

REVIEW
OF
FOREST ADMINISTRATION
IN
BRITISH INDIA
FOR THE YEAR
1907-1908

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REVIEW
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CHAPTER I.

CONSTITUTION OF STATE FORESTS.

I.—ALTERATION IN AREA.

[*Vide* Appendices I and II.]

The area under the control of the Forest Department decreased by 2,321* square miles during the year under review. Excluding 1,637 square miles of reserved and 10,341 square miles of protected forest under the control of other departments, the aggregate area of all classes of forest at the close of the year was 237,809 square miles, or 24.2 per cent. of the total area of British India.

2. The most important changes in the different classes of State forests were as follows:—

(i) *Reserved and Leased Forests.*

Additions and exclusions amounting to 2,640 and 2,610 square miles respectively resulted in an increase of the total area from 94,029 square miles at the commencement of the year to 94,059 square miles at its close. Included in these totals are 899 square miles and 743 square miles respectively of leased forests.

(ii) *Protected Forests.*

An apparent decrease of 615 square miles is chiefly due to the inclusion in 1906-07 of 548 square miles under the control of the Revenue Department in Bombay. The area at the close of the year was 8,853 square miles, which includes 439 square miles of leased forests in the Bombay Presidency.

(iii) *Unclassed State Forests and Public Forest Lands.*

The area at the close of the year was 134,897 square miles compared with 136,633 at its commencement, a decrease of 1,736 square miles. Transfer to Reserved forests in Burma and Eastern Bengal and Assam accounts for nearly the whole of this difference.

*This includes 1,607 square miles of reserved and 548 square miles of protected forest under the control of the Revenue Department in the Bombay Presidency, incorrectly shown last year as under the control of the Forest Department.

3. The following statement shows the area of the several classes of forest under the control of the Forest Department at the close of the years 1906-07 and 1907-08 :—

Class of Forest.	1906-07.	1907-08.	Difference.
	Sq. miles.	Sq. miles.	Sq. miles.
Reserved forests	93,130*	93,316	+186
Leased „	899	743	—156
Protected „	9,468	8,853	—615
Unclassed State forests and Public Forest lands.	136,633	134,897	—1,736
Total	240,130	237,809	—2,321

2.—FOREST SETTLEMENTS.

(Vide Appendix III.)

4. Progress in Forest Settlements was well maintained, the area finally settled being 1,798 square miles as compared with 1,812 square miles in the previous year, and 707 square miles in 1905-06. The area taken in hand was 3,575 square miles against 2,979 square miles in 1906-07. The approximate cost of settlement operations was R48,947 as compared with R43,344 in the previous year. In the Central Provinces, although an area of 21,999 square miles has been notified as Reserved forest, it appears from Form 52 that of this area 3,738 square miles have not been fully settled, whilst in Ajmer the 142 square miles of State forest taken up under the Ajmer Forest Regulation have not undergone settlement as in the case of reserves under the Forest Act. A Record of Rights has, however, been drawn up and approved by the Government of India. No settlement operations have been undertaken for the 2,793 square miles of Protected forest in Bengal.

3.—DEMARCATION.

(Vide Appendix IV.)

5. The total length of boundaries at the close of the year was 169,370 miles compared with 171,375 miles at the end of 1906-07. The decrease of 2,005 miles is due to exclusion of the boundaries of the Chamba forests in the Punjab, which have been retroceded to the Raja, and to the omission from the returns for the Central Circle, Bombay, of the boundaries of forests not under the control of the Forest Department. For the same reason, the length of demarcated boundaries fell from 143,256 miles to 141,227 miles, the undemarcated boundary being 10,653 miles compared with 11,869 miles in 1906-07. The length of natural boundaries not requiring demarcation rose from 16,250 miles to 17,490 miles, the principal increases being 555 miles in Burma and 621 miles in Bombay. The new boundaries demarcated aggregate 2,421 miles, or 190 miles and 898 miles less than in 1906-07 and 1905-06 respectively, while the cost was R57,006 against R33,562 in the previous year. The increase in expenditure is particularly noticeable in Madras where the cost per mile rose from R23 in 1906-07 to R41 in the year under review; in the United

* Revised figures.

Provinces where R2,157 was expended, although not a single mile of new demarcation is shown as having been done; and in the Central Provinces where 65 miles of new demarcation cost R8,278 compared with 1,106 miles at a cost of R5,321 in 1906-07. It appears probable that much of the expenditure on new work in the United Provinces and the Central Provinces should have been debited against repairs. In Bombay, the cost of new demarcation fell from R13 to R9 per mile. Existing boundaries were repaired to the extent of 55,439 miles at a cost of R89,154 compared with 57,599 miles costing R70,311 in 1906-07. Here again there is a reduction in the amount of work done and an increase in the cost, for which Bombay, Burma and the Central Provinces are chiefly responsible. Of the 10,653 miles of artificial boundaries not demarcated at the close of the year, 3,553 miles are in the Punjab and 5,421 miles in Bombay. The accurate and up to date demarcation of the State forests is of great importance and work in these two provinces is behindhand. Greater progress is promised in Bombay, and an inadequate staff accounts for the delay in the Punjab. In other provinces satisfactory progress is being made.

4.—FOREST SURVEYS.*

[Vide Appendices V and VI.]

6. The Forest Survey operations of the year were conducted principally on the scale of 2" to a mile instead of as heretofore on the 4" scale. The work was carried out by the various Topographical parties in whose sphere of operations the forests lay.

7. The following forest areas were topographically surveyed during the year :—

Presidency.	1"=1 mile.	2"=1 mile.	4"=1 mile.	Total.	REMARKS.
Bengal :	(a) 43	2,084.00	4.50	2,131.50	(a) Baluchistan.
Madras : . . . . .	...	35.50	39.00	74.50	
Bombay : . . . . .	...	556.25	...	556.25	
Total square miles	43	2,675.75	43.50	2,762.25	

The entire cost on the above surveys was borne by the Survey of India.

8. Details of surveys carried out in the various Provinces are given in the following paragraphs :—

Bengal.—The completion of the survey of the lower Sunderbans on the 2" scale was effected, 1,257 linear miles being traversed and surveyed in detail, comprising 947 square miles of upland and 310 of water, and mapped in 41 sheets.

Punjab.—No. 14 Party surveyed the Kala Chitta reserved forest, as well as various areas of unclassified forest under the Forest Department and under the Deputy Commissioner of Attock, comprising an area of 4 square miles, on the 2" scale.

North-West Frontier Province.—The Khwarra protected forests in the Peshawar district and the Zira reserve in the Kohat district were surveyed on the 2" scale by No. 14 Party.

Baluchistan.—The Gadbar reserve and part of the Girgi reserve were surveyed on the 1" scale by No. 15 Party, the former amounting to 34 square miles and the latter to 9 square miles.

*Contributed by the Superintendent, Forest Surveys.

Central Provinces (Berar Circle).—No. 2 Party surveyed an area of about 57 square miles of forests on the 2" scale, and the boundaries of this area, approximating 286 miles, were traversed.

Burma (Northern Circle).—No. 10 Party continued the survey of the reserves situated on the western border of the Mu division and an area of 232 square miles was completed on the 2" scale.

Burma (Southern Circle).—No. 3 Party made no special surveys for the Forest Department, but in the course of its ordinary operations surveyed 275 square miles of reserved forests on the 2" scale in the Pakokku district, Yaw Forest division. Similarly, No. 10 Party surveyed 219 square miles of reserved forests in the Ruby Mines district, also 4.5 square miles on the 4" scale in the Pinkan reserve. No surveys of forests in this circle are included in the programme of the Survey of India for 1908-09.

Bombay Presidency (Central Circle).—No. 17 Party surveyed an area of 555 square miles falling within the taluks of the West Khandesh district, together with an additional area of 1.25 square miles in the East Khandesh district, on the 2" scale. In the Shirpur, Shahada, Taloda and Akbrani ranges of the West Khandesh district, 423 linear miles of forest boundary were traversed on the 4" scale.

Madras Presidency (Northern Circle).—No. 19 Party finished the 4" forest survey of the Ganjam district with an area of 39 square miles, thereby completing all the work required to be done by the Forest Department on that scale.

Madras Presidency (Southern Circle).—In South Canara, the same party traversed 23 linear miles of forest boundaries; some 40 linear miles of undemarcated boundary still remain to be traversed. In South Malabar, the external boundaries of several reserves were traversed, and reserves with an aggregate area of 96 square miles were surveyed on the 2" scale. In North Malabar, the following reserves were surveyed on the 2" scale:—Edavankam, Kotiyur, Kambanmalai and Huntley. In North Coimbatore, one newly demarcated forest boundary (Attikan Estate) was surveyed by a Surveyor lent to the Forest Department. In the Nilgiris, 2 square miles of the Murkurti peak reserve were surveyed on the 2" scale.

Coorg.—No. 19 Party, in the course of its topographical survey of the Madras Presidency, surveyed 40 square miles of the Ghat forests on the 2" scale. A triangulator and a traverser were also employed in Coorg, and nearly the whole of the province was triangulated in preparation for the detail survey which will be commenced next year. The survey will be on the 2" scale and, being part of the regular survey programme, its cost will be borne by the Survey of India.

9. During the year under report, 11,177 maps were issued to Forest and other officials and to the public. Last year the number issued amounted to 11,100. Of the above number, 4,017 were coloured maps.

The principal mapping executed during the year comprised the usual 4" standard sheets of the Forest Surveys, of which 78 were published and 25 were in the press at the close of the year, while 126 were in various stages of progress. These latter include 69 sheets of the second edition of the Kumaun and Garhwal series. Of the working plan maps and other special maps prepared for the use of the Forest Department, 22 were published, 9 were in the press and 37 were being drawn at the close of the year. As there are no maps of the Madras Presidency showing the distribution of forests, a series of special district maps on the 4" scale was commenced at the request of the Board of Revenue, Madras. These of the five districts South Canara, Coimbatore, Tinnevely, Madura and Cuddapah were in hand at the close of the year.

The amount realized by the sale of maps and for work done for the Forest Department amounted to Rs 2,018 as against Rs 1,750 last year. Of this amount Rs 1,110 was adjusted by book debit. Besides the head-quarters charges, a sum of Rs 6,199 was debited to the Forest Department on account of mapping and publishing charges.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

1.—REGULATION OF MANAGEMENT.

*Working-Plans.**

[Vide Appendices VII, VIII and IX.]

10. An area of 2,711 square miles was added to the area to be treated under regular Working-Plans, thus bringing the total area under regular Working-Plans to 45,152 square miles. This increase took place chiefly in Burma, where very satisfactory progress was made. The very large areas in Burma, even of Reserved forests, which still remain unregulated by Working-Plans point to the advisability of adopting more expeditious methods.

In the Bengal Presidency, Working-Plans for 1,607 square miles were sanctioned and plans for 4,539 square miles were in course of compilation at the close of the year.

In the Madras Presidency also, good progress is shown and Working-Plans for 604 square miles were sanctioned; plans for 4,535 square miles were under preparation.

In the Bombay Presidency, plans for 500 square miles received the sanction of the Local Government and plans for 842 square miles were in course of preparation.

At the close of the year, the area under the control of the Forest Department still remaining to be brought under Working-Plans stood at 182,741 square miles. Of this, the Bengal, Madras and Bombay Presidencies contributed 168,785, 7,843 and 6,113 square miles respectively; but much of these large areas consists of Unclassed forest for which Working-Plans are not required.

11. The following figures show the total areas under Working-Plans at the close of the year:—

	At commencement of the year. Square miles.	Added during the year. Square miles.	Total. Square miles.
Bengal	30,218	1,607	31,825
Madras	6,625	604	7,229
Bombay	5,598	500	6,098
Total in 1907-08	42,441†	2,711	45,152
" " 1906-07	41,586	882	42,468

2.—COMMUNICATIONS AND BUILDINGS.

[Vide Appendix X.]

(a) Roads and Bridges.

12. The total expenditure on communications rose from R3,90,076 in 1906-07 to R5,49,631 in the year under review, an increase of R1,59,555. Rupees 3,48,394 were on account of new work and R2,01,237 for repairs, as compared with R1,96,738 and R1,93,338 respectively in the previous year. These

* Communicated by the Imperial Superintendent of Working-Plans.

† Revised figures.

figures constitute a record and it is interesting to compare them with those for 1897-98, namely ; R80,573 on new work and R92,387 on repairs, showing how rapidly the work of opening out the forests is expanding. As the more accessible forests become depleted of the mature timber they contain, improved communications are required to facilitate the exploitation of the more distant ones; it is evident that considerable progress in this direction is now being made.

(b) *Buildings.*

13. The total amount expended on buildings was R6,45,500 or R1,21,752 more than in the previous year. Of the increase, R1,02,517 was on new work and R19,235 on repairs. In the *United Provinces*, new work cost R32,774 less than in the previous year, which is attributed to curtailment of the building programme in the Western Circle owing to the ravages of famine. In the *Central Provinces*, on the other hand, more work was undertaken in order to provide employment and so mitigate the effect of the prevailing scarcity, with the result that the expenditure increased by R33,271. In the *Punjab*, R27,685 more were spent than in 1906-07, but the greater part of this was for work carried out by the Public Works Department. The expenditure was greater in all the other provinces except the *Andamans* and *Coorg*. The cost of the maintenance of buildings was greater in all the major provinces except *Bengal*, where the amount spent was R1,631 less than in the previous year. Small decreases occurred in *Coorg*, *Baluchistan*, *Ajmer-Merwara* and the *Andamans*. Considerable difficulty was experienced in erecting buildings in remote localities in *Bombay* and *Burma*, but notwithstanding this good progress was made both in respect of rest-houses and of quarters for the staff. More attention was paid to the suitable housing of the subordinate staff in all provinces, and this is an important feature of a satisfactory year's work.

(c) *Miscellaneous Works.*

14. The expenditure under this head amounted to R1,75,692, being an increase of R93,603 over that in the previous year. The work includes tanks, wells, bunds in torrent beds, fences, ditches, the clearing of compounds and camping grounds and other miscellaneous items. The greatest increase was in the *Central Provinces* where the policy already alluded to was fully taken advantage of, with the result that 28 new tanks and 76 wells were completed and others were well advanced. The expenditure on these and other works amounted to R1,15,529 or R84,453 more than in 1906-07. Of the other provinces, small decreases in the expenditure occurred only in the *Punjab*, *Coorg* and *Bombay*, while *Burma* and *Eastern Bengal and Assam* show increases of R4,060 and R3,288 respectively.

3.—PROTECTION OF FORESTS.

(a) *General Protection.*

(*Vide* Appendices XI and XII.)

15. The number of breaches of the forest laws decided by the courts and compounded shows an increase, the total being 58,831 compared with 57,858 in the previous year and 56,544 the average of the three years 1904-05 to 1906-07. The difference of 973 cases is made up of a decrease of 1,628 cases decided by the courts and an increase of 2,601 cases compounded. As regards cases decided

by the courts, *Madras*, *Bombay* and *Burma* show decreases of 773, 657 and 347 cases respectively; there was little change in the figures for other provinces. Compounded cases increased by 203 in *Bengal*, 901 in the *Punjab*, 759 in the *Central Provinces*, 164 in the *North-West Frontier Province*, 219 in *Ajmer* and 747 in *Madras*, while the number of such cases in *Bombay* was less by 526 than in the previous year. The most noticeable increases in the total number of both classes of cases were 957 in the *Punjab*, 762 in the *Central Provinces* and 262 in *Ajmer*; decreases of 1,183 and 320 respectively occurred in *Bombay* and *Burma*. Undetected cases increased by 282 to a total of 7,593, of which rather more than half were on account of injury to the forests by fire. The latter class of offences increased by 476, which more than counterbalance the decreases under all other heads. In *Bombay*, the number of undetected cases decreased by 689, but in other provinces increases were general, the principal ones being 268 in the *Punjab* and 387 in *Madras*.

16. The figures in the preceding paragraph refer only to cases disposed of or undetected. The forest offences reported during the year under review (including undetected cases and those written off or not proceeded with) compare with the average of the three preceding years as follows :—

	Average 1904-05 to 1906-07.	In 1907-08.
Injury by fire	4,152	4,679
Unauthorized felling or appropriation of forest produce	33,358	35,470
Unauthorized grazing	23,921	25,016
Other offences	4,781	4,528
TOTAL	66,212	69,693

The considerable increase in practically all provinces except *Bombay* is attributed generally to the unfavourable season or to the increased vigilance of the protective staff. The former cause was the most important factor in the year under review, as the scarcity in India was general. The abuse of temporary privileges, granted with a view to mitigating its effects, resulted in many offences, especially in the *Punjab* and in the *Central Provinces*. The insufficient supply of fodder also accounts for much illicit grazing, and for the numerous cases of forests being set fire to in the hope of inducing a further growth of grass. It is said that in *Bombay* only a small proportion of the offences committed are reported so that fluctuations in the figures are to be expected. At the same time, but for the large reduction in the number of cases reported in that Presidency, the total increase would have been even greater than it was. Some 2,300 cases were withdrawn or not proceeded with and 7,000 remained pending at the close of the year as compared with 6,084 at its commencement.

(b) Protection from Fire.

[Vide Appendix XIII.]

17. The area under systematic fire-protection continues to extend and amounted in the year under review to 45,695 square miles or 48.8 per cent. of the total area of Reserved forests, being 1,252 square miles greater than in the previous year. The only province in which there was a decrease was *Burma*, where long continued fire-protection has proved harmful, and where selected

areas, previously under protection, were abandoned with a view to ascertaining the effect on the natural reproduction of teak. The area successfully protected rose by 738 square miles to 42,577 square miles, but the percentage of success to the area attempted fell from 94.2 to 93.2. The results were less favourable than in 1906-07 in all provinces except *Bombay*, where the percentage of success rose from 86.2 to 92.7. The unfavourable results must be attributed to the extreme dryness of the season, accentuated by the admission to the reserves of large numbers of people who were granted the special privilege of collecting produce or grass or of free grazing for cattle in order to mitigate the effects of the prevailing scarcity. The privileges were in many cases abused and numerous cases of incendiarism occurred, the forest in many cases being set fire to in order to induce a further growth of grass. In the *North-West Frontier Province*, the area burnt amounted to 42.35 per cent. of that attempted and so large was the number of fires intentionally caused that the introduction of a scheme of punitive closure is under consideration. A dry year must necessarily adversely affect the results of fire-protective measures, because not only is the period during which the forests are liable to be burnt longer, but fires are more fierce and their extinction and control more difficult. If, in addition, serious scarcity prevails and the reserves are thrown open to the free collection of grass and edible products, the difficulties of the protective staff are still further accentuated. In view of the circumstances of the year, the general results cannot be regarded as unsatisfactory. The improvement in *Bombay* would have been noteworthy under any circumstances but is especially so in a very unfavourable year: it must be attributed to the consistent policy of the Government and to the personal interest taken by Divisional Officers.

18. The results of the year under review appear, and are compared with those of the previous quinquennium, in the following statement:—

PROVINCE.	AREA IN SQUARE MILES.		Percentage of forests under fire-protection to total area of reserves.	PERCENTAGE OF FAILURE TO AREA UNDER PROTECTION.		
	Attempted.	Protected.		Average of past five years to 1906-07.	1907-08.	
Bengal	1,838	1,795	44.5	2.5	4.9	
United Provinces	3,203	2,859	78.3	2.0	10.7	
Punjab	950	923	43.6	1.7	2.8	
Burma	7,526	7,159	32.9	10.3	4.9	
Eastern Bengal and Assam	3,255	3,167	49.6	0.8	2.7	
Central Provinces	10,815	10,003	49.1	3.1	7.5	
Coorg	208	205	40.0	1.1	1.4	
North-West Frontier Province	85	49	36.0	4.3	42.4	
Ajmer	142	142*	100.0	.8	0.1	
Total Bengal	23,072	26,302	44.7	5.1	6.3	
„ Madras	7,554	6,945	40.7	6.9	8.1	
„ Bombay	10,069	9,330	82.1	12.3	7.3	
GRAND TOTAL	1907-08	45,695	42,577	48.8	7.1	6.8
	1906-07	44,443	41,889	47.2	7.5	5.8

*Only 76 acres were burnt in Ajmer.

