

REVIEW
OF
FOREST ADMINISTRATION
IN
BRITISH INDIA
FOR THE YEAR
1905-1906

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REVIEW

OF

FOREST ADMINISTRATION IN BRITISH INDIA

FOR THE YEAR

1905-06.

CHAPTER I.

CONSTITUTION OF STATE FORESTS.

1.—ALTERATION IN AREA.

[*Vide* Appendices I and II.]

The area reported to be under the control of the Forest Department, including Reserved and all other classes of Forests increased during the twelve months under review by 713 square miles, thereby bringing up the total area of forest lands at the close of the year to 233,651 square miles, which is equal to 24.1 per cent. of the total area of British India.

2. The most important additions to and exclusions from the forest area during the year were as follows :—

(i) *Reserved and Leased Forests.*

In Reserved Forests, the additions were 1986 square miles and exclusions 1669, involving a net increase of 317 square miles. The area of Leased Forests stood at 910 square miles throughout the year. The approximate changes in the different provinces were as follows :—

In the *United Provinces*, 86 square miles were added mainly in Pilibhit (29 square miles) and in Garhwal (5 square miles).

In the *Punjab* additions and exclusions were each of 9 square miles. The additions were nominal, due to rectification of areas by survey in Jhelum and Kulu, while exclusions were mainly in the interests of the Canal and Colonization Departments.

In *Burma*, including Taungyas and Karen areas, 626 square miles were added and 492 excluded. New reservations were mainly in the Northern Circle and exclusions in the Northern and Pegu Circles.

In *Eastern Bengal and Assam*, 40 square miles were added of which 11 were due to corrections by survey. For the latter reason also 10 square miles were excluded and 3 on account of rectification of a boundary in Jalpaiguri.

In the *Central Provinces*, 863 square miles were added chiefly owing to corrections of areas and re-classification in Berar and 1,081 square miles excluded, mainly also in Berar, under the general scheme of re-classification. Finality in this respect has now practically been attained.

In *Coorg* the inclusion of the Padinalknad Ghat Forests caused an increase of 95 square miles.

In *Baluchistan* 30 square miles were added in the Loralai District.

In *Madras*, 216 square miles were added mainly on transfer from reserved lands and 35 square miles excluded, while in *Bombay*, additions amounted to 71 square miles and exclusions to 39 square miles.

In *Bengal*, the *North-West Frontier Province*, *Ajmer* and the *Andamans* the area of Reserved Forests remained unchanged.

(ii) *Protected Forests.*

There was an increase during the year of 583 square miles which raised the total area to 10,018 square miles. The principal additions were 263 square miles in the Punjab and 362 in Bombay.

The increase in the Punjab was chiefly due to re-afforestation in Multa and to rectification of area in Kulu consequent upon survey. Reductions were unimportant, the principal being 39 square miles in Coorg and 5 in Bengal.

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

The area at the close of the year was 131,137 square miles compared with 131,324 at its commencement, a decrease of 187 square miles.

3. The following statement exhibits the total area of each class of forest under the control of the Forest Department at the end of the years 1904-05, and 1905-06 :—

	1904-05.	1905-06.	Difference.
Reserved Forests	91,269	91,586	+ 317
Leased Forests	910	910	...
Protected Forests	9,435	10,018	+ 583
Unclassed State Forests and Public Forest Lands.	131,324	131,137	—187
TOTAL .	232,938	233,651	713

2.—FOREST SETTLEMENTS.

[Vide Appendix III.]

4. Progress was generally less satisfactory than in the previous year. The area finally settled fell from 1,192 square miles in the preceding year to 707 square miles, only 454 square miles being taken in hand compared with 1,052 in 1904-05.

The cost of settlement as nearly as can be ascertained was R52,635 compared with R68,500 in the previous year.

Out of a total area of Reserved Forests of 91,586 square miles and of Protected Forests of 10,018, there remained at the close of the year 3,860 and 4,114 square miles respectively of each class awaiting settlement. These balances appear to be mainly in Berar as regards Reserved Forests, and in Bombay and the Punjab as regards Protected Forests. The remarks made in last year's Review, urging the definition of privileges in the interests of efficient administration and adequate sylvicultural treatment, cannot again be too strongly brought to notice.

3.—DEMARICATION.

[Vide Appendix IV.]

5. The total length of boundaries at the close of the year was 169,693 miles compared with 168,220 at the end of 1904-05. Of the former, 16,456 miles consist of natural boundaries not requiring demarcation, leaving 153,237 miles in need of demarcation of which 135,341 had been completed; 17,896 miles therefore remained to be taken in hand compared with 21,842 at the close of the previous year. In the majority of provinces little remains to be done but in the Punjab and Bombay there remain balances of 3,575 and 12,183 miles respectively to be completed.

New work extended to 3,319 miles compared with 4,867 miles in the previous year, the corresponding cost being R44,482 against R57,065. The work does not therefore compare favourably with that of the previous year. The expenditure on repairs was R79,967 on 55,317 miles compared with R71,037 on 51,647 miles in 1904-05. The length of previously existing boundary not repaired at the close of the year stood at 76,705 miles, the latter

figure, together with the decrease in work under original demarcation and the comparatively small expenditure on maintenance, appears to show that in this important work there still remains much to be accomplished.

FOREST SURVEYS.*

[Vide Appendices V and VI.]

6. No change in the organization of the Forest Survey Branch was made during the year, and it still remained under the administrative control of the Superintendent, Forest Surveys, though in view of the reorganization of the Survey of India arrangements were in progress at the close of the year for the transfer of Nos. 17 and 19 Parties to the Deputy Surveyor General and of No. 20 Party to the newly formed Burma Circle. No. 9 Party it is intended to abolish.

The Forest Survey Office will, in future, be maintained for the storing and issue of forest maps and records and the preparation of working-plans and other special maps required by the Inspector General of Forests.

7. Four Survey Parties were employed on Forest Surveys during the year one in Madras, one in Bombay and two in the Bengal Presidency, and the following areas were surveyed :—

	Square miles.
Bengal Presidency	2,019
Madras „	832
Bombay „	757
	3,608

8. The total cost of Forest Surveys was R5,21,645 as compared with R5,02,091 last year. The decrease of R19,554 is principally due to the fact that no forest surveys were carried on in Bengal proper, this work having been completed during the previous year.

9. During the year 386 maps were published, including 18 working-plan maps and 8 other special small scale maps. Eleven thousand six hundred and twenty-nine maps were distributed, of which 8,304 were coloured.

10. Details of the surveys carried out in the various provinces are given in the following paragraphs :—

Bengal.—No field surveys were carried out during the year and none are proposed for 1906-07. The survey of the reserved forests in the Sunderbans will be undertaken by the Superintendent, Provincial Surveys, Bengal.

Twenty-five maps were published during the year. The expenditure on mapping and publication during the year was R4,720, of which, R3,384 are debitable to the Forest Department.

Eastern Bengal and Assam.—An area of 571 square miles was surveyed by a detachment of No. 9 Party on the 2-inch scale in Darrang, in the course of which the Charduar, Balipara and Nowdnar reserves were surveyed, at a cost of R30·5 per square mile. The expenditure in connection with this survey has been borne by the Survey of India. The Angratoli reserve in the Garo Hills and some scattered portions of the Nowgong reserves aggregating 19 square miles, were surveyed on the 4-inch scale at a cost of R129·8 per square mile. Twenty-five maps were published during the year.

The total expenditure amounted to R28,237, of which R4,520 are debitable to the Forest Department.

During the ensuing year a small Forest Survey party will undertake the 4-inch survey of the Sitapahar range in the Chittagong District.

United Provinces.—A small detachment was deputed for the traversing and 4-inch detail survey of the Surai Banbasa reserve in the Pilibhit District, but the work had to be stopped owing to a severe outbreak of cholera in the District, in the course of which a surveyor and two khalassis died. Work will be resumed in November 1906 and it is hoped the survey will be completed before the end of the year.

*Information communicated by the Superintendent of Forest Surveys.

The 4-inch detail survey of the leased Chir Forests of Tehri Garhwal, which is being undertaken at the expense of the State, was completed.

The areas and cost rates are as follows :—

	Square mile.	Cost rate. ₹
Pilibhit	17	17.6
Tehri Garhwal	81	35.1

The total expenditure amounted to ₹6,043, of which ₹1,035 were expended on account of a second edition of Kumaun and Garhwal maps. Rupees 5,778 are debitable to the Forest Department.

Seventeen maps were published during the year.

Punjab.—Fifty-three square miles of detail survey on the 4-inch scale in Rawalpindi and Lahore, costing ₹37.8 per square mile, and 839 linear miles of boundary survey in Shahpur and Bashahr costing ₹4.3 per linear mile, were surveyed during the year.

The total expenditure amounted to ₹6,218, of which ₹5,510 are debitable to the Forest Department.

Eight maps on the 4-inch and three maps on the 1-inch scale were published during the year. This completes the survey of the Punjab forests.

North-West Frontier Province.—An area of 25 square miles was surveyed in the Dungagali range in the Hazara District at a cost rate of ₹34.8 per square mile. The expenditure was ₹3,516, of which ₹2,490 are debitable to the Forest Department.

Sixteen maps were published during the year.

Central Provinces.—The only survey operation carried out by the Forest Survey Branch was the 4-inch detail survey of 320 acres in the Betul Division. Boundary surveys of all A and B class forests which occurred in the area topographically surveyed in Berar were carried out by No. 2 Party, Survey of India.

The total expenditure, chiefly on account of the publication of maps, was ₹3,424, of which ₹2,429 are debitable to the Forest Department.

During the year 59 maps on the 4-inch scale and 3 special maps of the Buldana Division were published.

Burma.—An area of 1,252 square miles was surveyed on the 4-inch scale, chiefly in the following Forest Divisions :—

Division.	Circle.
Yaw	Southern Circle.
Lower Chindwin	Northern Circle.
Kathá	
Mu	
Thayetmyo	Pegu Circle.
Thungyin	Tennasserim Circle.

The average cost rate was ₹126.1 per square mile.

Seventy-nine sheets were published during the year.

The total expenditure was ₹2,20,379, of which ₹1,19,947 are debitable to the Forest Department.

In Coorg, Ajmer-Merwara and Baluchistan.—No surveys were made by the Forest Survey Branch.

Andamans.—Four surveyors were placed at the disposal of the Forest Officer who was preparing a working-plan for the North Andamans.

Madras.—An area of 832 square miles was surveyed on the 4-inch scale in Ganjam, Godavari, South Canara, North Malabar and Chingleput Districts. The cost rates averaged ₹104 per square mile.

The total expenditure amounted to ₹1,02,734, of which ₹68,209 are debitable to the Forest Department.

Sixty-six maps were published during the year.

The programme for 1906-07 provides for the completion of the 4-inch detail survey in Ganjam and boundary survey on the 4-inch scale in Malabar.

Bombay.—An area of 757 square miles was topographically surveyed, including 631 square miles in Satara and 126 square miles on the 8-inch scale in Thana.

The total expenditure amounted to ₹84,944, of which ₹60,156 are debitable to the Forest Department.

Seventy-two maps were published during the year.

The programme for next season provides for the survey of forest lands in the Nasik and Khandesh Districts.

CHAPTER II.

MANAGEMENT OF STATE FORESTS.

1.—REGULATION OF MANAGEMENT.

Working-Plans.

[Vide Appendices VII, VIII and IX.]

11. The following information has been communicated by the Imperial Superintendent of Working-Plans:—

In the Bengal Presidency, working-plans for areas amounting to 1,290 square miles were sanctioned during the year. The most important additions to forests under regulated working were made in Burma and in Eastern Bengal and Assam where 686 and 391 square miles respectively were brought under working-plans. Working-plans for 5,460 square miles were in course of compilation at the close of the year.

In the Madras Presidency working-plans for 110 square miles were sanctioned, and plans for 3,622 square miles were under preparation at the close of the year.

In the Bombay Presidency plans for 971 square miles were sanctioned, whilst plans for 1,343 square miles still remained to be completed.

The following figures show the total areas under working-plans at the close of the year:—

	At commencement of year. Square miles.	Added during year. Square miles.	Total. Square miles.
Bengal	26,876	1,290	28,166
Madras	6,130	110	6,240
Bombay	4,545	971	5,516
TOTAL	37,551	2,371	39,922

In the Provinces outside the Madras and Bombay Presidencies, 165,530 square miles remained to be brought under regular working-plans at the close of the year. This large area, however, includes extensive tracts of State and Unclassed forests; (23,125 square miles of Unclassed forests in Eastern Bengal and Assam alone), for which no working-plans will be required in the immediate future owing to their inaccessibility and to want of demand; and also 4,145 square miles of State forests in the Central Provinces for which previously sanctioned working-plans have been abandoned. In the Madras and Bombay Presidencies 9,723 and 6,447 square miles respectively remained to be taken in hand at the close of the year.

12. The progress made during the year in the preparation of working-plans in the various Provinces was as follows:—

Bengal.—Two draft working-plans, *viz.*, for the Jalpaiguri Division (177 square miles) and the Buxa Division (327 square miles), were compiled during the year. These drafts were however subsequently transferred to the Eastern Bengal and Assam Forest Circle. The working-plans for the Darjeeling Division (39 square miles), the Puri Division (113 square miles) and the Sunderbans Division (3,833 square miles) were revised, and those for the Tista Valley forests of the Darjeeling Division (12 square miles) and the Mal forests of the Tista Division (221 square miles) were under revision during the year. Progress was made in the collection of data for the Angul Forests Working-Plan (251 square miles).

United Provinces.—The working-plan for the Naini Tal Municipal forests (2·2 square miles) was submitted during the year for sanction; and the compilation of working-plans for the Mussoorie Municipal and Landour Cantonment forests (4 square miles), the Chakrata Cantonment forests (3 square miles) and the Bahraich forests (334 square miles) was taken in hand. In addition the working-plans for the leased Deodar forests in Tehri-Garhwal

(78 square miles) and for the Saharanpur forests of the Siwalik Division (295 square miles) were under revision. The Preliminary Report for a new working-plan for the Pilibhit closed forests and the Preliminary Report for the revision of the existing working-plan for the Bhira forests of the Kheri Division were submitted during the year. The Preliminary Reports for the revision of the working-plans for the Trans-Sarda forests in the Kheri Division and the Nawabganj forests of the Gonda Division were under preparation.

Punjab.—A working-plan for the Bashahr leased forests (68 square miles) was sanctioned during the year, as well as the revision of the plan for the remaining forests (164 square miles) of the Sutlej Valley. The Pabar Valley Working-Plan (146 square miles) was under preparation.

Burma.—Regular working-plans for the Satpok, Sitkwin and Thindawyo Working Circles in the Tharrawaddy Division (20 square miles), the Rangoon Hill forests (188 square miles) and the South Zamayi Reserves (229 square miles) in the Pegu Division and a rough working-plan for the Padauk forests in the Ruby Mines Division (249 square miles) were sanctioned during the year. A working-plan for the East Yoma, Satsuwa and Tindaw reserves (134 square miles) and a preliminary working-plan report for the Mindon, Yoma, Ngawet and Made reserves (301 square miles) in the Thayetmyo Division were submitted for sanction towards the close of the year. The preparation of preliminary reports and working-plans for the forests in the Upper Chindwin and Myittha Divisions was continued and the plans for the Nyaunglebin Working Circle in the Shwegyin Division, the Taungdwingyi reserve in the Minbu Division and the Tonkan reserve in the Shwegyin Division were sent to press. In the course of the year the preparation of plans for an area of 2,567 square miles was taken in hand.

Eastern Bengal and Assam.—During the year working-plans for the Nambor reserves in the Sibsagar Division (64 square miles), for the Buxa Division (327 square miles), and for the Sâl forests of the Darrang Division (3 square miles) were sanctioned; a revised working-plan for the reserved forests in Jalpaiguri Division (177 square miles) was also sanctioned during the year.

Central Provinces.—Sanction was conveyed to the new working-plan for the Banjar Valley Sâl forests in the Mandla Division (98 square miles) and to the revised working-plan for the East Pench Range of the Nagpur Division (161 square miles). Working-plans for an area of 1,727 square miles in the Northern and Southern Circles were in course of preparation. A preliminary working-plan report for a portion of the Lormi Range Sâl forests in the Southern Circle was being compiled during the year.

Coorg.—No progress was made during the year in the preparation of working-plans, but the compilation of a working-plan for the Jainkal forests and of a preliminary working-plan report for the Ghat Valleys was under consideration.

North-West Frontier.—Sanction was accorded to a working-plan for the Siran range (47.1 square miles). The working-plan for the Dungagalli-Thandiani Range (61.2 square miles) was prepared but not submitted during the year.

Ajmer-Merwara.

Baluchistan.

Andamans.

} No working-plans or preliminary reports were compiled during the year.

Madras.—During the year working-plans for 110 square miles were sanctioned by the Board of Revenue: plans for 2,558 square miles were under preparation at the commencement of the year and those for 1,064 square miles were taken in hand. An area of 9,723 square miles therefore remained to be brought under regular working-plans.

A preliminary working-plan report for the Kodaikanal and Tandigudi ranges in the Madura District was prepared during the year and that for the Palavaram range in the Godavari District was under preparation.

Bombay.—Sanction was accorded to three provincial working-plans in the Nasik Division comprising an area of 735 square miles, to the working-plans for the Yellapur Teak Slopes, the Yellapur Ghat Teak area and the Warkad-Hammadgi extension of the Khanapur Fuel Plan Working-plans for the Kolaba Division, the Mandvi forests and the forests of the Sukkur Division were prepared during the year, but these together with the revised working-plan for the Halol range in the Panch Mahals Division were however not ready for submission to the Local Government during the year. Other working-plans, *viz.*, for the Babul reserves of the Jamner, Bhusaval and Edalabad ranges; the Anjan and scrub jungles of Edalabad; the Lonavla-Khandala Firewood Supply and the Mahabaleshwar Plateau forests were drawn up but were still under consideration at the close of the year. The area for which working-plans remained to be taken in hand was estimated at 6,447 square miles.

2.—COMMUNICATIONS AND BUILDINGS.

[*Vide* Appendix X.](a) *Roads and Bridges.*

13. The expenditure on new work fell to ₹1,51,345 as compared with ₹1,67,245 of the previous year. Repairs on the other hand rose to ₹1,41,071 from ₹1,19,129 in 1904-05. The total amount spent on communications was thus ₹2,92,416 compared with ₹2,86,374 in the previous year.

