introduced in the place of nomination in four municipalities during the year.

Municipal water-works were under construction at Silchar, Tezpur, and Sylhet, those at the two former towns being completed and opened soon after the close of the year. The need for the improvement of conservancy arrangements is now more generally appreciated and some substantial progress in this direction was effected during the year.

CHAPTER XIII.—NORTH-WEST FRONTIER PROVINCE.

Chief Commissioner.

LIEUTENANT-COLONEL SIR G. O. ROOS-KEPPEL, G.O.I.R., K.C.S.I.

The commencement of the third year of the war found the North-West Frontier Province still enjoying comparative peace both internally and externally. As in the rest of India, the people were feeling the pinch of the rise in prices caused by the continuance of the war, but the agriculturists at any rate were compensated to some extent by the high rates their produce commanded, and many of the poorer classes were benefited by the upward tendency of wages. The rains on the whole were as satisfactory as in an average year and the sowing of the rain crops took place in favourable conditions. There were, no doubt, clouds on the political horizon. There was a certain amount of temporary discontent of a nature which affords a ready soil for agitation, due to zemindars and grain merchants holding up cereal stores in the hope that a scarcity of grain might send up prices. Thanks, however, greatly to the excellent work, both preventive and detective, of the police force in all its branches, but still more to the general contentment of the people with the existing *régime*, "political unrest" of any kind was practically non-existent. Naturally in the circumstances of a frontier province, almost entirely Mussalman by religion, there was bound to be a certain amount of latent sympathy with the Turks. Such feelings, however, never found vent in any public utterance, and very little use had to be made of any of the special War Ordinances. On the whole, the year witnessed a gradual decline of interest in the war, except so far as it affected the cost of living in the province, but at the same time there was, no doubt, a general desire for the victory of the Allies provided Turkey's *izzat* was not seriously affected. So far as political crime and unrest go the year under review may be looked back upon with satisfaction.

Crime and Police.—2. Excluding offences under Special and Local Laws and such unimportant cases as public nuisances, the increase in cognizable crime during the year was infinitesimal and the amount practically the same as the average for the past 5 years. Offences against property, such as robberies and burglaries, are the truest gauge of discontent among the mass of the population, and in both these classes of crime the year under review witnessed a decline, which is perhaps all the more remarkable when it is remembered that high prices prevailed throughout the year and that the portions of certain districts adjoining the border were disturbed to a considerable extent at times by numerous trans-border raiding gangs whose success might have acted as an incentive to malcontent cis-frontier bad characters. An ugly feature, however, in the criminal history of the province was the yet further increase in murders committed by cis-frontier residents. The record number of 353 murders was reached during the year, while attempts at murder were as many as 100. Some of these were, of course, committed by outlaws or trans-frontier men—a danger to which the inhabitants of a frontier province are always exposed,—and three of such cases alone accounted for 14 victims. A very common cause, too, of murders was disputes over land questions; but by far the largest number (one-third in the year under review) were committed in quarrels or disputes over women—a potent factor always at work among Pathan society and totally disconnected with economic or political conditions.

The increases of pay granted to the police in November 1915 naturally made their financial and administrative effects felt more in the year under review, during which the force was recruited practically up to its full strength as the result of the improved prospects. At the end of the year the Inspector-General of Police was able to describe the force as a contented one and up to strength, but it is in the future still more than now, when the force will consist of a high percentage of long service men, that Government will reap the full benefit of its generosity.

Frontier Militia and Constabulary.—3. The continued need for strict economy left—as was bound to be the case—its trail over the work of some of

the Departments, notably the "spending" ones. But there are some branches of the Administration in which economy would have been indeed false in the peculiar circumstances produced by the war, and in such it was wisely decided, with the consent of the Government of India where necessary, to incur increased expenditure. Thus the necessities of making service in the Frontier Militia more attractive had to be met by the grant of war batta to all the corps; and to relieve the regular army the Government of India had to face the cost of raising a new corps—the Mohmand Militia. Similarly the constant demands made upon the Frontier Constabulary for assistance in internal defence against trans-border raids and the future desirability of garrisoning with the Constabulary several of the outposts along the frontier, now held by regulars, necessitated an increase in the corps by eight companies of Infantry and two of Mounted Infantry. The results in both cases have proved the wisdom of Government's policy.

Provincial Judicial Service.—4. In the Provincial Civil Service, the standard of whose judicial work has long been a subject of unfavourable comment and a cause of dissatisfaction, a certain number of new appointments were created in the shape of Judicial Extra Assistant Commissionerships at the various district headquarters, to which duty allowances are attached, with the idea of making the judicial line more attractive, and improving thereby the standard and output of its work. With the same idea duty allowances were sanctioned for all the posts of District Judges held by Extra Assistant Commissioners. The scheme came into force, however, too late in the year to show any results.

Various other Departments.—5. The energies of the Forest Department were crippled to some extent by financial stringency, and all large roads and building projects had to be abandoned. There was a brisk demand for timber for army purposes which the department did its best to meet; the gross income benefited, as a result, by a rise of nearly 23 per cent. over the average of the previous quinquennium.

The Medical Department did good work in all its branches, considering the difficulties under which its establishment suffered.

The capabilities of the Jail Department, the satisfactory manning of which was made very difficult by war conditions, and the capacity of the jails were both taxed to their utmost by the excessively large number of prisoners with whom they had to deal, and in the circumstances it is a matter for congratulation that there was little trouble during the year either as regards discipline or health, with the exception of a somewhat disastrous epidemic of typhus in the Peshawar Jail.

The one branch of the Administration, whose activities it is most undesirable to cripple on economical grounds, is the Educational Department, but even so its building programme had to be limited. In other respects, however, it showed steady progress throughout the year; the decline in private primary schools was not an unmixed evil; secondary schools increased; there was a general improvement in the standard of teaching in the high schools; the number of girls' schools grew, and an important step was taken in the institution of a junior anglo-vernacular class for training teachers qualified to give instruction in English and Vernacular subjects in the middle classes of anglo-vernacular schools.

Local Self-Government.—6. There is little real progress to report in the realm of local self-government: the interest of members of both kinds of local bodies still require the stimulation and guidance of the official element; in some cases municipal meetings had to be adjourned for lack of a quorum; most of the district boards stand condemned by their Presidents' faint praise, though it is encouraging to note that in one district at least the board's interest in the maintenance of its roads has been stimulated by placing at its disposal funds for the purpose. No doubt the absence of Government grants owing to the war has crippled somewhat their powers, but in spite of this a greater attention to agricultural development at any rate might have been expected from the district boards.