19. The classification of fires according to their origin is given in Appendix XIII. The total number of forest fires was 5,201, or 809 more than in the

previous year. The increase was general in all provinces except *Bombay*, where there was a reduction of 283. The most notable increases were 358 fires due to the carelessness of outsiders or to unknown causes and 248 due to intention or malice. Of the former, the *Punjab* accounts for an increase of 193, *Madras* 213, the *Central Provinces* 70 and the *North-West Frontier Province* 41, while in *Bombay* 323 less than in the previous year occurred. Of the latter, 114 were in the *North-West Frontier Province* and 70 in *Bombay*, only *Burma* and *Madras* showing small decreases in cases of this class.

(c) *Protection from Cattle.*

(Vide Appendices XIV and XV.)

20. The area closed to grazing during the whole year was 39,079 square miles to all animals and 20,639 square miles to browsers only, or 16.4 and 8.7 per cent. of the total area under the control of the Forest Department. These areas were about 500 square miles less and 1,000 square miles more, respectively, than in the previous year. In addition, some 7,673 square miles were closed to all animals and 292 square miles to browsers during a part of the year, while goats were only admitted to 649 square miles in *Madras*. As the year was one of general scarcity, considerable areas usually closed were thrown open in many provinces, either for grazing or the extraction of fodder, but this being a special concession, such areas are generally included in those shown as closed.

21. The total number of cattle admitted to graze in the Government forests was over 15 millions, of which nearly 5 millions were browsers such as goats, sheep and camels.

The following statement shows the details for the last two years, and the great increase in the number of cattle admitted to pasturage during the pleasure of Government or otherwise than under settlement is some indication of the concessions granted to the agricultural population :—

	1906-07.					1907-08.					TOTAL.
	At full rates.	At privileged rates.	By right under settlement.	During pleasure of Government or otherwise than under settlement.	Total.	At full rates.	At privileged rates.	By right under settlement.	During pleasure of Government or otherwise than under settlement.		
gal	4,490,712	1,546,208	2,153,805	583,720	(a) 8,774,445	8,879,475	1,538,159	2,167,840	1,515,349	(a) 9,100,843	
ras	3,528,140	150,637	8,875	20,273	3,707,925	3,942,094	54,851	11,119	36,961	4,041,525	
bay	103,008	808,252	49,171	334,534	(b) 1,234,965	117,322	916,663	37,575	339,678	(c) 1,930,697	
TOTAL	8,121,860	2,505,097	2,211,851	938,527	13,777,335	7,933,891	2,509,173	2,216,534	1,891,983	15,076,065	

(a) Excludes cattle grazing in unclassified forests in *Burma* and the *Andamans*, no figures being available.

(b) Excludes the *Poona* and *Satara* divisions for which figures are not available.

(c) Includes 519,459 cattle, the estimated figures for the *Nasik*, *Poona* and *Satara* divisions, of which details are not available.

22: The following statement gives the number of cattle and browsers admitted to pasturage per square mile of forest open to each class of animal. For purposes of comparison similar figures for 1898-99 (the first year for which complete figures are available) are also shown :—

PROVINCE.	1907-08.						1898-99.					
	HORNED AND OTHER CATTLE EXCEPT BROWSERS.			BROWSERS.			HORNED AND OTHER CATTLE EXCEPT BROWSERS.			BROWSERS.		
	No.	Square miles open.	No. per square mile.	No.	Square miles open.	No. per square mile.	No.	Square miles open.	No. per square mile.	No.	Square miles open.	
Bengal (a)	297,187	1,617	183.8	87,713	1,224	30.8	403,327	6,271	64.3	72,254	5,952	
United Provinces.	651,099	2,323	280.3	220,615	1,654	133.4	473,160	12,282	207.4	161,458	1,667	
Punjab (b)	907,188	8,690	104.4	1,328,016	7,807	170.1	906,080	6,819	132.9	1,189,274	6,003	
Burma	108,046	4,258	43.7	170	4,173	...	35,767	2,223	16.1	25	2,178	
Eastern Bengal and Assam (c).	589,609	24,484	24.1	72,507	23,414	3.1	216,939	17,631	12.3	14,394	16,701	
Central Provinces including Berar.	3,915,358	19,006	206.0	780,259	11,039	70.7	2,640,823	19,615	134.6	468,119	12,764	
Coorg	4,463	337	13.2	...	337	...	10,299	736	14.0	...	736	
North-West Frontier Province.	52,983	195	271.7	22	100	0.2	Included in the Punjab.					
Ajmer	17,937	134	133.9	...	6	...	75,482	143	527.8	427	...	
Baluchistan	5,051	71	71.1	22,600	63	358.7	2,799	60	46.6	17,358	60	
Total Bengal	6,638,921	61,115	108.6	2,461,902	49,817	49.4	4,764,676	55,780	85.4	1,923,309	46,061	
" Madras	1,914,632	17,447	109.7	2,129,898	(e) 16,623	128.1	1,394,875	17,770	78.5	1,223,949	15,716	
" Bombay (d)	1,724,442	10,777	160.0	206,255	2,255	91.5	1,484,618	12,192	121.8	725,930	6,683	
GRAND TOTAL	10,277,995	89,339	115.0	4,796,050	68,700	69.8	7,644,169	85,742	89.2	3,873,188	68,160	

The area open to browsers is included in that open to all animals.

The unclassified forests of Burma (107,597 square miles) and the Andamans (1,794 square miles) have been omitted from statement because the number of cattle grazing in them is not known. They are open to unrestricted grazing.

(a) Figures for 1898-99 include those for the area now known as Eastern Bengal.

(b) Figures for 1898-99 include those for what is now the North-West Frontier Province.

(c) Figures for 1898-99 are for Assam only.

(d) Includes browsers in the Nasik, Poona and Satara divisions for which details are not available.

(e) Goats were excluded from all except 649 square miles.

It thus appears that in nine years the average number of browsers admitted to each square mile of open forest has increased from 57 to 70 and the number of cattle of other descriptions from 89 to 115. Admitting that 1907-08 was an exceptional year, the increasing incidence of grazing is a matter of the utmost importance and gives cause for anxiety because of the impossibility of regenerating forests heavily grazed over. Much attention is being devoted to this question which will be further discussed under Silviculture; but to properly understand the conditions in the different provinces it is necessary to

know the percentage of the forest area in which grazing is permitted. This appears in the following statement :—

PROVINCE.	1907-08.			1898-99.		
	Total area.	Open to horned cattle.	Open to browsers.	Total area.	Open to horned cattle.	Open to browsers.
	sq. m.	per cent.	per cent.	sq. m.	per cent.	per cent.
Bengal	7,028	23.0	17.4	(a) 13,730	45.7	43.4
United Provinces	4,163	55.8	39.7	4,078	56.0	40.9
Punjab	9,139	95.1	85.4	(b) 7,484	91.1	80.2
Burma	(c) 22,858	18.6	18.3	(d) 15,667	14.2	13.9
Eastern Bengal and Assam	(e) 29,225	83.8	80.1	(f) 20,210	87.2	82.6
Central Provinces including Berar.	22,002	86.4	50.2	23,290	84.2	54.8
Coorg	520	64.8	64.8	895	82.2	82.2
North-West Frontier Province.	236	82.6	42.4	Included under the Punjab.		
Ajmer	148	90.5	1.4	149	96.0	...
Baluchistan	280	25.4	22.5	205	29.5	29.3
Andamans	159	...	...	156	100.0	100.0
Total Bengal	95,758	63.8	52.0	85,864	65.1	53.8
„ Madras	19,607	89.0	(g) 84.8	19,594	90.7	80.2
„ Bombay	13,053	82.6	17.3	14,942	81.6	44.7
GRAND TOTAL	128,418	69.6	53.5	120,400	71.3	57.0

The areas are those under the control of the Forest Department.

(a) Includes the area now included in Eastern Bengal and Assam.

(b) Includes the present North-West Frontier Province.

(c) Excluding 107,597 square miles of unclassified forest open to grazing, as the number of cattle is not known.

(d) Excluding unclassified forests for which no details are available.

(e) Includes 22,675 square miles of unclassified forests.

(f) For Assam only.

(g) Applies to sheep. Goats were admitted to 649 square miles only, or 3.3 per cent. of the total forest area.

The above figures show that the incidence of grazing and the area open differ greatly in the various provinces, in most of which the more accessible forests are undoubtedly heavily grazed over. Owing to the comparatively recent partition of *Bengal*, that province and *Assam* may be considered together. Since 1898-99 the total area of forests, the percentage open to cattle and the

number of cattle and browsers per square mile have all increased, but the average incidence is still light. In the *United Provinces*, there has been little change in the total area of forests or in the percentage open, but the number of both cattle and browsers admitted is much greater, the incidence now being very heavy, *viz.*, 414 per square mile or an average of about one head for every $1\frac{1}{2}$ acres in the areas open to both cattle and browsers. The *Punjab* is the only province in which the number of browsers exceeds the number of other cattle. The incidence of grazing per square mile, though less than in 1898-99, is still very high and only 15 per cent. of the total area is closed to browsers and 5 per cent. to cattle. Under these circumstances, satisfactory natural regeneration of most of the forests would appear to be practically impossible. In *Burma*, a few of the reserves are overgrazed, but the question is of little importance in most of them. Figures for the unclassified forests are not available, but many of them are heavily grazed over. In the *Central Provinces*, the total incidence is 277 head per square mile in areas to which both cattle and browsers are admitted, and the percentage of forest open is very high; but conditions are more favourable as regards browsers than in the *Punjab*. It appears impossible for forest growth to continue on the area open to grazing in *Baluchistan* where, out of a total of 430 head admitted per square mile, 359 are browsers.

In *Madras*, the grazing question is a difficult one and a stricter regulation appears to be necessary if the very existence of many of the forests is not to be endangered. The increase during the last nine years in the number of browsers admitted per square mile is 48 and of cattle 31. Goats are, however, admitted to only a comparatively small area and their exclusion will prevent much damage.

In *Bombay*, the principal change is the considerable decrease in the number of browsers and in the area to which these animals are admitted; but the figures for 1907-08 are only approximate, as details of the various kinds of animals are not fully available.

Excluding the Southern Circle in the *Central Provinces*, for which no figures are given in the report, the number of cattle impounded during the year was 447,142, of which 191,039 were in *Madras*, 193,719 in *Bombay* and 30,840 in the *Punjab*. In the previous year the number was 517,116. The total revenue derived from grazing and from fodder grass removed by purchasers was $\text{R}23,85,003$, while $\text{R}18,85,296$ is the estimated value of the grazing and grass conceded free or at reduced rates.

(d) *Protection against injury from natural causes.*

23. The most serious of the climatic influences from which damage to forests results are frost, drought and wind, while extensive injury is also caused by insects, wild animals, climbers, fungi and parasitic plants. In the year under review, damage by drought was particularly noticeable, especially in the *United Provinces* where the vitality of the trees had been reduced by a series of dry years and enormous numbers died. Many others were so seriously injured that they succumbed to the effects of the winter frosts which, however, were not unusually severe. Precautions can to a certain extent be taken against frost and wind by exercising care in opening out the cover and in arranging the fellings, but measures against drought are practically impossible except over such limited areas as can be artificially irrigated. The ravages of

insects seem to have been accentuated by the unusual dryness of the year, but some of the remedial measures undertaken showed good results. The study of injurious fungi has not yet received the amount of attention that has been devoted to insect pests, in the investigation of which considerable progress has been made by the Imperial Forest Zoologist; the damage done in our Indian forests by fungoid growths is perhaps not less than that caused by insects, and the appointment of a Forest Mycologist will certainly be advisable in the near future.

4.—SILVICULTURE.

(a) *Natural Reproduction.*

24. The importance of this subject cannot be overestimated, as the future existence of the vast majority of the forests in India must depend on regeneration being effected by natural means. Speaking generally, it may be said that in most of our Indian forests that are under systematic treatment, natural reproduction of the more important species is fairly satisfactory, and often excellent. An exception must be made in the case of the important moist teak forests in Burma, where natural reproduction of teak is insufficient; and also as regards sal in some of the fire-protected forests of Bengal and the Garo Hills. Much attention is being paid to the study of natural reproduction, and wide-spread experiments are in progress with a view to determining the conditions most favourable for the germination of seed and the production of seedlings, how these conditions can be brought about and, still more important, what protection and assistance must be afforded to the seedlings to enable them to develop and eventually become trees. The problem is complicated by the varying effect of fire-protection in different localities and on different species as well as by the necessity for providing grazing in the forests for large numbers of cattle. There can be no doubt that grazing is incompatible with the regeneration of the forests in areas heavily grazed over. The increase in the number of cattle allowed to graze in the forests during the last 10 years has already been referred to and, although much attention has been devoted to this subject, no practical scheme for providing all the grazing facilities required and at the same time regenerating the forests has yet been evolved.

25. The following are brief abstracts from the Provincial reports:—

Bengal.—Seedlings from the generally profuse crop of sal seed produced in 1907 did remarkably well until January 1908 or even later, and, in spite of the exceptional drought, it appears probable that in most places a satisfactory proportion survived until the rains of 1908. The crop of sal seed during the year under review was a failure, except in a few localities. Observations during the year tend to support the remarks made last year to the effect that there is no reason to believe that fire could anywhere be used as a cheap and effective agent for improving the reproduction of sal and that this can be better effected by frequently repeated cleanings and weedings of self-sown seedlings. Coppice reproduction was excellent.

United Provinces.—The sal seed crop of 1907 was very uneven, being good in the Eastern and bad in the Western Circle. Natural reproduction was unsatisfactory owing to the drought and extensive fires which caused the mortality in seedlings of all species, up to two or three years of age, to be exceptionally great. Seasons of severe drought are, however, frequently followed by a remarkably good seed year and this is being borne out in the present instance, two or three of the oaks (*Q. semicarpifolia* and *Q. dilatata*) having already borne heavy crops of seed since the break of the rains. The conifers also are reported to be showing signs of a general heavy seeding and it is hoped the sal will follow suit. Shisham (*Dalbergia Sisso*) and khair (*Acacia catechu*) reproduce themselves freely from seed except where grazing and fire render this impossible. Reproduction by coppice was also adversely affected by the

drought. The shoots of the year were poor and in Oudh many shoots of the previous year died.

Punjab.—The year was a bad one for the successful germination of all species on account of the hot dry summer, apart from the amount of seed produced which, for all species, was generally small. Evidence continues to accumulate as to the incompatibility of the grazing of sheep and goats, as carried on in most forests, with the regeneration of the forests, which appears to be in an unsatisfactory state. Much attention is being devoted to this subject, but no definite pronouncement is yet possible as to the incidence of grazing per acre compatible with natural reproduction.

Burma.—Practically nothing new regarding the natural regeneration of teak was recorded during the year, but various experiments were continued and protection from fire was abandoned over considerable areas with a view to watching the effects on natural reproduction. The burning over of areas in the Katha division where the bamboos (*Cephalostachyum pergracile* and *Dendrocalamus membranaceus*) had flowered has shown that it is possible, in such localities, to establish a sufficient quantity of teak over extensive areas at comparatively small expense and that there is, in the Katha district at any rate, no necessity to supplement the burning by any artificial sowings. Such operations must, however, be followed by periodical cleanings and improvement fellings to the extent which experience shows to be necessary. Further countings were made in the Tharrawaddy division which tend to confirm the contention that the reproduction of teak is adversely affected by fire-protection. On an area fire-protected for 20 years, that in 1885 contained 1,296 stems under 1' in diameter per 100 acres, only 375 can now be found and all are over 18" girth. There are no small trees between 3" and 18" girth. Small seedlings were plentiful, but 90 per cent. have a root system several years old. A similar plot that has not been brought under fire-protection has no break in the sequence of stems under 1' in diameter and seedling growth of all sizes is abundant. Another 10-acre plot under protection for 20 years was found rich in teak above 1' diameter, but contained not a single good stem under that size and none at all under 12" girth. Several other plots were also examined and in every case the results were the same. The Circle reports generally indicate that the natural regeneration of teak is excellent wherever, from whatever cause, light is admitted freely, but that, unless subsequent operations on an extensive scale are carried out to assist the teak seedlings, no considerable proportion of them can develop.

Eastern Bengal and Assam.—The year under review was not a good one for sal seed. Either the quantity produced was less than usual or the quality of the seed was poor. In some cases heavy storms caused considerable damage. Attention has been drawn to the unsatisfactory condition of sal reproduction in the fire-protected reserves of the Garo Hills division, and the opening out of the cover by the removal of mature trees has not yielded the satisfactory results which have resulted from similar operations in the Nowgong division. In some localities, the removal of inferior species and cleaning of the undergrowth in the previous year have greatly benefited the sal seedlings and this treatment is to be extended to other areas. Unfortunately, the experiments of firing sal areas to ascertain the effect on the reproduction of the species in the low level forests were not carried out. The natural reproduction of *Ficus elastica* in the Lakhimpur forests continues to be unsatisfactory owing to the paucity of seed bearers, many trees having been killed by root-tapping, etc. The reproduction of *Mesua ferrea* was good and the experimental improvement fellings carried out during the previous year have had a very beneficial effect on the natural regeneration of this species.

Central Provinces.—The season was unfavourable for natural reproduction which was somewhat retarded in consequence. The general spread of teak and *Hardwickia binata* continues to be noticed in localities immune from excessive grazing, and the development of the former species has been greatly assisted by cleanings and improvement fellings. The sal seeded unevenly, but the regeneration of this species is reported to be excellent in the fire-protected areas of the Southern Circle. It is also stated that sal derives more benefit from fire-protection than do the inferior species with which it is associated. Other species seeded well and the unfavourable season for growth appears to have stimulated the trees to reproduce themselves; many species of trees show indications that the next seed crop will be an excellent one.

North-West Frontier Province.—The year was exceptionally bad for natural reproduction, but the success attending the coppice operations both in Khanpur and in the Bagnotar forests is satisfactory.

Coorg.—The natural reproduction of *Pterocarpus marsupium* and *Dalbergia latifolia* is satisfactory, but that of teak was poor. An experiment to test the effect of light ground fire-

on teak regeneration gave promising results, but the conditions of over-head cover were clearly unsuitable for the development of the seedlings which sprang up and a large proportion of them died during the rains.

Madras.—The short rainfall hampered reproduction in many instances, but, under the circumstances, the reproduction from seed was generally fair and from coppice good, except where protection from fire and grazing was inadequate.

Bombay.—It is satisfactory to learn that natural reproduction of teak in the Thana forests of the Southern Circle is more promising than was formerly reported and that continuous fire-protection in certain localities is resulting in notably increased numbers of seedlings of all species. The Bombay forests appear to reproduce themselves freely and it is stated that, where natural regeneration by seed fails, it is due to the action of man directly or indirectly and not to any lack of reproductive power in the forests themselves. A deficient inundation adversely affected natural regeneration in Sind.

26. It is interesting to compare the reports from the Central Provinces and Eastern Bengal and Assam regarding the effect of fire-protection on the regeneration of sal. In the comparatively dry forests of the former province, fire-protection appears to yield eminently satisfactory results; but in the moister forests of Eastern Bengal and Assam successful protection encourages the undergrowth and inferior species at the expense of the more valuable sal. The Burma reports afford further evidence in support of the contention that in forests treated by the Selection method the natural regeneration of teak is practically absent in areas which have been successfully protected from fire for any considerable period, and it is not improbable that in many localities successful protection will prove to have greatly accentuated the difficulty of obtaining natural regeneration. Extensive experiments are in progress with a view to elucidating the problem, and possibly it may eventually be necessary to restrict fire-protective measures to comparatively dry localities and moister areas in which satisfactory regeneration has been obtained. In the latter case, however, heavy cleanings and improvement fellings will also be required and, owing to the general scarcity of labour, the areas over which this system could be adopted would be a very small proportion of the moister teak forests of the province. Some years must elapse before any definite conclusion can be arrived at, but if, as will probably be the case, it is fully proved that the effect of fire-protection on the natural regeneration of teak is as disastrous as most Forest officers in Burma consider it to be, there can be no question that either the method of treatment must be changed or the greater portion of the moister teak forests must be allowed to burn. It is generally admitted that even in teak forests fire does much damage, but magnificent forests exist which have been burnt annually from time immemorial while, at present, everything points to the conclusion that if fire-protection is continued nothing can prevent the eventual extermination of the teak over enormous areas. The remedy may be found in adopting the Regular method of treatment for the teak forests wherever this is possible.