Road work in *Bengal* was pushed on in Singbhum, other divisions also receiving attention.

In the *United Provinces* 61 miles of new roads were constructed and 4,191 miles repaired at a total cost of ₹53,565.

In the *Punjab* expenditure on new work rose to ₹14,726 compared with ₹6,537 in 1904-05 and maintenance to ₹5,108 against ₹4,604. New work consisted of 138 miles of bridle and other paths, while 964 miles of roads and paths were repaired.

In *Burma* new work cost ₹21,324 against ₹24,308 and repairs ₹9,700 against ₹11,123 in 1904-05. Considering the immense areas of forests to be exploited, this expenditure is clearly inadequate, but it is satisfactory to note that programmes prescribing construction for a term of years are in course of preparation, thereby ensuring more continuous progress.

In *Eastern Bengal and Assam* there was a falling off in expenditure on new work of about ₹3,500 while repairs cost ₹11,002 or about the same as last year. No tramway extension was undertaken. Most of the forests in this circle are devoid of communications, exploitation being confined to the edges of water courses, so that it is essential that the subject of communications should have the most careful attention.

In the *Central Provinces* 117 miles of cart road and 30 miles of minor roads cost ₹17,867. This is nearly double the amount spent in the previous year, but without roads remunerative exploitation is impossible in these forests and much larger sums will have to be disbursed before their full outturn can be utilised. Maintenance showed little difference, 4,691 miles of road costing only ₹13,497 or less than ₹3 per mile — a sum which would hardly pay for grass cutting on a width of 8 or 10 feet. The average annual profit on the Allapilli Monorail tramway for a period of three years is said to be 21.26 per cent. on the capital cost, after deducting 10 per cent. per annum for depreciation.

In *Madras* ₹18,599 were spent on new roads, while repairs cost ₹29,258 or nearly ₹6,500 more than in 1904-05. The monorail tramway in Godavari showed a profit as also did the tramway in Nellore, while that in Coimbatore appears to have been worked at a loss. The rate in Godavari per ton-mile fell from ₹2-0-5 to ₹0-10-4, the rate for carriage by other means being ₹1-5. In Coimbatore the rate was ₹1-4 per ton-mile while the estimated cost of carting was ₹1-0-8. These figures are of interest as again affording proof that well considered systems of mechanical transport are often not only highly remunerative but sometimes render accessible valuable forest tracts which must otherwise remain closed to exploitation.

In *Bombay* the amount spent on new roads was ₹24,804 or ₹5,622 less than in the previous year, repairs costing ₹9,433 or ₹1,310 less. 19½ miles of road were completed in the Dangs and some progress was made in Kanara but the forests of Bombay are clearly in need of a more extensive system of communications which must entail a much higher expenditure in the future.

(b) *Buildings.*

14. The importance of providing adequate shelter for the Forest Staff now appears to be recognised in every Province, though in some a commencement is only now being made to attain this desirable end. The total amount expended on buildings was ₹5,09,515 or about ₹94,000 more than in the previous year. The expenditure on new work increased by ₹66,776 and on repairs by ₹27,422. The most noteworthy increase of expenditure on new work, amounting to nearly ₹33,000, took place in the *United Provinces*. A five years scheme for buildings came during the year into operation. In the *Punjab* about ₹6,000, in *Eastern Bengal and Assam* about ₹3,000, in *Coorg* ₹3,000, in *Madras* about ₹13,000, and in *Bombay* over ₹15,000 more was spent than in 1904-05. At the same time the expenditure on repairs of existing

buildings rose in most Provinces. The suggestions with regard to buildings in sanctioned working-plans were not always acted up to in full. It is however necessary to remember that it is often difficult and sometimes impossible to carry out the silvicultural prescriptions of a working-plan if the suggestions as to roads and buildings are not fully complied with. The one may be to a great extent dependent on the other, and omissions to incur a necessary expenditure on communications and housing of subordinates, may result in inability to reap all the benefits of the proper exploitation of the forest with the estimated financial results. Hence in order to ensure continuity of purpose it is essential that the suggestions of the working-plan officer, if approved by the Local Government, should be embodied in sanctioned programmes for which adequate funds should be provided.

(c) *Miscellaneous Works.*

15. Rupees 64,835 was expended under this head, practically the same as in the previous year. The miscellaneous items, including the construction and maintenance of wells, irrigation works, tanks, clearing streams, camping grounds and compounds are of considerable local importance, the principal amounts being in the *United Provinces* ₹10,098, in the *Central Provinces and Berar* ₹14,781, in *Madras* ₹8,407, and in *Bombay* ₹14,688. In the *Central Provinces* the provision of tanks in grazing grounds continued to receive attention, while in the *Sind Circle* new irrigation works cost ₹7,174 and repairs ₹3,544.

3.—PROTECTION OF FORESTS.

(a) GENERAL PROTECTION.

[*Vide* Appendices XI and XII.]

16. There was during the year under review a noticeable increase in the number of forest offences taken into court and compounded, the total reaching 57,723 or an excess of about 3,700 on last year's record, and of 6,500 on the average of the past three years. The increase was general in all provinces except in *Bengal*, the *United Provinces* and the *Punjab*, but is most noticeable in *Madras* and *Bombay* where, compared with the previous year's returns, 1,397 and 1,961 more cases are shown. In *Bombay* the increase is ascribed partly to the prevailing scarcity, but both there and in *Madras* the greater efficiency of the protective staff is suggested as a reason for this undesirable phenomenon. The number of undetected cases has however also somewhat increased in both provinces. The total number of undetected offences was 7,288 against 7,107 in 1904-05. Of the former, 3,462 were cases of injury to forests by fire and 2,977 were cases of unauthorised felling or appropriation of wood and other forest produce.

17. The forest offences of the year under review compare with the average of the preceding three years as follows :—

	Average 1902-03—1904-05.	In 1905-06.
Injury by fire	4,367	4,320
Unauthorised felling and removal of forest produce.	30,805	33,911
" grazing	20,826	24,644
Other offences	3,991	4,771
TOTAL	<u>59,989</u>	<u>67,646</u>

It is impossible to give reasons for these statistical variations. The case of each Province or even District presents different conditions which Local Governments treat, after due investigation, with punitive or alleviating measures suited to the circumstances.

(b) PROTECTION FROM FIRE.

[*Vide* Appendix XIII.]

18. The area brought under systematic fire protection was 40,073 square miles or about 500 square miles more than in 1904-05. The percentage of area successfully protected was 93.5 against 95.4 in that year. The area under special protection amounted to 43.3 per cent. of the total area of reserved forests; but it may not be inferred that the whole forest area now unprotected is in need of special protection, for it appears that owing to various conditions, climatic and other, there is not much room left for further extension of systematic Fire Conservancy while it is probable that in many evergreen areas, some relaxation of the efforts of the Department in this direction may be justified in the future.

19. The following statement compares the results of the year with the percentages of the previous five years :—

PROVINCE.	AREA IN SQUARE MILES.		Proportion of forests under fire protection to total area of reserves.	PERCENTAGE OF FAILURE TO AREA ATTEMPTED TO BE PROTECTED.	
	Attempted.	Protected.		Average of past five years to 1905.	1905-06.
Bengal	1,889	1,822	44.3	2.9	3.5
United Provinces	3,198	3,054	78	1.5	4.5
Punjab	(a) 868	835	37	1.2	3.8
Burma	8,214	7,382	40.2	11.4	10.1
Eastern Bengal and Assam	1,392	1,387	23	3.0	0.4
Central Provinces including Berar. (b) 7,723	7,450	35	3.0	3.5	
Coorg	208	207	41	1.1	0.5
North-West Frontier	83	83	35	6.2	...
Ajmer	142	140	100	0.8	1.4
Total Bengal	23,717	22,360	48.1	3.45	3.46
Madras	7,202	6,772	39.9	5.4	5.9
Bombay	9,154	8,326	67.7	12.9	9.0
GRAND TOTAL, 1905-06	40,073	37,458	48.3	7.3	6.5
„ „ 1904-05	39,464	37,657	43	7.7	4.6

(a) Excludes 10 square miles not under systematic protection.

(b) „ 2,710 square miles of partially protected areas.

Except in *Eastern Bengal and Assam*, *Coorg*, the *North-West Frontier Province* and *Ajmer*, the results of the year's work were less satisfactory than in the previous year, although the percentage of failures in the forests of the Bengal Presidency differed from the quinquennial average by only .01 per cent. The unusually severe and prolonged hot weather rendered success extremely difficult and considering the conditions, results may generally be regarded as satisfactory. In *Bombay*, although the total percentage burnt differs little from that of the previous year, it is noted that in *Sind* favourable inundations greatly assisted protective measures. In the *Central Circle* the area burnt exceeded that of the previous year by 72 per cent.

20. The classification of fires according to their origin is given for each forest circle in Appendix XIII. The total number of forest fires was 4,892 compared with 4,248 in the previous year, but there was a satisfactory falling off in the number of fires due to the carelessness of the forest staff and of outsiders. A noticeable feature of the year's working is the number of fires ascribed to intention or malice, which rose from 488 in the previous year to 1,887. The increase was almost general but in *Bombay* the corresponding figures stand at 57 and 1,283. If these figures are reliable, the matter merits special investigation as to whether the people are actuated by necessity or merely by disapprobation of the forest laws.

(c) PROTECTION FROM CATTLE.

[*Vide* Appendices XIV and XV.]

21. Out of a total forest area of 233,651 square miles, 38,748 square miles or 16 per cent. remained closed to all animals and 16,239 or 7 per cent. to browsers only. Thus 77 per cent. of the total area was open to all animals. Buffaloes, cows, goats and sheep, camels and other animals to the number of over 13½ millions obtained pasture in State forests and of these, 7½ millions paid full rates, 2½ millions paid privileged rates, more than two millions were admitted by right under settlement and over one million during the pleasure of the Government.

There was an increase in the number of cattle impounded, the total being 541,626 compared with 535,328 in the previous year, but the average of the past three years was not exceeded. In *Bengal* the numbers fell to 52,291 compared with 56,523 in 1904-05 but rose in *Madras* to 230,796 and in *Bombay* to 258,539 or by about 2,500 and 8,000 head respectively.

(d) PROTECTION AGAINST INJURY FROM NATURAL CAUSES.

22. The most serious causes of injury reported are frost, snow, drought, climbers, insects and wild animals. The result of the serious frosts of February 1905 is still apparent in the affected areas and will remain for many years to come; the following abstracts from Provincial reports deal briefly with the subject.

In *Bengal* climber cutting extended over a smaller area than in the previous year, the figures showing 16,410 acres as compared with 24,617 acres in 1904-05. Severe storms caused considerable damage in *Singbhum*, and *Puri*. The previous year's frosts were ascertained to have affected about 20 per cent. of the *sal* area in *Palamau*, while in the *Mal* plantation the depredations of wild elephants render the continuation of the work of doubtful expediency. Barking deer are again stated to have done damage in *Darjeeling*.

In the *United Provinces* severe frosts again occurred. In the *Eastern Circle* it was noted that the regrowth of the trees injured in the previous year was again cut back by frost thus intensifying and prolonging the injury. In the *Cis-Sarda* forests coppice growth was very largely killed back in spite of the maintenance of a full number of standards, and

even high forest under treatment by improvement fellings suffered considerable injury. Attention is being everywhere given to the cutting of climbers.

In the *Punjab* recovery from the previous year's frosts is progressing slowly. In Chamba and Kulu snow caused injury to young deodar poles but the thinning of thickets has minimised this danger. Fungoid diseases are causing injury to the *deodar* in Kulu and to *Pinus excelsa* in Simla.

In *Burma* climber cutting was carried out over large areas, mainly in conjunction with girdlings or improvement fellings under working-plans. The teak plantations in Tharrawaddy, Zigon and Rangoon were as usual attacked by the defoliator, *Hyblaea puera*, while in Pyinmana this insect was noticed in large numbers both in reserved and unclassed forests. *Padouk* seedlings in the Tenasserim Circle were damaged by deer and in the Toungoo Division by a weevil which rings the young shoots.

In the *Central Provinces* the injury caused by the great drought of 1900 followed by seasons of insufficient rainfall and the phenomenal frosts of 1905 is everywhere noticeable. In the Northern Circle an increase in the number of standards, hitherto considered to be sufficient, over coppice is suggested as a means of reducing injury from frost. In the Southern Circle as in many other localities frost prevents the ingress of *sál* into the large blanks; it is probable that to afforest these areas with the more valuable species steps will first have to be taken to encourage the growth of quick growing trees of inferior value which are not so much influenced by low temperatures.

In *Eastern Bengal and Assam* a defoliating caterpillar, *Gunda Sikkima*, caused injury in the *Ficus elastica* plantation at Charduar. Climbers were cut over 17,838 acres at a cost of R4,011 but this important operation is apparently still much neglected.

In *Coorg* the spread of the *spike* disease of sandal is said to be most efficaciously arrested by immediately uprooting the attacked trees. The extirpation of *lantana* presents extreme difficulty in so moist a climate. Cutting, burning and uprooting of stumps is followed by a dense seedling growth almost as impenetrable as the original crop, and labour is again required to pull up the seedlings, after the first monsoon and before the plant again seeds.

In *Madras* plantations suffered from fungoid and insect attack while sandal also was attacked by *spike* disease. The danger to which pure crops, especially of exotic and even indigenous species, are exposed is exemplified in some of the Provincial Reports and the question of suitable mixture of species is one which would repay investigation.

In *Bombay* climber cutting was carried out over extensive areas, the guards participating in this work. *Lantana* is said to usurp the ground in the fellings in Belgaum and Dharwar, while in Sind a similar danger threatens in *Sar* grass which arrests the reproduction of *babul*.

4.—SYLVICULTURE.

(a) NATURAL REPRODUCTION.

23. This all-important subject on which the timber supply of the future must depend has apparently received detailed attention in all circles. The effect of frost has been referred to in the foregoing section, and it has been noted that the effect of fire protection in moist forests has produced results which could not be fully foreseen but which now demand the most careful study, in order to maintain and increase the proportion of the more valuable kinds of timber.

24. In *Bengal* the reproduction of *sál* is said to be excellent in the fire protected tracts of Chota Nagpur and Orissa where it is rapidly spreading over the blanks. In the Santhal Parganas *sál* seedlings are scarce in spite of profuse flowering. In the moist forests of the sub-Himalayan tract, the inroads of quick growing evergreen scrub, hitherto checked by the annual fires, has produced conditions unfavourable to the development of *sál* seedlings.

In *Eastern Bengal and Assam* the *sál* is of the type last referred to and suffers even more from the dense undergrowth. Experiments are being made to test the result of fire on the undergrowth, but it is as yet too early to make any deductions.

In the *United Provinces* the *conifers* and broad leaved trees of the hill forests seeded badly; in the plains the *sál* seeded fairly in the Western and

abundantly in the Eastern Circle. Germination was not however satisfactory probably owing to the severe frosts affecting the vitality of the trees. In the drier and open forests of Pilibit and Bhira, where coarse grass and poor soil prevail, natural regeneration is always poor. In parts of Gonda grazing is impeding reproduction which is excellent in the closed areas. Reproduction by coppice is generally good, although frosts are said to cause injury unless a large number of standards is maintained.

In the *Central Provinces* the combination of frost and drought resulted in conditions unfavourable for regeneration, but except in localities exposed to drawbacks, reproduction by coppice was satisfactory.

In *Burma* while protection from fire has resulted in marked benefit in the drier forests, it is remarked that the dense undergrowth and unbroken canopy of bamboos in the moist forests resulting from successful fire protection do not admit of adequate reproduction. The subject is being carefully investigated. The flowering of *tinwa* bamboo (*Cephalostachyum pergracile*) in the Northern Circle afforded an opportunity for systematic preparations to assist reproduction.

In *Madras* natural regeneration in the moist forests was as usual most prolific and satisfactory. In the dry forests the year was generally unfavourable owing to the short rainfall and prolonged hot weather. In such forests, the shrubby growth following fire protection helps the seedlings to establish themselves, provided cattle are excluded.

In *Bombay* conditions were generally unfavourable for natural reproduction, except in Sind where abnormal floods assisted the *babul* and *tamarisk*. Protection from fire and cattle has increased the number of teak seedlings in the Central Circle and in Surat, Panch Mahals and Kanara, but it would appear that more effective protection against all causes of injury is necessary for the welfare of these forests.

(b) ARTIFICIAL REPRODUCTION.

[*Vide* Appendix XVI.]

25. The total area of regular and taungya plantations fell from 143,754 acres in the previous year to 136,528. The decrease was mainly due to the abandonment of 3,516 acres in the Central Circle of *Bombay* and to the exclusion of "topes" in *Madras* which were included in the returns of 1904-05.

26. The following is a brief abstract of the progress made in the different Provinces :—

In *Bengal* an apparent reduction is due to the transfer of the Eastern Bengal Districts to the new province. New work consisted of the extension of rubber plantations in the Darjeeling District and of the teak plantations in Puri, in all 255 acres were added. Two-thirds of the teak planted in Puri died back but it is hoped that they will throw out new shoots. Besides the above, 32 acres of cantonment land at Darjeeling were planted up at the expense of the Department.

In the *United Provinces* 172 acres were planted with *deodar*, *chir*, etc., in Naini Tal and 80 acres excluded in the Siwalik Division, the plantation now forming part of the surrounding forest. The total area of plantations was brought up to 3,519 acres.

In the *Punjab* the established plantations at Sabathu and Jatogh aggregating 470 acres, were transferred to forests, the area under plantations being thereby reduced to 507 acres.

In *Burma* the total area of plantations rose to 76,384 acres of which 70,555 are taungyas 2,255 acres of this class being added during the year. Five hundred and fifty acres of regular plantations were abandoned and 213 added, the balance of this class of plantation at the end of the year standing at 5,829 acres. Schemes to regulate thinnings in the older plantations were

under preparation, but this work would seem to have been much neglected in the past owing to inadequacy of the staff.

No extensions were made to the Charduar and Kulsu rubber plantations of *Assam*, where work was limited to maintenance and the clearance of large trees between the lines of rubber trees. The Kulsu teak plantations of 171 acres should have been thinned but only 27 acres were worked over.

The year's work in the *Central Provinces* was mainly experimental but conditions were generally unfavourable and results partly or wholly failed.

In *Coorg* the restoration of unsuccessful plantations was commenced, and 110 acres added to taungyas. The total area, including regular plantations, at the end of the year was 3,129 acres.