Trade and Industry.—7. Trade generally continued to adjust itself successfully to the abnormal situation caused by the war with the notable exception of

that carried by the Malakand route, which was interfered with to an excessive degree by the unrest in tribal country beyond the border and by the blockade of Swat and Bajaur. It is interesting to note that the value of both export and import trade with Afghanistan increased. The province is not a manufacturing one, and there is nothing to note under this head, though it is encouraging to record that the general health and sanitary conditions in the only four factories which exist were very satisfactory.

Frontier affairs.—8. Except for persistent raiding in the Derajat by Mahsud gangs, all had been fairly quiet along the border up till about July or August 1916. At the opening of the year 1916-17 the Mohmands had recently tendered their submission and offered to pay a heavy fine, and prospects of a fairly long peace with them seemed favourable. The effervescence in Swat and Buner had subsided. The Mohmand and Bajaur Mullas, however, kept the fanatical pot simmering by incessant, though unsuccessful, efforts to destroy the settlement with the Mohmands. An uneasy feeling among the Afridis and other tribes was intensified towards the end of June by the activities of Mir Mast, *ex-Jemadar* of the 58th Rifles, a deserter from his regiment in France, who moved about Tirah registering, in the name of the Sultan, recruits for the Turkish Army, which, he said, was about to arrive. The arrival in Tirah a little later of two so-called Turks added fuel to the smouldering fire. They produced a flag which they claimed to have been blessed by the Khalifa, announced themselves as the Sultan's plenipotentiaries, and offered the Afridis his protection and assistance against the British. They made similar attempts to enlist the neighbouring tribes. Though their activities made it impossible for our Political Officers to relax their precautions for a moment, yet nowhere did they meet with any real success until August, when, working through the notorious Haji Sahib of Turangzai they began to affect the Mohmands by preaching and bribes. The Haji asked for and received assistance in the shape of armed men from the Colony of Hindustani Fanatics, set up a printing or lithographing press, from which he issued a series of rousing *jehad* leaflets, and by the middle of September had stirred up the Mohmands to presenting an ultimatum demanding the immediate restoration of their allowances. Receiving what they considered an unsatisfactory reply, the Halimzai, Tarakzai and the Pandiali sections of the tribe opened hostilities by firing on regular troops near Hafiz Kor and raiding on an extensive scale. They received some half-hearted assistance from some of the Bajauris. It became necessary to despatch the Peshawar Flying Column to Shabkadr and to place the offending sections under a thorough blockade. This took the novel form of a barbed wire fence, made more formidable by a live wire throughout its length of $17\frac{1}{2}$ miles, from Michni to Abazai, and by blockhouses at intervals of about 800 yards. In spite of this, however, on November 14th the Haji Sahib and the Babra Mulla assembled a force of about 6,000 on the hills west of Shabkadr. It was decided that our troops should disperse them the following day. Accordingly, on the morning of the 15th the force at Shabkadr moved out against them; one brigade was sent a short distance beyond the wire to draw out the Mohmands, the guns remaining behind the wire, and working in conjunction with the aeroplanes, shelling the tribesmen on the hills round. The *Lashkar* made a very half-hearted attack, and by the following day were rapidly dispersing, hastened on in this purpose by further attacks from our aeroplanes. After this the Mohmands gave little further trouble, but by the end of the year under review no actual settlement had been made with them, though the favourable prospects for such culminated in a final one shortly afterwards. After these events the winter on the border passed by quietly save for Mahsud raids. The Haji of Turangzai turned his attention to the Swatis, but the death of their famous Mulla, Sadullah Khan, in January 1917 left the extremist faction without a leader, and, far from responding to the Haji's excitations to *jehad*, the more important parties in Swat approached the Political Agent with proposals that Government should take over the valley. The behaviour of the Upper Swat tribes, indeed, continued so satisfactory that the blockade of the past 18 months was raised against them on March 10th, 1917.

As the year drew to an end the cloud on the Mahsud border, however, grew blacker. Though the tribe had harassed almost continuously the unfortunate Derajat border villages, they had until March 1917 avoided any direct

challenge to our regular troops or the Militia. On March 2nd, 1917, however, they made a strong demonstration against the Militia fort at Sarwakai. In an unfortunate sortie against them the Militia suffered somewhat heavily and nearly lost the fort. The latter held out, however, till relieved about a week later by a column from Tank. Exaggerated reports of the event greatly excited the Mahsuds, and to some extent their neighbours, and the former embarked upon an active campaign against our posts and communications in the Gomal, which necessitated the despatch of the Waziristan Field Force to the Mahsud border. These events, however, belong to the narrative of 1917-18.

Thus closed a somewhat anxious year, from the beginning to the end of which His Majesty the Amir's firm adherence to the policy of neutrality announced by him at the commencement of the war proved of the greatest value. Throughout the year the Frontier Militias and Constabulary were tried severely and stood the test well; their work deserves special mention in connection with the successes gained by them against raiders in Bannu and the Tochi Agency. On January 13th, 1917, a gang of seven desperate outlaws was exterminated in Bannu, and on March 20th of the same year a party of 17 was accounted for to a man in the same district. Both these events stand to the credit of the regular troops also, and it is interesting to note that in the latter affair the lessons learnt in the war in the West were turned to good account in the East in the shape of a very successful bombing attack on the gang by a party of the 52nd Sikhs when other tactics had failed. The development of the Air Service, which the war has likewise brought about, has not been without its value, both military and moral, on border politics.

CHAPTER XIV.—BALUCHISTAN.

Chief Commissioner.

LIEUTENANT-COLONEL SIR JOHN RAMSAY, K.C.I.B., C.S.I.