(b) *Artificial Reproduction.*

(*Vide Appendix XVI.*)

27. The area of plantations increased from 134,785 acres to 144,416 acres, which includes 83,171 acres of taungyas. There was a total addition of 14,217 acres, of which 6,211 acres are due to omissions from previous returns and 8,006 acres were plantations newly made; 4,586 acres were abandoned during the year, leaving a net increase of 9,631 acres. The principal increases were 1,131

acres in the *United Provinces*, 1,350 acres in *Burma*, 4,298 acres in the *Central Provinces* and 2,152 acres in *Madras*. The total expenditure on plantations rose from R2,31,036 to R2,36,966, which includes R41,237 on account of the Mergui Rubber plantation and experimental garden in Burma.

28. *Cultural operations* comprise all measures of artificial regeneration not amounting to plantations and are undertaken chiefly for the purpose of introducing valuable species, re-stocking blanks and poorly stocked areas and regenerating coupes after final fellings. Such works are still to a great extent experimental and the procedure adopted varies greatly according to circumstances, many methods intermediate between the broadcast sowing of seed on unprepared ground and the raising of seedlings in nurseries and transplanting them in the forest being employed. The total area operated on amounted to approximately 77,000 acres, of which 38,200 were in Bombay, 29,000 in Burma and nearly 7,000 in Madras.

29. The amount expended on cultural operations was R70,067 compared with R62,925 in 1906-07. Details for the different provinces were :—

	R
Bengal	5,201
United Provinces	4,836
Punjab	5,347
Burma	18,642
Eastern Bengal and Assam	219
Central Provinces	705
Coorg . . . . .	...
North-West Frontier Province	437
Ajmer	17
Baluchistan	12
Andamans . . . . .	...
Total Bengal	34,916
Madras	23,940
Bombay	11,211
GRAND TOTAL	70,067

(c) *Operations for the improvement of the growing stock.*

30. These comprise weedings, cleanings and thinnings of natural crops but not of plantations. Also improvement fellings and girdlings, including the cutting back of badly shaped or diseased stems, the opening out of the canopy to facilitate regeneration and the felling or girdling of inferior species to assist more valuable ones. The utilization of the material felled is only occasionally possible and the work generally is quite distinct from exploitation. The circle reports show that some 298,000 acres were worked over at a cost of R68,700, but these figures are incomplete, details for several circles not being available.

31. There can be no question as to the value of these operations, but the extent to which it is possible to carry them out is hopelessly inadequate. To be of real benefit they should be repeated at frequent intervals, especially in localities where fire-protection has benefited the undergrowth or inferior species to a greater extent than the more valuable ones, with the result that artificial assistance must be afforded to the latter if the proportion is to be increased or even maintained. The fact that money spent on properly carried out improvement fellings is of far more benefit than a similar amount spent on plantations is now generally recognised, but badly conducted operations may

result in great damage to the growing stock. Skilled supervision is essential and comparatively few subordinates can be trusted with these important works, and this is one reason why they cannot at present be carried out over much larger areas. In several provinces the scarcity of labour is another contributing cause but every effort should be made to extend the scope of such operations.

(d) *Experiments.*

32. The following are brief abstracts of the most important features of Provincial reports regarding the experiments carried out during the year:—

Bengal.—Of 200 mahogany seedlings planted out in the Banpur forest, only 72 were alive at the close of the year. Wattle seed obtained from Naini Tal failed at Kurseong. Some Para rubber trees grown from seed obtained about six years ago are doing fairly well in the Sukna compound, Kurseong Terai; but nearly all the plants put out in the neighbouring forest at about the same time have disappeared in spite of every attention.

United Provinces.—The severe drought or frost killed most of the seedlings of exotic trees recently put out in the forests, but *Eucalyptus globulus* and *Acacia decurrens* are reported to be doing well at moderate elevations in the Naini Tal division. Frost killed all the *lac* tied on by the lessee in the Siwalik division, and he has expressed his intention of abandoning the experiment which, however, will be continued for a time departmentally, although it appears probable that the extremes of temperature are too great for the successful cultivation of *lac*. In the experimental garden at Chorgalia, the formation of *lac* on the infected stems of *arhar* (*Cajanus indicus*) proceeded satisfactorily, but the insects did not spread much to other stems. A large number of the *arhar* plants sown in 1906 died in the hot weather of 1908, although well irrigated, and the experiment tends to show that the *arhar*, on account of its short life, is not a very suitable host plant for *lac*. An experiment that has been proceeding during the last four years with a view to ascertaining the best method of tapping the *chir* pine for resin has shown that channels made diagonally across the fibres yield nearly 20 per cent. more resin than channels parallel with the fibre. In the Sathiana Range of the Eastern Circle 200 acres of open forest have been demarcated for experimental closure to fire and grazing with a view to procuring better natural reproduction of *shisham* and *khair*.

Punjab.—The experiment in Jhelum with *Salix Babylonica* has been abandoned, but continued attention will be paid to *Pinus pinaster* in connection with the afforestation of bare hill sides. A number of new species of *Eucalyptus*, which have been specially obtained from Tasmania as being likely to suit the climate, are being tried in Simla and extended experiments in fruit growing are also about to be tried. A few sample plots have been established with the object of obtaining information regarding the degree of thinnings desirable and the yield of resin from trees tapped to death. These experiments require to be extended and in some cases more closely supervised before definite results can be expected.

Burma.—Experimental sowing and planting of various species were continued on a small scale; the germination of the seed of *Pterocarpus dalbergioides* (Andamans padouk) appears to have been generally satisfactory. Further sowings of *Cinnamomum camphora* seed obtained from Hong Kong were made in the Northern and Southern Circles, and preliminary arrangements were made for the experimental cultivation of *lac*, especially on *Schleichera trijuga*. The Mergui rubber plantation was maintained and 2,455 lbs. of dry rubber were collected. The yield of rubber appears to depend to considerable extent on the method of tapping; 280 trees on which half spiral incisions were made yielded 566 lbs. of dry rubber compared with 347 lbs. yielded by 660 trees in which V-shaped incisions were made.

Eastern Bengal and Assam.—Preparations have been made to propagate *lac* on *arhar* (*Cajanus indicus*) plants by sowing up some 20 acres with this species. Two sample plots were selected with a view to obtaining statistics regarding the growth of *Nakor* (*Mesua ferrea*).

Central Provinces.—The silvicultural experiments previously instituted were continued, but have not yet yielded any very definite results. Certain conclusions are indicated which, however, require confirmation before they can be finally accepted. Sowings of *lac* in the Berar Circle were not successful, the failure being attributed to heavy rain after the insects hatched out and to the early cessation of the rains. The Conservator, however, remarks that the

failure is no doubt partly due to the unfavourable season but chiefly to the absence of men experienced in the cultivation of *lac*.

Baluchistan.—The various experiments already instituted with a view to introducing fodder and forest plants were continued. The results so far are not very encouraging; out of 11 varieties tried, only two, *viz.*, *Paspalum dilatatum* and the *Chil*, succeeded.

Madras.—Except in regard to Ceara rubber, teak and *Pterocarpus marsupium* in the Napier's park in Ganjam, Divi Divi (*Casalpinia coriaria*) in Nellore and North Arcot, camphor wood in the Nilgiris and *Swietenia Mahogani* and *Hevea Braziliensis* in South Canara, the results of the numerous experiments with exotic and other trees were not encouraging.

Bombay.—The experimental plantations of rubber were extended in some divisions, but, except in South Thana, they do not appear to be very promising. Government are arranging for a special examination and report on the experiments by an expert in rubber cultivation. Attempts to extend the cultivation of *lac* by infecting trees of *Schleichera trijuga* and *Butea frondosa* in North Khandesh were unsuccessful. Certain silvicultural experiments undertaken are as yet inconclusive.

5.—EXPLOITATION.

(a) System of Management.

33. In the provinces outside the Bombay and Madras Presidencies, the total area for which regular working-plans have been prepared and sanctioned amounted, in the year under review, to 31,825 square miles. This excludes 317 square miles in the Andamans for which a working-plan has been approved but is not yet in operation, and it includes 10,405 square miles of forests which are either unworkable or for which no definite system of working has been prescribed.

The various silvicultural systems in force over this area are summarised in the following table:—

Silvicultural system.	Area in square miles.	Percentage of total area under each silvicultural system.
Method of Clear fellings by compartments	39	·1
Uniform method	177	·5
Group method	75	·2
Selection method	10,335	32·5
Simple coppice	128	·4
Coppice with standards	2,524	7·8
Method of Improvement fellings	8,142	25·5
	(a) 10,405	33·0
TOTAL	31,825	100·0

(a) Included in the forests for which working-plans have been prepared but not subjected to any definite system of working.

It is thus manifest that the Selection method and the method of Improvement fellings are the systems most widely applied in the provinces outside the Madras and Bombay Presidencies. The wide application of these two systems is due to the fact that some simple systems had to be introduced in order to deal with the large areas of forest which have been taken in hand since the commencement of forest conservancy in India; the Selection system was

found to be the most rational one to adopt under the circumstances and is also the most suitable for the protection of steep hill sides. In a great many cases the forests were already in a semi-ruined condition when taken up, and it was thus necessary to apply nothing more than Improvement fellings in order to enable them to recover from the effects of former overworking and bad treatment.

As time goes on there can be little question that it will be of advantage to introduce, to a much larger degree than has been possible hitherto, some more systematic form of working, for example the Uniform method: this subject, which is one of great importance to the future of silviculture in India, is now receiving the attention of Forest officers and is also under special investigation at the Imperial Forest Research Institute, Dehra Dun.

(b) *Agency of Exploitation.*

[Vide Appendix XVIII.]

(i) *Departmental Agency and (ii) Purchasers.*

34. The outturn of *timber* rose by nearly $7\frac{1}{2}$ million cubic feet to about $65\frac{1}{2}$ million cubic feet. Of this total, $7\frac{1}{2}$ millions were removed by departmental agency, nearly 53 millions by purchasers, $2\frac{1}{2}$ millions by free grantees and nearly $2\frac{1}{2}$ millions by right or privilege-holders. The policy of still further relieving the Department of timber operations is gradually being given effect to, and there was a net reduction, compared with the previous year, of nearly 900,000 cubic feet in the quantity of timber removed by government agency, notwithstanding that in Madras there was an increase under this head of nearly 350,000 cubic feet. The quantity removed by purchasers and free grantees increased by more than $7\frac{1}{2}$ millions and nearly four-fifths of a million cubic feet respectively. A small net increase in the volume extracted by right-holders resulted from an increase of 300,000 cubic feet in Bombay and decreases in Bengal and Madras.

The outturn of *fuel* was $169\frac{1}{2}$ million cubic feet, or nearly $5\frac{1}{2}$ million cubic feet more than in the previous year. Of this, more than $21\frac{1}{2}$ millions were removed by government agency, 92 millions by purchasers, more than $7\frac{1}{2}$ millions by free grantees and $48\frac{1}{2}$ millions by right or privilege-holders. As compared with the previous year, there was a small decrease in the quantity removed by purchasers, while removals by government agency, free grantees and right-holders increased by more than four-fifths of a million, $1\frac{1}{2}$ millions and more than 3 million cubic feet respectively. In Bombay alone the quantity removed by right-holders increased by more than $3\frac{1}{2}$ million cubic feet.

The number of *bamboos* extracted amounted to nearly $193\frac{1}{2}$ millions or 12 millions more than in the previous year. Removals by government agency amounted to nearly $10\frac{1}{2}$ millions, by purchasers to more than $157\frac{1}{2}$ millions, by free grantees to nearly 3 millions and by right-holders to $22\frac{1}{2}$ millions. The principal changes as compared with the previous year were an increase of $3\frac{1}{2}$ millions by government agency—almost wholly in Madras; a decrease of nearly half a million by purchasers—made up of a decrease of $3\frac{1}{2}$ millions in Bengal and increases of nearly 2 and 1 million respectively in Madras and Bombay, a decrease of more than a quarter of a million by free grantees, and an increase of $9\frac{1}{2}$ million by right-holders; of the latter more than 8 millions occurred in Bombay and nearly $1\frac{1}{2}$ millions in Bengal.

The outturn of *minor produce*, including grass and grazing, increased in value by nearly $5\frac{1}{2}$ lakhs of rupees to a total of nearly $71\frac{1}{2}$ lakhs distributed as follows:—Nearly $3\frac{1}{2}$ lakhs by government agency, more than $46\frac{1}{2}$ lakhs by purchasers, more than $7\frac{3}{8}$ lakhs by free grantees, and more than $13\frac{1}{4}$ lakhs by right-holders. Under the first three heads the increases were approximately $\frac{1}{2}$ of a lakh, $1\frac{3}{8}$ lakhs and $3\frac{3}{8}$ lakhs respectively, while the value of the minor produce extracted by right-holders was nearly $\frac{2}{5}$ of a lakh less than in the previous year. The large increase in the value of produce granted free was almost entirely in the Bengal Presidency, and the Central Provinces alone accounts for $2\frac{1}{2}$ lakhs.

(iii) *Rights and Privileges.*

35. The material removed from the forests by right and privilege-holders during the last two years was:—

	1906-07.	1907-08.
Timber, cubic feet	2,483,669	2,464,266
Fuel, cubic feet	45,816,957	48,400,846
Bamboos, number	12,830,125	22,160,618
Minor produce, including grass and grazing, value	R14,23,443	13,84,749

Mention has already been made of the greater quantities of timber fuel and bamboos extracted by right-holders in Bombay, and it is probable that the apparent increase is due more to revised estimates than to any actual increase in the amount of produce removed.

(iv) *Free Grants.*

36. The year under review having been one of general scarcity, the amount of forest produce granted free shows a considerable increase.

The following are the figures for the last two years:—

	1906-07.	1907-08.
Timber, cubic feet	1,325,357	2,112,544
Fuel, cubic feet	5,991,867	7,653,314
Bamboos, number	3,222,567	2,987,151
Minor produce, value	R4,05,967	R7,63,135

(c) *Outturn and Sources of Forest Produce.*

(Vide Appendix XVII.)

37. The outturn from all classes of forest under the control of the Forest Department, of timber and fuel, bamboos and minor produce is compared with that of the previous year in the following statement:—

Presidency.	Year.	Timber and fuel.	Bamboos.	Minor produce.
		Cubic feet	No.	R
Bengal ...	1907-08	169,524,073	133,035,771	42,18,119
	1906-07	162,390,630	135,503,416	37,19,999
Madras ...	1907-08	26,354,690	44,657,836	16,20,999
	1906-07	23,975,356	39,282,182	15,20,606
Bombay ...	1907-08	39,103,360	15,733,416	13,00,123
	1906-07	35,780,962	6,608,172	13,49,415
GRAND TOTAL ...	1907-08	234,982,123	193,427,023	71,39,241
	1906-07	222,140,948	181,393,770	65,90,019

Of the increased output of more than 7 million cubic feet of *timber and fuel* in Bengal, 1¼ millions were from reserved forests, more than 1 million from protected forests and 4½ millions from unclassified forests.

As regards *bamboos*, the number extracted naturally fluctuates considerably from year to year, and the increase of 12 millions during the year under review can only be regarded as a partial recovery of the decrease of 28½ millions recorded in the previous year.

The value of the outturn of *minor produce* was R5,49,222 greater than in the previous year. Much of this is attributable to increased grazing facilities granted because of the prevailing scarcity.

6.—EXPORTS OF FOREST PRODUCE.*

(Vide Appendix XXIV.)

38. The total value of exports of forest products at ports of shipment amounted to 563½ lakhs of rupees compared with 496½ lakhs in 1906-07, and an average of 469 lakhs for the three preceding years.

The quantity of *caoutchouc* exported fell from 224 tons in 1906-07 to 149 tons in the year under review. There was also a fall in the value from R4,993 to R3,882 per ton, and this probably accounts, to some extent, for the smaller quantity exported.

The exports of *lac* rose to 18,138 tons compared with 13,464 tons in the previous year, and an average of 12,585 tons during the five years ending with 1906-07. A decline of R348 per ton in the average value of the various varieties of lac was more than compensated for by the increased quantity, and the total value of the exports rose by R58,32,851 to R4,08,30,591. Much attention is now being paid to the cultivation of lac and it is probable that the exports of this article will increase considerably in the near future.

An increase of 16,554 tons in the quantity of *myrabolams* exported, together with a slightly higher market value, resulted in an increase in the total value of the exports from R43,97,571 to R58,95,246.

The quantity of *teak* exported continued to decline, and, in the year under review, amounted only to 39,539 tons, or 4,663 tons less than in 1906-07 and 15,520 tons less than the average for the preceding five years. There was, however, a compensating increase in the value per ton and little change in the total value occurred. Six hundred and fifty tons of specially selected teak squares of large size were supplied to the Admiralty.

* This subject was dealt with in previous Reviews under Chapter IV.

CHAPTER III.

FINANCIAL RESULTS.

[Vide Appendices XIX to XXIII.]

39. The following statement shows the Gross Revenue, Expenditure, Surplus and the proportion of Expenditure to Gross Revenue for the last 35 financial years, figures for the individual years of the quinquennium 1903-04 to 1907-08 being also shown separately for purposes of comparison:—

Quinquennial periods.	Gross Revenue. (Average.)	Expenditure. (Average.)	Surplus. (Average.)	Proportion of Expenditure to Gross Revenue.
	R	R	R	Per cent.
1873-74 to 1877-78	67,23,191	44,76,303	22,46,888	66
1878-79 to 1882-83	79,15,956	52,09,538	27,06,418	66
1883-84 to 1887-88	1,10,59,434	71,42,382	39,17,052	64
1888-89 to 1892-93	1,51,86,115	82,61,176	69,24,939	55
1893-94 to 1897-98	1,74,50,655	96,57,496	77,93,159	55
1898-99 to 1902-03	1,90,22,776	1,08,42,872	81,79,904	57
1903-04 to 1907-08	2,50,55,151	1,35,94,021	1,14,61,130	54
Years.	Annual.	Annual.	Annual.	
1903-04	2,22,16,747	1,21,66,993	1,00,49,754	55
1904-05	2,40,29,950	1,29,67,856	1,10,62,094	54
1905-06	2,66,74,593	1,42,58,521	1,24,16,072	53
1906-07	2,64,91,486	1,40,63,800	1,24,27,686	53
1907-08	2,58,62,979	1,45,12,933	1,13,50,046	56

The Gross Revenue was R6,28,507 less than in the previous year and the expenditure R4,49,133 more, so that the surplus was less by R10,77,640.

The above figures for revenue do not include the estimated value of the timber and other produce granted free or at reduced rates, which, during the year under review, amounted to 49½ lakhs of rupees compared with 34 lakhs in the previous year.

40. Decreases in gross receipts occurred in the United Provinces ($\frac{4}{5}$ lakh), the Punjab ($1\frac{1}{2}$ lakhs), Burma ($11\frac{1}{2}$ lakhs), the Central Provinces ($1\frac{1}{2}$ lakhs) and in the Andamans ($3\frac{1}{2}$ lakhs). The most important increases were in Madras (6 lakhs), Bombay ($2\frac{1}{4}$ lakhs), Bengal ($1\frac{1}{2}$ lakhs), Eastern Bengal and Assam ($1\frac{1}{10}$ lakhs) and the North-West Frontier Province ($\frac{1}{2}$ lakh), while smaller increases occurred in Coorg, Ajmer and Baluchistan.

The fall in revenue in the Andamans is due to the termination of the padouk contract and to an almost complete cessation of demand for this timber. The revenue in Burma fluctuates considerably, and the figures suffer by comparison with unusually good results in 1905-06 and 1906-07. The falls in the other provinces are attributed to the larger quantities of produce granted free in consequence of the prevailing scarcity.

The increases in revenue are generally due to an increased demand and, in some cases, to better prices being realized. This does not apply to the North-West Frontier Province, where the increase is due to a change in the system of working and is not likely to be maintained.