In the *Andamans* 200 acres of taungyas were added, mainly of *padauk*.

In *Madras* regular plantations were extended by 969 acres while 609 acres were excluded. Twenty-five acres were added to taungyas, the total area at the close of the year being 26,087 acres.

The *Bombay* Reports still fail to show the difference between regular and other plantations, and so far as can be gathered cultural operations are sometimes entered in Form 61 as regular plantations. The additions are stated to be 9,325 acres and exclusions 3,752 leaving a balance of 20,679 acres at the close of the year.

27. If the sum of R82,645 spent on the Mergui plantation be excluded as incurred on an experimental concern, which is now being leased to private individuals, the total expenditure on plantation work amounted to R1,57,961 as compared with R1,32,008 in the previous year.

28. In addition to the ordinary plantation work, operations for the introduction of valuable species, the filling up of blanks, and sowings or plantings in areas where bamboo has flowered, known as "cultural operations," were undertaken in most provinces.

In *Bengal*, 766 acres were dealt with mainly in the Darjeeling and Tista Divisions under the prescribed plans. Blanks were filled up by sowing or planting, and cleanings were carried out over 463 miles of lines formerly planted. In Tista the attempt to introduce valuable kinds was a failure owing to damage by wild animals. In Puri the introduction of *Cassia siamea* in coppice coupes was a partial failure owing to an unfavourable season.

In the *United Provinces* extensive operations were undertaken chiefly in the direction of filling up blanks or introducing the most valuable species. In Naini Tal and Jaunsar a large number of *deodar* seedlings were planted out.

In the *Punjab* the operations were mainly on the same lines.

In *Burma* teak and cutch seeds were sown in blanks and in areas where bamboo had flowered. An area of 345 acres so treated in the Rangoon Division was abandoned but results as a rule were successful. The experimental sowings and dibblings in Upper Burma over areas previously burnt over do not as yet afford conclusive deductions.

In the *Central Provinces* work was centered in the agri-sylvicultural operations in Berar. In Chirori results were successful but in the Melghat tardiness and incompleteness in execution resulted in failure.

In *Madras* sowings and plantings of a great variety of species were undertaken with varying success. Drought usually accounted for failure. An attempt is being made to plant up the swamps of Geddassal with *Eucalyptus globulus*, and a nursery, so far very promising was established.

The raising of teak in nurseries for planting in the forests was continued in *Bombay*, more than 200,000 teak plants were thus planted in the Northern Circle. In the Central and Southern Circles 64 per cent. of the transplants survived in spite of unfavourable weather.

29. The expenditure on cultural operations in the different Provinces was as follows:—

	R
Bengal	6,368
United Provinces	2,549
Punjab	6,397
Burma	14,041
Eastern Bengal and Assam	674
Central Provinces	3,373
Coorg	285
North-West Frontier Province	517
Ajmer . . . . .	...
Baluchistan	12
Andamans	530
Total	34,746
Madras	10,643
Bombay	11,660
GRAND TOTAL	57,049

(c) OPERATIONS FOR THE IMPROVEMENT OF THE GROWING STOCK.

30. These comprise operations the outturn of which is usually unsaleable, such as weedings, cleanings, thinnings, improvement fellings and girdlings, and are therefore distinct from works of formation and exploitation. The following is a brief abstract of the year's work.

In *Bengal* 8,810 acres were cleaned for the benefit of the existing stock in addition to much work of this nature carried out by the staff. The attention paid to these operations is considered by the Conservator to be still insufficient.

In the *United Provinces* work was on a larger scale and more systematic than in other provinces. Weedings, cleanings and thinnings were undertaken in nearly all divisions together with improvement fellings or girdlings in accordance with the prescriptions of working-plans.

In the *Punjab* cleanings and early thinnings were conducted mainly in favour of deodar, the largest area dealt with in any division amounted to 2,630 acres in *Bashahr*.

Nearly 68,000 acres were worked over in *Burma* under Improvement Fellings. *Ficus* bound trees were also felled over extensive areas but measures are generally of a tentative nature owing to want of adequate supervision.

It is regrettable that no operations for the improvement of the growing stock could be undertaken in *Eastern Bengal and Assam*. The rapid growth of inferior kinds in so moist a climate clearly necessitates extensive measures to benefit the valuable species.

In the *Central Provinces* improvement fellings, girdlings and cutting back of injured trees were undertaken, the largest area dealt with being in the *Melghat* where 49 square miles are said to have been so treated.

In *Madras* improvement fellings, thinnings and cleanings were extensively carried out and measures were taken to eradicate fungoid and other diseases.

In *Bombay* weedings and thinnings proceeded in *Babul* coupes and valuable trees were relieved of pressure by the felling or girdling of inferior species over extensive areas.

31. It may be said that the value of these operations is now generally realised, although the extent of the operations and sometimes also the manner of dealing with the work is not so satisfactory as might be desired. In the great majority of cases this is referable to the weakness of the trained staff in all branches of the Department, for it is not yet apparently fully recognised that to tend and exploit the crop which for the past 50 years we have been fostering, and to collect the revenue which is now at our disposal, a larger number of officers is necessary than at a time when protection and organization alone occupied the attention of the Forest Department. In order to

continue the progress already made not only cultural works on a large scale are now necessary, but repeated cleanings and weedings are essential in the altered conditions of growth which have often been the result of the attempt to increase the quality and quantity of the outturn of the more valuable timber.

(d) EXPERIMENTS.

32. In the Sambalpur Division of Bengal 1,900 acres of grass were burnt in the winter with a view to compare the growth on this and unburnt areas. There was however no remarkable production of early grass until the rains set in. The experiment will be repeated.

In the *United Provinces*, the experiments to introduce exotics in Naini Tal were continued. The *Hardy Catalpa* and *Knobcone* pine succeeded best. Exotic spruce and pine were noticed to be peculiarly prone to insect attack. Experiments in lac propagation were made in the Siwaliks, and also experiments to test the effect of resin tapping on the growth and weight of chir timber were conducted in Naini Tal. It was proved that tapping for 5 consecutive years with a 10 years' rest did not affect the weight of the timber.

In the *Punjab*, the introduction of *Robinia* in 1897 to clothe the lower slopes has been pronounced a failure, the tree thriving only at elevations above 5,000 feet. The *Catalpa* seems to promise best of the exotics. The introduction of *Eucalyptus globulus* and *Eucalyptus rostrata* was proceeded with, the latter germinated sparingly, plants were pricked out in nurseries, in which several thousands of *Eucalyptus globulus* were thriving.

Work was continued in the Mergui rubber plantation in *Burma*, the expenditure of the year was R82,645 bringing the total to date to R2,29,781, for which sum 1,957 acres have been planted up. Tapping operations showed that trees between 4 and 5 feet in girth yield an average of 18.08 ozz. of rubber per tree while the yield for trees over 5 feet was 30.98 ozz. The average price of rubber sold in London was 5s. 5d. per lb.

Sylvicultural experiments were commenced in the *Central Provinces*, the most important being directed to test (a) the effect of the season of felling on coppice reproduction, (b) the effect of fire on the existing crop and its reproduction, (c) the value of ploughing and sowing as a cheap method of afforesting blanks, to discover (d) the reason for the absence of *sál* reproduction in Mandla. The sandal introduced into Chanda was progressing well, but in Wun was regarded as a failure.

In *Madras* experiments were continued with exotics but on the whole proved disappointing. Some success was achieved with mahogany, camphor and American pines. In *Bombay* measurements were continued to test the relative depth of water in wells situated outside and inside the forest. Experiments were also undertaken to test the feasibility of growing *Ceara Rubber*, the germination of which was on the whole successful and growth rapid, but few plants survived after planting in the open. *Ficus elastica* seed obtained from Assam failed to germinate.

5.—EXPLOITATION.

(Vide Appendix XVIII.)

(a) SYSTEM OF MANAGEMENT.

33. The clear fellings carried out during the year were mainly restricted to the exploitation of plantations worked under a short rotation and to areas under Babul (*Acacia indica*) in Bombay. The abnormal condition of the

forest crop points to the general adoption of methods which will gradually improve the factors of the locality and which are suitable to the conditions of a demand, which often results in only one or two of a number of species being utilized. For these reasons the selection method has been adopted over far the larger area of forest under systematic management. Improvement fellings are also provisionally prescribed in order to prepare the growing stock for the introduction of a permanent method, and large areas are now under this treatment. In places where market or other conditions indicate the necessity for this treatment, the coppice system has been introduced. Working-plans prescribe the various systems of management which are considered to suit local circumstances and as a rule they have been worked up to in all Provinces, although, in some cases, inaccessibility or absence of demand have precluded utilization of the entire outturn.

(b) AGENCY OF EXPLOITATION.

(Vide Appendix XVIII.)

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

34. Out of a total outturn of timber of $67\frac{3}{4}$ million cubic feet, $10\frac{1}{4}$ million were removed by Departmental Agency, 51 million by purchasers, $1\frac{3}{4}$ million by free grantees and $4\frac{3}{4}$ million by right holders. Although it is the policy to relieve, as far as possible, the Department of timber operations and to substitute private enterprise, there was no increase in the outturn by purchasers compared with the previous year. Timber merchants do not readily extend their operations to inaccessible parts and until such forests have been opened out by suitable communications, private enterprise will not altogether supplant departmental agency. The matter is of importance because the staff is designed to meet the demands of the Forests in protection and improvement and is insufficient to undertake felling, conversion and removal of the produce.

The outturn of fuel was $171\frac{1}{2}$ million cubic feet or nearly 14 million cubic feet less than in 1904-05. Twenty million cubic feet were removed by Government Agency, 88 million cubic feet by purchasers, $6\frac{1}{2}$ million by free grantees and 57 million by rightholders.

The total yield of bamboos was 210 millions of which $3\frac{3}{4}$ millions were removed departmentally, $3\frac{1}{4}$ millions by free grantees and $17\frac{3}{4}$ millions by right holders, the rest being removed by purchasers.

The returns for minor produce including grass and grazing show also that more than two-thirds of the produce was removed by purchasers. Out of a total value of 60 lakhs, only 5 lakhs were removed by Government Agency, about $4\frac{1}{2}$ by free grantees and 9 lakhs by right holders.

(iii) *Rights and Privileges.*

35. The quantity of material removed from the forests by right and privilege holders was as follows :—

Timber	$6\frac{1}{2}$ million cubic feet.
Fuel	$63\frac{1}{4}$ do. do.
Bamboos	$20\frac{3}{4}$ millions.

To this should be added minor produce including grass and grazing to the value of nearly $13\frac{1}{2}$ lakhs of rupees.

(iv) *Free Grants.*

36. Free grants were given in all provinces to relieve distress caused by famine, fire, flood, earthquakes and for works of public utility erected by

public-spirited persons. Relief was afforded to sufferers from the earthquake of 1905 in the Punjab, and in Burma no less than 127,919 cubic feet of teak and 241,409 cubic feet of reserved woods were granted for the construction of monasteries, bridges, village rest houses and other public works.

(e) OUTTURN AND SOURCES OF FOREST PRODUCE.

(Vide Appendix XVII.)

37. The outturn from all classes of forests 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.		Timber and fuel.	Bamboos.	Minor produce.
		Cubic feet.	No.	₹
Bengal	{ 1905-06	179,761,727	164,298,466	36,15,587
	{ 1904-05	182,248,460	170,213,114	33,48,540
Madras	{ 1905-06	22,514,748	32,054,025	14,01,348
	{ 1904-05	23,913,211	35,788,482	13,11,827
Bombay	{ 1905-06	44,058,365	13,821,289	4,95,884
	{ 1904-05	45,406,605	9,259,583	11,56,559
GRAND TOTAL	{ 1905-06	246,334,840	210,173,780	55,12,819
	{ 1904-05	251,568,276	215,261,179	58,16,926

38. There was a falling off in output of over 5 million cubic feet of timber and fuel, of more than 5 million bamboos and of over 3 lakhs of rupees in the value of minor produce.

In the *Bengal Circle* an increase under timber and a decrease under fuel resulted in a deficit of over half a million cubic feet. In the *Sunderbans* there was considerably less demand for fuel of inferior species, coke now being largely in use in *Calcutta*.

The *United Provinces* showed an increased outturn of timber and fuel from Reserves of about $\frac{1}{2}$ million cubic feet.

In the *Punjab* there was an increase of 4 million cubic feet from Reserves and over $\frac{1}{2}$ a million from unclassified Forests.

In *Burma* while there was no appreciable difference in the outturn from Reserves, there was a falling off of 10 million cubic feet from unclassified Forests and it is this large deficit, said to be due to cattle disease and plague, which mainly affects the year's decrease.

In *Madras* a decrease of nearly one and-a-half million cubic feet of timber and fuel is ascribed mainly to alterations in methods of disposal and conditions of sale.

In *Bombay* an almost similar decrease is said to be chiefly caused by the completion of the fellings of dead and dying teak and to total suspension of coupe sales in the *North Thana Division*.

The fall in the output of bamboos in the *Bengal Presidency* was principally due to decreased extraction in the *Bengal Circle* and in the *Central Provinces*. There was an increase of over $4\frac{1}{2}$ millions in *Bombay* which is unexplained as also a fall in the value of minor produce of $6\frac{1}{2}$ lakhs of Rupees.

CHAPTER III.

FINANCIAL RESULTS.

[Vide Appendices XIX to XXIII.]

39. The Gross Revenue, Expenditure, Surplus and the proportion of Expenditure to Gross Revenue of the last 33 financial years are shown in the table below :—

Quinquennial periods.	Gross Revenue.	Expenditure.	Surplus.	Proportion of Expenditure to Gross Revenue.
	₹	₹	₹	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	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

The gross revenue and the surplus are the highest recorded ; the increases over last year being about 26½ and 13½ lakhs respectively and although there has been an increase of expenditure of nearly 13 lakhs, the proportion of expenditure to gross revenue is the lowest on record.

The gross revenue of the Department has approximately quadrupled during the past 33 years while the surplus has during that period increased six-fold. In order to deal with a steadily increasing area and to execute works essential to a realization of the yield, the expenditure too has, during that time, increased about 3½ times.

The above figures exclude the value of forest produce granted free or at reduced rates. The estimated value of such concessions amounted during the year to about 35 lakhs of rupees. This direct relief is therefore outside the contribution of 124 lakhs to the State revenues.

40. It was stated in the last chapter that there had been a reduced output of material, the increased receipts therefore lead to the inference that the value of forest produce has generally risen and this should be expected to be continuously the case now that the Department is entering on the exploitation of areas which have been under protection for many years. With the exception of Ajmer and Baluchistan all provinces yielded a surplus. In *Bengal* although three of the most important divisions were transferred to the new province, the fall in gross receipts, compared with the average of the preceding 5 years, was only about one lakh and the surplus fell by only ₹21,000. The most remarkable increase of revenue was of more than 27 lakhs in *Burma*, but there were also large increases in the following provinces, *Central*

Provinces (9 lakhs), *Bombay* (8 lakhs), *Eastern Bengal and Assam* (5 lakhs), *United Provinces* ($4\frac{1}{2}$ lakhs), *Madras* ($3\frac{1}{2}$ lakhs) *Punjab* and *Andamans* (each 2 lakhs). The net revenue per square mile of land under the control of the Forest Department was ₹296 in Coorg, ₹247 in the United Provinces, ₹142 in the North-West Frontier Province, ₹126 in the Andamans, ₹69 in Bengal and ₹52 in Burma; *Assam* yielding only ₹18 per square mile. There seems no reason why, given an adequate Forest Staff, a demand which must increase with the prosperity and population of the country, and the utilization of hitherto neglected products, the revenue per square mile should not steadily and largely increase in the future. It appears probable that the Indian State Forests are now entering upon a new phase of their existence when, provided that the means of regulating the crop and harvesting the outturn are forthcoming, the profit to the State will increase more rapidly than it has hitherto done.

41. 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	2,66,74,593
Value of produce granted free or at reduced rates	34,96,073
	<hr/>
Total value of yield	3,01,70,666
	R
Gross Expenditure	1,42,58,521
Deduct expenditure not yielding an immediate return :—	
(a) Roads and Buildings	8,63,004
(b) Cultural operations	5,18,295
(c) Working-Plans	86,741
(d) Settlements	79,366
(e) Surveys	3,26,091
(f) Demarcation	1,33,536
	<hr/>
TOTAL	20,07,033
Balance of direct revenue producing expenditure	1,22,51,488
Surplus of revenue over expenditure directly chargeable to revenue	1,79,19,178

CHAPTER IV.

GENERAL.

I.—ADMINISTRATION.

42. The post of Inspector General of Forests was held by Mr. S. Eardley-Wilmot throughout the year. Ten Conservators were on leave during a portion or the whole of the year:

The cadre of the Forest Department was strengthened by the addition of two posts to the Imperial and two posts to the Provincial Service, in order to complete the staff of the Imperial Forest College and Research Institute.

The cadre of the Imperial Forest Service in Madras was increased by two posts which were sanctioned for a period of five years. Two temporary appointments were created in the Bombay Provincial Service to be retained so long as vacancies in the sanctioned cadre of the Imperial Service remained unfilled.

As part of a general scheme for effecting an improvement in the conditions of service in the Imperial Forest Service, the pay of the Inspector General, of Chief Conservators and of Conservators was raised, while exchange compensation in all cases was discontinued. Five officers of the Imperial and four of the Provincial Service, retired and two of the Imperial and one of the Provincial Service died during the year. One officer of the Imperial Service was permanently transferred to Colonial Service in South Nigeria. The services of one officer of the Provincial Service were dispensed with.

OFFICERS ON FOREIGN SERVICE.

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.	1. Saiyid Mchdi Hasan (United Provinces), Kashmir.
2. „ R. M. Williamson (Central Provinces), Central India.	2. Lala Daulat Ram (Punjab), Kashmir.
	3. „ Sundar Das (Punjab), Kotah State.
	4. „ Jai Kishen (Punjab), Jubal State.
	5. Mr. Keshva Nand (United Provinces), Kashmir.
	6. Pandit Sada Nand Gairola (United Provinces), Tehri State.
	7. Mr. Fazl-ud-din (Punjab), Patiala State.
	8. Rai Bahadur M. Muttannah (Madras), Mysore.
	9. Mr. R. C. Eber-Hardie (Madras), Jeypore.
	10. „ V. Alwar Chetti (Madras) Cochin.
	11. Bhagwandas Harkisandas Dalal (Bombay), Rajpipli.
	12. Mr. G. O. Coombs (United Provinces), Alwar State.
	13. Pandit Thakur Das (Punjab), Indore State.
	14. J. M. Blanchfield (United Provinces), Bundelkand State.
	15. Lala Mulraj (Punjab), Partabgarh, Durgapur and Bunswara States.