General.—1. In spite of the prolongation of the war, another year of peace and order has been added to the credit of the tribal system of Government under the direction of British district officers. By the commencement of the year excitement caused by the war had died down in the administered districts and the three areas which were causes of anxiety were the Persian border, the Shorawak border of Afghanistan, and the Jhalawan tribal area of Kalat. The absence of any vestige of Persian authority along the whole length of the Baluchistan border was no new thing, but it had become more serious owing to the appearance of German parties, who were willing to stir up trouble regardless of the probable ultimate consequences to their dupes. In the autumn of 1915 Bahram Khan of Bampur had very seriously, and with impunity, raided southern Makran and early in April 1916 Mr. Hughes and Lieutenant Horst were murdered on the border at Mand by fanatics from Persia. This outrage was no doubt partly due to Bahram Khan's success and partly due to German instigation. The loss of these two officers was a deplorable event, and in the case of Mr. Hughes who had made for himself a unique position amongst the Brahuis and local Balogh, it was a public calamity. Circumstances had not permitted of vigorous action being taken against Bahram Khan after his raid and as an alternative it had been decided to send a Mission across the border with a view to counteracting German intrigues and in the hope of maintaining the peace of the border. The Mission was to be in charge of Major Keyes and it was to be started off from Mand by Lieutenant-Colonel Dew, the Political Agent of Kalat, who had been able to induce Bahram Khan to come to the border for discussion. This Mission was within a forced march of Mand when news of the murders was received and the presence of responsible officers was sufficient to restore some confidence. The men of the Mekran Levy Corps had shot the murderers on the spot, but they were much upset by the disorders prevalent on the border, which had culminated in the murder of their only two British Officers. The proceedings of the Mission which operated across the border are beyond the scope of this report. It is therefore sufficient to say that it succeeded in keeping the border peaceful, was of great assistance in furthering a settlement with the Damani tribe, and returned to India from Charbar in April 1917.

On the northern portion of the Persian border conditions were perhaps even worse. The Damanis living in the tract known as Sarhad, across the border, had for years been the terror of the adjoining Persian districts though they had been wise enough not to attack British territory. They had enjoyed a long continued success as marauders and had no doubt been emboldened by the disturbed condition of the border and the impunity with which they had raided northern Makran in the winter of 1914 and Bahram Khan had raided southern Makran in the autumn of 1915. It only wanted the stimulus of German intrigue to incite them to further excesses against us. In April 1916 they crossed the British border in such force as they could muster; attacked military convoys and caravans on the Nushki-Robat road; looted levy thanas and Rest Houses; and, for a short time, closed the road. Military action against them was thus forced upon us. These operations are also outside the scope of this report. It is sufficient to say that the operations were very successful and concluded with a satisfactory settlement with the Damanis.

The trouble on the Shorawak border though less serious was much nearer home. For some time there had been a series of thefts of camels, which had caused great inconvenience to the Military authorities, and there had been other minor offences from across the border. In April the bad characters of Shorawak, with their chief supporter Malik Samand Khan, Mandozai Barech, obtained reinforcements from the Nushki district in the form of the Badini Sardar and a number of his followers. Further camel thefts and robberies continued to be committed from across the border until June 1916 when a very daring attempt was made to derail the train going to Nushki. The attempt

had been most admirably conceived, was to stop or derail the mail train from Quetta to Nushki, which was supposed to be taking £70,000 to the Nushki Treasury. The plan only failed owing to the accident that the mail train was late, with the consequence that a train of empty camel trucks ran into the trap. The engine driver was shot, but the raiders got nothing. This was the climax, and since September 1916 the Barech have caused no trouble.

A recent examination of the history of Jhalawan has shown that on and off, the Sardars have been a cause of trouble for at least twenty years, but that they have never received a lesson. Things came to a head in the summer of 1915; but, for a variety of reasons, no satisfactory settlement was obtained, in spite of the fact that troops were sent to the border of their country. In the winter of 1915-1916 Lieutenant-Colonel Dew, on his way to Makran, gave the Jhalawan Sardars an opportunity of making a fresh start by bringing about a number of Jirgah decisions providing for the compensation of those injured in the disturbances of 1915. The decisions were accepted by the parties concerned, but it soon became apparent that the Sardars had no intention of carrying them out. The leading Sardars of the malcontents, that is to say the Mengal and Gurgnari Sardars, went secretly to Persia to join Bahram Khan. A little later it became clear that the compensation which had been awarded by the winter Jirgahs was not going to be paid, and later still, there were raids into Sind. The Jhalawan cup was now full and over-brimming. Lieutenant-Colonel Dew was sent to Jhalawan with a military escort of 6 British officers, 250 Indian officers and men of the 106th Hazara Pioneers, one section of Mountain Battery, one Jemadar and 29 rank and file of 3rd Gwalior Lancers and 118 Field Ambulance. His objects were to ensure the peace of the Sind border, to punish the guilty, and to show all waverers that Government was still strong. In addition to the troops he had material support from a few men of the Makran Levy Corps and from some tribal Sarawan levies; he also had the moral support of representatives of some of the Sarawan Sardars and of Syed Khan Bahadur Nawab Mir Shams Shah, the Wazir-i-Azam of the Kalat State. The latter support was particularly valuable as fanaticism had a good deal to do with the latest outbreak in Jhalawan. Complete success was obtained. Forty-seven outlaws were killed and 91 were arrested, and within two months peace was restored in Jhalawan.

Tribal Administration.—2. The conduct of the tribes in the administered area has been good and all Political Agents report that the Jirgahs have done good work in the settlement of local cases. The number of cases disposed of by Jirgahs during 1916 was 5,857* compared with 5,708 in 1915. The Criminal cases show an increase of 184 while the

* Civil 3,031.
Criminal 2,826.

Civil have dropped by 35. In the great majority of cases the Jirgah awards were accepted by the parties concerned. These figures show that Baluchistan shows no signs of outgrowing the system of tribal responsibility on which the administration is based and give some idea of the protection afforded by that system against expensive and long drawn out litigation. One of the chief problems of modern frontier administration has been to find a method of adapting the system of tribal responsibility to the conditions created by the arms traffic. A solution seems to have been found in the distribution of Government arms and in the creation of bodies of tribal Scouts. During the year more arms have been distributed and several new bodies of Scouts have been raised. Each body of Scouts consists of from 20 to 25 armed men, it is solely employed in the tribal area concerned, is responsible for its own intelligence work, moves about as it thinks fit, and is a real and easily accessible force for the protection of the tribal area. The tribesmen can always get information about bands, or even individual bad characters, visiting their tribal limits; but they could often urge with justice that they had not the force to engage them. This excuse has ceased to be valid since the creation of the Scouts, for the Scouts can always call to their help other men who have Government or private arms. The only area from which really formidable raiding gangs could be expected was Waziristan, and to deal with such bands the Scouts could usually rely on the assistance of the Zhob Militia. The Mahsuds were responsible to two serious raids into Zhob in August and September 1916 and for three crimes of less importance. More raids might well have been expected; that more were

not committed is probably due to the combination of a good intelligence system and the efficiency of the Militia.