The increase in expenditure is chiefly due to the reorganizations of the Imperial Forest Service and to partial or complete reorganizations of certain branches of the Subordinate and Clerical establishments in several provinces; further increases on this account may be expected. The amount expended on the extraction of timber by departmental agency again declined considerably. The principal changes in expenditure were in Bengal (+ $\frac{1}{2}$ lakh), United Provinces (- $1\frac{1}{2}$ lakhs), Punjab (+ $\frac{1}{2}$ lakh), Burma (- $1\frac{1}{2}$ lakhs), Eastern Bengal and Assam (+ $1\frac{2}{5}$ lakh), Central Provinces (+ $2\frac{2}{5}$ lakhs), Andamans (- $\frac{3}{4}$ lakh), Madras (+3 lakhs) and Bombay (- $\frac{1}{2}$ lakh).

41. The average net revenue per square mile of land under the control of the Forest Department fell from R52 in 1906-07 to R47 in the year under review. The largest net returns were R636 in the North-West Frontier Province, R326 in Coorg and R292 in the United Provinces; and the smallest R30 in the Punjab and R21 in Eastern Bengal and Assam.

42. The following statement shows the financial results of the working of the forests after deducting capital expenditure not yielding an immediate return:—

	R
Gross Revenue	2,58,62,979
Value of produce granted free or at reduced rates	49,53,319
	<hr/>
Total value of yield	3,08,16,298
	R
Gross Expenditure	1,45,12,933
Deduct expenditure not yielding an immediate return:—	
(a) Roads and Buildings	12,60,238
(b) Cultural operations	6,54,422
(c) Working-Plans	65,997
(d) Settlements	79,756
(e) Surveys	2,18,915
(f) Demarcation	1,36,369
	<hr/>
TOTAL	24,15,697
Balance of direct revenue producing expenditure	1,20,97,236
	<hr/>
Surplus of revenue over expenditure directly chargeable to Revenue	1,87,19,062
	<hr/>

CHAPTER IV.

GENERAL.

1.—ADMINISTRATION.

43. Mr. S. Eardley-Wilmot, C.I.E., resumed the duties of Inspector General of Forests on his return from privilege leave in July 1907. In February 1908, he was deputed to England to represent the Government of India on the Committee appointed by His Majesty's Secretary of State for India to enquire into the system of selecting and training candidates for the Imperial Forest Service. The Committee submitted its report on 9th April and Mr. Eardley-Wilmot returned to India early in May. Mr. W. F. Perrè, Assistant Inspector General of Forests, carried on the current duties of the Inspector General during Mr. Eardley-Wilmot's absence on deputation.

With the sanction of the Secretary of State three posts of Assistant and Deputy Conservators were added to the Imperial Service cadre in the United Provinces. Proposals for strengthening the controlling staff in other provinces were under the consideration of the Government of India.

Two officers of the Imperial Service retired and one officer died during the year.

Officers on Foreign Service.

44. The following statement shows the number of officers on foreign service in India, in British Colonies and serving under other Governments :—

In India.

<i>Imperial Service.</i>	<i>Provincial Service.</i>
1. Mr. A. W. Blunt (Central Provinces), Kashmir, reverted in October 1907.	1. Lala Daulat Ram (Punjab), Kashmir.
2. „ W. H. Lovegrove (United Provinces), Kashmir from October 1907.	2. „ Devi Ditta (Punjab), Jubal State.
3. „ R. M. Williamson (Central Provinces), Rewah State from October 1907.	3. Rai Bahadur M. Muttannah (Madras), Mysore.
4. „ C. G. Trevor (Punjab), Chamba State from April 1908.	4. Rao Sahib M. Rama Rao (Madras), Travancore.
	5. Mr. G. W. Thompson (Madras), Jeypore.
	6. Pandit Thakur Das (Punjab), Indore State.
	7. Mr. W. G. Gilmore (Central Provinces), Indore State.
	8. „ B. Inamati Shama Rao (Central Provinces), Mysore.
	9. Bhagawandas Harkisandas Dalal (Bombay), Rajpipla.
	10. Mr. A. P. Mudaliar (Bengal), Mysore.
	11. Rai Bahadur Keshva Nand (United Provinces), Kashmir.
	12. Mr. J. M. Blanchfield (United Provinces), Bundelkhand State (died during the year).

In the Colonies.

Mr. N. C. McLeod (Central Provinces) was permanently transferred for service in Southern Nigeria.

Under other Governments.

Mr. W. F. Lloyd (Bengal), Siam.

Mr. S. A. Wood (Burma), Soudan.

2.—RECRUITMENT, TECHNICAL EDUCATION AND RESEARCH.

45. Eleven officers, who had undergone their training partly at Cooper's Hill College and partly at Oxford and had obtained the Diploma of Forestry from the University of Oxford, were appointed Assistant Conservators of Forests and arrived in India at the end of 1907. Three of these were posted to Burma, two each to Madras, Eastern Bengal and Assam and the Central Provinces, and one each to Bengal and the United Provinces.

Nineteen candidates were selected in England by the Secretary of State for training at Oxford for the Indian Forest Service.

46. Mr. H. H. Haines continued to act as Principal of the College and Imperial Silviculturist up to 20th October 1907, when he was relieved by Mr. J. H. Lace. On the transfer of the latter officer as Chief Conservator, Burma, Mr. L. Mercer was appointed Principal from the 26th February 1908. The post of Superintendent of Working-Plans was held by Mr. A. M. F. Caccia throughout the year; he was also appointed Silviculturist from the 26th February 1908. Mr. C. E. C. Fischer was acting Forest Zoologist until the 15th October 1907, when he was relieved by Mr. E. P. Stebbing on his return from leave. Mr. R. S. Troup held the post of Forest Economist up to 15th April 1908, when he proceeded on long leave, being relieved by Mr. A. J. Gibson. Mr. R. S. Hole was Forest Botanist and Mr. Puran Singh continued to act as Forest Chemist.

47. A third year's course of theoretical and practical training was started during the year to qualify selected candidates for direct appointment to the Provincial Service. The class opened on 1st July 1907 with seven students, all in the service of the Government. Two of these students were found unfit to follow the course of instruction and returned to their respective provinces; the other five obtained pass certificates.

48. In July 1907, 114 candidates presented themselves for the College Entrance Examination for admission to the Rangers' course of 1908-10. Of these 63 passed, but only 44 joined the College in April 1908, together with 13 others who were exempted from the necessity of passing the examination. One stipendiary student was discharged from the College and the class was thus reduced to 56 at the close of the year. On the results of the final examination held in March 1908 for the class of Senior students, Higher Standard certificates were granted by the Board of Control to 22 candidates and Lower Standard certificates to seven. Six students failed to obtain any certificate.

49. *Forest Research.*—Much of the time of the Research officers had again to be devoted to the education of the large classes of Forest students at the College, but good progress in research work was made. Details are given in the Progress Report of the Imperial Forest Research Institute for 1907-08; the following brief remarks afford only general information:

Silviculture.—For the greater part of the year the Principal of the Imperial Forest College filled the appointment of Silviculturist and he had little time to devote to research. Enquiries were started with a view to collecting information regarding (a) plantations and (b) the effects of fire-protection on *Sal* in the moist Terai forests of Bengal and Eastern Bengal and Assam.

Working-Plans.—The Superintendent of Working-Plans commenced the preparation of a note on the exact manner in which investigations should be carried out, and how the collecting and recording of all statistical data should be standardized so that adequate comparison may be possible. A careful enquiry into the Selection system of treatment was taken in hand and

completed shortly after close of the year, and special registers were opened for recording data dealing with measurements in sample plots. The revision of D'Arcy's "Preparation of Forest Working-Plans" was undertaken. A preliminary note on "The development of the *Sal* in volume and in money value" and "A List of Forest technical terms" were published during the year.

Forest Botany.—The two main subjects in which research was carried on were, (a) the coppicing of teak and its effect on the vitality and normal development of the tree, and (b) the study of the forms of *Grewia*. No definite conclusion can be drawn from such investigations until they have extended over a considerable period. The Botanist was also engaged in preparing a Manual of Botany for the use of students at the College, which was sent to the Press but not published during the year.

Forest Zoology.—Various investigations were carried out in connection with insects injurious to forests, chiefly those infesting the western fringe of the sub-montane *Sal* belt in the United Provinces. A Manual of Forest Zoology was completed and sent to the Press but was not issued until after the close of the year. The following were published :—

- (a) Forest Bulletin No. 11 on "Some Assam *Sal* insect pests,"
- (b) A Forest Record on the *Lac* insect (*Tachardia lacca*), and
- (c) A Pamphlet on the bark-boring beetle attack in the coniferous forests of the Simla catchment area.

The preparation of a sample collection of Indian insects for the instruction of the students of the College was commenced.

Forest Economy.—Investigations were undertaken into the purposes for which different kinds of wood and minor forest produce can be employed, but few were completed and no very definite results were arrived at. The most important enquiries were in connection with the utilization of inferior species for railway sleepers; woods suitable for matches, wood-pulp, tea boxes and opium chests, cricket bats, lead pencils and tobacco pipes. Enquiries regarding the possible development of the *lac* industry and the commercial value of oil derived from the seeds of forest trees and of gum resins were undertaken in conjunction with the Forest Chemist.

Forest Chemistry.—The following notes were published :—

- On Cutch Analysis and the preparation of pure Catechin;
- On the utilization of Khair forests in Eastern Bengal and Assam;
- On the future of Cutch and Katha manufacture;
- On the manufacture of Camphor from *Blumea balsamifera*;
- On the manufacture of pure Shellac.

In addition, investigations were initiated in connection with the trade value of Burmese varnish or lacquer, locally distilled turpentine and the resin of *Podophyllum Emodi*.

50. The Research Institute is still in its infancy, and the experience of the year indicates that much remains to be done before the work of research can be regarded as being on a satisfactory footing. The claims of education on the time of the Research officers have already been alluded to and, at present, local Forest officers in various parts of India have to supervise or carry on many of the experiments necessary in connection with the investigations undertaken. Divisional officers have not generally time to devote to such work, and as the experiments become more extensive, special establishments will be required to supervise them and record the results.

APPENDIX I.

[Vide paragraphs 1-3.]

Area of Reserved and Leased Forests.

PROVINCE	AREA IN SQUARE MILES.				REMARKS.
	At commencement of year.	Added in 1907-08.	Excluded in 1907-08.	At close of 1907-08.	
Bengal	(a)4,235	...	...	(a)4,235	(a) Excludes 5 square miles of Reserved forests not under the management of the Forest Department.
United Provinces	(b)4,091	1	1	(b)4,091	(b) Includes 157 square miles of Leased forests.
Punjab	(c)2,334	24	(d)182	(c)2,176	(c) Revised figures: includes 525 square miles of Leased forests and excludes 114 square miles not under the management of the Forest Department.
Burma	(f)21,576	1,400	118	22,858	(d) Includes 156 square miles of Leased forests.
Eastern Bengal and Assam.	(g)6,250	300	...	(g)6,550	(e) Includes 369 square miles of Leased forests.
Central Provinces including Berar.	21,998	448	447	(h)21,999	(f) Revised figures.
Corg	476	44	...	520	(g) Excludes 6 square miles of Reserved forests not under the management of the Forest Department.
North-West Frontier	(i)234	5	3	(i)236	(h) Includes 34 square miles of village forests.
Ajmer	142	...	...	142	(i) Excludes 13 square miles of Military and Civil Reserved forests.
Baluchistan	280	...	...	280	(j) Includes 217 square miles of Leased forests and 1,607 square miles under the control of the Revenue Department.
Andamans	156	3	...	159	(k) Includes 1,607 square miles under the control of the Revenue Department, incorrectly shown last year.
Total Bengal	(f)61,772	2,225	751	63,246	
„ Madras	18,541	242	234	18,549	(l) Includes 217 square miles of Leased forests and excludes 1,499 square miles under the control of the Revenue Department.
„ Bombay	(j)13,716	173	(k)1,625	(l)12,264	
GRAND TOTAL, 1907-08	(f)94,029	2,640	2,610	94,059	
„ „ 1906-07	92,485	2,941	1,389	94,037	

APPENDIX II.

[Vide paragraphs 1-3.]

Area of all Forest Lands.

PROVINCE.		FOREST AREA IN SQUARE MILES.				Proportion of forests to whole area of Province.	REMARKS.
Name.	Area in square miles.	Reserved.	Protected.	Unclassed State.	Total.		
Bengal	115,790	4,235	(a) 2,793	...	7,028	6.0	(a) 40 square miles excluded during the year; excludes 599 square miles not under the control of the Forest Department.
United Provinces	107,637	4,091	(b) 30	(c) 42	4,163	3.8	(b) Excludes 9,070 square miles of District Protected forests not under the control of the Forest Department.
Punjab	97,218	2,176	5,241	(d) 1,722	9,139	9.4	(c) 1 square mile excluded during the year.
Burma	176,543	22,858	...	(e) 107,597	130,455	73.3	(d) 31 square miles added and 65 square miles excluded during the year.
Eastern Bengal and Assam.	93,751	6,550	(f)	(g) 22,675	29,225	31.2	(e) 15 square miles added and 1,383 square miles excluded during the year.
Central Provinces including Berar.	100,332	21,999	...	(h) 3	23,002	21.9	(f) 4 square miles not under the management of the Forest Department.
Coorg	1,582	520	...	...	520	32.9	(g) Revised figure; 212 square miles added and 508 square miles excluded during the year.
North-West Frontier	13,057	236	(i)	...	236	1.8	(h) 1 square mile transferred to Reserved forests.
Ajmer	2,646	142	...	6	148	5.6	(i) 120 square miles of Civil Protected forests are not shown.
Baluchistan	9,403	280	...	...	280	2.9	(j) Reserved lands including 192 square miles of Leased forests.
Andamans	3,143	159	...	1,794	1,953	62.1	
Total Bengal	721,102	63,246	8,064	133,839	205,149	28.4	(k) Includes 439 square miles of Leased forests, and excludes 748 square miles under the control of the Revenue Department.
" Madras	141,807	18,549	...	(j) 1,058	19,607	13.8	
" Bombay	128,029	12,264	(k) 789	...	13,053	10.6	
GRAND TOTAL, 1907-08	985,938	94,059	8,853	134,897	237,809	24.2	
" " 1906-07	987,740	94,037	9,468	136,633	240,130	24.3	

APPENDIX III.

[Vide paragraph 4.]

Progress in Forest Settlements.

PROVINCE.	AREAS ALREADY SETTLED AT THE COMMENCEMENT OF THE YEAR.			AREAS FINALLY SETTLED DURING THE YEAR.						AREAS UNDERGOING SETTLEMENT.								
	Reserved forests.	Protected forests.	Total.	AREA.			EXPENDITURE INCURRED.			AT COMMENCEMENT OF THE YEAR.			TAKEN IN HAND DURING THE YEAR.			EXPENDITURE INCURRED DURING THE YEAR.		
				Reserved.	Protected.	Total.	Reserved.	Protected.	Total.	Reserved.	Protected.	Total.	Reserved.	Protected.	Total.	Reserved.	Protected.	Total.
	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Rs.	Rs.	Rs.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Rs.	Rs.	Rs.
Bengal	4,240	...	4,240	...	...	...	...	...	...	15	...	15	...	...	...	6,869	...	6,869
United Provinces	3,934	30	3,964	...	...	...	...	...	...	...	...	13	...	13	...	...	...	...
Punjab	(a) 1,922	5,241	7,163	1	...	1	...	...	...	62	205	267	...	...	...	...	...	...
Burma	(a) 21,510	...	21,510	1,349	...	1,349	2,096	...	2,096	2,390	...	2,390	2,350	...	2,350	19,759	...	19,759
Eastern Bengal and Assam.	6,256	...	6,256	300	...	300	2,360	...	2,360	134	...	134	122	...	122	...	...	...
Central Provinces including Berar.	(a) 18,257	...	18,257	4	...	4	180	...	180	1	...	1	12	...	12	...	...	...
Coorg	478	...	478	44	...	44	744	...	744	...	...	...	...	...	...	...	...	...
North-West Frontier	(a) 249	120	369	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	280	...	280	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Andamans	156	...	156	3	...	3	...	...	...	...	...	...	...	...	...	...	...	...
Total Bengal	(a) 57,280	5,391	62,671	1,701	...	1,701	6,380	...	6,380	2,602	205	2,807	3,497	...	3,497	26,628	...	26,628
Madras	(b) 18,505	...	18,505	44	...	44	1,110	...	1,110	453	...	453	66	...	66	1,879	...	1,879
Bombay	13,412	919	14,331	53	...	53	...	...	...	67	...	67	12	...	12	(c) 5,681	...	(d) 5,681
GRAND TOTAL, 1907-08	89,197	6,310	95,507	1,798	...	1,798	7,490	...	7,490	3,122	205	3,327	3,575	...	3,575	34,188	...	34,188
" " 1906-07	87,523	6,151	93,674	1,674	138	1,812	3,151	...	3,151	1,954	205	2,159	2,978	1	2,979	25,108	...	25,108

(a) Corrected figures.

(b) Difference of 23 square miles between the closing balance of last year and the opening balance of this year is mainly due to revision of figures as a result of surveys and disforestation.

(c) Excludes Rs 0 expended in other than Forest Accounts.

(d) Excludes Rs 7,169 expended in other than Forest Accounts.

APPENDIX IV.

[Vide paragraph 5.]

Demarcation and Maintenance of Boundaries.

PROVINCE.	CIRCLE.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at the close of the year.	Length of boundaries not demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	EXPENDITURE ON DEMARCATION DURING THE YEAR.	
									On new work.	On repairs.
		Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Rs.	Rs.
Bengal	.....	31	3,318	189	3,538	...	1,028	4,566	631	1,836
United Provinces	Eastern Circle	...	914	1,601	2,515	9	599	3,123	2,056	4,027
	Western "	...	609	1,629	2,188	1	784	2,923	101	3,858
	Total	...	1,433	3,230	4,653	10	1,383	6,046	2,157	7,855
Punjab	..... (a)	39	1,841	8,266	10,146	3,553	1,111	14,810	1,052	3,264
Burma	Pegu Circle	181	848	2,537	3,566	67	1,310	4,943	7,010	9,431
	Tenasserim "	259	1,238	2,150	3,647	193	635	4,475	3,614	6,836
	Northern "	141	1,017	2,587	3,745	39	553	4,337	3,612	2,938
	Southern "	365	1,078	2,740	4,183	427	609	5,219	6,772	3,891
	Total	946	4,181	10,014	15,141	726	3,107	18,974	21,038	23,096
Eastern Bengal and Assam.	.....	53	1,973	49	2,075	32	2,698	4,805	1,038	11,065
Central Provinces	Northern Circle	38	8,320	3,387	11,695	9	1,129	12,927	4,049	7,507
	Southern "	15	8,746	...	8,761	49	978	9,783	137	3,729
	Berar "	12	2,753	10,796	13,561	...	656	14,217	4,092	5,620
	Total	65	19,819	14,133	34,017	52	2,763	36,832	8,278	16,856
Coorg	.....	166	...	141	307	173	56	536	1,097	115
North-West Frontier	.....	...	122	655	777	...	139	916	...	585
Ajmer	.....	...	1	261	262	...	158	420	250	45
Baluchistan	.....	...	252	169	421	...	77	498	...	...
Andamans	.....	6	8	34	48	33	116	197	100	11
Total Bengal	.....	1,306	32,938	37,141	71,365	4,579	12,636	88,600	35,641	64,558
Madras	Northern Circle	141	2,639	7,356	10,136	97	545	10,778	9,765	2,430
	Central "	67	11,985	2,856	14,908	131	280	15,319	969	3,883
	Southern "	162	1,838	8,139	10,136	425	873	11,434	4,257	12,845
	Total	370	16,462	18,348	35,180	653	1,698	37,531	14,991	19,158
Bombay	Northern Circle	60	109	5,356	5,525	742	468	6,735	564	1,651
	Central "	99	3,256	11,477	14,832	4,176	1,471	20,179	1,160	1,213
	Southern "	529	933	10,800	12,262	563	629	13,394	4,650	2,374
	Sindh "	57	1,741	245	2,043	...	588	2,631	...	...
	Total	745	6,039	27,878	34,662	5,421	3,156	43,239	6,374	5,488
GRAND TOTAL, 1907-08	.....	2,421	55,439	83,367	141,327	10,653	17,490	169,370	57,008	89,154
" 1906-07	.....	2,611	57,599	83,026	143,256	11,869	16,250	171,375	33,562	70,311

F.B.—Boundaries include, besides the outer perimeter, the limits of enclosures of private and other lands within the forests, but not the limits of subdivisions, such as blocks, compartments and coupes.