In the Colonies.

<i>Imperial Service.</i>	<i>Provincial Service.</i>
1. Mr.* H. N. Thompson (Burma), South Nigeria.	1. Mr. N. C. McLeod (Central Provinces), South Nigeria.
2. „ T. J. Campbell (United Provinces), Ceylon.	

Under other Governments.

1. Mr. W. F. Lloyd (Bengal), <u>Siam</u> .	1. Mr. R. C. Thompson (Central Provinces), <u>Siam</u> .
	2. „ S. A. Wood (Burma), <u>Soudan</u> .

2.—EXPORTS OF FOREST PRODUCE.

[*Vide* Appendix XXIV.]

43. The total value of exports of forest products at ports of shipment amounted to 469 lakhs of rupees as compared with 442 lakhs in 1904-05, 445 lakhs in 1903-04 and 320 lakhs in 1902-03.

Two hundred and seventy-nine tons of caoutchouc were exported as against 211 tons in 1904-05, 90 tons in 1903-04 and 52 tons in 1902-03. These figures tend to show an increase in the sources of supply of this article, which will doubtless be still further marked when the artificial plantations come into full bearing.

The quantity of lac exported during the year was 13,723 tons against an average of 10,988 tons for the five preceding years. The total value of this article rose during the year from 308 lakhs to 318 lakhs of rupees. Hitherto the cultivation and collection of this valuable commodity has been chiefly in the hands of the aboriginal races and carried on in the most primitive method. But the growing demand has drawn attention to the importance of careful cultivation on improved and scientific lines, and a beginning in systematic cultivation has already been made in the reserved forests of the Central Provinces. The results of the investigations made by the Forest Department will shortly be published in the Indian Forest Records and it is to be hoped that they will give an impetus to the rapid development of this much neglected industry.

Exports of teak during the year amounted to 52,768 tons valued at ₹70½ lakhs as against 46,912 tons valued at ₹60 lakhs in 1904-05. But the year's exports still show a decline of 10,000 tons from the average of the past five years. The recent arrangements made in Burma for the encouragement of private enterprise in the exploitation of the Government teak forests will doubtless show beneficial results in the future.

3.—RECRUITMENT AND TECHNICAL EDUCATION.

44. Eight students who had completed the forestry course at Cooper's Hill College were appointed to be Assistant Conservators of Forests and arrived in India in October and November 1905. Three of these were posted to the Punjab, two each to Burma and the Central Provinces and one to Bengal.

Eleven probationers were admitted in 1905 and fourteen candidates for the Indian Forest Service were selected in England by the Secretary of State in 1906 and are now under training at Oxford.

The status of the Imperial Forest School, Dehra Dun, was raised to that of Imperial Forest College and a Forest Research Institute was created in connection therewith. The staff consists of six officers of the Imperial Service

* Services permanently transferred to South Nigeria during the year.

holding the posts of Sylviculturist, Superintendent of Forest Working-Plans, Forest Zoologist, Forest Botanist, Forest Chemist and Forest Economist, and of four Provincial Forest Service officers who are Instructors in the College and attend to the practical training of the students in the forests. One of the Imperial officers, in addition to his other duties, holds the post of Principal of the College.

The Directorship of the School was held by Mr. A. G. Hobart-Hampden from 1st July 1905 until the 8th April 1906, when, the status of the School having been raised to that of a College, he was appointed Principal and Imperial Sylviculturist, but he shortly after proceeded on furlough and was succeeded by Mr. J. H. Lace. The other appointments on the Imperial staff of the College were held by the following officers:—

Mr. E. P. Stebbing, Forest Zoologist.
 „ H. H. Haines, „ Botanist.
 „ R. S. Troup, „ Economist.
 „ A. M. F. Caccia, Superintendent of Working-Plans.

The post of Forest Chemist remained vacant during the year under report, arrangements having been since made to train a Forest officer in England.

At the Entrance Examination to the Upper Class of the Forest School held in October 1905, 83 candidates presented themselves, of whom 42 qualified for admission, but only 32 joined the College in April 1906 together with nine who had passed in previous years and four, including three from the Federated Malay States, who were specially exempted from passing the Entrance Examination.

Mr. S. Carr continued to fill the post of Director of the Burma Forest School. Fifteen students were admitted to that School in December 1905.

4.—FOREST ADMINISTRATION IN NATIVE STATES.

45. *Jammu and Kashmir*.—The State forests continued under the administration of Mr. A. W. Blunt of the Indian Forest Service.

The total area of State forests increased from 2,764 to 2,963 square miles, of which 2,315 square miles were demarcated, 254 square miles partially demarcated and 394 square miles remained undemarcated at the close of the year. The increase is due partly to afforestation of new areas and partly to correction of areas after survey. No settlements were completed during the year although a special Settlement Commissioner was engaged on the revision of forest boundaries—a task in which some progress was made.

An area of 162 square miles with 508 miles of boundaries was surveyed at a cost of R1,854 or about R11 per square mile.

The collection of data for the Working-Plan of the Upper Chenab Valley Forests was completed. 560 square miles were examined, of which 209 square miles containing deodar were described in detail and the stock enumerated. The Working-Plan report is under compilation.

The expenditure on roads was R4,827 compared with R3,452 in the previous year. The amount spent on buildings rose from R3,602 to R6,583. It is said that there is room for expansion in both these important works.

The number of Forest offences was 469 against 414 in 1904-05. Including 69 cases pending from the previous year the total was 538, 455 of which were disposed of. The percentage of convictions to cases taken into Court was 33.

250 cases involving 366 persons were compounded, the average per case being R4-12-9 and R3-4-5 per person.

There were 125 fires against 97 in 1904-05, the area burnt being $5\frac{1}{2}$ square miles, the same as in the previous year. Only 43 acres were burnt in the comparatively moist forests of the Kashmir valley, the rest of the fires occurred in the dry forests of Jammu. Natural reproduction is said to be seriously hampered by excessive grazing, the Durbar has not yet accorded its sanction to the proposals for the regulation and control of this important question.

Until Working-Plans are introduced it is considered advisable to continue departmental working. In India the rapid compilation of regular Working-Plans and the cessation of departmental works have, however, given much improved results in Forest management.

The total outturn of major produce was 38 million cubic feet, 31 million cubic feet consisting of fuel. Out of a total outturn of timber of $7\frac{1}{4}$ million cubic feet, $3\frac{1}{4}$ million or 45 per cent. was taken out by State Agency. Over $9\frac{1}{2}$ lakhs of cubic feet of timber are being supplied departmentally for the Electric Power plant at Rampore on the Jhelum.

The financial results showed a marked improvement. The gross Revenue being R13 $\frac{1}{2}$ lakhs compared with R9 $\frac{4}{5}$ in the previous year, the surplus being R9 $\frac{1}{2}$ lakhs against R6 $\frac{1}{2}$ lakhs. The total expenditure was R3,98,244 or about R30,000 more than in 1904-05. The percentages of expenditure and surplus to gross Revenue were 30 and 70, respectively. A good floating season resulted in a larger outturn of material which included a part of the previous year's yield, better prices also ruled on the Jhelum. The estimated value of free grants was R6 $\frac{1}{2}$ lakhs so that the gross value of forest produce removed from the State forests was R19 $\frac{2}{3}$ lakhs. The Inspector General of Forests made a tour in Kashmir and Jammu between the 24th September and 5th November 1905 and issued an Inspection Note advising on the future management of the State Forests.

46. *Mysore*.—The total area of the State forests in Mysore was increased by 157 square miles, thereby bringing up the total to 2,292 square miles. The percentage of area of State forests to that of the whole State is 7.78 and the Administration considers that further extension of the forest area is necessary. 157 $\frac{1}{2}$ square miles were finally settled and satisfactory progress was also made in surveys, 621 square miles of State forests being mapped. Owing to paucity of officers there remain large areas to be brought under regular Working-Plans, but provisional plans are in force for the forests not as yet under systematic management. Considerable progress was made in road work. 82 miles of roads were opened, the total expenditure being R13,051 compared with R8,758 in the previous year. The importance of extending communications is fully realized; the Mysore Government, however, quite correctly desire that this work should be organized according to a systematic programme. Exclusive of R18,360 debited to the Public Works Department Budget, a sum of R18,450 was spent on buildings against R8,152 in the previous year, a marked advance was therefore made in the important work of housing the Forest staff.

The number of Forest offences fell from 895 in 1904-05 to 865. Only 52 cases or 6 per cent. were taken into Court resulting in 30 convictions. 756 cases were compounded for R4,528.

The season was most unfavourable to fire protection owing to the prolonged drought. The area attempted to be protected was 1,915 square miles,

failures amounting to 116 square miles. The cost was R14,308, equivalent to R7-15-0 per square mile.

Extensive measures were undertaken to stamp out the *spike* disease of sandal trees, no less than 2,86,962 trees, of which 95 per cent. consisted of saplings, being uprooted. By this means the disease in the Hassan District was confined to an area of about 2 square miles.

Climatic conditions were unfavourable to both natural and artificial reproduction, teak however suffered least. Energetic measures are being taken to sow or dibble sandal seed in suitable localities through the agency of the Revenue and Forest authorities, with the object of creating a supply independent of existing natural sources.

The financial results were satisfactory. The gross Revenue rose to R20,07,514 from R19,28,250 in the previous year and the surplus to R13,32,410 against R12,89,655. Charges were also higher than in 1904-05, the figures being R6,75,104 and R6,38,595, respectively. The ratio of expenditure to gross receipts was 33·6 per cent. The contribution to receipts from the sale of 2,466 tons of sandal was R12,52,394 or an average of R507 per ton, the highest price yet realized.

47. *Indore*.—The total area of forests is estimated at 2,860 square miles. 429 miles of boundary were cleared and surveyed. Until demarcation and surveys are completed it is stated that little progress can be made in Working-Plans as little demand appears to be yet made on the forests. Some advance was made in the erection of buildings for the staff. Systematic fire protection is being organized and some success has been attained, resulting in benefit to natural regeneration, particularly of *Hardwickia binata*. The importance of regulating cattle grazing is also realized.

Experiments were undertaken in propagating lac, the climatic conditions being generally favourable a large revenue should ultimately be realized from this product. The forests are mainly worked under the system of coppice with standards; there is a large demand for fuel in Mhow and Indore, which as yet the State forests have done little to supply. The output of timber and fuel was about a lakh of cubic feet, there being a fall under timber and an increase under fuel compared with the previous year.

The financial results show a total revenue of R190,916 or an increase of R19,631 over the previous year, expenditure amounted to R1,21,391 the surplus therefore was R69,517. Good progress appears to have been made in organizing the Department and the importance of forest conservancy is beginning to be realized.

48. In the *Nizam's Dominions** the estimated area of Reserved forests was 5,247 and of Protected forests 4,451 square miles. Some progress was made in demarcation, 228 miles of line were newly cleared and 430 of previously existing boundaries repaired.

The number of Forest offences was 8,812 or about 600 more than in the year previous. Only 13 were decided by the Courts, 5,197 were compounded, 134 acquitted, leaving 3,468 pending at the close. The area placed under fire protection was 507 or less than one-sixth of the Reserved area, 52 square miles were burnt, the expenditure was R3,403=R6-11-4 per square mile.

The incidence of grazing in the State forests is heavy. Grazing fees amounting to over a lakh were realized. Only 124 square miles were closed to all animals throughout and 119 for a portion of the year, 1,522 square miles were

*The report reviewed is for the year 8th, October 1904 to 8th October 1905.

closed to goats only. The effect of the heavy grazing combined with drought and fires is noticed to retard natural reproduction and a proper regulation of grazing is proposed. The total Forest revenue was nearly ₹6½ lakhs, being nearly half a lakh better than the previous year. The expenditure amounted to a little over ₹2 lakhs leaving a surplus of nearly ₹4½ lakhs which is about ₹½ lakh better than the previous year. The value of timber and fuel sold was over ₹2½ lakhs. More than a lakh was collected by the Revenue authorities exclusive of the value of grazing fees which as already stated exceeded a lakh.

The financial results are steadily improving but the Administration points out the necessity for improved communications and for the extension of *Babul* cultivation in certain districts. A local training class for lower subordinates, and the education at Dehra of the upper subordinates places His Highness the Nizam's Forest Department in a fair way to the constitution of an efficient service.

49. In the *Bhopawar Agency* a net increase of 195 square miles to the area in charge of the Forest Department brought up the total area to 1,949 square miles at the close of the year. Reserved forests have so far been constituted only in Dhar, Ali-Rajpur and Barwani. Forest Conservancy has only recently been introduced and progress in surveys and demarcation is as yet comparatively small. Working-Plans have not yet been introduced although compilation of statistics has been undertaken in Barwani. The susceptibilities of the Bhils are stated to require careful study in order to secure their sympathy. In the early years of Forest Conservancy, it is probable that, as in British India some time must elapse before the important task of organization and protection is completed, meanwhile as suggested by the Political Agent, demarcation can be pushed on together with the classification of forests in order to anticipate the time when increased demand will call for systematic working. The number of Forest offences was 144, or a little less than the results of the previous two years, the number of cases of injury by fire was 42, or one-fourth of the total—a high percentage.

The season was abnormally dry, little or no rain falling between September 1905 and June 1906. Fire protection was, therefore, less successful than in the previous year. Full protective measures were attempted over 1,233 square miles and partial measures over 716 square miles. In forests under the latter treatment, only the external boundaries are fire-traced. 62·3 per cent. of the first and 30 per cent. of the second class escaped fire. In Dhar there were 22 fires, of which 10 originated internally and 12 crossed external fire traces. The corresponding figures in Ali-Rajpur were 13 and 4. As pointed out by the Political Agent, repeated burning of external lines is essential to the reduction of fires crossing fire-lines, but supervision of the large numbers of people engaged in collecting minor produce and in herding cattle are equally necessary to minimize intentional firing.

The estimated outturn of timber and fuel from the eleven States was 1,841,834 cubic feet or nearly half a million cubic feet better than in 1904-05. By far the larger portion consists of fuel, the outturn of which reached 1,450,380 cubic feet, Dhar contributing 453,829 cubic feet, Barwani 304,165 cubic feet and Ali-Rajpur 249,484 cubic feet. 311,823 head of cattle were grazed, of which 190,000 were charged full rates and the rest privileged rates or free, the total value of grazing being ₹35,131.

The financial results show, on the whole, steady progress; in two States only was there a fall in comparison with the previous year's figures. The gross Revenue realized was R1,40,860 being R28,000 better than the preceding year and more than double the average of the previous three years. Charges were R63,957 or about the same as in 1904-05, the surplus therefore was R76,903, being higher than the previous year by about R28,000 and some four times the previous triennial average.

The forests of the Bhopawar Agency appear to be now established on a sound financial footing; by an extension of organization and conservancy the steady increase of surplus should continue and the forests ultimately fulfil their functions as sources of benefit to the people of each State.

50. *Travancore*.—The total area under the control of the Forest and Cardamom Departments at the close of the year was 2,266 square miles of Reserved forests and 166 square miles of Reserved lands, the former figure being raised during the year under review by an addition of 21 square miles. Preliminary notifications issued for 9 square miles. Provision of grazing grounds was engaging the attention of the Administration.

Good progress was made in demarcation, but survey work was almost exclusively directed to valuation surveys of growing stock.

There was only a slight difference in the number of Forest offences, the figures falling from 697 to 659.

Fire protection, in spite of an unfavourable season, was fairly successful. Out of a total area of 1,930 square miles under protective treatment, only 59 square miles were burnt against 85 in the previous year.

The expenditure on communications and buildings was less than in 1904-05, falling from R21,000 to R13,339.

The area of plantations at the close of the year was 2,746 acres, 74 acres being added and 80 acres of teak dibblings excluded. The outturn of timber fell somewhat owing to some contractors failing to extract the quantities stipulated, the revenue suffered somewhat in consequence falling from R6,38,523 to R6,27,411. There was a corresponding fall in expenditure to R4,60,411. The surplus nevertheless rose by about $\frac{1}{3}$ rd lakh but this was mainly due to reduced expenditure.

English units of measurement were introduced in place of the old system and the salaries of the upper grades of officers were improved. Steady progress has been made in the organization and working of the forests of Travancore.

51. The Forest Administration Report of the *Jaipur State* deals with the period of 17 months from 1st April 1905 to 31st August 1906. It therefore renders comparison of results somewhat difficult while the report itself does not convey much information. The area under the management of the Department was 255 square miles at the close of the year. Existing communications are said to be sufficient, a road recently constructed as a famine relief work aiding much in the export of forest produce. Seventeen cases were taken into Court and 601 involving 1,149 persons were compounded, the average amount of compensation per case being Rs. 1-15-0. Special leniency was shown on account of the famine. About one-third of the forest area was closed to browsers, scarcity of fodder necessitated the opening of the forests to cattle grazing on a large scale and 136,655 head of cattle were admitted. Drought and famine are usually conducive to forest fires and it is therefore a most satisfactory feature of the year's administration that the entire area

(173 square miles) under special protection is reported to have escaped fire. This result is stated to have been achieved without additional staff or expenditure. Drought and extensive grazing following on the severe frosts of 1905 operated against successful reproduction. The third class forests were thrown open to the sufferers from the famine for the removal of brushwood but it was found impossible to control the immense numbers who availed themselves of the concession.

The financial statement shows an increase during the period under review of ₹484 under revenue and of ₹355 under expenditure, the receipts amounted to ₹26,899 and the charges to ₹11,146.

52. *Cochin*.—The area under the control of the Forest Department was 605 square miles, the same as in the previous year. Preliminary notifications were issued for an extension of 467 square miles which area was meanwhile classed as Reserved lands. There was a large increase in the number of forest cases, the total being 137 against 28 in the previous year, but these were apparently due to misunderstandings on the part of the staff of the provisions of the new Forest Regulation which led to the reporting of cases where no violation of the law had actually occurred. The most important cases were of encroachment by cultivators and of breaches of transport rules.

Of the three working circles two only were worked, an excess of stock in hand led to closure of the third temporarily. The selection system appears to be followed, although improvement fellings were carried out over an extensive area. The people continued to enjoy forest privileges on a large scale, being allowed free grazing and the removal practically of everything required for domestic use, in addition, large indents were met from railways for sleepers and fuel.