Industries.—3. The existence of coal in Baluchistan has long been known and one mine at Khost is systematically worked by the North-Western Railway. The other mines are not worked by men possessed of capital and expert knowledge. The shortage of rolling stock and the extension of railways in Baluchistan has brought to notice the potential value of the Baluchistan coal fields and the question of working the coal on more satisfactory lines is being considered. The chromite deposits have been opened out by the making of a narrow gauge railway to the neighbourhood of the mines near Hindubagh from the North-Western Railway at Khanai. The first load of chrome ore was brought down by the railway towards the close of the year. The search for oil, which was very active before the war, is now less keen. The concession of the Burma Oil Company in the Las Bela State has been extended for a second year; the Company's trial boring near Ormara had reached a depth of about 1,500 feet at the close of the year.

Public Works and Railways.—4. The expenditure on Civil Works from Special Revenues was R8,11,678 in 1916-17 against R7,33,375 in 1915-16. The principal works in progress or completed during the year were the rebuilding of the Kohlu Tahsil, the new Lady Dufferin Hospital at Quetta, the improvement of the water supplies at Nushki, Barkhan, Fort Sandeman, Quetta and Sibi. Much attention was paid to the improvement of the roads.

The grant for expenditure on "Irrigation Minor Works and Navigation" was R3,02,127. The training works of the Khushdil Khan Reservoir and the Spin Karez and Nari Weirs suffered considerably from floods.

The Nushki Dalbandin extension (116 miles) and the Khanai-Hindubagh Railway (46 miles) were commenced in September 1916. Both these lines were working before the close of the year under review. The former line, though built chiefly for military purposes, will prove a great administrative convenience and give an impetus to trade with Persia.

Public Health.—5. The province has enjoyed immunity from every kind of epidemic disease except cholera, which appeared in Zhob in June 1916 when 35 villages were infected causing 328 cases and 174 deaths. Thanks to the timely and energetic efforts of the local medical and civil officers the disease was prevented from spreading still further. A party of Pwindahs who passed through the district on their way from the Punjab to Afghanistan was responsible for introducing the disease into Zhob. Anti-malarial measures were adopted in several places with good results. During the year under report the number of malarial cases treated in the dispensaries of the province fell by 3.77 per cent, as compared with the number treated in the previous year. The vaccine operations among the Zarkun and Mari tribes show that the most ignorant and backward people of Baluchistan are now ~~beginning to appreciate the advantages of vaccination.~~

Agriculture and Irrigation.—6. These subjects are particularly closely allied in Baluchistan, for no crops can be grown without artificial irrigation of some sort. In the Irrigation Department an important decision has been reached. For a number of years an Irrigation Officer has been largely employed in preparing reservoir schemes, but it has now been admitted by the experts that such schemes are not likely to be a success in Baluchistan. The chief difficulty is the enormous quantity of silt carried by the rivers when in flood. It has therefore been decided to turn our attention on possible methods of saving loss in channels and of using, as opposed to storing, flood water.

Grazing.—7. In the early part of the year there was great scarcity of grazing which caused heavy mortality among the flocks. The crops without permanent sources of irrigation failed, but the other crops were good and, owing to high prices, the Land Revenue of the year was R86,401 more than last year. In many parts of Baluchistan the revenue is taken in kind; consequently Government gets its share of any rise in prices. The grazing conditions in the Mari and Bugti hills were especially bad. Each tribe received a loan of R20,000 and a free gift of R9,500. In the past it has been customary to make such free gifts in times of scarcity, and the custom was continued on this occasion because it was felt that conditions were such that it was not

desirable to have on the borders of Sind, the Punjab, and Baluchistan, a number of distressed Baluch of marauding instincts.

Native States.—8. His Highness the Khan of Kalat has enjoyed good health and has continued to give his moral and material support to Government. The State is well administered by His Highness and the Wazir-i-Azam, Khan Bahadur Nawab Mir Shams Shah. The Sardars of Sarawan have kept their tribes in order and presented ₹19,300 to be given to War Funds. As most of the State is held free of revenue by the various tribes its income is very small compared to its importance. Nevertheless, the State and the Sardars have put three and a half lakhs into the War Loan.

There were no disturbances in Las Bela. The State was able to put a lakh and a half into the War Loan and the Jam Sahib and his subjects gave ₹15,605 to War Funds. The free gifts given by the State during the war have been considerably over a lakh of rupees.

CHAPTER. XV.—COORG.

Chief Commissioner.

MR. H. V. COBB, C.S.I., C.I.E.

Cultivation.—1. Since the grave decline in the prosperity of the coffee industry 20 years ago the Coorg ryot has turned more and more to the raising of wet crops which have become to an increasing extent his sole source of livelihood. The province was still suffering in the year under report from the unusually severe epidemic of rinderpest and the consequent shortage of cattle told heavily on the cultivators. To this extent the year was an unfavourable one, though the rice crop was decidedly better than in the previous year and the prices obtained were unusually high. To obviate these periodical epidemics of rinderpest, which last year exceeded all previous records, it will probably be necessary to attack the centres of infection in the Mysore State. Steps are being taken to increase the number of Veterinary Assistants, but the short period of immunity gained by inoculation and the fact that small doses of serum were found entirely useless has shaken the faith of the ryot in the accepted methods of prophylaxis.

For the European planter the past year has been one of constantly increasing anxiety for the future. Although the coffee crop was an average one, much difficulty was experienced in its disposal, and a considerable proportion of it still remains at ports on the West Coast awaiting shipment.

The prices realised were higher than might have been expected and, were it not for the shadow cast by the war, planters would have had no cause for anxiety. Those who were fortunate enough to have included pepper cultivation in their activities were rewarded by high prices and quick returns. Pepper is only grown as a by-product to coffee and that too only in South Coorg. Its cultivation will probably extend in the near future.

Although the market for pepper remained unaffected by the war, the cardamom market was altogether disorganised and what would have been in ordinary years an excellent crop remained almost unsaleable except at bed-rock prices, which left but little gain to the cultivator.

The Indian growers of oranges complained of the ravages of the boring beetle which has infested their gardens for some time past and which was unusually abundant during the monsoon.

Rubber-tapping was commenced on the two largest rubber concerns in the Province and results are said to be very promising.

In spite of the high prices, the imported coffee coolie and the indigenous labourer continued to thrive. These classes have not suffered to the same extent as the proprietors.

Public Health.—2. An index in the well-being of the labourer is to be found in the state of the public health, which was considerably better than has been noted for several years. The number of births was 9.68 above and the number of deaths 24.52 per cent. below the average for the previous five years.

Quinine prophylactic against malaria continued to be administered in the secondary schools with satisfactory results. 50,500 quinine powders were sold to the public through the agency of the post offices.