(a) The boundaries of the Chamba State Forests which have been retroceded to the Rajah are excluded.

APPENDIX V.

[Vide paragraphs 6—9.]

Forst areas surveyed and under survey.

PROVINCE.	1"=1 MILE.		2"=1 MILE.		4"=1 MILE.		TOTAL OF DETAIL SURVEY.		Expenditure on Surveys including mapping and publishing charges (debitable to Forests).
	Outturn.	Cost rate.	Outturn.	Cost rate.	Outturn.	Cost rate.	1907-08.	Total up to date.	
1	2	3	4	5	6	7	8	9	10
	Sq. m.	Rs.	Sq. m.	Rs.	Sq. m.	Rs.	Sq. m.	Sq. m.	Rs.
Bengal	1,257	42.5	...	...	1,257	2,307	...
United Provinces	4,138.5	2,285
Punjab	4	30.5	...	...	4	3,572	2,297
North-West Frontier Province	366	735
Baluchistan	43	(a)	...	...	...	...	43	43	(c)
Burma	726	69.2	4.5	...	730.5	13,835.5	165
Central Provinces including Berar	57	54.3	...	...	57	18,676.5	631
Eastern Bengal and Assam	1,580	286
Ajmer	144	...
Coorg	40	(a)	...	...	40	40	(c)
Total of Bengal	43	...	2,084	...	4.5	...	2,131.5	44,702.5	(c) 6,199
Madras	35.5	52.8	39.0	326.0	74.5	14,352.5	(c)
Bombay	556.25	32.7	...	...	556.25	12,344.25	(c)
Total of Madras and Bombay	591.75	...	39.0	...	630.75	26,696.75	(c)
GRAND TOTAL, 1907-08	43	...	2,675.75	...	43.5	...	2,762.25	71,399.25	(a) 6,199
1906-07	1,648	...	578.5	...	2,226.5	68,637	(b) 63,297

- (a) Cost rate not given.
(b) Includes 126 square miles on 8" scale.
(c) Exclusive of cost borne by the Survey of India.
(d) Excludes Rs 30,656 for Head-quarters charges.
(e) " " 1,52,023 " " "

APPENDIX VI.

[Vide paragraphs 6-9.]

Details of Forest Survey operations.

PROVINCE.	Forest surveyed.	NATURE OF SURVEY OPERATIONS.				Expenditure including mapping and publishing charges (debitable to Forests).	REMARKS.	
		2 ^d DETAIL SURVEY.		1 st DETAIL SURVEY.				
		Area.	Cost rate.	Area.	Cost rate.			
		Sq. m.	R.	Sq. m.	R.	R.		
BENGAL	Sunderbans	1,257	42.5	...	...	.. (a)	
EASTERN BENGAL AND ASSAM	Chittagong	...	...	...	...	86	Mapping and publishing charges.
UNITED PROVINCES OF AGRA AND OUDH.	Western Circle.	Tehri Garhwal	...	...	...	600	Mapping and publishing charges. For 2nd edition of Kumaun and Garhwal maps.
		Naini Tal	...	...	...	456	
	Ganges	...	...	...	374		
	Garhwal	...	...	...	718		
	Kheri	...	...	...	38		
Eastern Circle.	Pilibhit	...	...	...	...	99	Mapping and publishing charges.
	Total	...	...	...	...	2,285	
PUNJAB	}	Attock	4	30.5(a)	Mapping and publishing charges.
		Rawalpindi	...	...	...	...	238
		Jhelum	...	...	...	...	657
		Bahawalpur	...	...	...	...	1,232
		Shahpur	...	...	...	...	170
Total	4	30.5	...	...	2,297		
NORTH-WEST FRONTIER PROVINCE.	Hazara	...	...	...	...	735	Mapping and publishing charges.
BURMA	Northern Circle.	Mu	232(a)	Mapping charges.
		Katha	...	...	...	...	19
	Southern Circle.	Yaw	275	...	4.5	...	..(a)
		Ruby Mines	219	...	...	...	..(a)
		Minbu	...	...	...	...	146
Total	726	69.2	4.5	..(c)	165			
CENTRAL PROVINCES	Berar	57	54.3	...	...	631(a)	Preparation of Taluk maps.
BALUCHISTAN	.....	43(b)	..(c)	...	...	..(a)	
COORG	.....	40	..(c)	...	...	..(a)	
MADRAS	Northern Circle.	Ganjam	...	...	39	326.0	..(a)
		North and South Malabar.	33.5	...	...	...
	Southern Circle.	Nilgiris	2	...	...	...
Total	35.5	52.8	39	326.0	..(a)			
BOMBAY	Central Circle.	West Khandesh	555	32.7	...	...	..(a)
		East Khandesh	1.25		...	...
		Total	556.25	32.7(a)	
FOREST SURVEYS	Head-quarters	...	...	...	...	30,655	
GRAND TOTAL, 1907-08	.....	(b) 2,718.75	...	43.5	...	36,854	
" " 1906-07	.....	1,648	...	578.78	...	95,319	

(a) Cost borne by the Survey of India.

(b) Includes 43 Sq. miles on 1" scale.

APPENDIX VII.

[*Vide* paragraph 10.]

Areas brought under the control of sanctioned Working-Plans up to 30th June 1908 in the Provinces outside the Madras and Bombay Presidencies.

PROVINCE.	FOREST AREA IN SQUARE MILES.				Area for which Working-Plans prepared and sanctioned up to 30th June 1908.	Proportion of Forest area under sanctioned Working-Plans.
	Reserved.	Protected.	Unclassed State.	Total.		
					Sq. miles.	Per cent.
Bengal	4,335	2,793	...	7,028	5,088	72
United Provinces	4,091	30	42	4,163	3,750	90
Punjab	2,176	5,241	1,722	9,139	4,013	44
Burma	22,858	...	107,597	130,455	5,829	4
Eastern Bengal and Assam	6,550	...	22,675	29,225	1,103	4
Central Provinces including Berar	21,999	...	3	22,002	11,683	53
Coorg	520	...	...	520	178	34
North-West Frontier	236	...	...	236	236	100
Ajmer	142	...	6	148	140	95
Baluchistan	280	...	...	280	...	...
Andamans	159	...	1,794	1,953	...	...
GRAND TOTAL, 1907-08	63,246	8,064	132,839	205,149	31,825	16
" " 1906-07	61,780	8,109	135,554	205,443	30,216	15

APPENDIX VI.

[Vide paragraphs 6-9.]

Details of Forest Survey operations.

PROVINCE.	Forest surveyed.	NATURE OF SURVEY OPERATIONS.				Expenditure including mapping and publishing charges (debitable to Forests).	REMARKS.	
		2 nd DETAIL SURVEY.		4 th DETAIL SURVEY.				
		Area.	Cost rate.	Area.	Cost rate.			
		Sq. m.	R.	Sq. m.	R.	R.		
BENGAL	Sunderbans	1,257	42.5	...	...	.. (a)	
EASTERN BENGAL AND ASSAM	Chittagong	...	...	...	...	86	Mapping and publishing charges.
UNITED PROVINCES OF AGRA AND OUDH.	Western Circle.	Tehri Garhwal	...	...	...	600	Mapping and publishing charges.
		Naini Tal	...	...	...	456	
	Eastern Circle.	Ganges	...	...	...	374	For 2nd edition of Kumaun and Garhwal maps.
		Garhwal	...	...	...	718	
		Kheri	...	...	...	38	
Pilibhit	...	...	...	...	99	Mapping and publishing charges.	
	Total	...	...	...	...	2,285	
PUNJAB	}	Attock	4	30.5 (a)	Mapping and publishing charges.
		Rawalpindi	...	...	...	...	233
		Jhelum	...	...	...	...	657
		Bahabr	...	...	...	...	1,232
		Shahpur	...	...	...	...	170
	Total	4	30.5	...	...	2,297	
NORTH-WEST FRONTIER PROVINCE.	Hazara	...	...	...	...	735	Mapping and publishing charges.
BURMA	Northern Circle.	Mu	232	...	...	... (a)	Mapping charges.
		Katha	...	...	...	19	
	Southern Circle.	Yaw	275 (a)	Mapping charges.
		Ruby Mines	219	...	4.5	... (c)	... (a)	
		Minbu	...	...	...	...	148
	Total	726	69.2	4.5	... (c)	165		
CENTRAL PROVINCES	Berar	57	54.3	...	...	631 (a)	Preparation of Taluk maps.
BALUCHISTAN	.....	43 (b)	... (c)	...	...	... (a)	
COORG	.....	40	... (c)	...	...	... (a)	
MADRAS	Northern Circle.	Ganjam	...	...	39	326.0	... (a)
		North and South Malabar.	33.5	...	...	...
	Southern Circle.	Nilgiris	2	...	...	...	... (a)
	Total	35.5	52.8	39	326.0	... (a)		
BOMBAY	Central Circle.	West Khandesh	555	32.7	...	...	... (a)
		East Khandesh	1.25		...	...
		Total	556.25	32.7	...	...	... (a)
FOREST SURVEYS	Head-quarters	...	...	...	...	30,655	
GRAND TOTAL, 1907-08	.....	(b) 2,718.75	...	43.5	...	38,854	
" " 1906-07	.....	1,648	...	578.78	...	95,319	

APPENDIX VII.

[*Vide* paragraph 10.]

Areas brought under the control of sanctioned Working-Plans up to 30th June 1908 in the Provinces outside the Madras and Bombay Presidencies.

PROVINCE.	FOREST AREA IN SQUARE MILES.				Area for which Working-Plans prepared and sanctioned up to 30th June 1908.	Proportion of Forest area under sanctioned Working-Plans.
	Reserved.	Protected.	Unclassed State.	Total.		
					Sq. miles.	Per cent.
Bengal	4,235	2,793	...	7,028	5,088	72
United Provinces	4,091	30	42	4,163	3,750	90
Punjab	2,176	5,241	1,722	9,139	4,013	44
Burma	22,858	...	107,597	130,455	5,629	4
Eastern Bengal and Assam	6,550	...	22,675	29,225	1,103	4
Central Provinces including Berar	21,999	...	3	22,002	11,683	53
Coorg	520	...	...	520	178	34
North-West Frontier	236	...	...	236	236	100
Ajmer	142	...	6	148	140	95
Baluchistan	280	...	...	280	...	...
Andamans	159	...	1,794	1,953	...	...
GRAND TOTAL, 1907-08	63,246	8,064	132,839	205,149	31,825	16
" " 1906-07	61,780	8,109	135,554	205,443	30,216	15

APPENDIX VIII.

[Vide paragraphs 10 and 11.]

Progress in Working-Plans in the Provinces outside the Madras and Bombay Presidencies during the year 1907-08.

PROVINCE.	PRELIMINARY PROPOSALS SUBMITTED TO THE INSPECTOR-GENERAL OF FORESTS, FOR WORKING-PLANS.		COMPLETED PLANS SUBMITTED FOR OPINION AND REMARKS OF INSPECTOR-GENERAL OF FORESTS.		PLANS FINALLY SANCTIONED BY LOCAL GOVERNMENTS ON RECOMMENDATION OF THE INSPECTOR-GENERAL OF FORESTS.		
	No.	Area for which prepared.	No.	Area for which prepared.	No.	Area for which prepared.	
1	2	3	4	5	6	7	
	No.	Sq. miles.	No.	Sq. miles.	No.	Sq. miles.	
Bengal	1	66	1	225	1	(a)225	
United Provinces { Eastern Circle . . . . .	...	...	1	71	1	(a)21
	Western " . . . . .	...	...	...	1	78
Punjab . . . . .	...	...	...	...	...	...
Burma	Pegu Circle . . . . .	...	...	...	...	...
	Tenasserim Circle . . . . .	...	1	570	2	601
	Northern "	1	38	...	...	...
	Southern "	4	645	3	798	3	820
Eastern Bengal and Assam	3	326	...	...	...	...
Central Provinces { Northern Circle	1	42	2	981	...	...
	Southern "	1	501	1	193	1	(b)193
	Berar "
Coorg . . . . .	...	...	...	...	...	...
North-West Frontier . . . . .	...	...	...	...	1	51
Ajmer . . . . .	...	...	...	...	...	...
Baluchistan . . . . .	...	...	...	...	...	...
Andamans . . . . .	...	...	...	...	...	...
TOTAL	11	1,618	9	2,838	10	1,989	

Notes.—This statement has been compiled by the Superintendent of Working-Plans.

(a) Revised Working-Plan.

(b) Includes 136 Sq. miles of revision.

APPENDIX IX.

[Vide paragraphs 10 and 11.]

Comparative Statement of Progress made in Working-Plans.

PROVINCE.	AREAS FOR WHICH WORKING-PLANS HAVE BEEN COMPLETED AND SANCTIONED.		AREAS FOR WHICH WORKING-PLANS ARE BEING COMPLETED.		Areas for which Working-Plans have still to be taken in hand.	Total forest area, as in Form No. 51.	REMARKS.	
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.				
1	2	3	4	5	6	7	8	
	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.		
Bengal	(a)5,088	...	295	...	1,645	(a)7,028	(a) Exclude 5 square miles of "other Reserves."	
United Provinces	{ Eastern Circle	(b)1,815	...	...	34	306	(b) Includes 821 square miles of Forests in Bahraich, Khari and Pilibhit Divisions, the existing Working-Plans for which were under revision during the year, and 21 square miles of Forests in Gonda Division, the Working-Plan for which was sanctioned during the year.
	{ Western "	(c)1,857	78	73		(c)2,008
Punjab	(d)4,013	...	363	...	4,764	9,139		
Burma	{ Pegu Circle	1,672	...	...	...	30,082	(c) Decrease by 1 square mile, as compared with the figures of previous year, is due to the Lurli and Suitoli forests in the Jaunsar Division being handed over to the cantonment authorities.
	{ Tenasserim Circle	1,187	601	265	...	29,605		
	{ Northern "	38	...	716	276	27,696		
	{ Southern "	1,311	820	663	315	35,208	38,317	
Eastern Bengal and Assam	1,103	...	189	158	27,765	29,225	(d) Decrease by 132 square miles, as compared with the figures of 1906-07, is due to the re-demarcation and the transfer of Chamba forests to the management of the Chamba State.	
Central Provinces	{ Northern Circle	(e)3,902	...	939	...	(e)2,529	(e) Decrease by 218 square miles, as compared with the figures of 1906-07, is due to changes in the area of forests, under the Working-Plans in the Hoshangabad and Secni Divisions.	
	{ Southern "	(f)5,540	57	(f)2,026		
	{ Berar "	2,189	(h)4,820		7,009
Coorg	178	...	...	...	342	520	
North-West Frontier	(g)185	(g)51	...	...	...	236	
Ajmer	140	...	...	...	8	148	(f) Increase by 2 square miles, as compared with the figures of 1906-07, is due to re-calculation of areas in North Chanda Division.
Baluchistan . . . . .	...	...	...	...	280	280	
Andamans . . . . .	...	...	(h)317	...	1,636	1,953	(g) Increase by 1 square mile, as compared with the figures of the previous year, is due to the re-survey of the area.
TOTAL BENGAL	30,218	1,607	3,756	783	168,785	205,149	(h) A Working-Plan for this area was compiled during 1906-07, but has not yet been brought into force.	
Madras	{ Northern Circle	(i)2,281	255	602	(m)1,074	2,599	(i) Includes 918 square miles, for which Working-Plans are not required.	
	{ Central "	2,177	248	1,724	536	2,558		(j) Includes 1,441 square miles, for which Working-Plans are not required.
	{ Southern "	2,167	101	593	6	2,686		5,553
TOTAL	(i)6,625	604	2,919	(m)1,616	7,843	19,607	(k) Includes 2,340 square miles, for which Working-Plans are not required.	
Bombay	{ Northern Circle	(l)1,787	2	64	...	664	(l) Decrease by 27 square miles, as compared with the figures of 1906-07, in columns 2 and 3 is due to the adoption of the area given in India Survey Maps.	
	{ Central "	2,280	52	414	96	2,264		(m) Excludes 89 square miles, which are included in columns 2, 3 and 4.
	{ Southern "	(o)920	25	304	64	3,111		(n) Decrease by 1 square mile, as compared with the figures of 1906-07, is due to re-computation of area.
	{ Sindh "	611	431	(p)74		1,106
TOTAL	5,598	500	682	160	6,113	13,053	(o) Decrease by 1 square mile, as compared with the previous years' figures, is due to the reduction of the Western Kanara Division.	
							(p) Includes 21 square miles, which have not been accounted for in the Report.	

APPENDIX X.

[Vide paragraphs 12 to 14.]

Expenditure on Communications and Buildings.

PROVINCE.	NEW WORK.		REPAIRS.		Other Works.	TOTAL.
	Buildings.	Roads.	Buildings.	Roads.		
	R	R	R	R	R	R
Bengal	22,364	29,756	6,571	9,999	2,868	71,558
United Provinces	44,616	19,861	31,619	47,843	12,136	1,55,075
Punjab	45,795	33,131(a)	7,879	21,477	2,168	1,10,450(a)
Burma	81,650	93,864	42,557	20,425	12,861(b)	2,51,357(b)
Eastern Bengal and Assam	38,822	46,014	19,730	11,190	7,034	1,22,790
Central Provinces including Berar	91,731	83,213	23,811	27,737	1,15,529	3,41,021
Coorg	812	...	953	1,963	60	3,808
North-West Frontier	3,007	1,239	1,641	642	93	6,623
Ajmer	642	333	53	354	562	1,944
Baluchistan . . . . .	...	74	100	6	...	180
Andamans	2,299	131	395	2,093	...	4,918
Total Bengal	3,31,738	3,07,116	1,34,309	1,43,229	1,53,331	10,69,723
" Madras	76,804	32,413	31,740	38,421	10,491	1,89,869
" Bombay	55,518	8,865	15,391	19,587	11,870(c)	1,11,231(c)
GRAND TOTAL, 1907-08	4,64,060	3,48,394	1,81,440	2,01,237	1,75,692	13,70,823
" " 1906-07	3,61,543	1,96,738	1,62,205	1,93,338	82,089	9,95,911

(a) Excludes Rs. 997 spent on explosives.

(b) Excludes Rs. 466 paid in wages of rest-house darwans in the Tenasserim Circle.

(c) Excludes Rs. 7,705 spent by the Public Works Department in the Northern Circle and Rs. 858 in the Sind Circle. Excludes also certain expenditure on wells and other works included under Buildings.

APPENDIX XI.

[Vide paragraphs 15 and 16.]

Breaches of Forest Rules.

PROVINCE.	Number of cases decided by the courts.	Number of cases compounded.	Total.	Percentage of convictions to total number of cases decided by the courts.
Bengal	265	2,065	2,330	82.2
United Provinces	111	1,011	(a) 1,122	85.6
Punjab	871	5,247	6,118	80.2
Burma	894	2,217	3,111	84.9
Eastern Bengal and Assam	191	735	926	82.7
Central Provinces including Berar	351	5,914	6,265	80.9
Coorg	2	62	64	100.0
North-West Frontier	66	732	798	78.8
Ajmer	62	507	569	85.5
Baluchistan	57	168	225	92.9
Andamans	15	...	15	100.0
Total Bengal	2,885	18,658	21,543	82.8
„ Madras	(b) 4,444	(c) 15,257	19,701	83.5
„ Bombay	1,420	16,167	17,587	85.9
*GRAND TOTAL { 1907-08	8,749	50,082	58,831	86.2
{ 1906-07	10,377	47,481	57,858	85.9
{ 1905-06	11,160	46,564	57,724	83.3
{ 1904-05	10,209	43,842	54,051	89.0

* Includes cases which were pending at the close of the previous year.
(a) Excludes breaches of rules in District Forests.
(b) and (c) Exclude 848 and 1,256 cases respectively withdrawn under the orders of the District Forest Officers.