Excellent progress was made in the extension of communications. The most important work was the extension of the forest tramway, 16½ miles of earthwork were completed, 69 bridges constructed and 32 strengthened. The length of open line at the close of the year was 26½ miles. Including construction, purchase of rolling stock and other charges a sum of ₹3,41,184 was spent on the tramway during the year—27,560 cubic feet of timber in the log, 33,214 cubic feet of sleepers and 1,131 tons of fuel being transported by tram.

The year appears to have been favourable to natural reproduction and all species except *ebony* are reported to be thriving. Teak seeded profusely and germinated satisfactorily. No extension of plantations appears to have been made but thinnings were carried out in a part of the Palapilli Teak Plantation. Receipts and expenditure amounted to ₹7,79,348 and ₹8,24,478, respectively as against ₹8,86,032 and ₹8,15,757 in the previous year. The revenue therefore fell by ₹1,15,405; if however the expenditure on the tramway be not charged against the year the surplus would be ₹2,96,054.

The State of Cochin may be congratulated on the attention paid to forest administration generally and on the wisdom of providing up-to-date methods of exploiting its valuable forests.

53. In *Gwalior* the area of the forests cannot be ascertained until they have been surveyed and demarcated.

A tentative classification into Reserved, Protected and Unclassed has been introduced. The present condition of the forests is described as so mutilated that immediate measures are required to produce a healthy crop. Famine and drought caused a severe drain on the resources of the forests and most of the works of improvement were in consequence postponed.

The financial results show a revenue of ₹56,287 and an expenditure of ₹36,095 against ₹79,845 and ₹23,860 in the previous year. The less favourable results were due to the opening of the greater part of the State forests to the famine-stricken population and cattle, thereby depriving the Department of its share of grazing and grass dues.

54. *Baroda*.—The area of Reserved forests at the close of the year was 660 square miles or about the same as in the previous year. External demarcation is said to be practically accomplished and work was confined to internal demarcation of working units. Some progress was made in the compilation of Working-Plans while the prescriptions of existing plans were followed.

Moreover, about 100 square miles in the Tapti and Vakal Ranges were examined and surveyed with a view to bringing them also under systematic management. Protection of the forests against illicit felling, cattle and fire appears to have been moderately successful, although the area under fire protection is not stated and comparison with previous results is as a rule omitted.

Natural reproduction is reported to be far from satisfactory, except in localities immune from fire. Artificial reproduction to stock blanks in coupes received attention, reboisement works were also undertaken but the area so treated is not stated. Exploitation seems to be almost entirely by purchasers. In Unreserved forests the sale proceeds of six valuable species is credited to the Forest Department.

The financial results show a total realization of ₹1,57,361 and an expenditure of ₹68,890. The surplus was better than last year by about ₹34,000 and is the highest on record. The progress of forestry in Baroda appears to be very satisfactory, although the report does not convey much information.

55. *Alwar* shows an unchanged forest area of 367 square miles. Some progress was made in demarcation and in the erection of quarters for the staff.

Forest produce appears to be chiefly consumed by the various State departments. The principal operations consisted in collecting 1½ lakhs of maunds of fuel and five lakhs of maunds of grass. The year being one of scarcity an abnormal demand was thrown on the forests for fodder. All the State forests are protected from fire, and it is a matter for congratulation that in a season so unfavourable only four fires were reported, burning only 800 acres. The financial results of the Department as a whole are not stated.

56. The General Administration Report of the *Rewah* State does not contain much information, although Forest Conservancy has been in existence for some time.

The revenue from the State forests was ₹6,16,288, of which ₹5,01,688 were derived from lac. It is stated that the outturn was below the average but the receipts include the value of a part of the previous year's output.

The staff includes three trained Dehra Dun Rangers. Mr. R. M. Williamson, Deputy Conservator of Forests, Central Provinces, was deputed to examine the forests of the State and advise on their management and the Durbar hopes to derive much benefit from his report and advice.

APPENDIX I.

[Vide paragraphs 1 to 3.]

Area of reserved and leased forests.

PROVINCE.	AREA, IN SQUARE MILES.				REMARKS.
	At commencement of year.	Added in.	Excluded in.	At close of	
Bengal	4,260	...	...	4,260	
United Provinces	(a)4,056	36	...	(a)4,092	(a) Includes 157 square miles of leased forests.
Punjab	(b)2,357	9	9	(b)2,357	(b) Includes 586 square miles of leased forests.
Burma	20,411	626	492	20,545	
Eastern Bengal and Assam	(c)5,982	40	18	6,009	(c) Includes 2,179 square miles of area transferred from Bengal.
Central Provinces including Berar.	(d)22,344	863	1,081	22,126	(d) Excludes 395 square miles in Sambalpur Division transferred to Bengal.
Coorg	410	95	...	505	
North-West Frontier	234	...	...	234	
Ajmer	142	...	...	142	
Baluchistan	234	30	...	264	
Andamans	156	...	...	156	
Total Bengal	60,586	1,699	1,595	60,690	
„ Madras	18,107	216	35	18,288	
„ Bombay	(e)13,486	71	39	(e)13,518	(e) Includes 217 square miles of leased forests.
GRAND TOTAL, 1905-06	(f)92,179	1,986	1,669	(f)92,496	(f) Includes 910 square miles of leased forests.
„ „ 1904-05	91,567	1,893	1,278	92,182	

APPENDIX II.

[Vide paragraphs 1 to 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.	Unclassified State.	Total.		
Bengal . . .	115,791	4,260	3,423	...	7,683	6.6	
United Provinces.	107,127	4,092	30	43	(a)4,165	3.9	(a) Includes 157 square miles of leased forests but excludes 9,071 square miles of district protected forests in the Naini Tal District.
Punjab . . .	97,218	(b)2,357	5,168	1,851	(b)9,376	9.6	(b) Includes 536 square miles of leased forests.
Burma . . .	162,508	20,545	...	(c)103,014	(c)123,559	76.0	(c) Includes 21 square miles of leased forests.
Eastern Bengal and Assam.	93,141	(d)6,009	5	23,125	29,139	31.3	(d) Includes— 502 acres under control of Eastern Bengal and Duars Railway. 315 acres under Bengal, Cooch Behar State Railway. 3,008 acres in charge of Collector of Noakhali. Total 3,825 acres or 6 square miles.
Central Provinces including Berar.	100,401	22,126	...	6	22,132	21.0	
Coorg . . .	1,582	505	...	...	505	32.0	
North-West Frontier.	13,057	234	...	...	234	1.8	
Ajmer . . .	2,646	142	...	6	148	5.6	
Baluchistan(e)	9,403	264	...	...	264	2.8	(e) British Baluchistan only.
Adamans(f)	3,143	156	...	1,795	1,951	62.1	(f) South Island only.
Total Bengal .	706,017	60,690	8,626	129,840	199,156	28.2	
„ Madras .	141,678	18,288	...	(g)1,297	19,585	13.9	(g) Reserved lands.
„ Bombay	122,922	(h)13,518	1,392	...	(h)14,910	11.8	(h) Includes 217 square miles of leased forests.
GRAND TOTAL, 1905-06.	970,617	(i)92,496	10,018	(j)131,137	(k)233,651	24.1	(i) Includes 910 square miles of leased forests.
GRAND TOTAL, 1904-05.	967,255	92,182	9,435	131,324	(*)232,941	24.1	(j) Includes 21 square miles of leased forests. (k) Includes 931 square miles of leased forests.

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.						AREA UNDERGOING SETTLEMENT.								
	Reserved forests.	Protected forests.	Total.	AREA.			EXPENDITURE INCURRED.			AT COMMENCEMENT TAKEN IN HAND OF THE YEAR. 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	4,260	...	4,260	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
United Provinces	3,900	30	3,930	35	...	35	...	...	5	...	5	1	...	1	...	...	...	...
Punjab	1,936	4,908	6,844	...	...	...	...	...	16	205	221	...	...	...	...	...	...	...
Burma	20,349	...	20,349	195	...	195	835	...	835	1,641	...	1,641	378	...	378	23,415	...	23,415
Eastern Bengal and Assam	5,981	...	(a) 5,981	20	...	20	...	...	721	...	721	28	...	28	...	...	...	...
Central Provinces including Berar.	18,410	...	(b) 18,410	1	...	1	...	...	10	...	19	8	...	8	...	...	...	...
Coorg	410	...	410	95	...	95	1,456	...	1,456	...	...	...	...	...	...	...	...	...
North-West Frontier	234	...	234	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	234	...	234	30	...	30	...	...	...	...	...	...	...	...	...	...	...	...
Andamans	156	...	156	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Bengal	55,870	4,938	60,808	376	...	376	2,291	...	2,291	2,402	205	2,607	415	...	415	23,415	...	23,415
„ Madras	18,107	...	18,107	181	...	181	(c) 1,947	...	(c) 1,947	812	...	812	23	...	23	(d) 524	...	(d) 524
„ Bombay	13,182	826	14,008	10	140	150	...	...	(e) 1,570	27	...	27	16	...	16	(f) 5,32	...	(f) 5,32
GRAND TOTAL, 1905-06	87,159	5,764	92,923	567	140	707	4,238	...	(g) 5,808	3,241	205	3,446	454	...	454	29,771	...	29,771
„ „ 1904-05	86,406	5,606	92,012	1,192	...	1,192	19,233	...	19,233	042	205	3,247	1,052	...	1,052	15,256	...	15,256

(a) Includes 2,184 square miles transferred from the Province of Bengal.

(b) Excludes 395 square miles in Sambalpur Division transferred to Bengal.

(c) Excludes Rs.12,581 debited to other than Forest Accounts.

(d) Excludes Rs.6,130 debited to other than Forest Accounts.

(e) Includes expenditure on areas undergoing settlement.

(f) Excludes Rs.979 debited to other than Forest Accounts. See also (e) above.

(g) Includes expenditure referred to in (e) above.

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	.....	223	3,320	79	3,622	...	1,005	4,627	1,488	3,169
United Provinces	Eastern Circle	...	524	1,984	2,508	11	610	3,129	48	1,620
	Western "	2	542	1,597	2,141	2	784	2,927	128	3,310
	Total	2	(a) 1,066	3,581	4,649	13	1,394	6,056	174	4,930
Punjab	.....	245	2,525	8,076	10,846	3,575	1,191	15,612	641	4,702
Burma	Pegu Circle	163	814	2,237	3,214	114	1,163	4,491	1,389	4,501
	Tenasserim Circle	...	1,018	2,310	3,328	19	607	3,954	...	7,573
	Northern "	259	1,023	2,309	3,591	22	503	4,116	3,375	1,857
	Southern "	169	803	2,699	3,671	394	431	4,496	2,404	3,158
	Total	591	3,658	9,555	13,804	549	2,704	17,057	7,168	17,089
Eastern Bengal and Assam.	.....	52	1,628	260	1,940	18	2,560	4,518	3,320	7,401
Central Provinces	Northern Circle.	18	9,773	3,407	13,198	...	1,291	14,489	1,156	5,811
	Southern "	...	6,363	1,193	7,556	59	867	8,482	...	2,671
	Berar "	207	6,613	5,360	12,180	332	636	13,143	2,702	3,577
	Total	225	22,749	9,960	32,934	391	2,794	36,119	3,858	12,059
Coorg	.....	...	...	307	307	173	56	536	110	107
North-West Frontier	.....	...	323	452	775	...	163	938	...	4,604
Ajmer	.....	...	1	243	244	...	158	402	194	5
Baluchistan	.....	63	212	126	401	...	77	478	...	...
Andamans	.....	...	...	42	42	29	116	187	...	...
Total Bengal	.....	1,401	35,482	32,681	69,564	4,748	12,218	86,530	16,953	54,066
" Madras	Northern Circle	209	2,904	6,735	9,848	108	553	10,509	4,850	6,508
	Central "	232	8,396	6,190	14,818	216	239	15,273	3,201	3,494
	Southern "	167	1,022	8,522	9,711	641	959	11,311	2,800	11,631
	Total	608	12,322	21,447	34,377	965	1,751	37,093	10,851	21,631
" Bombay	Northern Circle	132	1,210	3,122	4,464	73	397	4,934	1,170	1,230
	Central "	227	3,736	13,997	17,960	4,681	861	23,502	1,892	1,718
	Southern "	911	833	5,239	6,983	7,429	653	15,065	13,616	1,322
	Sindh "	40	1,734	219	1,993	...	576	2,570	...	...
	Total	1,310	7,513	22,577	31,400	12,183	2,487	46,070	16,678	4,270
GRAND TOTAL, 1905-06.	.....	3,319	55,317	76,705	135,341	17,896	16,456	169,693	44,482	79,967
" " 1904-05.	.....	4,867	51,647	73,722	130,236	21,842	16,142	168,220	57,065	71,037

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

(a) Includes 15 miles of Nepal boundary and 51 miles of railway boundary.

APPENDIX V.

[Vide paragraphs 6 to 10.]

Forest areas surveyed and under survey.

PROVINCE.	4"=1 MILE.		8"=1 MILE.		TOTAL OF DETAIL SURVEY ON 4" SCALE AND OVER.		Expenditure in surveys including mapping and publishing charges.
	Outturn.	Cost rate.	Outturn.	Cost rate.	1905-06.	Total up to date.	
1	2	3	4	5	6	7	8
	sq. miles.	R	sq. miles.	R	sq. miles.	sq. miles.	R
Bengal . . . . .	...	...	...	...	...	2,223	4,720
United Provinces	98	32.0	...	...	98	4,075	6,043
Punjab	53	37.8	...	...	53	3,568	6,218
North-West Frontier Province	25	84.8	...	...	25	366	3,516
Burma	1,252	126.1	...	...	1,252	12,478	2,20,379
Central Provinces including Berar	0.5	...	...	...	0.5	18,597.5	3,424
Eastern Bengal and Assam	(a) 590	30.5 for 2" 129.8 for 4"	...	...	590	(a) 1,556	28,237
Ajmer . . . . .	...	..	...	...	...	144	...
Total of Bengal	2,018.5	...	...	...	2,018.5	43,007.5	2,72,537
Madras	832	104.0	...	...	832	13,900	1,02,734
Bombay	631	87.4	126	173.2	757	11,726	84,944
Total of Madras and Bombay	1,463	...	126	173.2	1,589	25,626	1,87,678
GRAND TOTAL 1905-06	3,481.5	...	126	...	3,607.5	(b) 68,633.5	(c) 4,60,215
" " 1904-05	3,171	...	187	...	3,358	(d) 64,926	(d) 4,78,677

(a) Includes 571 sq. miles on 2" scale in Darrang.

(b) Area revised, vide Appendix V of Review on Forest Administration in British India for 1904-05.

(c) Excludes Head-quarters charges R41,876.

(d) Includes R10,479 for cost of instruments.

APPENDIX VI.

[Vide paragraphs 6 to 10.]

Details of Forest Survey Operations.

PROVINCE.	Forest Surveyed.	NATURE OF SURVEY OPERATIONS.						EXPENDITURE INCLUDING MAPPING AND PUBLISHING CHARGES.			REMARKS.
		4" DETAIL SURVEY.		TRIANGULATION.		TRAVERSING.		Forest.	Survey of India.	TOTAL.	
		Area.	Cost rate.	Area.	Cost rate.	Area.	Cost rate.				
		sq. m.	R	sq. m.	R	l. m.	R	R	R	R	
BENGAL	Koderma . Singhbhum . Darjeeling . Angul . Kalimpong	473	137	610	} Mapping and publishing charges.
		...	...	...	...	...	...	289	120	409
		...	...	...	...	...	...	370	153	523
		...	...	...	...	...	...	2,221	913	3,134
		...	...	...	...	...	...	31	13	44
		...	...	...	...	...	...	3,384	1,336	4,720
UNITED PROVINCES	Western Circle { Tehri-Garhwal . Ganges . Naini Tal . Garhwal . Eastern Circle { Pilibhit .	81	35.1	101	9.3	3,939	...	3,939	} For Second Edition of Kumaun and Garhwal maps.
		...	...	...	...	...	...	905	...	905
		...	...	...	...	...	...	16	...	16
		...	...	...	...	64	9.5	114	...	114
		17	17.6	...	...	...	...	804	265	1,069
		98	32.0	101	9.3	64	9.5	5,778	265	6,043	
PUNJAB	Rawalpindi . Lahore . Shahpur . Bathinda . Jhelum .	4.4	1,410	581	1,991	} Includes mapping and publishing charges. (a) Special boundary Survey. Drawing charges.
		...	37.8	...	...	...	...	245	101	346
		(a) 474	4.9	...	...	...	...	2,420	...	2,420
		(a) 365	3.6	...	...	...	...	1,369	...	1,369
		...	...	...	...	...	...	66	26	92
		53 (a) 339	37.8 4.3	...	...	...	...	5,510	708	6,218
NORTH-WEST FRONTIER PROVINCE.	Hazara .	25	84.8	2,490	1,026	3,516	Includes mapping and publishing charges.
BURMA	Southern Circle { Mandalay . Ruby Mines . Yaw . Pakokku . Katha . Mu . Bhamo . Northern Circle { Myittha . Upper Chindwin . Lower " . Pegu Circle { Thayetmyo . Tenasserim { Thaungyin . Ataran	849	350	1,199	} Mapping and publishing charges.
		...	...	...	...	...	...	520	216	736
		68.22	9,683	54,996	64,679	} Mapping and publishing charges. (b) For 2" boundary survey.
		...	...	1,622	...	857.21	...	27,292	11,246	38,538
		318.0	...	...	...	115.0	...	19,450	8,015	27,465
		252.0	...	...	...	95.0	...	132	55	187
		...	...	...	...	...	...	35,374	14,573	49,947
		392.65 (b) 40.0	...	...	...	...	...	...	...	...
		14.43	...	...	...	...	...	1,566	648	2,214
		206.91	...	...	...	24.1	...	25,081	10,333	35,414
...	...	...	...	...	...	...	...	...	Includes mapping and publishing charges.	
Total	1,252.21 (b) 40.0	126.1	1,622	9.1	1,091.81	40.1	1,19,947	1,00,432	2,20,379		
CENTRAL PROVINCES.	Northern Circle { Mandla . Southern Circle { Hoshangabad . South Chanda . Berar Circle { Nimar . Betul	1,993	818	2,811	} Mapping and publishing charges.
		...	...	...	...	...	...	39	16	55
		...	...	...	...	...	...	113	46	159
		...	...	...	...	...	...	93	16	55
		0.5	...	...	...	...	...	245	99	344
		0.5	...	...	...	...	...	2,429	995	3,424
EASTERN BENGAL AND ASSAM.	Garo Hills . Kamrup . Nowgong . Darrang . Sibsagar . Chittagong .	15	1,785	735	2,520	} Includes mapping and publishing charges. *On 2" scale.
		...	129.8	...	...	...	...	204	84	288
		4	...	...	...	...	...	992	408	1,400
		*571	30.5	346	1.9	230	16.8	634	22,118	22,752	
		...	...	...	...	...	...	54	22	76
		...	...	...	...	37	31.0	851	350	1,201
		571* 19	30.5 129.8	346	1.9	267	18.7	4,520	23,717	28,237	

APPENDIX VI—continued.