Forests.—3. The abnormal receipts from the sale of sandalwood resulted in a surplus on the working of the Forest Department of Rs. 3,27,817, thus swelling the provincial surplus to the quite unprecedented figure of Rs. 3,72,626.

Sylvicultural operations are being greatly extended in the case of sandal teak, ironwood and rosewood, and efforts are being made to increase the fuel supply, especially round Mercara, where the rates are unduly high and existing plantations are receiving an increased share of attention. The expenditure on clearance of the *lantana* weed in the eastern forests, quite apart from the immunity from fire which has resulted, has been more than justified by a wonderful growth of fuel.

Education.—4. Considerable progress was made in the sphere of education. Among other reforms introduced in the year under report may be mentioned the foundation of 13 new elementary schools, and improvements in the strength and pay of the teaching staffs. Instruction in temperance is being given as an experiment in the schools. The Coorgs have unfortunately a marked inclination towards intemperance, which they have inherited from the period of the coffee boom 20 years ago.

Other heads.—5. There is nothing of interest to report from this small province under other heads.

CHAPTER XVI.—DELHI.

Chief Commissioner.

W. M. HAILEY, C.S.I., C.I.E.

Weather and Crops.—1. The agricultural conditions of the year were far more favourable than in the year preceding. The monsoon rainfall was 3·71 inches above the normal, and though its actual incident was somewhat unfavourable to the outturn of the autumn crops, the monsoon allowed of the sowing of an unusually large area for the *rabi*. The area matured at *kharif* was 135,676 acres against 102,556 in 1915-16. In spite of some failure in the maturing of the *rabi* crops, owing to the shortage of winter rains, the harvested area of these crops was nevertheless 145,722 acres against 68,570 acres in the previous year.

Trade and Industry.—2. The course of trade was influenced by the depression following on the reduction of imports and the difficulties attending railway transport. Prices of all imported material were high, and there was much speculation of rather a wild nature in goods of this description; but the profits remained in the hands of a few dealers. Industrial conditions, though perhaps somewhat better than in the preceding year, were still far from favourable, and the poorer classes suffered from the continued high prices of foodstuffs.

Litigation and Crime.—3. The stagnation in really productive business showed itself in a reduction in the institutions of civil cases; but the unfavourable industrial conditions and the high range of food prices fortunately did not lead to any increase in crime. Indeed, the number of true cognizable police cases showed a reduction on previous years. Nor was the year marked either by any serious political excitement, or by the discovery of criminal conspiracies against the State.

Education.—4. The educational returns show no falling off in the progressive increase in the number of pupils attending primary and secondary schools which has marked the statistics of this province for the last four years. There was an increase in both public and private educational expenditure, and an addition of two to the number of secondary and nine to the number of primary schools.

Public Health.—5. Sanitary conditions, especially within the City and Civil Station, continued to show the improvement which has resulted from the attention paid in recent years to this side of administrative activity. The municipal report shows that the sanitary establishment was increased, a new slaughter-house constructed, and drains extended. The important and costly anti-malarial measures in the Bela were pushed on, and one section completed; in the Civil Station a brick channel was constructed to the Najafgarh Drain out. Considerable additions were made to the City Western Extension, which should in time draw off a large number of menial occupations from the city. The heavy monsoon rains rendered the year less healthy than its predecessor, but the death rate (32·92 *per mille*) nevertheless compared very favourably with the years preceding 1914. The excess of births over deaths, though lower than in 1915-16, also reflected a far more satisfactory state of affairs than in 1914.

CHAPTER XVII.—THE ANDAMAN AND NICOBAR ISLANDS.

Chief Commissioner and Superintendent of Port Blair.

LIEUTENANT-COLONEL M. W. DOUGLAS, C.I.E.

Penal Administration.—1. The number of convicts in the Settlement at the close of the year was 12,843, representing an increase during the past five years of 1,615. The classes were as follows:—Male labouring convicts, 10,926; female labouring convicts, 280; self-supporting convicts, 1,637.

The gross cost of the administration amounted to R26,06,200, and the nett cost, deducting the value received from remunerative works, to R12,73,938. The cost of each convict amounted to R100-10-0 for the year.

Eighty-four convicts escaped into the forests, of whom 71 returned or were recaptured, in addition to seven of the previous year. During the past seven years 109 convicts have disappeared in this manner, who have almost all perished; a few were possibly killed by the hostile tribe of Jarawas, and a few perhaps attempted to cross in canoes to Burma. Instances of successful crossing have occurred, but are rare. More than 50 per cent. of the fugitives are Burmans.

The convicts in the Female Jail continued to weave all material, and to supply all cotton and woollen clothing and blankets for the Settlement; but an experiment in silkworms failed owing to the misfortune of a premature hatching of eggs when in postal transit. The factories in the Cellular Jail, which contains cells for 703 convicts, were responsible for a revenue of R99,596 mainly from cocoanut produce.

The Associated Jail, started in 1916 as an annexe to the Cellular Jail, is now kept fully occupied. In the latter jail are confined (1) newly arrived convicts of the habitual or dangerous classes for periods from six months to two years; (2) convicts locally convicted; (3) free residents locally convicted; (4) convicts whose release in the Settlement is undesirable. The Associated Jail is reserved for (1) the remainder of the newly arrived convicts for periods of six months, (2) the juveniles.

The private workshops, where work of all kinds in metal wood and tortoise-shell is produced, had greater demands than could be met; but though this institution is educationally valuable, it is impossible to spare more than 100 convicts for it.

The special nominal roll and labour record cards introduced experimentally in 1915-16 have met with success. By their means a record is kept of the labour performed by each convict during his term whether "hard," "ordinary" or "light," and favouritism or oppression at the instance of convict petty officers is checked.

The allotment of certain villages for occupation in the main by married "self-supporter" convicts is proving popular; and the special village for such self-supporters who are not agriculturists continues to attract residents. The extension of the grant of self-supporter tickets to artificers and to convicts employed in Government offices has resulted in the issue of 132 tickets to men of these classes. Under the previous system about half of these convicts on the completion of ten years in transportation, would either have remained at labour or would have had to cultivate rice.

Military Police.—2. Practically the entire force volunteered for active service last year and of the men selected, one officer and twenty-six men, the former and two men have been reported as killed; and of the ten men who returned, two were wounded; six men were promoted, one to the rank of officer, while sepoy No. 2549 Khan Singh was awarded the Indian Order of Merit for great gallantry on the field.