APPENDIX XII.

[Vide paragraphs 15 and 16.]

Breaches of Forest Rules.

PROVINCE.	CASES TAKEN INTO COURT.				COMPOUNDED CASES.				CASES IN WHICH THE OFFENDERS REMAINED UNDETAILED.				TOTAL OF EACH CLASS OF OFFENCE.			
	Injury to fire-protected forests by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission in tracts in which grazing is prohibited.	Other offences.	Injury to fire-protected forests by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission in tracts in which grazing is prohibited.	Other offences.	Injury to fire-protected forests by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission in tracts in which grazing is prohibited.	Other offences.	Injury to fire-protected forests by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission in tracts in which grazing is prohibited.	Other offences.
Bengal	53	187	28	33	6	1,190	421	112	163	15	—	1	222	1,292	521	146
United Provinces	38	90	35	24	37	409	555	71	110	67	10	1	185	516	610	96
Punjab	61	956	218	86	40	2,567	2,927	23	221	68	6	—	332	2,151	2,931	119
Burma	32	762	44	137	33	1,259	107	871	82	41	—	7	147	2,063	151	1,015
Eastern Bengal and Assam	4	116	6	73	1	335	135	204	31	3	—	—	36	514	141	277
Central Provinces (including Larar).	31	129	136	59	70	3,004	2,767	153	289	169	17	—	393	3,293	2,929	222
Ceorg	2	2	—	1	—	10	15	37	—	—	—	—	2	12	15	28
North-West Frontier	50	49	20	4	6	330	270	59	43	9	—	1	99	418	298	63
Ajmer	—	41	20	1	3	324	164	16	2	—	—	—	5	365	184	17
Baluchistan	—	95	35	1	—	2	165	1	4	2	—	—	4	49	200	2
Andaman	—	23	—	—	—	—	—	—	—	—	—	—	—	23	—	—
Total Bengal	274	1,921	548	419	136	9,551	7,294	1,566	1,005	374	33	10	1,475	11,806	7,871	1,995
Madras	71	3,680	1,457	210	7	10,505	6,104	666	701	574	243	25	779	14,759	7,914	1,071
Bombay	85	618	382	137	137	6,028	8,298	1,280	2,133	2,229	51	115	2,425	8,905	9,591	1,532
* GRAND TOTAL, 1907-08	449	6,209	2,338	856	400	26,084	22,136	3,512	3,839	3,177	927	150	4,679	35,470	25,016	4,528
1906-07	406	6,194	2,768	1,002	369	23,824	21,454	4,058	3,263	3,208	587	153	4,128	33,296	24,809	5,213
1905-06	421	6,661	3,261	1,189	437	24,070	20,711	3,405	3,462	2,977	672	177	4,320	33,911	23,644	4,771
1904-05	313	6,431	2,933	1,104	348	23,251	18,950	3,068	3,237	3,186	427	157	3,998	32,829	22,310	4,359

* Includes only the new cases of the year; not those which were left pending at the close of the previous year.

APPENDIX XIII.

[Vide paragraphs 17 to 19.]

Causes of Forest Fires.

PROVINCE.	I.—FIRES DUE TO PREVENTIBLE CAUSES.				II.—OTHER FIRES.				TOTAL.			
	Fires originating in Departmental Fire Conservancy operations.		External fires crossing the Fire traces.		Fires due to carelessness of outsiders or to unknown causes.		Fires originating from intention or malice.					
	No.	Sq. m.	No.	Sq. m.	No.	Sq. m.	No.	Sq. m.	No.	Sq. m.		
Bengal	13	47	21	60	39	121	36	700	109	928		
United Provinces	Eastern Circle		19	279	20	147	64	1187	7	164	1110	1777
	Western "		14	8	15	155	51	274	8	1236	88	1663
	Total		33	287	35	302	115	1461	15	1390	199	3440
Punjab	14	18	60	54	256	87	50	109	380	268		
Barma	Pegu Circle		13	110	19	716	86	628	21	332	139	1786
	Tenasserim Circle		7	4	11	289	36	242	1	17	55	552
	Northern "		16	74	10	260	18	330	2	30	46	694
	Southern "		13	394	14	136	19	33	6	75	52	638
	Total		49	582	54	1401	159	1233	30	454	292	3670
Eastern Bengal and Assam	3	26	21	508	36	278	3	1	63	873		
Central Provinces	Northern Circle		27	122	18	104	89	902	5	225	134	1353
	Southern "		24	292	33	2039	110	1596	12	665	179	4592
	Berar "		21	97	12	618	76	1462	1	...	110	2177
	Total		72	511	58	2761	275	3960	18	890	423	8122
Cooch	...	...	5	4	2	1	4	21	11	26		
North-West Frontier	...	...	17	30	52	3	121	340	190	(a) 373		
Ajmer	...	...	...	...	4	1	...	...	4	1		
	Total Bengal		184	1471	271	5180	138	7145	277	3965	1670	17701
Madras	Northern Circle		53	285	82	1142	248	2331	55	499	438	4257
	Central "		7	8	35	149	233	393	187	1060	462	1609
	Southern "		18	209	27	10	92	129	53	66	190	414
	Total		78	502	144	1300	573	2853	295	1625	1090	(b) 6280
Bombay	Northern Circle		40	7	29	35	660	1203	2	3	731	1248
	Central "		88	247	26	39	497	8565	83	148	644	3999
	Southern "		9	9	81	215	738	1709	70	285	893	2218
	Sindh "		2	1	...	...	171	209	...	...	173	310
	Total		89	264	136	239	2061	6786	155	436	2441	(b) 7775
GRAND TOTAL	1907-08		351	2237	551	6769	3572	16784	727	5966	5201	81756
	1906-07		283	1106	416	3717	3214	17984	479	3000	4393	25810

(a) Includes nearly 2 sq. miles of unprotected forests burnt.

(b) The total areas shown as burnt in Madras and Bombay do not agree with those given in para. 18 of the Review. This is due to discrepancies in the Circle reports, which cannot be accounted for.

APPENDIX XIV.

[Vide paragraphs 20 to 23.]

Protection from Cattle.

PROVINCE	RESERVED FORESTS.			PROTECTED FORESTS.			UNCLASSIFIED FORESTS.			ALL CLASSES OF FORESTS.		
	Total areas.	Area closed to all animals.	Area closed to browsers only.	Total areas.	Area closed to all animals.	Area closed to browsers only.	Total areas.	Area closed to all animals.	Area closed to browsers only.	Total areas.	Area closed to all animals.	Area closed to browsers only.
	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.	Sq. m.
Bengal	4,235	3,678	88	2,793	1,733	305	...	...	...	7,028	5,411	394
United Provinces	4,091	1,840	609	30	...	30	42	...	30	4,163	1,840	664
Punjab	2,176	352	672	5,241	82	145	1,723	15	66	9,139	449	885
Burma	22,858	18,600	85	...	...	...	107,597	...	...	130,455	18,600	85
Eastern Bengal and Assam	6,550	4,741	1,070	...	...	...	22,675	...	...	29,225	4,741	1,070
Central Provinces including Berar	21,990	2,996	7,967	...	...	...	3	...	...	22,002	2,996	7,967
Coorg	520	188	...	...	...	...	...	...	...	520	188	...
North-West Frontier Provinces	236	41	95	...	...	...	...	...	...	236	41	95
Ajmer	142	14	128	...	...	...	6	...	...	148	14	128
Baluchistan	280	209	8	...	...	...	...	...	...	280	209	8
Andamans	159	159	...	...	...	...	1,794	...	...	1,953	159	...
Total Bengal	63,246	32,813	10,722	3,064	1,815	480	133,839	15	96	205,149	34,643	11,29
„ Madras	18,549	2,085	(a) 819	...	...	...	(b) 1,058	75	...	19,607	2,160	(a) 81
„ Bombay	12,264	2,276	8,488	789	...	34	...	...	...	13,053	2,276	8,52
GRAND TOTAL { 1907-08	94,059	37,174	20,029	3,853	1,815	514	134,897	90	96	237,809	39,079	20,62
{ 1906-07	94,037	37,812	18,823	9,468	1,791	628	136,633	6	108	240,138	39,609	19,55

(a) This refers to all browsers; goats were admitted to 649 square miles of forest only.

(b) Reserved lands.

APPENDIX XV.

[Vide paragraphs 20 to 22.]

Protection from Cattle.

Circles.	GRAZED ON PAYMENT, NUMBER OF ANIMALS.										GRAZED FREE, NUMBER OF ANIMALS.									
	AT FULL RATES.					AT PRIVILEGED RATES.					BY RIGHT UNDER SETTLEMENT.					DURING PLEASURE OF GOVERNMENT OR OTHERWISE THAN UNDER SETTLEMENT.				
	Buffaloes.	Cows and Bullocks.	Goats and Sheep.	Camels.	Other animals.	Buffaloes.	Cows and Bullocks.	Goats and Sheep.	Camels.	Other animals.	Buffaloes.	Cows and Bullocks.	Goats and Sheep.	Camels.	Other animals.	Buffaloes.	Cows and Bullocks.	Goats and Sheep.	Camels.	Other animals.
..	6,902	42,019	4,005	..	24	9,632	153,897	12,572	..	532	21,000	63,000	21,000	..	..	..	179	133	..	2
Eastern	44,592	122,926	3,545	..	1,340	24,137	127,192	39,211	..	627	13,446	64,742	12,313	..	1,198	3,103	14,276	716	..	799
Western	29,155	59,699	51,109	5,604	21,037	5,082	25,269	67,906	..	233	8,938	70,528	38,619	..	38	428	8,417	562	..	..
..	73,747	188,625	54,654	5,604	22,277	23,219	152,461	107,117	..	860	22,384	135,268	51,932	..	1,231	3,529	20,696	1,276	..	79
..	14,960	55,546	367,679	13,914	1,430	1,697	9,420	281,061	118	972	145,215	664,188	700,455	282	12,930	36	744	63	4,451	40
Tega	1,671	1,295	..	..	2	..	..	..	..	..	21,205	43,405	..	..	1	..	..	..	..	25
Tenasserim	22	75	..	..	1	..	..	..	..	..	4,291	32,438	..	..	9	..	697	..	..	5
Northern	52	..	..	..	..	90	..	..	..	..	17,649	220	..	..	..	760	10	..	..	348
Southern	137	2,816	170	..	7	..	..	..	..	..	1,656	66,183	..	..	..	2,222	..	..	..	753
..	1,882	4,186	170	..	11	90	..	..	..	..	44,801	142,247	..	..	10	2,982	707	..	..	1,130
..	43,816	12,663	30	..	691	..	90,504	..	..	..	..	60	..	..	..	64,222	376,902	72,477	..	650
Northern	130,038	644,329	51,224	..	2,620	..	..	..	..	..	..	..	..	..	..	96,300	534,112	50,193	..	1,069
Southern	35,967	267,168	108,645	..	390	67,115	559,322	69,179	..	778	..	..	..	..	..	584	6,963	202	..	..
Berar	189,396	1,026,369	463,325	70	3,733	3,404	20,584	121	..	15	..	115,059	..	..	..	23,661	174,608	7,294	..	430
..	256,301	1,937,886	653,194	70	6,743	70,519	580,306	69,300	..	793	..	115,059	..	..	..	130,545	716,694	57,695	..	1,523
..	494	2,263	..	..	..	..	..	..	..	..	1,676	..	..	..	..	..	30	..	..	..
..	1,512	1,802	22	..	44	..	..	..	..	..	376	710	..	..	..	21,402	27,098	..	..	15
..	44	178	..	..	..	1,161	5,920	..	..	..	..	..	..	..	..	1,663	8,971	..	..	..
..	222	2,830	640	..	..	..	..	..	..	..	..	1,337	21,959	1	662	..	..	..	..	..
1907-08	499,880	2,248,398	1,080,339	19,588	31,220	112,318	692,518	430,050	118	3,157	235,446	1,121,899	795,376	283	14,836	224,380	1,150,711	131,649	4,451	4,101
1906-07	617,117	2,670,896	1,170,160	12,647	19,892	116,549	672,507	451,597	217	5,338	246,421	1,096,578	795,935	283	14,588	75,055	428,202	75,665	2,120	2,668
Northern	92,040	478,221	895,422	..	..	7,258	38,364	6,611	..	..	..	2,685	5,505	..	..	2,031	31,073	..	..	..
Central	41,055	841,825	1,039,100	..	..	..	257	1,282	..	..	..	584	..	..	..	708	2,794	255	..	..
Southern	2 9,118	343,518	181,617	..	322	..	579	..	..	..	2,815	..	..	..	..	..	..	..	..	..
1907-08	182,267	1,663,364	2,116,140	..	323	7,258	39,200	7,898	..	..	2,245	3,269	5,505	..	..	2,739	33,867	356	..	..
1906-07	158,360	1,560,785	1,808,607	..	338	6,881	50,895	92,861	..	..	1,481	5,182	2,202	..	..	2,045	18,035	193	..	..
Northern	675	3,070	..	..	..	70,837	16,053	15	..	..	..	..	..	..	..	53,238	281,850	..	..	..
Central (a)	7,688	26,795	230	..	1,353	34,421	290,919	140,955	..	2,296	4,266	19,401	..	..	265	..	..	..	..	..
Southern	..	2,671	1,611	..	..	..	247,061	8,834	..	51	..	..	..	..	..	..	..	..	..	..
Siindh	11,755	16,844	48,919	1,340	370	653	1,543	2,611	75	149	2,809	10,520	91	2	121	413	954	777	792	1,634
1907-08	20,116	43,880	50,763	1,340	1,722	106,101	655,577	152,415	75	2,495	7,175	29,921	91	2	386	53,651	282,804	777	792	1,634
1906-07	14,669	30,168	56,026	1,268	877	100,387	537,311	165,880	83	4,591	8,590	39,721	91	2	767	43,450	280,410	1,147	1,000	3,537
1907-08	682,263	3,955,142	3,247,292	20,928	33,266	225,677	1,687,295	590,258	191	5,652	244,966	1,135,089	800,972	285	15,222	280,770	1,467,432	132,781	5,243	5,912
1906-07	790,146	4,261,848	3,034,793	12,915	21,157	223,617	1,560,713	710,339	300	9,925	256,502	1,141,431	783,228	285	15,355	125,550	726,647	76,996	3,120	6,214

.. of the North .. and Satara Divisions for which details are not available. It is estimated that the total number of cattle of all ..

APPENDIX XVI.

[*Vide* paragraph 27.]

Area of Plantations and the cost of the year's work.

PROVINCE.	AREA IN ACRES.												Cost of operations during the year.	
	AT COMMENCEMENT OF THE YEAR.			ADDED DURING THE YEAR.			EXCLUDED DURING THE YEAR.			BALANCE AT CLOSE OF THE YEAR.				
	Regular Plantations.	Taung-yas.	Total.	Regular Plantations.	Taung-yas.	Total.	Regular Plantations.	Taung-yas.	Total.	Regular Plantations.	Taung-yas.	Total.		
Bengal	754	(a) 45	799	10	40	50	...	...	...	764	85	849	1,412
United Provinces	(b) 3,872	...	3,872	(c) 1,131	...	1,131	...	...	...	4,803	...	4,803	3,393
Punjab	507	...	507	...	...	...	...	...	...	507	...	507	...
Burma	5,646	(d) 73,330	78,976	...	(e) 1,462	1,462	412	77	489	5,234	74,715	79,949	92,522	
Eastern Bengal and Assam.	3,861	7	3,868	...	...	...	8	...	3	3,858	7	3,865	6,946
Central Provinces including Berar.	1,041	(f) 4,539	5,580	264	819	1,083	...	1,274	1,274	1,305	4,084	5,389	1,868	
Coorg	2,062	1,197	3,259	...	24	24	...	...	...	2,062	1,221	3,283	3,074
North-West Frontier	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer	64	...	64	...	...	...	...	...	...	64	...	64	921
Baluchistan	33	...	33	...	...	...	...	...	...	33	...	33	174
Andamans	697	617	1,314	66	215	281	...	...	...	763	832	1,595	5,912
Total Bengal	18,337	79,735	98,072	1,471	2,560	4,031	415	1,851	1,766	19,393	80,944	100,337	1,16,222	
Madras	(d) 24,254	(d) 2,231	(d) 26,485	1,204	25	1,229	274	29	303	25,184	2,227	27,411	1,02,112	
Bombay	(d) 16,364	...	16,364	2,821	...	2,821	2,517	...	2,517	16,668	...	16,668	18,632	
GRAND TOTAL	1907-08	58,955	81,966	140,921	5,496	2,565	8,081	3,206	1,380	4,586	61,245	83,171	144,416	2,36,966
	1906-07	61,838	74,847	136,185	3,344	2,769	6,103	7,472	31	7,503	57,710	77,075	134,785	2,31,036

(a) Erroneously omitted from last year's return.

(b) Includes 2,649 acres of plantation in Gorakhpur division practically abandoned as failures.

(c) Includes 70 acres found in excess in re-calculation of the area and 161 acres not sown.

(d) Revised figures.

(e) Includes 5 acres in the Zigyin Reserve being the area of an old plantation erroneously omitted from previous year's returns.

(f) Revised figures. Includes 365 acres of teak plantation in Sooni division and 4,124 acres sown with timber species in conjunction with field crops which were not shown in previous years.

APPENDIX XVII.

[Vide paragraph 37.]

Outturn of Forest Produce.

I.

PROVINCE.	RESERVED FORESTS.			PROTECTED FORESTS.			UNCLASSIFIED FORESTS.			AVERAGE OUTTURN PER SQUARE MILE.								
										RESERVED FORESTS.			PROTECTED FORESTS.			UNCLASSIFIED FORESTS.		
	Timber and Fuel.	Bamboos.	Minor Produce.	Timber and Fuel.	Bamboos.	Minor Produce.	Timber and Fuel.	Bamboos.	Minor Produce.	Timber and Fuel.	Bamboos.	Minor Produce.	Timber and Fuel.	Bamboos.	Minor Produce.	Timber and Fuel.	Bamboos.	Minor Produce.
C. ft.	No.	R.	C. ft.	No.	R.	C. ft.	No.	R.	C. ft.	No.	R.	C. ft.	No.	R.	C. ft.	No.	R.	
Bengal	18,411,988	5,551,421	1,44,270	17,536,848	4,570,489	1,41,826	(a)11,639	...	...	4,247	1,310	34	6,301	1,636	50	...	...
United Provinces	15,365,048	15,587,262	4,95,090	393,760	965	2,992	94,872	11,455	2,470	2,755	2,810	121	13,125	22	133	2,259	272	59
Punjab (b)	11,438,718	317,778	2,62,662	17,627,988	2,580	2,45,854	994,345	26,182	49,635	4,905	136	112	2,363	1	47	577	15	28
Rajasthan	9,694,986	18,532,000	1,76,912	...	...	...	33,209,925	43,286,000	2,22,074	424	810	8	...	...	...	309	402	2
Northern Bengal and Assam	5,417,300	11,974,660	1,31,006	...	...	...	10,381,125	11,445,080	5,74,868	827	1,828	20	...	...	...	479	505	25
Central Provinces including Bihar	24,182,095	20,620,616	16,79,680	...	...	...	...	...	...	1,099	937	76	...	...	...	...	...	...
Madhya Pradesh	219,380	96,350	20,589	...	...	...	(d)158,200	(d)44,100	...	422	185	40	...	...	...	...	...	...
North-West Frontier	970,122	...	26,666	...	...	...	...	...	...	4,110	...	113	...	...	...	...	...	...
Coastal Provinces	637,527	8,634	16,036	1,600	...	59	...	...	...	4,490	61	113	(e)	...	(e)	...	...	...
Sindh	66,216	...	18,432	...	...	...	352,710	...	26	236	...	66	...	...	(f)	...	(f)	(f)
Baluchistan	872,447	439,994	1,999	...	...	...	913,205	519,205	3,943	5,452	2,750	12	...	...	...	509	290	2
WEST BENGAL, 1907-08	37,285,827	73,128,715	29,73,372	35,622,194	4,575,034	3,91,731	46,616,052	55,332,022	8,53,016	1,376	1,153	47	4,417	567	98	248	413	6
WEST BENGAL, 1906-07	36,062,974	76,409,517	24,91,330	34,538,319	4,542,275	2,89,855	41,789,337	54,551,624	8,38,813	1,393	1,226	40	4,259	560	88	203	402	6

(a) This outturn from unclassified forests is credited to the Chhambas and Singbhum Divisions. There are, however, no demarcated unclassified forests in Bengal.
 (b) Including the Chamba forests (156 square miles) retroceded to the Raja on 1st April 1908.
 (c) Tons of bamboos in the Northern Circle have been converted at the rate of 700 bamboos to the ton.
 (d) Represents the outturn of "unreserved lands."
 (e) There are only 115 acres of protected forest in Ajmer.
 (f) A record of the area of unclassified forests does not appear to have been kept.