Details of Forest Survey Operations—continued.

PROVINCE.	Forest Surveyed.	NATURE OF SURVEY OPERATIONS.						EXPENDITURE INCLUDING MAPPING AND PUBLISHING CHARGES.			REMARKS.				
		4" DETAIL SURVEY.		TRIANGULATION.		TRAVERSING.		Forests.	Survey of India.	TOTAL.					
		Area.	Cost rate.	Area.	Cost rate.	Area.	Cost rate.								
		sq. m.	R	sq. m.	R	l. m.	R	R	R	R					
MADRAS	Northern Circle. Southern Circle. North Malabar Central Circle.	Ganjam . . .	288.57	104.0	70	33.0	40,895	16,853	57,748				
		Godavari . . .	297.18		...	...	...	...			
		South Canara . . .	46.67		149	28.0					25,378	16,985	42,363
		Chingleput . . .	51.76		25	...								1,936	687	2,623
	Total . . .	831.78	104.0	70 2,150	33.0 (a)6.0	174	28.0	68,209	34,525	1,02,734	(a) For 2" topo.				
BOMBAY	Northern Circle. Central Circle.	Thana . . .	*126.0	173.2	15,885	6,546	22,431	*On 8" scale.			
		Setara . . .	630.85	87.4	44,271	18,242	62,513				
		Khandesh . . .	...	...	680	13.2	...	...					
	Total . . .	*126.0 630.85	173.2 87.4	680	13.2	...	...	60,156	24,788	84,944			
	Forest Survey Head-quarters.	...	...	...	...	..	..	29,655	12,221	41,876
GRAND TOTAL, 1905-06.	4,486.34	...	4,969	...	1,596.31	...	3,02,078	2,00,013	5,02,091	+4" . 2,910.34 sq. m. 2" . 571 " 8" . 126 " Boundary Survey on 4" 879 l. m. Total 4,486.34					
GRAND TOTAL, 1904-05.	3,508	...	5,074	...	2,471	...	3,37,167	1,41,490	5,21,645						

APPENDIX VII.

[Vide paragraphs 11 and 12.]

Areas brought under the control of sanctioned Working-Plans up to 30th June 1906 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.	Proportion of Forest area under sanctioned Working-Plans.
	Reserved.	Protected.	Unclassified State.	Total.		
1	2	3	4	5	6	7
					Sq. miles.	Per. cent.
Bengal	4,260	3,423	...	7,683	5,122	67
United Provinces	4,092	30	43	4,165	3,318	80
Punjab	2,358	5,168	1,851	9,377	4,145	44
Burma	20,544	...	103,014	123,558	4,074	3
Eastern Bengal and Assam	6,009	5	23,125	29,139	1,101	4
Central Provinces including Berar	22,126	...	6	22,132	9,965	45
Coorg	505	...	...	505	178	35
North-West Frontier	234	...	...	234	123	53
Ajmer	142	...	6	148	140	95
Baluchistan	264	...	...	264	...	...
Andamans	156	...	1,795	1,951	...	...
GRAND TOTAL IN 1905-06	60,690	8,626	129,840	199,156	28,166	14
" " " 1904-05	60,588	8,405	129,805	198,798	27,318	14

APPENDIX VIII.

[Vide paragraphs 11 and 12.]

Progress in Working-Plans in the provinces outside the Madras and Bombay
Presidencies during the year.

PROVINCE.	PRELIMINARY PROPOSALS SUBMITTED TO THE IN- SPECTOR-GENERAL OF FORESTS FOR WORKING- PLANS.		COMPLETED PLANS SUB- MITTED FOR OPINION AND REMARKS OF IN- SPECTOR-GENERAL OF FORESTS.		PLANS FINALLY SAN- TIONED BY LOCAL GOV- ERNMENTS ON RECOM- MENDATION 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	2	2,670	3	2,810	...	...
United Provinces .	{ Eastern Circle	5	876	...	...	...
	{ Western „	1	5	1	2	1	2
Punjab . . . . .	...	...	1	232	1	232
Burma	{ Pegu Circle	1	21	3	438
	{ Tenasserim Circle
	{ Northern Circle	1	190
	{ Southern „	1	248	1	248
Eastern Bengal and Assam . . . . .	...	...	...	...	2	391
Central Provinces .	{ Northern Circle	1	98
	{ Southern „
	{ Berar „
Coorg . . . . .	...	...	...	...	...	...
North-West Frontier . . . . .	...	...	1	47	1	47
Ajmer . . . . .	...	...	...	...	...	...
Baluchistan . . . . .	...	...	...	...	...	...
Andamans . . . . .	...	...	...	...	...	...
TOTAL	9	3,741	8	3,360	10	1,456	

N.B.—The figures in this Appendix have been obtained from the Conservators.

APPENDIX IX.

[Vide paragraphs 11 and 12.]

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 COMPILED.		Area 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) 5,122	...	251	...	2,310	7,883	(a) The decrease by 112 square miles as compared with the figures of 1904-05 is due to the transfer of the Jalpaiguri Division (182 square miles) from Bengal to Eastern Bengal and Assam and of the Sambalpur Division (70 square miles) from the Central Provinces to Bengal. (b) The decrease by 506 square miles as compared with the figures given in previous year's review is accounted for thus:— (i) Transfer of 33 ¹ / ₂ and 21 square miles of the Bahraich and Gonda Divisions from column 2 to column 4 as the working-plans for these areas are under revision. (ii) Transfer of 74 square miles in Jaunsar Division from column 2 to column 4 of this Appendix as the Working-Plan has expired, and is now under revision. (iii) Transfer of 78 square miles in Jaunsar Division from column 2 of Appendix IX of Review for 1904-05 to column 4 of this Appendix, as the Working-Plan has not yet been completed. (iv) Increase by 1 square mile of the area of the Kheri Division. (c) The increase by 241 square miles as compared with the figures of 1904-05 is due principally to additions to the area of forests in Kulu Division. (d) The increase by 113 square miles as compared with the figures of the previous year is due to the following causes:— Transfer from Bengal of the Jalpaiguri Division—178 square miles. Correction of the area of Garo Hills Division which caused a reduction of 1 square mile. Non-completion of the Working-Plan for 14 square miles of forests in Sibsagar Division. (e) The decrease as compared with the figures of the previous year is accounted for as follows:— Decrease by 78 ¹ / ₂ square miles due to the transfer to Bengal of the Sambalpur Division. Decrease by 76 square miles in Balaghat Division; by 9 square miles in North Chanda; by 14 square miles in Raipur; due to abandonment of Working-Plans. Decrease by 2 square miles in Seoni due to correction of area. Increase by 1 square mile in Chhindwara due to correction of area. (f) Excludes 20 square miles: this discrepancy is not explained in the Report.
United Provinces { Eastern Circle	(b) { 1,460	...	...	355	341	2,156
{ Western „	(b) { 1,858	...	78	...	73	2,009	
Punjab	(c) 4,077	68	367	...	4,865	9,377	
Burma { Pegu Circle	1,102	438	133	...	23,933	25,606	
{ Tenasserim Circle	1,187	...	860	...	29,620	31,667	
{ Northern „	36	...	288	298	27,282	27,904	
{ Southern „	1,063	249	(e) 773	215	36,082	38,381	
Eastern Bengal and Assam	(d) 710	391	1	3	28,034	29,139	
Central Provinces { Northern Circle	(e) { 4,977	98	927	...	2,845	8,847	
{ Southern „	(e) { 3,282	...	642	158	2,798	6,880	
{ Berar „	(e) { 1,608	...	...	...	4,797	6,405
Coorg	178	...	...	...	327	505
North-West Frontier	76	47	111	...	...	234
Ajmer	140	...	...	...	8	148
Baluchistan . . . . .	...	...	...	...	264	264
Andamans . . . . .	...	...	...	...	1,951	1,951
TOTAL BENGAL	26,876	1,290	4,431	1,029	165,530	199,156	
Madras { Northern Circle	1,810	...	1,202	54	3,761	6,827	
{ Central „	2,181	110	1,356	378	3,225	7,250	
{ Southern „	2,139	...	...	632	2,737	5,508
TOTAL	6,130	110	2,558	1,064	9,723	19,585	
Bombay { Northern Circle	1,369	...	63	...	677	2,109	
{ Central „	1,542	735	532	25	2,342	5,176	
{ Southern „	1,023	236	252	50	3,389	4,950	
{ Sindh „	811	...	421	...	39	1,091	
TOTAL	4,545	971	1,268	75	(f) 6,447	13,326	

*In Form 55 of the Bengal Report for 1905-06, this area is shown as 70 square miles.

APPENDIX X.

[Vide paragraphs 13 to 15.]

Expenditure on Communications and Buildings.

PROVINCE.	NEW WORK.		REPAIRS.		Other works.	TOTAL.
	Buildings.	Roads.	Buildings.	Roads.		
	₹	₹	₹	₹	₹	₹
Bengal	13,559	23,415	9,461	11,654	6,060	69,149
United Provinces	85,312	11,948	22,641	41,617	10,098	1,71,616
Punjab	16,873	14,726	11,693	5,108	971	49,371
Burma	61,148	21,324	33,755	9,700	6,606	1,32,533
Eastern Bengal and Assam	16,754	9,277	13,925	11,002	2,881	53,839
Central Provinces including Berar	33,828	17,867	20,370	13,497	14,781	1,00,243
Coorg	3,278	787	519	1,398	141	6,123
North-West Frontier	807	2,060	1,432	808	49	5,156
Ajmer	312	99	42	18	153	624
Baluchistan	16	...	...	33	...	49
Andamans	808	1,439	562	7,545	...	10,354
Total Bengal	2,32,695	1,07,942	1,14,400	1,02,380	41,740	5,99,157
Total Madras	58,296	18,599	30,238	29,258	8,407	1,44,798
Total Bombay	65,545	24,804	8,341	9,433	14,688	1,22,811
GRAND TOTAL, 1905-06	3,56,536	1,51,345	1,52,979	1,41,071	64,835	8,66,766
GRAND TOTAL, 1904-05	2,89,760	1,67,245	1,25,557	1,19,129	64,959	7,66,650

APPENDIX XI.

[Vide paragraphs 16 and 17.]

Breaches of Forest Rules.

PROVINCE.	Number of cases decided by the Courts.	Number of cases compounded.	Total.	Proportion of convictions to total number of cases decided by the Courts.	
Bengal	259	2,466	2,725	91.5	
United Provinces	103	838	941	88.3	
Punjab	828	4,012	4,840	81.6	
Burma	1,190	2,180	3,370	85.5	
Eastern Bengal and Assam	197	485	682	83.8	
Central Provinces including Berar	348	5,227	5,575	84.4	
Coorg	8	39	47	50.0	
North-West Frontier	44	618	662	88.6	
Ajmer	26	537	563	100.0	
Baluchistan	91	150	241	68.1	
Andamans	1	1	1	...	
Total Bengal	3,095	16,553	19,647	82.2	
Total Madras	6,126	13,288	19,414	89.2	
Total Bombay	1,939	16,723	18,662	86.7	
*GRAND TOTAL	1905-06	11,160	46,564	57,723	88.3
	1904-05	10,209	43,842	54,051	89.0
	1903-04	10,928	40,709	51,637	88.4
	1902-03	11,022	36,890	47,912	86.9

*Includes cases which were pending at the close of the previous year.

APPENDIX XII.

[Vide paragraphs 16 and 17.]

Breaches of Forest Rules.

PROVINCE.	CASES TAKEN INTO COURT.				COMPOUNDED CASES.				CASES IN WHICH THE OFFENDERS* REMAINED UNDETECTED.				TOTAL OF EACH CLASS OF OFFENCE.				GRAND TOTAL OF CASES.
	Injury to fire-protected forests by fire.	Unauthorised 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.	Unauthorised 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.	Unauthorised 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.	Unauthorised felling or appropriation of wood and minor forest produce.	Grazing without permission in tracts in which grazing is prohibited.	Other offences.	
Bengal	38	134	20	92	4	1,791	729	87	89	14	...	...	131	1,939	749	179	2,998
United Provinces	13	35	37	17	19	543	227	52	62	48	1	...	94	626	265	69	1,054
Punjab	30	498	216	78	14	2,193	1,773	32	126	27	3	4	170	2,718	1,992	114	4,994
Burma	31	986	49	188	35	1,419	54	897	48	14	...	1	114	2,419	103	1,086	3,722
Eastern Bengal and Assam	1	136	9	42	1	266	92	132	10	...	...	1	12	402	101	175	690
Central Provinces including Berar.	60	171	70	69	115	2,830	1,976	191	340	118	...	...	515	3,119	2,046	260	5,940
Coorg	1	...	...	3	...	1	14	14	...	...	...	...	1	1	14	17	33
North-West Frontier . . . . .	...	29	9	1	2	331	276	9	18	18	4	...	25	378	289	10	702
Ajmer . . . . .	...	26	...	...	...	439	97	1	3	...	...	...	3	565	97	1	566
Baluchistan . . . . .	...	53	17	7	...	4	146	...	...	1	...	...	...	58	163	7	228
Andamans . . . . .	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Total Bengal	179	2,069	427	497	190	9,817	5,384	1,415	696	240	8	6	1,065	12,126	5,849	1,918	20,928
.. Madras	73	4,083	1,880	472	21	8,915	5,474	676	562	456	358	51	656	13,154	7,712	1,199	23,021
.. Bombay	169	712	954	220	226	5,338	9,853	1,314	2,204	2,281	305	120	2,599	8,331	11,113	1,654	23,697
GRAND TOTAL 1905-06	421	6,861	3,261	1,189	437	21,070	20,711	3,405	3,462	2,977	672	177	4,320	33,911	24,644	4,771	67,646
.. " 1904-05	313	6,431	2,933	1,104	348	23,251	18,950	3,098	3,337	3,186	427	157	3,998	32,868	22,310	4,359	63,535
.. " 1903-04	426	5,816	3,589	1,116	471	21,675	17,227	2,759	4,080	2,785	414	131	4,977	36,276	21,230	4,006	60,489
.. " 1902-03	456	5,772	3,518	1,186	343	20,924	14,993	2,282	3,378	2,574	428	140	4,127	29,270	18,539	2,608	55,944

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

† See Review for 1904-05.

APPENDIX XIII.

[Vide paragraphs 18 to 20.]

Causes of Forest Fires.

PROVINCE.	I.—FIRE DUE TO PREVENTIBLE CAUSES.				II.—OTHER FIRES.				TOTAL.		
	Fires originating in departmental fire conservancy operations.		External fire crossing the fire traces.		Fires due to carelessness of outsiders.		Fire originating from intention or malice.				
	No.	Sq. m.	No.	Sq. m.	No.	Sq. m.	No.	Sq. m.	No.	Sq. m.	
Bengal	6	2	15	27	24	24	4	14	49	67	
United Provinces	Eastern Circle	7	8	10	7	35	72	3	1	55	88
	Western „	10	8	5	31	23	13	5	4	43	56
Total United Provinces	17	16	15	38	58	85	8	5	98	144	
Punjab	4	1	21	2	114	23	43	17	182	43	
Burma	Pegu Circle	35	82	26	26	50	28	24	136	135	272
	Tenasserim „	6	3	29	85	(a) 30	70	23	21	88	179
	Northern „	14	2	13	180	9	26	5	2	41	210
	Southern „	6	10	11	3	48	125	20	33	85	171
Total Burma	61	97	79	294	137	249	72	192	349	832	
Eastern Bengal and Assam	1	...	5	2	7	3	3	...	18	(b) 5	
Central Provinces	Northern Circle	32	9	35	52	52	36	(c) 45	(c) 93	164	190
	Southern „	14	2	25	43	49	129	(d) 48	(d) 83	136	257
	Berar „	18	54	20	28	36	31	(e) 38	(e) 37	112	150
Total Central Provinces	64	65	80	123	137	196	131	213	412	597	
Coorg	1	1	2	5	1	1	4	6	8	13	
North-West Frontier . . . . .	...	...	...	...	19	...	5	...	24	...	
Ajmer . . . . .	...	...	...	...	3	2	...	...	3	...	
Grand Total, Bengal'	154	181	217	486½	500	582	270	441½	1141	1,691	
Madras	Northern Circle	54	23	44	47	316	275	58	76	472	421
	Central „	4	2	33	16	155	95	189	73	381	186
	Southern „	15	5	35	9	174	79	87	55	311	148
Total Madras	73	30	112	72	645	449	334	204	1164	755	
Bombay	Northern Circle	40	2	64	11	636	161	...	...	740	174
	Central „	25	2	13	50	231	22	(f) 406	(f) 536	675	610
	Southern „	4	2	44	4	201	56	877	205	1126	267
	Sindh „	1	05	8	16	37	16	...	...	46	181
Total Bombay	70	6	129	65	1105	240	1283	741	2587	1,052	
GRAND TOTAL	1905-06	297	217	458	623½	2250	1,271	1887	1,386½	4892	3,498
	1904-05	216	148½	424	454½	3120	1,649½	488	232½	4248	2,485

(a) Of this number 9 fires burning 14 square miles were due to carelessness or accident of workmen.

(b) Excludes partially protected areas which were included in the figures for 1904-05.

(c) Includes 32 fires burning 55 square miles the causes of which are unknown.

(d) „ 33 „ 73 „ ditto.

(e) „ 33 „ 81 „ ditto.

(f) „ 383 „ 518 „ ditto.

APPENDIX XIV.

[Vide-paragraph 21.]