Agriculture.—3. The year was climatically better than the last and the tea garden made a recovery, yielding a gross outturn of R223 and a nett outturn of R43 per acre. Prices are ruling high and the outlook for the coming year is still more promising. No further cocoanut extensions will be made.

at present. The number of trees in bearing is 49,356, but when the extensions mature the total number will be about 200,000. The gross annual value of a cocoanut tree based on the outturn from the Jail factory is at present about R2, and at similar rates the plantations should hereafter yield four lakhs annually. The rubber plantations, which have been increased in area from 137 to 500 acres, are doing well, and as soon as an agricultural expert is appointed to the Settlement it will be possible to commence extraction of rubber. These plantations should eventually yield at least two lakhs annually. The vegetable gardens are now well organised and a systematic rotation of crops is maintained, with the result that the area cultivated has diminished, but the outturn has increased; and it is now possible to provide all labouring convicts with vegetables.

Public Health.—4. The record of the health of the year shows improvement as compared with that of 1915, but the incidence of sickness and mortality has still been high. Malaria of special virulence prevailed in 1914, which in addition to direct results rendered the population liable to other diseases, and the effects of this severe attack are doubtless still in operation. The main cause of sickness was as usual malaria; and of death, pneumonia, now recognised to be a direct result of malarial infection in the Settlement. Malaria not only affects the convict population, but persistently saps the vigour of the entire official staff, leaving after-effects in its wake which are often permanent. A gang of close on 100 men is maintained on swamp reclamation but the work at the present rate of progress is likely to last some 20 years; whereas a dredger would reclaim the dangerous area in a year and at less cost. Measures were in train in 1915 to borrow a dredger from Burma but collapsed owing to financial reasons. In the autumn of 1916 some sepoy became affected with malaria and the matter of the dredger was revived at the instance of the military authorities, but the needs of Mesopotamia had to be met and the question was again put aside. When normal conditions return an effort to procure a dredger must be made.

Aborigines.—5. The attacks by the Jarawas continue and in one case a corner of the tramway line in the Wimberleygunj valley, which is frequently used by the officials of the Settlement, was ambushed and two convicts killed. A forest clearing with subsidiary clearings at right angles is now being made into the tracts occupied by these savages and an expedition will be sent against them next cold weather. They are open to no advances and treat all mankind as enemies.

Nicobar.—6. Owing to the war it was not found possible to fill the post of Deputy Superintendent of the Nicobars. Progress is being made by the merchants in the realisation of their debts without complaint by the people, and there is reason for hope that the debts will be cleared within the five years period fixed. The royalties on exports at the rate of 5 per cent. *ad valorem* realised R9,228, and licenses to traders R1,924. Trade was dull owing to the war and the total value of produce exported was approximately R1,01,145. The possible development of the islands was reported on by two officers after a tour of inspection. It seems probable that a large tract of fertile land is available in the island of Katchal and further enquiries will be made when an officer is forthcoming for the post of Deputy Superintendent.

CHAPTER XVIII.—NATIVE STATES HAVING DIRECT POLITICAL
RELATIONS WITH THE GOVERNMENT OF INDIA.

HYDERABAD.

Agricultural Conditions.—1. The prosperity of the State and the condition of the people depend chiefly upon the character of the monsoon season. The rainfall during this season in 1916 was copious and well distributed, so that there was every reason to anticipate good harvests and general prosperity. Unfortunately, in the early part of November when the crops are ripening and require sunshine, there was extremely heavy and destructive rain. Nearly half the cotton crop was ruined while oil seeds and food grains were also seriously injured. Further, in some districts, such as Mahbubnagar, very extensive damage was done to the tanks, upon which the cultivation of the rice crop depends; some villages were even destroyed by floods caused by the bursting of tanks; fortunately there was no loss of human life, but considerable time will be required to repair the breached tanks and restore these areas to their former condition of prosperity.

The effect of this disaster was not, however, so serious as would have been the case in an ordinary year. Owing to the high prices prevailing for the staple articles of export and particularly for cotton, the cultivators on the whole received in exchange for their damaged crops very nearly as much as they would have got for a full crop in peace time; in fact, it may be said that the war prices saved the situation. On the other hand, for those classes who do not grow their own food, the year was a difficult one in many respects; for in addition to food prices being at a high level, the price of clothes of all kinds, including country-made cloth, was nearly double the price prevailing before the war. Not only this, the general dearness of living extended to practically every article of consumption.

The activities of the Agricultural department were, however, very slightly affected by the discouraging conditions of the season. Over 60,000 acres were sown with the indigenous long staple cotton, with which the department are attempting to replace the short staple brought here from the North. In the preceding year, 38,000 acres were under long staple, so that the area has nearly doubled and success appears to attend this important experiment. Further, the Agricultural department have now succeeded in growing sugarcane without the use of props in those districts where props were universally used before. As 10,000 props were often required for one acre, the saving by discarding props is obviously considerable. There has also been some progress with the silk-worm industry. Agricultural associations are now springing up in various parts of the State, and people are learning to turn to the department for information.

Public Health.—2. The difficulties, to which the people were exposed on account of unseasonable rain and high prices, were still further aggravated by an extremely severe epidemic of plague. In Hyderabad City alone, no less than 14,053 persons died of this disease between the months of October and April although O. S. Rs. 5,50,000 were spent on plague preventive measures in the City alone. In the districts the epidemic was no less severe, and in out-of-the-way villages the suffering was very great as it was impossible to render these people any material assistance.

The results of this visitation were far-reaching and extended to almost every department of the State. Progress on the more important works was seriously delayed and schools and courts were closed for several months. Numerous temporary hospitals to deal with plague were opened at the capital and in the districts. Apart from the loss of life and the general suffering, there was a complete dislocation of business during the latter half of the period under review. The year was an extraordinarily unhealthy one for cattle and cattle disease was prevalent in nearly every district.

Military.—3. One regiment of Imperial Service Cavalry was on active service during the whole of the year in Egypt.

The pecuniary assistance rendered to the allied cause included a donation of fifteen lakhs to the Anti-Submarine Campaign in addition to three lakhs per mensem for land forces.

Trade.—4. Trade statistics for the British India official year are not available, but it is fairly certain that exports largely exceeded imports, and that the gross value of the principal commodities of exports and imports was normal while the quantity and bulk were below normal. The export trade was delayed for some time in 1917 by the diversion of railway wagons, which ordinarily carry cotton, to the Bengal-Bombay route where extra wagons were required to make good the shortage of coal. It is probable that a certain proportion of the normal exports of the year 1916-1917 will appear in the statistics of 1917-1918. The Secunderabad-Gadag Railway was opened as far as Wunparti Road—a distance of 104 miles. The remaining sections of the line cannot be built till after the war.