II.

PRESIDENCY.	Total area under control of Forest Department.	Timber and Fuel.	Bamboos.	Minor Produce.	AVERAGE OUTTURN PER SQUARE MILE.			
					Timber and Fuel.	Bamboos.	Minor Produce.	
					C. ft.	No.	R.	
Bengal	Sq. m. (a) 205,305	C. ft. 169,524,073	No. 133,035,771	R. 42,18,119	C. ft. 825	No. 655	R. 20	
Madras	19,607	26,854,690	44,657,836	16,20,999	1,345	2,278	82	
Bombay (b)	13,053	39,103,360	15,733,416	13,00,123	2,996	1,205	100	
GRAND TOTAL	(a) 1907-08	237,965	234,982,123	193,427,023	71,39,241	996	813	30
	1906-07	240,138	222,146,948	181,393,770	65,90,019	925	755	27

(a) Includes the Chamba forests (156 square miles) retroceded to the Raja on 1st April 1908.
 (b) Excludes Rs25,620 worth of sandalwood exploited during the year, and 184 cart loads of dry bamboo.

APPENDIX

[Vide

Forest Produce removed

PROVINCE.	TIMBER.				FUEL.			
	Removed by Govern- ment.	Removed by Purchasers.	Removed by Free- grantees.	Removed by Right- holders.	Removed by Govern- ment.	Removed by Purchasers.	Removed by Free- grantees.	Removed by Right- holders.
	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Bengal	27,555	4,966,508	9,807	175,744	97,143	17,356,891	4,373	13,384,954
United Provinces	93,198	4,163,465	80,177	237,370	593,880	7,254,082	170,348	3,261,160
Punjab	497,092	4,933,077	10,871	722,177	1,042,408	2,962,044	98,704	19,794,679
Burma	3,576,128	23,248,422	615,006	772,602	343,925	13,364,359	49,825	934,644
Eastern Bengal and Assam	399,137	4,821,334	554,568	7,550	18,109	4,812,539	4,058,263	1,626,925
Central Provinces including Berar	634,248	3,126,539	532,275	43,218	1,053,309	14,102,761	2,930,250	1,769,495
Coorg	112,130	173,030	...	...	12,000	80,420	...	...
North-West Frontier	62,791	600,272	931	...	91,250	151,818	23,080	34,980
Ajmer	1,796	2,915	...	3,585	36,674	594,037	...	120
Baluchistan	148	6,939	16,431	...	47,654	341,723	1,126	4,935
Andamans	579,296	41,273	34,110	110,063	692,760	18,240	272,880	37,030
Total Bengal	5,983,519	46,083,772	1,853,676	2,072,309	4,029,112	61,033,914	7,613,849	40,848,922
{ 1907-08	5,983,519	46,083,772	1,853,676	2,072,309	4,029,112	61,033,914	7,613,849	40,848,922
{ 1906-07	7,092,744	40,198,856	1,164,733	2,342,728	3,842,646	60,859,396	5,963,173	40,926,354
Madras (b)	900,176	2,582,905	144,680	89,857	13,444,727	9,023,909	13,980	154,506
Bombay (c)	939,979	4,298,394	114,188	302,100	4,072,903	21,952,843	25,535	7,397,418
GRAND TOTAL	7,823,674	62,965,071	2,112,544	2,464,266	21,546,742	92,015,666	7,653,314	48,400,846
{ 1907-08	7,823,674	62,965,071	2,112,544	2,464,266	21,546,742	92,015,666	7,653,314	48,400,846
{ 1906-07	8,719,273	45,411,733	1,325,357	2,433,689	20,725,926	92,223,166	5,991,867	45,316,957

XVIII.

paragraph 37.]

by different agencies.

BAMBOOS.				MINOR PRODUCE INCLUDING GRASS AND GRATING.				PROVINCE.
Removed by Government.	Removed by Purchasers.	Removed by Free-grantees.	Removed by Right-holders.	Removed by Government.	Removed by Purchasers.	Removed by Free-grantees.	Removed by Right-holders.	
No.	No.	No.	No.	₹	₹	₹	₹	
509,743	5,594,317	17,850	4,000,000	253	1,72,393	540	1,12,910	Bengal.
20,161	15,350,196	...	229,325	96,948	2,65,635	82,258	56,711	United Provinces.
48,250	298,215	...	1,075	2,516	1,90,639	3,057	3,71,939	Punjab.
53,000	56,524,000	49,000	5,192,000	7,082	2,35,969	13,134	1,42,882	Burma.
19,867	19,127,748	1,251,325	3,020,300	54,209	2,61,052	3,64,955	22,658	Eastern Bengal and Assam.
(a)	(a)	(a)						
484,659	18,635,946	884,611	615,400	43,326	13,13,589	2,72,799	44,966	Central Provinces including Berar.
...	140,450	...	...	...	20,589	...	...	Coorg.
...	...	...	...	687	11,519	13,810	650	North-West Frontier.
3,172	5,463	...	...	2,974	1,981	1,139	10,001	Ajmer.
...	...	...	...	7	1,131	983	16,332	Baluchistan.
4,224	60,500	454,800	439,673	398	354	2,898	2,292	Andamans.
1,143,076	115,736,334	2,657,586	13,498,275	2,13,350	24,67,850	7,55,578	7,81,341	Total Bengal
1,112,862	119,158,746	3,060,897	12,170,911	1,50,434	24,13,803	3,99,873	7,55,888	Total Bengal
9,343,675	35,145,016	156,352	12,793	71,237	14,99,671	7,416	42,675	Madras (d).
10,540	6,900,113	173,213	8,649,550	47,984	6,86,265	5,141	5,60,733	Bombay (e).
10,497,291	157,781,963	2,987,151	22,160,618	3,32,571	46,53,736	7,68,135	13,84,749	GRAND TOTAL
2,571,693	158,269,385	3,222,567	12,830,125	2,73,317	44,87,292	4,05,967	14,23,443	GRAND TOTAL

(a) Bamboos shown in tons in the Northern Circle have as usual been converted at the rate of 700 bamboos to the ton.

(b) Excluding 184 cart loads of dry bamboo.

(c) These figures are taken from Form 63 and do not always agree with the figures in Conservators' report.

(d) Compiled from paragraph 32 of Board's Proceedings reviewing the administration report.

(e) The outturn shown here is exclusive of 340 trees and 182 kan fies of sandalwood.

APPENDIX XIX.

[Vide paragraphs 39 to 42.]

Comparative Statement of Revenue and Expenditure.

PROVINCE.	REVENUE.		SURPLUS.		DEFICIT.		Proportion of Surplus to Gross Revenue.	Net Revenue per square mile of land under control of Forest Department.
	1907-08.	Average for preceding 5 years.	1907-08.	Average for preceding 5 years.	1907-08.	Average for preceding 5 years.		
	₹	₹	₹	₹	₹	₹		
Imperial	7,666	4,427	...	...	92,538	82,904	...	...
Bengal	11,97,650	11,34,729	4,84,256	4,83,327	...	...	40.4	68
United Provinces	24,09,745	23,27,836	12,15,732	10,88,065	...	...	50.4	292
Punjab	14,57,449	17,13,117	2,90,753	6,05,731	...	...	19.2	30
Burma	86,63,999	88,21,946	51,12,457	53,64,465	...	...	59.0	39
Eastern Bengal and Assam	14,30,447	8,99,659	6,30,074	3,87,978	...	...	44.0	21
Central Provinces and Berar	22,90,128	21,09,242	7,06,721	8,07,462	...	...	30.8	32
Coorg	2,74,756	2,17,835	1,69,937	1,25,035	...	...	61.8	326
North-West Frontier	2,38,490	1,21,138	1,50,090	45,427	...	...	63.2	636
Ajmer	29,864	14,851	11,676	...	...	1,658	39.0	78
Baluchistan	24,829	20,586	...	...	6,429	3,749	...	...
Andamans	2,91,822	5,13,750	62,555	2,09,475	...	...	21.4	32
Forest School	6,137	3,501	...	...	1,51,901	77,550	...	...
Forest Surveys . . . . .	...	693	...	...	27,060	30,623	...	...
Total Bengal	1,83,22,972	1,79,03,311	65,46,323	89,20,471	...	...	46.6	41
Madras	38,93,830	28,71,807	11,12,973	8,07,838	...	...	28.5	56
Bombay	36,46,177	30,01,745	16,90,750	11,07,254	...	...	46.3	129
GRAND TOTAL { 1907-08	2,58,62,979	2,37,76,863	1,13,50,046	1,08,85,563	...	...	43.8	47
{ 1906-07	2,64,91,486	2,20,43,308	1,24,27,687	97,65,510	...	...	46.9	53

APPENDIX XX.

[Vide paragraph 42.]

Estimated value of Forest Produce given away free or at reduced rates.

PROVINCE.	Timber.	Fuel.	Bamboos.	Minor Produce.	Grass and Grazing.	TOTAL.
	₹	₹	₹	₹	₹	₹
Bengal	9,339	58,525	4,844	43,060	66,092	1,81,860
United Provinces	43,096	58,587	913	3,967	86,170	1,97,733
Punjab	45,815	6,21,668	11	48,113	3,28,031	10,43,633
Burma	1,40,537	7,121	35,036	23,953	1,30,125	3,36,772
Eastern Bengal and Assam .	33,362	70,994	9,085	1,71,600	2,16,013	5,01,054
Central Provinces including Berar.	(b) 86,830	23,764	16,376	43,881	2,68,647	4,44,493
Coorg . . . . .	...	...	...	...	...	...
North-West Frontier	450	1,540	...	100	7,708	9,798
Ajmer	378	41	...	27	16,411	16,857
Baluchistan	(c) 1,520	260	...	938	16,332	19,100
Andamans	2,833	7,748	558	5,190	...	16,329
Total Bengal	3,69,160	8,50,248	66,823	3,45,879	11,35,529	27,67,639
„ Madras	51,169	5,236	1,146	(d) 50,091	...	1,07,642
„ Bombay	91,708	7,86,849	1,69,323	2,80,391	7,49,767	20,78,038
GRAND TOTAL { 1907-08	5,12,037	16,42,333	2,37,292	6,76,861	18,85,296	49,53,319
{ 1906-07	3,70,133	6,51,011	1,62,430	5,62,515	16,59,343	34,05,432

(a) Excludes famine concessions to the value of ₹7,858 under grazing and ₹70,300 under minor produce.

(b) Includes value of 1,769,495 c. ft. of fuel removed by right-holders in Berar Circle.

(c) " " 1,126 c. ft. of fuel.

(d) " " grass and grazing fees.

APPENDIX XXI.

[Vide Paragraph 42.]

Details of Revenue and Expenditure.

		R	
Gross Receipts	(a) Wood	1,93,99,939	
	(b) Minor forest produce	21,76,878	
	(c) Forest stamps and commutation fees for forest produce	7,94,133	
	(d) Grazing	22,13,199	
	(e) Revenue from forests not managed by Government	4,16,058	
	(f) Miscellaneous	8,62,772	
TOTAL REVENUE		2,58,62,979	
Expenditure	(a) Administration	(i) Superior Staff	27,33,520
		(ii) Exchange Compensation Allowance	8,332
		(iii) Subordinate Staff (including Rangers, Foresters and Guards).	23,62,546
		(iv) Office Establishments (including Contingencies).	12,55,437
	(b) Working	(1) Extraction	36,41,748
		(2) Roads and Buildings	12,60,238
		(3) Fire-protection	5,58,682
		(4) Cultural operations	6,54,422
		(5) Live-stock, stores and plant	5,37,065
		(6) Working-Plans	65,997
		(7) Rent for leased forests	6,40,083
		(8) Miscellaneous	1,77,301
	(c) Expenditure on realization of revenue from forests not managed by Government	24,484	
	(d) Forest Science and Education (including all "A" and "B" charges of Forest Research Institute and College).	1,58,038	
	Total		1,40,77,893
B Extraordinary	(e) Forest Settlement	79,756	
	(f) Forest Surveys	2,18,915	
	(g) Forest Demarcation	1,36,369	
Total		4,35,040	
GRAND TOTAL EXPENDITURE		1,45,12,933	
Net Revenue		1,13,50,046	

APPENDIX XXII

**Summary of Revenue and Expenditure of the Forest Department in India
for the financial year 1907-08.**

[Vide paragra

Summary of Revenue and Expenditure of t

BUDGET HEADS.	(a) Imperial.	Bengal.	United Provinces.	(b) Punjab.	(c) Burma (Upper and Lower.)	Eastern Bengal and Assam.	Central Provinces including Berar.	Coorg.	North-We Frontier Province.
	R	R	R	R	R	R	R	R	R
REVENUE.									
I.—Timber and other produce removed from the forests by Government agency.	1,751	50,628	2,06,934	5,68,679	33,74,248	3,36,219	1,51,815	2,11,014	1,13,771
II.—Timber and other produce removed from the forests by consumers or purchasers.	5,700	11,01,552	21,10,160	7,52,279	46,60,996	8,85,363	20,66,273	47,377	1,10,82
III.—Drift and waif wood and confiscated forest produce.	...	5,506	17,060	50,470	2,36,884	29,630	1,869	...	3,72
IV.—Revenue from forests not managed by Government.	...	...	11,045	2,649	2,67,185	1,09,555	1,492	...	3,73
V.—Miscellaneous	215	39,964	64,546	83,372	1,24,676	69,680	68,660	16,365	6,45
TOTAL REVENUE	7,666	11,97,650	24,09,745	14,57,449	86,63,969	14,30,447	22,90,128	2,74,756	2,38,40
EXPENDITURE.									
A.—CONSERVANCY AND WORKS.									
I.—Timber and other produce removed from the forests by Government agency.	...	16,672	98,962	2,12,321	9,37,819	1,56,403	96,597	17,659	31,60
II.—Timber and other produce removed from the forests by consumers or purchasers.	...	96,646	43,321	2,885	67,751	16,900	1,08,635	...	16
III.—Drift and waif wood and confiscated forest produce.	...	1,742	6,323	12,331	97,357	1,504	27	...	1
IV.—Revenue from forests not managed by Government.	...	...	4,310	...	1,454	18,422	...	...	...
V.—Rent of leased forests and payments to shareholders in forests managed by Government.	...	5,300	1,88,398	3,52,483	...	39,650	...	...	13,95
VI.—Live-stock, stores, tools and plant.	...	26,079	40,237	10,973	1,30,315	29,475	58,662	8,254	1,11
VII.—Communications and buildings	...	70,735	1,69,959	1,16,350	2,15,487	1,10,918	2,64,445	5,036	6,11
VIII.—Demarcation, improvement, and extension of forests.	111	1,74,109	1,27,994	47,719	5,48,425	64,617	1,63,627	14,700	2,37
IX.—Miscellaneous	...	4,322	16,041	10,526	30,440	10,423	17,904	854	87
Total A.—Conservancy and Works	111	3,95,605	6,95,550	7,65,488	20,28,948	4,48,312	7,09,897	46,703	56,38
B.—ESTABLISHMENTS.									
I.—Salaries	75,512	2,46,749	4,00,321	3,17,651	12,57,425	2,71,841	7,22,057	49,760	25,35
II.—Travelling allowances	15,080	44,027	61,393	59,351	1,91,941	59,793	70,668	7,240	4,27
III.—Contingencies	9,501	27,013	36,749	84,306	73,218	20,427	80,785	1,116	2,35
Total B.—Establishments	1,00,093	3,17,789	4,98,463	4,11,208	15,22,584	3,52,061	8,73,510	58,116	32,01
GRAND TOTAL OF EXPENDITURE	1,00,204	7,13,394	11,94,013	11,76,696	85,51,532	8,00,373	15,83,407	1,04,819	88,39
SURPLUS	...	4,84,256	12,15,732	2,80,753	51,12,457	6,30,074	7,06,721	1,69,937	1,50,0
DEFICIT	92,538	...	...	...	...	...	...	...	...

(a) Includes R7,666 of Revenue and R1,59
(b) Including Chamba which was retrocede
(c) Excludes figures

Forest Department in India for the financial year 1907-08.

Ajmer.	Baluchistan.	Andamana.	Forest Research Institute and College.	Forest Surveys (Imperial).	Total Bengal Presidency.	Madras.	Bombay.	GRAND TOTAL.	BUDGET HEADS.
R	R	R	R	R	R	R	R	R	
6,828	12,171	2,79,539	...	...	53,13,537	14,16,870	11,54,348	78,84,755	REVENUE.
21,950	3,048	6,125	...	...	1,17,71,647	22,96,155	23,65,138	1,64,32,940	I.—Timber and other produce removed from the forests by Government agency.
59	49	...	...	...	3,45,255	14,650	5,922	3,65,827	II.—Timber and other produce removed from the forests by consumers or purchasers.
...	9,321	...	...	...	4,04,982	...	11,076	4,16,058	III.—Drift and waif wood and confiscated forest produce.
1,027	240	6,158	6,137	...	4,87,551	1,66,155	1,09,693	7,63,399	IV.—Revenue from forests not managed by Government.
20,864	24,829	2,91,823	6,137	...	1,83,22,972	38,93,830	36,46,177	2,58,62,979	V.—Miscellaneous.
									TOTAL REVENUE.
									EXPENDITURE.
									A.—CONSERVANCY AND WORKS.
2,408	6,983	1,41,754	...	...	17,19,384	8,41,150	4,44,974	30,05,508	I.—Timber and other produce removed from the forests by Government agency.
98	1	...	...	...	3,36,429	1,22,540	55,912	5,14,881	II.—Timber and other produce removed from the forests by consumers or purchasers.
5	...	...	...	...	1,19,705	1,485	169	1,21,359	III.—Drift and waif wood and confiscated forest produce.
...	298	...	...	...	24,484	...	...	24,484	IV.—Revenue from forests not managed by Government.
...	...	...	...	...	5,99,793	15,882	24,408	6,40,083	V.—Rent of leased forests and payments to shareholders in forests managed by Government.
153	193	37,120	5,483	...	3,47,541	1,60,971	34,036	5,42,548	VI.—Live-stock, stores, tools and plant.
2,011	3,667	4,804	810	...	9,70,419	1,84,139	1,06,490	12,61,048	VII.—Communications and buildings.
1,368	853	6,033	...	26,600	11,78,056	3,77,033	1,59,052	17,14,141	VIII.—Demarcation, improvement and extension of forests.
226	43	505	7,123	...	99,266	8,210	76,948	1,84,424	IX.—Miscellaneous.
6,269	11,573	1,90,216	13,416	26,600	53,95,077	17,11,410	9,01,989	80,08,476	Total A.—Conservancy and Works.
									B.—ESTABLISHMENTS.
10,152	15,855	34,865	1,20,494	460	35,48,497	8,24,519	8,82,059	52,55,075	I.—Salaries.
860	2,812	3,770	13,912	...	5,35,018	1,65,687	1,16,994	8,17,699	II.—Travelling allowances.
907	1,018	416	10,216	...	2,93,057	79,241	54,385	4,31,683	III.—Contingencies.
11,919	19,685	39,051	1,44,622	460	43,81,572	10,69,447	10,53,433	65,04,457	Total B.—Establishments.
18,188	31,258	2,29,267	1,58,038	27,060	97,76,849	27,30,857	19,55,427	1,45,12,933	GRAND TOTAL OF EXPENDITURE
11,678	...	62,555	...	...	85,46,323	11,12,973	16,90,750	1,13,50,046	SURPLUS.
...	6,429	...	1,51,901	27,060	...	...	...	...	DEFICIT.