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	4,260	3,606	86	3,423	1,752	393	...	...	...	7,633	5,358	479
United Provinces	4,092	2,082	527	30	...	30	43	1	30	4,165	2,083	587
Punjab	2,357	571	538	5,168	53	74	1,851	12	141	9,376	636	753
Burma	20,545	16,653	62	...	...	...	103,014	...	...	123,559	16,653	62
Eastern Bengal and Assam	6,009	4,546	1,093	5	...	...	23,125	...	...	29,139	4,546	1,093
Central Provinces including Berar.	22,126	4,847	7,792	...	...	...	6	...	...	22,192	4,847	7,792
Coorg	505	162	...	...	...	...	...	...	...	505	162	...
North-West Frontier	234	72	94	...	...	...	...	...	...	234	72	94
Ajmer	142	10	142	...	...	...	6	...	...	148	10	142
Baluchistan	264	168	...	...	...	...	...	...	...	264	168	...
Andamans	156	156	...	...	...	...	1,795	...	...	1,951	156	...
Total Bengal	60,690	32,878	10,334	8,626	1,805	497	129,840	13	171	199,156	34,696	11,002
„ Madras	18,288	1,503	315	...	...	...	1,297	...	...	19,585	1,503	315
„ Bombay	13,518	2,549	4,897	1,392	...	25	..	...	...	14,910	2,549	4,922
GRAND TOTAL { 1905-06	92,496	36,930	15,546	10,018	1,805	522	131,137	13	171	233,651	38,743	16,239
{ 1904-05	92,182	35,978	18,631	9,435	1,803	554	131,324	22	171	232,941	37,803	19,356

* Total areas as shown in Appendix II.

† For the whole year. Areas closed for a part of the year omitted.

APPENDIX XV.

[Vide paragraph 21.]

Protection from Cattle.

PROVINCE.	Circle.	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.
Bengal	...	5,802	32,655	5,153	...	18	10,015	155,086	12,514	...	515	21,000	63,000	21,000	...	...	20	230	137	...	1
United Provinces.	Eastern	32,880	123,251	9,595	...	946	23,700	129,071	41,043	...	687	14,311	59,140	1,759	...	584	15,350	63,003	872	60	97
	Western	32,167	68,783	25,540	3,738	6,712	2,549	17,357	34,607	...	1,519	8,774	70,400	42,458	...	33	259	5,860	580	...	15
Total	...	65,067	192,034	35,135	3,738	7,658	32,249	146,428	96,650	...	2,206	23,085	129,540	44,217	...	617	15,649	68,863	1,452	60	112
Punjab	...	21,373	53,270	377,282	4,797	1,951	416	4,671	231,603	178	286	145,272	646,200	657,687	282	12,878	13	269	27	4,359	95
Burma	Pegu	1,138	974	...	...	...	...	...	...	...	...	17,686	33,861	49	...	1	...	...	...	...	...
	Tenasserim	72	65	...	...	...	...	...	...	...	...	22,518	570	48	...	14	...	...	...	...	...
	Northern	7	...	...	...	...	...	...	...	...	...	14,083	276	...	...	...	1,527	...	...	...	321
Total	Southern	39	529	...	...	74	...	...	...	...	...	656	85,876	...	...	...	1,712	668	...	...	677
	...	1,256	1,568	...	...	74	...	...	...	...	...	54,943	120,583	97	...	15	3,239	668	...	...	998
Eastern Bengal and Assam.	...	36,123	7,357	40	...	693	...	56,112	...	...	...	...	60	...	...	...	67,936	378,598	72,377	...	543
Central Provinces.	Northern	20,528	176,018	70,149	29	294	54,685	436,008	90,625	...	630	...	...	...	...	...	234	1,940	4	...	...
	Southern	204,285	998,735	65,600	2	3,304	31,188	140,673	19,086	...	813	...	...	...	...	...	5,052	21,274	565	...	...
	Berar	208,920	963,535	608,732	165	5,424	17,791	165,015	7,876	...	401	16	103,355	...	...	...	...	17,313	685	...	51
Total	...	433,733	2,138,288	744,481	196	9,022	103,664	741,696	117,587	...	1,844	16	103,355	...	...	...	5,286	40,527	1,254	...	51
Coorg	...	539	2,627	...	...	...	859	...	...	...	...	...	1,676	...	...	...	...	30	...	...	...
North-West Frontier.	...	1,730	2,168	26	...	25	...	...	...	...	...	370	740	...	...	...	1,245	6,611	...	...	...
Ajmer	...	572	3,721	...	...	...	2,231	10,811	...	...	...	...	...	...	...	...	3,639	16,439	...	...	...
Baluchistan	...	189	4,414	2,079	...	56	...	...	...	...	...	...	751	16,652	1	224	...	300	992	...	...
Total Bengal.	1905-06	566,384	2,437,502	1,164,196	8,731	19,497	149,434	1,114,804	457,354	178	4,851	244,686	1,065,905	739,653	283	13,734	87,027	512,535	76,239	4,419	1,900
	1904-05	555,605	2,579,434	1,108,128	21,878	32,283	110,885	906,904	502,823	96	3,889	242,387	1,015,996	656,997	299	10,959	78,974	427,424	74,508	723	1,821
Madras	Northern	80,235	484,852	682,914	...	...	9,362	74,392	8,240	...	...	...	2,685	5,505	...	...	26	1,863	...	...	...
	Central	32,826	759,497	790,519	...	...	...	721	1,200	...	...	...	1,900	...	...	...	679	2,947	35	...	...
	Southern	30,620	344,855	164,374	...	996	74	2,299	117	...	...	...	...	...	...	...	...	...	...	...	...
Total	1905-06	143,681	1,589,204	1,637,807	...	996	9,436	77,412	9,557	...	...	...	4,585	5,505	...	...	705	4,810	35	...	...
	1904-05	143,272	1,597,601	1,472,732	...	385	7,495	53,199	10,895	...	...	2,251	4,585	5,505	...	...	925	8,115	45	...	...
Bombay	Northern	553	2,474	...	...	13	3,611	12,436	...	...	...	...	...	...	...	...	48,243	291,406	...	...	2,306
	Central	2,873	24,768	136,074	...	1,205	7,223	349,953	132,885	...	4,063	...	...	...	...	...	2,363	28,663	...	...	100
	Southern	*6,519	...	2,105	...	...	*490,645	...	6,465	1	11	...	...	...	...	...	...	...	...	...	...
	(Sindh)	11,367	10,384	70,815	1,690	380	542	1,155	1,855	77	74	2,942	10,252	91	2	112	724	1,874	2,692	1,131	2,653
Total	1905-06	21,312	37,626	208,994	1,690	1,598	502,021	363,584	141,205	78	4,148	2,942	10,252	91	2	112	51,330	321,943	2,692	1,131	5,059
	1904-05	24,368	35,857	211,658	1,858	1,335	554,975	321,651	80,827	309	941	2,935	10,529	91	9	113	48,976	297,674	3,610	1,549	12,595
GRAND TOTAL.	1905-06	731,377	4,064,332	3,010,997	10,421	22,091	660,991	1,555,800	608,116	256	8,999	247,628	1,080,742	745,249	285	13,846	149,062	839,288	78,966	5,550	6,859
	1904-05	723,245	4,212,892	2,792,518	23,736	34,003	673,355	1,281,754	594,545	405	4,830	247,573	1,031,110	662,593	308	11,072	128,875	733,213	78,163	2,262	14,416

* Includes cows and bullocks.

APPENDIX XVI.

(Vide paragraphs 25 to 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	960	...	960	255	...	255	2	...	2	1,213	...	1,213	1,726
United Provinces	3,427	...	3,427	172	...	172	80	...	80	3,519	..	3,519	25
Punjab	977	...	977	...	...	...	470	...	470	507	...	507	26
Burma	6,166	68,438	74,604	213	2,255	2,468	550	138	688	5,829	70,555	76,384	1,40,820
Eastern Bengal and Assam	3,849	7	3,856	51	...	51	25	...	25	3,875	7	3,882	7,132
Central Provinces including Berar	352	...	352	597	...	597	446	...	446	503	...	503	312
Coorg	2,062	957	3,019	...	110	110	...	...	...	2,062	1,067	3,129	3,396
North-West Frontier . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer	94	...	94	2	...	2	..	...	...	96	...	96	1,018
Baluchistan	33	...	33	3	...	3	...	...	...	36	...	36	201
Andamans	116	177	293	...	200	200	...	...	...	116	377	493	3,150*
Total Bengal	18,036	69,579	87,615	1,293	2,565	3,858	1,573	133	1,711	17,756	72,006	89,762	1,59,606
Madras	24,957†	746	25,703	969	25	994	609	...	609	25,317†	770	26,087	70,255
Bombay	15,106	...	15,106	9,325	...	9,325	3,752	...	3,752	20,6	...	20,679	10,745
GRAND TOTAL { 1905-06	58,099	70,325	128,424	11,587	2,590	14,177	5,934	138	6,072	63,752	72,776	136,528	2,40,606
{ 1904-05	69,350	67,692	187,542	5,763	3,050	8,818	2,501	105	2,606	73,117	70,637	143,754	1,85,892

* Excludes R960 spent on up-keep.

† The figures for 1905-06 are exclusive of topes which were included in the area of plantations shown in 1904-05.

APPENDIX XVII.

[Vide paragraphs 37 and 38.]

Outturn of Forest Produce.

I

PROVINCE.	RESERVED FORESTS.			PROTECTED FORESTS.			UNCLASSIFIED FORESTS.			AVERAGE OUTTURN PER SQUARE MILE.								
	Timber and Fuel.	Bamboos.	Minor Produce.	Timber and Fuel.	Bamboos.	Minor Produce.	Timber and Fuel.	Bamboos.	Minor Produce.	RESERVED FORESTS.			PROTECTED FORESTS.			UNCLASSIFIED FORESTS.		
										C. ft.	No.	₹	C. ft.	No.	₹	C. ft.	No.	₹
Bengal	17,839,822	6,495,801	1,62,488	16,269,706	4,507,131	1,37,475	11,709	...	...	4,188	1,525	38	4,753	1,317	40	...	...	...
United Provinces	16,144,376	13,943,077	3,88,696	381,290	24,529	3,187	175,755	22,450	2,532	3,915	3,407	95	12,710	817	106	3,087	522	59
Punjab	13,686,972	87,712	2,56,832	21,998,367	117,726	2,41,311	2,245,803	101,768	47,849	5,807	37	109	4,257	23	47	1,213	55	25
Burma	9,049,070	15,197,000	1,59,860	...	...	...	35,975,717	56,364,000	2,08,560	369	621	6	...	...	...	349	586	2
Eastern Bengal and Assam.	4,799,736	11,239,081	1,52,516	...	...	...	10,500,980	33,269,204	5,08,155	789	1,870	25	...	...	...	455	1,006	22
Central Provinces including Berar.	23,081,062	21,931,511	12,68,642	...	...	...	...	...	9	1,043	909	57	...	...	...	...	...	...
Coorg	219,190	172,820	16,180	450	1,500	...	161,420	26,600	...	434	342	32	...	3	...	320	53	...
North-West Frontier	1,613,538	...	19,847	...	...	...	...	...	...	6,895	...	85	...	...	...	...	...	...
Ajmer	510,196	4,551	18,488	...	...	211	...	...	...	3,593	32	130	...	...	...	...	...	...
Baluchistan	48,069	...	12,125	...	...	...	359,480	...	354	182	...	46	...	...	...	...	...	...
Andamans	397,819	177,960	1,052	...	...	...	1,291,143	613,945	9,216	2,250	1,141	7	...	...	...	8,277	3,936	59
TOTAL BENGAL, 1905-06	90,389,850	69,249,513	24,56,726	38,649,810	4,650,886	3,82,184	50,722,067	90,397,967	7,76,676	29,505	9,884	630	21,720	2,160	193	14,701	6,158	168
TOTAL BENGAL, 1904-05	83,996,525	65,950,422	21,79,178	36,820,998	4,404,059	3,84,659	61,756,296	100,277,084	7,84,785	27,739	9,762	634	22,017	1,510	197	6,242	4,905	107

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.	₹	
Bengal	Sq. m.	C. ft.	No.	₹	C. ft.	No.	₹	
Bengal	199,156	179,761,727	164,298,466	36,15,587	65,926	18,202	991	
Madras	19,585	22,514,748	32,054,025	14,01,348	1,149	1,637	72	
Bombay	14,910	44,058,365	13,821,289	4,95,884	2,955	927	33	
GRAND TOTAL	1905-06	233,651	246,334,840	210,173,780	55,12,819	1,054	916	24
	1904-05	232,941	251,568,276	215,261,179	58,16,926	1,080	924	25

APPENDIX XVIII.

Forest Produce removed by different agencies.

APPENDIX

[Vide

Forest Produce removed

PROVINCE.	TIMBER.				FUEL.			
	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.
	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Bengal	89,921	5,686,302	18,709	175,000	246,604	14,492,552	27,192	13,384,957
United Provinces	211,076	4,191,585	82,700	588,887	548,512	7,507,372	283,152	3,288,137
Punjab	1,146,085	5,218,826	101,208	3,280,886	3,250,267	1,335,528	85,431	23,512,911
Burma	4,689,303	22,249,639	527,887	572,729	192,899	15,531,316	61,528	1,199,481
Eastern Bengal and Assam	494,563	4,660,562	500,611	5,800	27,043	4,517,290	4,083,097	1,011,750
Central Provinces including Berar	657,597	3,611,055	78,722	61,657	586,598	14,767,850	1,647,117	1,640,466
Coorg	105,710	186,170	1,110	...	18,500	69,570	...	...
North-West Frontier	244,989	918,049	...	...	165,846	241,538	8,136	34,930
Ajmer	13	4,907	...	463	240	502,369	2,204	..
Baluchistan	280	3,819	12,904	...	24,375	365,153	1,018	...
Andamans	606,198	31,370	29,745	...	605,450	...	237,920	...
Total Bengal { 1905-06	8,275,740	46,765,284	1,353,596	4,685,422	5,666,334	55,330,538	6,436,795	44,072,682
{ 1904-05	8,245,253	45,650,694	1,794,083	2,626,395	7,730,868	64,610,364	6,846,069	44,744,729
Madras	536,203	1,785,532	95,877	97,715	10,429,234	9,309,215	3,406	257,561
Bombay	1,484,362	2,285,501	309,479	...	4,100,378	29,367,369	13,157	12,498,119
GRAND TOTAL { 1905-06	10,296,310	50,836,317	1,758,952	4,783,137	20,195,946	88,007,122	6,453,358	56,323,362
{ 1904-05	9,997,565	51,218,529	1,992,663	2,765,747	22,817,791	106,996,526	6,855,632	43,923,823

XVIII.

paragraph 34. J

by different agencies.

BAMBOOS.				MINOR PRODUCE INCLUDING GRASS AND GRAZING.				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.	₹	₹	₹	₹	
485,940	6,486,066	30,476	4,000,450	2,486	1,83,530	906	1,13,041	Bengal.
167,814	18,605,836	...	216,406	80,208	2,45,428	12,005	56,774	United Provinces.
13,537	293,669	...	...	3,740	1,69,337	1,129	3,71,786	Punjab.
50,000	67,078,000	39,000	4,394,000	17,479	2,19,868	11,324	1,19,749	Burma.
15,485	40,588,177	2,084,373	1,870,400	67,575	2,30,817	3,45,237	14,048	Eastern Bengal and Assam.
146,205	20,845,600	330,706	609,000	12,957	11,96,414	19,892	39,388	Central Provinces including Berar.
...	192,420	8,500	...	...	16,157	23	...	Coorg.
...	...	...	...	480	11,620	7,024	723	North-West Frontier.
194	4,357	...	...	1,461	5,207	9,526	7,020	Ajmer.
...	...	...	...	26	1,656	906	9,891	Baluchistan.
*374,905	20,400	396,600	...	7,084	191	2,529	...	Andamans.
1,254,030	149,061,525	2,889,655	11,090,256	1,93,496	22,80,225	4,13,501	7,32,415	1905-06
960,359	154,636,335	4,141,920	10,474,500	1,61,594	20,45,299	4,13,578	7,28,069	1904-05
2,574,515	29,208,397	240,024	22,080	55,877	13,03,891	559	41,024	Madras.
9,178	7,033,707	98,004	6,680,400	2,35,728	5,90,778	23,007	1,36,371	Bombay.
3,837,723	185,306,629	3,236,683	17,792,745	4,85,101	41,74,894	4,37,067	9,09,810	1905-06
1,639,150	196,705,592	4,420,082	12,496,355	2,57,165	37,52,518	4,25,105	13,82,138	1904-05
								GRAND TOTAL

* Includes 364,905, removed by District Officers.

APPENDIX XIX.

[Vide paragraphs 39 to 41.]

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.
	1905-06.	Average for preceding 5 years.	1905-06.	Average for preceding 5 years.	1905-06.	Average for preceding 5 years.		
	₹	₹	₹	₹	₹	₹	Per cent.	₹
Imperial	7,255	4,166	...	...	76,512	79,942	...	...
Bengal	11,18,542	12,02,924	5,29,669	5,51,373	...	...	47.3	69
United Provinces	24,33,428	19,96,812	10,28,346	9,04,972	...	...	42.3	247
Punjab	17,81,653	15,95,410	5,17,990	6,04,501	...	...	29.1	55
Burma	1,03,29,869	75,81,125	63,91,598	45,80,992	...	...	61.9	52
Eastern Bengal and Assam	11,06,097	6,26,819	5,12,186	2,40,074	...	...	46.3	18
Central Provinces and Berar	24,49,131	15,54,941	11,41,978	4,63,002	...	...	46.6	52
Coorg	2,45,419	1,83,137	1,49,671	99,400	...	...	61.0	296
North-West Frontier	1,28,529	76,740	33,271	20,860	...	1,299	25.9	142
Ajmer	15,002	11,686	...	331	2,129	4,927	...	...
Baluchistan	21,481	18,384	...	...	4,262	6,284	...	...
Andamans	5,82,511	3,84,800	2,46,526	1,37,789	...	...	42.3	126
Forest School	3,080	3,418	...	...	77,589	63,508	...	...
Forest Surveys . . . . .	...	853	...	...	30,044	31,921	..	...
Total Bengal	2,02,22,000	1,53,77,115	1,03,56,172	69,35,112	...	...	51.2	52
Madras	29,67,600	25,96,872	7,01,000	7,97,359	...	...	23.6	36
Bombay	34,84,993	26,88,502	13,58,900	7,91,614	...	...	39.0	50
GRAND TOTAL	2,66,74,593	2,06,62,489	1,24,16,072	85,24,085	...	...	46.5	50
{ 1905-06	2,66,74,593	2,06,62,489	1,24,16,072	85,24,085	...	...	46.5	50
{ 1904-05	2,40,29,950	1,96,58,421	1,10,62,192	83,88,934	...	...	46.0	47

APPENDIX XX.