Education.—5. Despite the epidemic of plague, real progress was made with primary education. Several hundred new primary schools were established, and attendance at primary schools increased by at least 15,000 pupils. The number of secondary schools and colleges remained unchanged. Owing to the closing of schools during the epidemic of plague, the results in the higher examinations were not as satisfactory as could have been wished; this was particularly the case in examinations for the B. A. degree of the Madras University. A number of new primary schools for girls were opened. In the Middle School and Cambridge Local Examinations, the girl candidates were fairly successful.

MYSORE.

The Mysore Representative Assembly was granted the privilege of a second session, in addition to the Dasara Session, from this year. Twelve Regulations were passed by the Legislature of the State.

His Highness the Maharaja contributed a sum of Rs. 10 lakhs towards the expenses of the war in addition to the 52 lakhs previously contributed. His Highness' Government contributed 35 lakhs of rupees to the War Loan of the Government of India. The total contribution of the State including the Civil and Military Station, Bangalore, to the War Loan is estimated at about R75 lakhs. The Imperial Service Lancers and Transport Corps continued in the field during the year.

The rains were ample and the seasonal conditions favourable to agriculture. The outturn of the important crops was normal and prices remained high as before. The total Land Revenue was R126 lakhs and nearly 87.6 per cent. of it was collected. Forest, Excise, Registration and Stamp Revenues showed an increase.

The birth-rate for the year was 20.31 *per mille* and the death-rate 16.63. Village Improvement Committees did good work for the improvement of sanitation in villages and the Malnad Improvement Committees in the Malnad. Great attention was paid to the improvement of rural water-supply.

In response to a widespread popular desire, the reservoir at Kannambadi was named 'The Krishnarajasagara' after His Highness the Maharaja. In connection with irrigation improvements gauging stations were established in selected important tanks and rivers for measuring discharges. Penstock pipes were fixed in the Krishnarajasagara Dam to generate electric power to serve as a reserve for the Mysore Power supply and for other purposes. Portions of the Kolar District Railway and Chikballapur Light Railway were completed and opened for traffic. The mines on the Kolar Gold Fields kept up their normal level of work and output in the face of great difficulties caused by the War. The schists of the Western Ghats were examined for iron ores. Certain samples of Mysore iron ores were sent for being tested to the Electrical Metals, Limited, London. Experiments were conducted with a view to the economic utilisation of bauxite. Enquiries were made into the manufacture of the chemical and commercial products of limestones. A preliminary investigation was made of the magnesite and chrome ores available in the State.

The Faculties of Arts and Sciences were constituted in the Mysore University. Boards of studies were formed as also an Audit Board, the Extension Lecture Board, the Publication Board and the Residence of Students' Committee. Eighteen Committees were constituted for the consideration of several important subjects. A Committee inspected all the Collegiate High Schools

in the State. Four Industrial Schools and two Normal Schools were newly opened. A sum of one lakh of rupees was sanctioned for scholarships to pupils of the educationally backward classes. The number of educational institutions as well as of pupils under instruction increased in all grades, and particularly in the primary grade. The percentage of pupils under instruction to the population of school age was 38. The Compulsory Education Scheme was in force in 68 centres. Provision was made for the advancement of the education of women and girls, of adults, of Mahomedans and of Panchamas and other classes. Four Commercial Schools were newly opened.

Rural Science instruction was introduced in four schools. Demonstration work to popularise improved implements was carried out on a large scale. Scientific experiments and investigations were carried on in four agricultural farms. A detailed scheme was prepared for developing sericulture and a central sericultural school was opened. The Co-operative movement was very popular and there was one Co-operative Society for every 17 villages and every 5,950 persons in the State.

BARODA.

The gross receipts during 1916-17 amounted to a little over 2 crores of rupees, and the disbursements to a little more than a crore and a half. The rainfall during the year, being very satisfactory, was on the whole favourable to all kinds of crops. The yield of crops was distinctly better and the prices of foodstuffs lower than those of the preceding year of drought.

The number of Co-operative Societies continued to be the same. Instead of expanding the movement, efforts were made to improve the working of the existing Societies, especially those that were weak and inefficient. The Baroda Central Bank has been doing good work, having advanced more than a lakh and a half of rupees to various Societies.

An Agricultural and Industrial Exhibition was held in January 1917 on a fairly large scale. Nearly 30,000 exhibits were received and special attention was paid to practical demonstrations and shows.

The number of births exceeded deaths by nearly 8,500. Medical relief was, as usual, continued unstinted among other things quinine being distributed free in malarial areas.

The year was marked by progress in the direction of spreading education among the masses. The creation of the Ecclesiastical Department was a remarkable feature of the year, its main duties being to conduct Sanskrit Pathshalas and spread religious and moral education. Three graduates in Science were appointed to deliver lectures explaining natural Phenomena, with a view to dispelling popular superstitions regarding miracles. The work of collecting old and valuable manuscripts has been satisfactorily progressing, the Central Library now possessing over 5,000 Sanscrit manuscripts.

KASHMIR.

A well distributed rainfall resulted in abundant *kharif* crops and enabled the prohibition against export of grain from the Jammu Province to be temporarily suspended. The *rabi* harvest was a total failure in unirrigated submontane tracts, but anything approaching widespread distress was prevented by a normal outturn from irrigated lands. Prices of local produce continued to evince an upward tendency, due to sympathy with the prevailing high prices of all imported goods, rather than to any actual scarcity. Rural sanitation is in a backward condition, but the country was free from epidemics and the mortality from Plague in Jammu was only 1-17th of the figure for the preceding year.

Increased outturn of silk and cocoons, for which high prices were realised in Europe, and larger sales of timber, were the principal factors in an unprecedented revenue of 150½ lakhs and served to convert an anticipated financial deficit into a surplus of 24½ lakhs.

Trade expanded in value from 281 lakhs to 355 lakhs, due in large measure to the exceptionally mild winter, which enabled traffic to be maintained throughout the year.

Education absorbed 7½ lakhs; medical relief 2½ lakhs; and 1½ lakhs were expended on sanitation.

The Kashmir Imperial Service Rifles remained on active service in East Africa, and added to their reputation as efficient and valuable fighting units. The State also despatched an Imperial Service Battery for service in East Africa.

SIKKIM.

The year was a prosperous one. Harvests averaged better than in the previous year, and prices were, in consequence, lower. The trade figures were also slightly better than last year. Public health was good and the State continued free from serious epidemics. There was much recruiting both for the Army and for military police forces. His Highness the Maharaja took an active part in all matters affecting the welfare of the State and in those branches of the administration over which he exercises independent control. To the latter category were added, during the year under report, the management of police and jails and the departments of income-tax and excise.