Expenditure on account of Indore.
 Raja on 1st April 1908.
 Seddah Operations.

Revenue, Expenditure and Surplus of the Forest Department through

(I) R

PROVINCE.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.
Imperial*	32,907	26,574	14,708	1,186	4,817	4,017	4,759	6,370	6,688	5,240	2,680	4,980
Bengal	6,94,334	5,71,152	5,97,432	653,634	6,57,794	6,72,907	7,68,718	7,27,392	7,89,553	7,44,830	8,01,610	7,95,670
United Provinces	16,11,383	15,72,319	14,61,495	15,73,556	12,47,454	14,62,802	17,14,159	16,37,879	17,31,514	16,52,540	17,09,800	16,58,250
Punjab	8,10,177	7,49,352	8,50,419	11,27,277	7,86,336	10,45,768	9,11,713	8,34,370	10,20,074	8,12,630	9,13,300	10,32,430
Burma	25,09,275	16,70,982	20,23,859	21,06,741	25,15,773	41,89,233	49,40,786	43,21,968	41,85,414	56,60,000	57,85,100	54,36,780
Eastern Bengal and Assam	2,11,445	1,80,414	1,96,656	2,12,011	2,67,312	3,03,882	3,79,498	3,26,793	3,36,129	3,82,830	4,88,500	4,35,030
Central Provinces and Berar	12,02,987	13,25,321	13,57,378	12,84,322	15,00,412	15,88,382	15,96,722	17,00,570	18,71,085	16,61,870	16,17,260	14,82,030
Coorg	87,822	1,13,233	89,388	99,291	1,27,078	1,36,183	92,753	1,35,561	1,82,897	1,80,680	1,73,700	1,53,050
North-West Frontier Province	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	4,752	6,089	14,882	14,081	11,053	5,668	12,857	15,724	20,503	19,030	20,730	16,300
Ajmer	3,198	10,456	9,697	11,374	11,233	13,574	11,592	15,266	18,793	14,830	14,620	12,840
Andamans	24,762	22,213	23,944	31,870	1,04,062	1,06,075	1,62,185	1,58,326	2,72,338	3,60,430	4,41,730	1,14,530
Imperial Forest College	...	73	273	415	777	449	1,237	1,184	1,788	1,980	1,990	2,750
Forest Surveys (Imperial)	26	234	202	241	49	315	220	2,104	257	520	2400	80
Total	73,98,078	62,48,412	66,40,409	71,18,899	72,40,791	85,33,255	1,06,08,219	98,83,507	1,04,38,145	1,14,97,580	1,18,71,490	1,11,44,820
Madras	9,52,704	11,65,916	11,98,650	12,46,911	12,74,820	15,15,006	15,57,627	17,95,408	16,94,216	15,77,210	19,47,180	18,94,030
Bombay	25,03,100	27,71,812	33,66,288	30,32,678	30,32,577	28,50,190	31,37,696	32,88,220	32,84,649	32,69,550	37,94,350	37,50,030
GRAND TOTAL	1,08,54,882	1,01,90,170	1,12,05,345	1,12,98,486	1,16,48,288	1,38,98,451	1,53,03,572	1,49,67,135	1,54,17,010	1,68,44,340	1,77,12,020	1,67,88,880

(II) EXI

Imperial*	98,266	96,306	88,245	86,299	78,626	86,199	81,311	85,414	65,788	1,07,270	80,610	84,950
Bengal	3,82,813	4,11,915	3,70,399	4,22,781	3,90,368	3,76,270	3,98,150	4,14,004	4,22,930	3,81,610	4,04,040	3,97,390
United Provinces	10,41,485	10,20,101	9,74,519	9,19,580	8,30,743	8,44,544	9,63,151	9,19,195	9,58,211	9,28,540	8,64,020	9,36,310
Punjab	6,52,146	5,58,070	6,75,483	7,16,510	6,77,912	5,33,885	6,45,855	6,53,041	6,40,275	6,56,270	6,36,430	7,22,120
Burma	12,17,824	12,12,233	11,50,932	10,78,018	11,53,846	20,17,073	16,06,644	13,88,789	16,96,680	18,05,000	14,62,500	18,17,990
Eastern Bengal and Assam	1,99,562	1,97,689	2,11,494	2,12,287	2,26,822	2,09,906	2,57,129	2,83,852	2,67,525	2,64,070	2,68,220	2,72,010
Central Provinces and Berar	6,07,880	6,83,274	6,47,614	7,16,469	7,78,802	6,82,864	8,79,418	9,04,475	10,02,281	10,80,630	11,85,440	12,27,700
Coorg	75,023	76,951	65,630	74,068	72,629	80,175	72,420	65,818	86,860	73,090	86,890	86,140
North-West Frontier Province	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	16,911	13,266	15,799	17,836	17,753	15,994	17,662	29,450	30,497	55,620	63,730	40,910
Ajmer	14,574	16,316	16,469	20,744	18,897	15,676	12,701	12,720	13,986	15,000	15,000	14,900
Andamans	12,161	22,700	37,035	25,769	62,679	67,295	94,975	1,30,052	1,79,509	2,31,210	2,44,550	1,22,780
Imperial Forest College	...	22,568	24,229	30,831	33,129	32,961	29,646	35,191	44,347	50,400	65,530	65,980
Forest Surveys (Imperial)	30,940	19,823	19,180	23,318	22,868	22,164	21,188	24,324	26,882	22,160	27,900	29,810
Total	43,55,985	43,51,282	42,97,118	43,49,560	43,75,149	52,15,005	50,80,590	49,46,325	54,38,471	56,70,870	59,05,990	59,19,020
Madras	7,86,733	8,96,505	9,37,972	11,53,122	11,23,212	12,20,794	11,61,237	12,46,914	13,24,254	13,30,380	13,62,770	13,86,350
Bombay	15,64,172	17,78,723	18,39,461	19,52,910	19,44,005	16,94,962	17,70,691	18,69,887	19,21,457	19,01,970	20,71,940	20,67,820
GRAND TOTAL	67,06,890	70,26,510	70,74,551	74,55,592	74,48,366	81,29,761	80,12,518	80,63,125	86,94,182	89,06,230	93,40,700	93,73,290

(III) S

Imperial*	-65,359	-69,782	-73,537	-82,173	-73,779	-62,183	-76,552	-79,044	-59,100	-1,02,030	-78,160	-79,970
Bengal	3,06,521	1,59,237	2,27,033	2,30,853	2,67,426	3,00,637	3,70,568	3,13,388	3,66,623	3,63,270	3,97,570	3,98,280
United Provinces	5,69,498	5,52,218	4,86,976	6,53,976	4,16,705	6,18,258	7,51,008	7,18,684	7,73,303	7,24,900	7,48,840	7,21,810
Punjab	2,67,031	1,91,282	1,74,936	4,10,767	1,09,024	4,51,883	2,75,858	1,41,329	3,79,799	1,56,360	2,76,870	3,10,310
Burma	12,91,451	4,58,749	8,72,907	10,28,723	13,61,927	21,72,160	33,38,142	29,33,179	24,86,434	38,55,000	39,22,600	35,18,190
Eastern Bengal and Assam	11,883	-17,085	-14,838	-278	40,420	93,977	1,22,369	42,941	68,604	1,18,760	2,20,280	1,63,080
Central Provinces and Berar	6,95,107	6,42,047	7,03,762	5,67,853	7,21,610	7,25,518	7,17,264	7,96,095	8,68,804	5,81,240	4,30,840	2,54,330
Coorg	12,799	26,222	23,696	35,203	54,399	56,008	20,333	63,743	96,037	1,07,590	86,900	66,810
North-West Frontier Province	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	-12,159	-7,177	-837	-3,755	-3,690	-10,326	-4,065	-13,726	-9,888	-36,590	-43,000	-28,610
Ajmer	-6,376	-5,860	-6,772	-9,470	-4,604	-2,102	-1,109	2,546	5,813	-110	-1,260	-2,060
Andamans	12,601	-547	-13,091	6,101	41,383	48,780	67,220	28,274	92,423	1,23,280	1,97,249	-8,256
Imperial Forest College	...	-22,495	-23,966	-30,416	-32,352	-32,512	-28,409	-34,007	-42,559	-48,420	-63,540	-63,190
Forest Surveys (Imperial)	-30,904	-19,589	-18,978	-28,107	-32,828	-21,849	-20,968	-22,220	-28,625	-21,640	-27,660	-29,760
Total	30,42,039	18,97,130	23,43,291	27,69,339	28,65,642	43,18,230	55,27,659	49,37,182	49,69,678	58,26,710	60,65,500	52,25,800
Madras	1,66,971	2,70,411	2,60,678	93,789	2,45,708	2,94,212	3,96,390	5,48,495	3,69,962	2,46,820	5,81,410	5,07,680
Bombay	8,38,928	9,96,118	15,26,825	10,79,766	10,98,572	11,56,228	13,67,065	14,18,233	13,62,192	13,64,580	17,22,410	16,92,110
GRAND TOTAL	41,47,992	31,63,660	41,30,794	39,42,694	41,99,922	57,68,690	72,91,054	62,04,010	67,22,628	74,38,110	83,72,320	74,15,590

* Includes pay of Inspector General of Forests, certain b

India during the 25 (financial) years from 1883-84 to 1907-08.

NUE.

1883-84	84-85	1885-86	1886-87	1887-88	1888-89	1889-90	1890-91	1891-92	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	PROVINCES.
4,100	18,130	17,540	6,000	2,462	2,484	2,658	7,455	2,768	7,255	...	7,668	Imperial.			
13,70,350	11,89,880	9,73,010	11,38,910	12,33,339	12,02,237	12,56,279	10,65,523	11,67,472	11,18,542	10,65,859	11,97,650	Bengal.			
14,41,820	13,86,670	15,68,040	16,14,740	15,65,463	17,15,508	20,25,324	22,30,446	23,97,318	24,33,428	25,02,664	24,09,745	United Provinces.			
11,07,720	10,68,470	14,74,430	14,00,770	13,50,848	14,47,558	15,86,408	17,17,787	18,74,443	17,81,653	16,05,284	14,57,449	Punjab.			
63,78,950	72,15,260	83,50,890	78,12,050	80,54,414	59,73,938	67,39,053	82,68,535	89,59,756	1,03,29,869	98,12,519	86,63,969	Burma.			
4,36,410	2,84,820	3,98,180	5,68,100	5,49,521	5,12,963	5,30,200	6,75,722	8,15,677	11,06,096	13,20,592	14,30,447	Eastern Bengal and Assam.			
12,01,140	11,80,400	14,34,940	12,97,490	12,65,614	15,79,118	16,84,428	19,98,032	20,13,459	23,49,131	24,01,159	22,90,128	Central Provs. and Berar.			
93,000	1,30,910	1,55,070	1,62,410	1,37,596	1,70,242	1,90,730	24,031	1,93,087	2,45,419	2,35,909	2,74,756	Coorg.			
...	...	...	...	...	12,012	1,01,123	1,01,833	80,991	1,28,528	1,83,214	2,38,490	N.-W. Frontier Province.
15,460	15,010	14,920	17,060	16,956	14,712	19,336	18,363	22,555	21,481	21,195	24,829	Baluchistan.			
12,370	15,540	14,420	10,270	10,648	6,865	9,736	13,894	17,297	15,002	18,335	23,824	Ajmer.			
3,62,370	4,33,710	2,29,460	2,60,600	2,77,868	2,68,903	3,26,035	4,32,381	6,20,796	5,82,511	6,07,027	2,91,822	Andamans.			
2,850	2,890	2,360	3,210	2,697	3,545	3,252	3,038	3,557	3,080	4,579	6,137	Imperial Forest College.			
400	80	280	...	327	473	3,034	431	...	...	...	...	Forest Surveys (Imperial)
1,25,20,470	1,30,42,340	1,46,32,850	1,42,92,220	1,44,68,794	1,29,06,556	1,45,28,565	1,68,07,481	1,81,84,176	2,02,21,996	1,97,78,336	1,83,22,972	Total.			
23,03,330	21,36,430	21,10,520	23,02,290	23,40,170	25,43,430	26,13,819	26,57,727	28,29,216	29,67,604	32,90,669	38,93,830	Madras.			
30,32,710	26,16,960	22,95,150	24,15,200	29,61,539	23,79,729	23,29,156	27,51,539	30,20,558	34,84,993	34,22,481	36,45,177	Bombay.			
1,79,56,510	4,77,95,490	1,90,38,520	1,90,09,610	1,97,70,493	1,78,23,715	1,94,71,540	2,22,16,774	2,40,29,950	2,66,74,593	2,64,91,486	2,58,62,979	GRAND TOTAL.			

UTURE.

78,360	84,300	85,460	96,550	83,578	78,583	85,017	89,345	83,058	83,767	95,472	1,00,204	Imperial.
6,90,040	6,53,440	4,89,320	5,45,210	5,70,806	6,57,131	6,38,014	7,03,508	6,88,589	5,93,509	6,33,386	7,13,394	Bengal.
9,06,340	9,17,859	9,72,030	8,42,380	9,63,439	10,08,739	10,13,998	10,81,438	12,91,583	14,05,182	13,06,651	11,94,013	United Provinces.
7,23,300	7,71,940	8,55,340	12,11,460	8,87,343	9,38,335	9,60,095	11,56,415	10,12,354	12,63,669	11,44,403	11,76,696	Punjab.
2,28,820	21,96,610	24,26,190	24,47,440	26,54,717	26,46,457	28,90,263	33,52,404	24,46,824	29,38,063	26,59,753	26,51,532	Burma.
2,62,010	2,88,830	3,05,360	3,57,140	3,47,972	3,29,112	3,27,498	4,25,489	5,03,656	5,93,910	7,07,860	8,00,373	Eastern Bengal and Assam.
11,92,860	11,65,490	11,09,400	12,75,820	11,65,869	12,00,904	12,57,288	12,80,968	13,20,615	13,07,153	13,42,878	15,83,407	Central Provs. and Berar.
71,630	87,020	80,100	74,220	70,905	82,333	89,437	82,181	83,820	95,748	1,02,855	1,04,819	Coorg.
...	...	...	...	...	19,510	54,086	60,603	74,958	95,258	93,650	88,400	N.-W. Frontier Province.
29,770	27,330	27,760	28,680	29,254	24,480	23,240	21,697	24,672	25,743	26,322	31,258	Baluchistan.
22,010	14,670	16,300	15,350	16,782	15,927	16,377	16,680	15,941	17,131	16,715	18,188	Ajmer.
3,16,600	2,47,340	1,38,400	1,40,940	1,40,137	2,04,667	2,81,702	2,66,121	3,42,431	3,35,985	2,95,126	2,29,287	Andamans.
67,380	60,920	63,370	73,550	71,238	76,290	66,338	59,339	61,424	80,669	1,37,466	1,58,038	Imperial Forest College.
31,970	33,950	33,970	33,980	33,991	33,730	33,985	33,335	28,229	30,044	30,389	27,060	Forest Surveys (Imperial)
65,41,690	65,49,690	66,00,000	72,42,720	70,36,028	73,17,154	77,37,338	86,40,126	90,77,954	98,65,926	95,92,956	97,76,649	Total.
15,34,300	15,72,850	15,94,670	16,53,530	17,15,431	17,09,554	18,35,552	17,50,930	19,86,098	22,66,602	24,80,660	27,80,857	Madras.
19,69,160	20,73,190	18,39,250	21,28,430	24,08,581	17,19,680	16,76,441	17,75,937	19,03,804	21,28,093	19,90,183	19,55,427	Bombay.
1,00,45,160	1,01,95,730	1,00,33,920	1,10,24,680	1,11,60,040	1,07,46,368	1,19,49,331	1,21,66,993	1,29,67,656	1,42,58,521	1,40,63,799	1,45,12,933	GRAND TOTAL.

LUS.

-74,860	-65,170	-67,920	-90,460	-81,115	-76,056	-81,358	-81,890	-79,290	-76,512	-65,472	-62,538	Imperial.
6,30,810	5,25,840	4,85,990	5,93,700	6,62,539	6,35,106	6,18,282	3,62,015	4,78,883	5,25,033	4,32,473	4,84,256	Bengal.
5,38,430	4,68,820	5,96,090	6,72,360	6,02,024	7,06,769	10,11,326	11,99,008	10,05,735	10,28,246	11,96,012	12,15,722	United Provinces.
3,84,420	2,96,530	5,19,010	1,89,310	4,63,199	5,09,223	6,36,313	5,61,382	8,62,089	5,17,989	4,60,881	2,80,753	Punjab.
12,50,130	50,18,650	59,24,700	53,64,610	53,99,727	32,27,481	38,48,790	49,16,131	55,12,832	63,91,806	61,52,766	51,12,457	Burma.
1,54,430	95,990	92,820	2,10,960	2,01,549	1,83,851	2,52,701	2,50,248	3,12,021	5,12,186	6,12,722	6,30,074	Eastern Bengal and Assam.
98,220	14,910	3,25,540	21,670	99,748	3,78,212	4,27,140	7,17,066	6,92,944	11,41,978	10,58,281	7,06,721	Central Provs. and Berar.
21,370	49,890	74,970	88,190	66,691	87,909	1,01,299	1,31,940	1,09,267	1,43,671	1,32,054	1,69,937	Coorg.
...	...	...	...	...	6,498	47,038	41,230	16,033	53,271	89,568	1,50,000	N.-W. Frontier Province.
-14,310	-12,290	-12,840	-11,620	-12,298	-9,768	-3,904	-3,394	-2,117	-4,262	-5,127	-6,429	Baluchistan.
9,640	870	-1,880	-5,080	-6,136	-9,062	-6,641	-2,796	1,656	-2,129	-1,620	11,676	Ajmer.
45,770	1,86,370	91,060	1,19,660	1,37,749	62,236	44,333	1,68,260	2,78,365	2,46,526	3,11,891	62,555	Andamans.
-64,530	-58,030	-61,010	-70,340	-67,541	-72,746	-63,086	-56,301	-57,667	-77,589	-1,32,907	-1,51,901	Imperial Forest College.
-31,570	-33,730	-33,680	-33,560	-33,664	-33,257	-30,951	-33,504	-29,229	-30,044	-30,389	-27,060	Forest Surveys (Imperial)
59,18,780	64,92,650	80,32,850	70,49,400	74,32,766	55,83,402	67,91,227	81,67,355	91,02,222	1,03,56,170	1,01,85,380	85,46,323	Total.
7,69,030	5,63,640	5,15,850	6,48,760	6,24,739	8,33,876	7,78,267	9,06,787	8,43,118	7,01,002	8,10,009	11,12,973	Madras.
10,63,550	5,43,470	4,55,900	2,86,770	5,52,948	6,60,049	6,52,715	9,75,802	11,16,754	13,58,900	14,22,298	16,90,750	Bombay.
70,11,320	75,99,760	90,04,600	79,64,930	86,10,453	70,77,827	82,22,209	1,00,49,754	1,10,62,094	1,24,16,072	1,24,27,687	1,13,50,046	GRAND TOTAL.

... and undistributable and petty local items.

APPENDIX XXIV.

(Vide paragraph 38.)

Exports of Forest Produce.

Articles of Forest Produce.	QUANTITY IN TONS OF 20 CWT. IN THE CASE OF TEAK, CUBIC TONS.		VALUATION AT PORT OF SHIPMENT IN 1907-08.	
	Average of five years 1902-03 to 1906-07.	In 1907-08.	Total.	Per ton.
I	2	3	4	5
			₹	₹
Caoutchouc	171	149	5,78,397	3,882
Lac { Button	1,995	1,976	46,80,489	2,369
{ Shell	9,907	13,917	3,32,38,167	2,388
{ Stick, seed and other kinds	683	2,245	29,11,935	1,297
Sandal, Ebony and other ornamental woods	(a)	(a)	12,49,286	...
Cutch and gambier	3,984	4,588	14,49,927	316
Myrabolams	59,435	74,665	58,95,246	79
Teak	55,059	39,539	61,34,670	155
Cardamoms	115	90	2,31,555	2,573
Total in 1907-08			5,63,69,672	
Do. 1906-07			4,96,50,953	

(a) Figures are not available.