RAJPUTANA.

The agricultural conditions to the Rajputana States during the period under report were generally good, and the year was a prosperous one. The copious monsoon rains of 1916 produced good harvests. Public health was also on the whole good, but there were slight outbreaks of cholera in some States in the summer of 1916.

The wolfram mines at Digana in Marwar worked satisfactorily, and altogether over 93 tons of wolfram were exported up to September 1917. The Imperial Service troops of Jodhpur, Bikaner, Alwar and Bharatpur remained on active service, and these and the other States continued to support Government generously by furnishing recruits and by assisting in other ways towards the prosecution of the War.

AJMER-MERWARA (BRITISH TERRITORY).

The year 1916-1917 opened under most unfavourable agricultural conditions. The monsoon had failed in the preceding year, and it had been found necessary to declare Scarcity in the Merwara Sub-District in March 1916. Prospects were generally depressing throughout the District, nearly all the tanks were empty and the *rabi* harvest was in consequence extremely poor. By the month of June the number of relief works in Merwara had risen to ten, and a failure of the approaching monsoon would have made the declaration of Famine inevitable. Fortunately abundant rain was received in July, and in the following months the monsoon was all that could be desired. The scarcity works were all closed by the end of August, Ajmer-Merwara enjoyed an excellent *kharif* and distress gave place to prosperity.

As a result of the favourable monsoon the total revenue (Imperial and Local) of Ajmer-Merwara rose to Rs. 17,80,057, an increase of nearly three lakhs as compared with that of the preceding year. The expenditure incurred also shows a substantial increase amounting to Rs. 20,54,671—as against Rs. 15,22,656—in the year 1915-1916: this is due to an outlay of some five lakhs of rupees in connexion with the relief of scarcity.

CENTRAL INDIA.

Both the autumn and spring harvests were excellent throughout Central India except in the Bhopal Agency and the Guna Sub-Agency where the yield of the autumn crops was reduced to half by excess of rain. Prices of food grains were high. Labour was scarce as usual and with grain so dear wages were high; in fact, at the present time labour is the most serious problem in the development of Central India.

Public Health.—2. All the Agencies, except Baghelkhand and Bundelkhand, were visited by plague, the only respite being in the hot weather. The

incidence was severest in Indore where there were 1,777 deaths out of 2,396 in the Province. Fortunately, people now evacuate their houses as soon as rats begin to die, and the increasing popularity of inoculation is shown by over 9,000 persons having been inoculated in Indore. Cholera, in all parts of Central India, accounted for 5,474 deaths against 795 in 1915, the worst months being July and August. Small-pox was prevalent, but reliable figures cannot be given. The birth-rate shows a further fall from 11.81 to 11.51 *per mille* but the statistics are unreliable. The death-rate increased from 9.55 to 10.60 *per mille*.

Opium.—3. The principal feature of the year was the inception of a scheme for States in Malwa to revive cultivation, to a limited extent and under adequate safeguards, for the production of crude opium for sale to Government at contract prices which will pay both the cultivators and the States. The control and taxation of the local consumption of opium continues to improve, all States, except two (Indore and Jaora), having introduced direct taxation.

Education.—4. The number of boys in the Daly College has begun to rise again slowly in spite of the higher scale of fees; but the College had to be closed for three months on account of plague, and studies were further interrupted by a severe outbreak of malarial fever. There are now over 200 students in the King Edward Medical School which supplies the Darbars, both of Central India and Rajputana, with their medical staffs. Admission has recently been restricted to Matriculates, and at the close of their course students will in future appear for the Licentiate Examination of the Bombay College of Physicians and Surgeons.

Agricultural Development.—5. The States in the Malwa Agency associated themselves during the year with the scheme of a Joint Agricultural Adviser (first adopted by Gwalior, Indore, Bhopal, Datia and Dhar), and it is already bearing fruit. The most advanced State is naturally Gwalior, where the Darbar have built a Research Institute, founded Experimental and Demonstration Farms with the necessary staff, and established a Department of Agricultural Engineering. But all States are progressing according to their means and the main agricultural problems of Central India are now being seriously dealt with on modern lines.

Industrial Development.—6. For the development of the industries and resources of the Gwalior State, His Highness the Maharaja Scindia founded during the year the 'Gwalior State Trust', incorporated under the Gwalior State's Companies Act, with an authorized capital of ₹10,000,000 of which the first issue of ₹1,000,000 has been taken up by His Highness. In the management of the Trust, the Board of Directors are to have the assistance of an Advisory Board consisting of representative officials of the State. It has already resuscitated the Gwalior Paper Mills, which previously had been a failure.

The Eastern States of Central India Export Trust ('Esociet'), founded in the previous year by the Darbars of Datia, Panna, Ohhatarpur, Nagod and Maihar, have increased their capital from ₹2,00,000 to ₹3,72,000. They have already done valuable work in the testing and development of indigenous tanning agents, with the result that the Government of India have acquired some of their processes and have established a Tannin Research Factory at Maihar with their co-operation.

War.—7. Major His Highness the Raja of Batlam remained at the front throughout the year, and the other Ruling Princes and Chiefs of Central India contributed towards the war to the best of their ability in men, materials and money. Under the first head, the various Imperial Service Contingents remained mobilised throughout the year and did good service on several fronts, as also on garrison duty in India. The State troops assisted to train remounts for the Army, and in the case of Gwalior, furnished drafts for Imperial Service Troops; but, otherwise, the question of recruitment is a very difficult one in Central India owing to the scarcity of population and the absence of all military tradition. Under the second head, the States continued to maintain the Hospital Ship "Loyalty." It had cost approximately ₹50 lakhs up to the 31st March 1917, the funds being advanced by His Highness the Maharaja Scindia, pending final adjustment between the States. His Highness the Maharaja of Datia

has opened, at his own expense, a War Hospital for Indian Troops at Datia, while at Indore hospitals for both British and Indian Troops are maintained by the Ratlam, Barwani, and Ali-Rajpur Darbars. All States have supported the War Loans and equally the Joint War Committee and Imperial Indian Relief Fund. Details of individual War contributions are too numerous to record. But from the lavish gifts of the Maharaja Scindia, whose aid may be set down at not less than one crore of rupees, to the widow's mite of the poorest all are offered in the same spirit of loyalty to the King-Emperor, faith in the justice of our cause, and determination to persevere till victory is won.

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