[Vide paragraphs 39 to 41].

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

PROVINCE:	Timber.	Fuel.	Bamboos.	Minor produce.	Grass and Grazing.	TOTAL.
	₹	₹	₹	₹	₹	₹
Bengal	9,995	51,344	5,282	49,348	65,341	1,81,310
United Provinces	76,617	61,441	942	7,318	1,04,111	2,50,429
Punjab	1,11,921	2,51,065	...	49,524	3,23,391	7,35,901
Burma	1,01,269	20,607	17,624	10,427	1,18,198	2,68,125
Eastern Bengal and Assam	31,967	63,961	9,465	2,02,640	1,59,640	4,67,673
Central Provinces including Berar.	(a)15,368	(a)76,732	(a)11,363	(a)20,784	(a)38,435	(a)1,62,682
Coorg	151	...	29	23	426	629
North-West Frontier . . . . .	...	43,116	...	7,747	7,650	58,513
Ajmer	42	...	...	16	19,923	19,981
Baluchistan	2,195	16	...	906	10,025	13,142
Andamans	3,264	6,638	951	2,999	...	13,846
Total Bengal	3,52,789	5,74,920	45,656	3,51,726	8,47,140	21,72,231
Madras	49,460	5,003	2,149	39,111	3,496	99,219
Bombay	19,221	1,88,790	32,090	1,19,033	8,65,489	12,24,623
GRAND TOTAL { 1905-06	4,21,470	7,68,713	79,895	5,09,870	17,16,125	34,96,073
{ 1904-05	3,92,364	7,57,149	81,908	4,95,513	17,73,727	35,00,661

(a) These figures are merely an estimate. They include an estimate of the value of general forest concessions in Berar, but not as regards the Northern and Southern Circles. Excluding the estimated value of the Berar concessions, the figures would be as follows:—

4,219 6,919 1,848 8,004 11,827 32,817.

APPENDIX XXI.

[Vide paragraphs 39 to 41.]

Details of Revenue and Expenditure.

		R	
Gross Receipts .	(a) Wood	2,05,17,696	
	(b) Minor forest produce	19,77,327	
	(c) Forest stamps and commutation fees for forest produce	8,17,960	
	(d) Grazing	20,86,409	
	(e) Revenue from forests not managed by Government	4,71,140	
	(f) Miscellaneous	8,04,061	
	TOTAL REVENUE .	2,66,74,593	
Expenditure .	A Recurring .	(i) Superior Staff	23,23,653
		(ii) Exchange Compensation Allowance	84,248
		(iii) Subordinate Staff (including Rangers, Foresters and Guards)	21,12,654
		(iv) Office Establishments (including Contingencies)	10,41,514
		(1) Extraction	44,34,528
		(2) Roads and Buildings	8,63,004
		(3) Fire-protection	5,77,787
		(4) Cultural operations	5,18,295
		(5) Live-stock, stores and plant	5,08,153
	(b) Working .	(6) Working-Plans	86,741
		(7) Rent for leased forests	8,57,939
		(8) Miscellaneous	2,08,980
		(c) Expenditure on realization of revenue from forests not managed by Government	21,363
		(d) Forest Science and Education (including all "A" and "B" charges of Forest School)	80,669
		Total .	1,37,19,523
B Extraordinary	(e) Forest Settlement	79,366	
	(f) Forest Surveys	3,26,091	
	(g) Forests Demarcation	1,33,536	
	Total .	5,38,993	
GRAND TOTAL EXPENDITURE .		1,42,58,521	
<i>Net Revenue</i> .		1,24,16,072	

APPENDIX XXII.

Summary of Revenue and Expenditure of the Forest Department in
India for the financial year 1905-06.

DIX XXII.

39, 40, and 41.]

Forest Department in India for the financial year 1905-06.

Ajmer.	Baluchistan.	Andamans.	Forest School.	Forest Surveys (Imperial.)	Total Bengal Presidency.	Madras.	Bombay.	GRAND TOTAL.	BUDGET HEADS.
2,668	7,599	5,77,167	...	...	86,14,402	9,08,784	14,83,564	1,10,06,750	REVENUE.
11,289	2,613	3,564	...	...	1,02,06,214	19,05,324	18,87,684	1,39,99,222	I.—Timber and other produce removed from the forests by Government agency.
11	7	...	...	...	4,72,760	16,777	3,549	4,93,086	II.—Timber and other produce removed from the forests by consumers or purchasers.
...	11,034	...	...	...	4,56,265	...	14,875	4,71,140	III.—Drift and waif wood and confiscated forest produce.
1,034	228	1,780	3,080	...	4,72,355	1,36,719	95,321	7,04,395	IV.—Revenue from forests not managed by the Government.
15,002	21,481	5,82,511	3,080	...	2,02,21,996	29,67,604	34,84,998	2,66,74,593	V.—Miscellaneous.
									TOTAL REVENUE.
									EXPENDITURE.
									A.—CONSERVANCY AND WORKS.
970	5,381	1,49,394	...	...	26,99,946	5,12,113	5,12,738	37,24,797	I.—Timber and other produce removed from the forests by Government agency.
91	...	...	...	...	3,14,444	1,18,707	1,14,462	5,47,613	II.—Timber and other produce removed from the forests by consumers or purchasers.
...	...	...	...	...	1,60,067	1,865	186	1,62,118	III.—Drift and waif wood and confiscated forest produce.
...	357	...	...	...	21,363	...	...	21,363	IV.—Revenue from forests not managed by Government.
...	...	...	...	...	8,12,572	18,615	26,752	8,57,939	V.—Rent of leased forests and payments to shareholders in forests managed by Government.
605	53	126,843	1,506	...	3,52,568	1,38,919	18,172	5,09,659	VI.—Live-stock, stores, tools and plant.
1,032	399	8,577	1,114	...	6,01,340	1,41,304	1,21,474	8,64,118	VII.—Communications and buildings.
1,675	150	11,513	...	30,044	11,32,108	3,83,430	2,06,278	17,21,816	VIII.—Demarcation, improvement, and extension of forests.
143	40	7,251	2,973	...	73,978	8,758	1,29,217	2,11,953	IX.—Miscellaneous.
4,524	6,380	3,03,578	5,593	30,044	61,68,386	13,23,711	11,29,279	86,21,376	Total A.—Conservancy and Works.
									B.—ESTABLISHMENTS.
10,626	15,875	28,121	60,243	...	30,41,951	7,12,313	8,33,487	45,87,751	I.—Salaries.
1,032	2,798	3,538	8,633	...	4,42,318	1,61,664	1,11,009	7,15,791	II.—Travelling allowances.
949	690	748	6,195	...	2,13,171	68,914	51,518	3,33,603	III.—Contingencies.
12,607	19,363	32,407	75,076	...	36,97,440	9,42,831	9,96,814	56,37,145	Total B.—Establishments.
17,181	25,743	3,35,985	80,669	30,044	98,65,826	22,66,602	21,26,003	1,42,58,521	GRAND TOTAL OF EXPENDITURE.
2,129	...	2,46,526	...	...	1,03,56,170	7,01,002	13,58,900	1,24,16,072	SURPLUS.
	4,262	...	77,589	30,044	...	...	...	...	DEFICIT.

Revenue, Expenditure and Surplus of the Forest Department throughout India during

(I) REVE

PROVINCE.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.
	R	R	R	R	R	R	R	R	R	R	R	R	R
Imperial*	27,407	30,732	32,907	26,574	14,708	4,186	4,847	4,017	4,759	6,370	6,688	5,240	2,860
Bengal	6,33,734	6,93,959	6,94,334	5,71,152	5,97,432	6,53,634	6,57,794	6,76,907	7,68,718	7,27,322	7,89,553	7,44,840	8,01,610
United Provinces	10,66,094	10,13,403	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	17,09,860
Punjab	6,88,309	7,66,709	9,10,177	7,49,352	8,50,419	11,27,277	7,85,936	10,45,768	9,21,713	8,34,370	10,20,074	8,12,630	9,18,300
Burma (Lower)	22,31,604	25,03,896	25,09,275	16,70,982	20,23,859	19,98,667	22,18,897	26,09,305	31,34,716	26,77,671	28,58,114	35,83,370	34,89,350
Burma (Upper)	1,66,054	2,49,605	2,11,445	1,90,414	1,96,656	2,12,111	2,67,312	3,03,882	3,79,498	3,26,793	3,36,129	3,82,830	4,88,500
Eastern Bengal and Assam	11,72,884	9,77,647	9,94,769	10,27,202	10,36,894	9,57,410	10,93,369	11,80,405	11,56,181	12,13,451	13,59,900	12,30,850	11,34,480
Coorg	1,00,364	1,38,022	87,822	1,13,233	89,386	89,291	1,27,028	1,36,183	92,753	1,35,561	1,82,897	1,80,680	1,73,790
North West Frontier	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer	4,065	7,126	8,198	10,456	9,677	11,274	14,293	13,574	11,592	15,266	19,799	14,890	14,620
Andamans	48,407	70,858	24,762	22,213	23,944	31,870	1,64,062	1,06,075	1,62,195	1,58,326	2,72,338	3,60,490	4,41,790
Forest School	...	...	...	...	...	...	...	...	...	...	...	...	...
Forest Surveys (Imperial)	...	348	36	234	202	241	40	315	220	2,104	257	520	240
Total	61,39,121	61,51,365	70,85,108	59,44,204	63,04,965	67,77,936	68,19,685	91,19,610	1,01,53,811	93,80,674	99,06,351	1,10,47,530	1,14,67,960
Madras	8,66,908	9,06,442	9,53,704	11,66,916	11,98,650	12,45,911	13,74,920	15,15,006	15,57,627	17,95,418	16,94,216	15,77,210	19,37,180
Bombay	18,28,117	20,90,353	25,03,100	27,74,822	33,66,286	30,32,676	30,32,577	28,50,190	31,37,696	32,88,220	32,84,649	32,69,550	37,94,350
Total (British India)	87,74,146	94,48,100	1,05,41,912	98,85,962	1,08,69,911	1,10,57,493	1,12,27,182	1,34,84,806	1,48,49,134	1,44,64,302	1,58,58,216	1,58,94,290	1,72,09,490
Berar	2,33,511	2,92,614	3,08,218	2,97,185	3,19,651	3,26,261	4,06,447	4,07,977	4,40,541	4,87,109	5,11,185	4,31,020	4,82,800
Forest Surveys (Berar)	18,616	5,039	4,752	934	631	651	596	568	13,897	15,724	20,609	19,030	20,730
Baluchistan	...	...	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL	90,26,273	97,45,153	1,08,54,882	1,01,90,170	1,12,05,345	1,13,98,486	1,16,48,238	1,38,98,451	1,53,03,572	1,49,67,135	1,70,10,100	1,63,44,340	1,77,13,020

The figures in this statement have been
* Includes certain home receipts and
† Amalgamated with the Central

(II) EXPEN

Imperial*	77,635	87,269	98,265	96,306	88,245	86,299	78,626	86,199	81,311	85,414	65,788	1,07,270	80,840
Bengal	3,94,612	3,82,183	3,87,813	4,11,915	3,70,399	4,22,781	3,90,368	3,76,270	3,98,150	4,14,004	4,22,530	3,81,610	4,04,040
United Provinces	9,16,212	8,39,025	10,41,885	10,20,101	9,74,519	9,19,580	8,30,748	8,44,544	9,63,151	9,19,195	9,58,211	9,28,540	9,63,020
Punjab	5,16,269	5,60,750	6,53,116	5,58,070	6,75,483	7,16,510	6,77,912	5,93,885	6,45,855	6,53,041	6,40,275	6,56,270	6,36,430
Burma (Lower)	11,50,224	12,28,955	12,17,824	12,12,233	11,50,952	10,75,830	10,32,694	12,31,944	13,32,814	10,86,374	13,25,121	13,63,250	13,41,640
Burma (Upper)	1,63,361	1,71,823	1,99,562	1,97,699	2,11,494	2,12,287	2,26,892	2,09,905	2,57,129	3,02,315	2,73,859	4,41,750	5,20,860
Eastern Bengal and Assam	4,97,013	4,12,247	4,36,058	4,95,821	4,45,432	4,93,293	5,52,939	6,68,697	6,96,445	7,35,554	8,03,915	8,51,400	9,32,190
Coorg	59,796	64,770	75,623	76,951	65,690	74,088	72,629	80,175	72,420	65,818	86,860	73,090	86,890
North-West Frontier	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer	13,954	11,284	14,574	16,316	16,469	20,744	18,897	15,676	12,701	12,720	13,986	15,000	15,900
Andamans	2,306	1,840	12,161	22,760	37,035	25,769	62,679	57,295	94,975	1,30,052	1,79,909	2,31,210	2,44,550
Forest School	...	...	...	...	...	...	...	...	...	...	...	...	...
Forest Surveys (Imperial)	42,489	41,595	30,940	19,823	19,180	28,348	32,868	22,164	21,188	24,324	26,882	22,160	27,900
Total	38,35,871	38,01,740	41,67,252	41,50,563	40,79,137	41,14,548	41,31,533	50,04,844	48,79,615	47,47,954	52,09,608	53,86,020	55,88,010
Madras	6,03,419	6,45,352	7,86,733	8,96,505	9,37,972	11,53,122	11,29,212	12,20,794	11,61,237	12,46,913	13,24,254	13,30,390	13,62,770
Bombay	11,69,181	12,78,770	15,64,172	17,78,723	18,39,461	19,52,910	19,44,005	16,93,962	17,70,691	18,69,887	19,31,457	19,04,970	21,71,940
Total (British India)	56,68,471	57,25,862	65,18,157	68,25,791	68,56,570	72,20,580	72,04,750	79,19,600	78,11,543	78,64,754	84,65,319	86,21,380	90,22,720
Berar	1,52,985	1,55,054	1,56,779	1,52,649	1,59,242	1,71,704	1,83,765	1,70,212	1,76,549	1,68,821	1,98,366	2,29,230	2,54,250
Forest Surveys (Berar)	17,682	11,962	16,911	13,266	15,799	17,836	17,753	15,994	17,962	29,450	30,497	55,620	63,730
Baluchistan	...	...	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL	57,79,138	58,92,878	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

* Includes pay of Inspector General of Forests
† Amalgamated with the Central Provinces.

(III) SUR

Imperial*	-50,228	-56,536	-65,359	-69,732	-73,537	-82,114	-73,779	-82,182	-76,552	-79,044	-59,100	-1,02,030	-78,160
Bengal	2,39,122	3,11,776	3,06,521	1,59,237	2,27,033	2,30,853	2,67,426	3,09,637	3,70,568	3,13,388	3,66,623	3,63,270	3,97,570
United Provinces	1,49,882	1,74,378	5,69,498	5,52,218	4,86,976	6,53,976	4,16,706	6,18,258	7,51,008	7,18,684	7,73,303	7,24,000	7,46,840
Punjab	1,72,039	2,05,959	2,57,031	1,91,282	1,74,936	4,10,767	1,09,204	4,51,883	2,75,858	1,81,329	3,79,799	1,56,360	2,76,870
Burma (Lower)	10,81,580	12,74,941	12,91,451	4,58,749	8,72,907	9,22,837	11,86,203	13,77,361	18,01,872	15,91,197	15,32,993	22,20,120	21,47,710
Burma (Upper)	...	...	...	...	...	...	...	...	...	...	...	...	...
Eastern Bengal and Assam	693	76,782	11,883	-17,285	-14,838	-276	40,420	7,94,799	15,32,270	13,41,982	9,53,441	16,34,880	17,74,890
Central Provinces	6,75,871	5,68,400	5,58,711	5,31,381	5,91,482	4,58,117	5,40,430	5,11,708	4,59,736	4,77,977	5,55,985	4,18,760	2,20,280
Coorg	40,568	73,252	12,799	36,282	23,686	25,203	54,399	26,008	20,333	69,743	96,037	3,79,450	2,92,290
North-West Frontier	...	...	...	...	...	...	...	...	...	...	...	...	...
Ajmer	-9,889	-4,158	-6,376	-5,860	-6,772	-9,470	-4,614	-2,102	-1,109	-2,546	...	...	...
Andamans	46,101	68,018	12,601	-547	-13,091	6,101	41,383	48,780	67,220	28,274	92,429	1,29,240	1,97,240
Forest School	...	...	...	...	...	...	...	...	...	...	...	...	...
Forest Surveys (Imperial)	-42,489	-41,247	-30,904	-22,495	-23,968	-30,416	-32,352	-32,512	-28,409	-34,007	-42,559	-48,320	-63,540
Total	23,03,250	26,49,565	29,17,856	17,93,641	22,25,828	26,63,358	26,88,152	41,14,766	52,74,196	46,32,720	46,96,743	56,61,510	59,79,950
Madras	2,03,489	2,61,090	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	5,84,410
Bombay	6,58,936	8,11,583	9,38,928	9,96,119	15,26,825	10,79,766	10,88,572	11,56,228	13,67,005	14,18,333	13,53,192	13,64,580	17,22,410
Total (British India)	31,65,675	37,22,238	40,23,755	30,60,171	40,13,231	38,36,913	40,22,432	55,65,206	70,37,591	65,99,548	64,19,897	72,72,910	81,86,770
Berar	80,526	1,36,960	1,51,439	1,44,536	1,60,609	1,54,557	2,22,682	2,37,765	2,63,892	3,18,188	3,12,819	2,01,790	2,28,550
Forest Surveys (Berar)	934	-6,923	-12,159	-7,177	-837	-3,755	-3,690	-10,326	-4,065	-13,726	-9,888	-36,590	-43,000
Baluchistan	...	...	...	...	...	...	...	...	...	...	...	...	...
GRAND TOTAL	32,47,135	38,52,275	41,47,992	31,63,660	41,30,794	39,42,804	41,59,922	57,68,690	72,91,054	69,04,010	67,22,828	74,38,110	83,72,320

* Includes pay of Inspector General of Forests, certain home
† Amalgamated with the Central Provinces.

DIX XXIII

39 to 41.]

the 25 (financial) years from 1881-82 to 1905-06.

NUE.

1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	PROVINCE.
R	R	R	R	R	R	R	R	R	R	R	R	
4,980	2,690	4,190	19,130	17,540	6,090	2,463	3,481	3,659	7,455	3,768	7,255	Imperial* Bengal. United Provinces.
7,95,670	9,18,710	13,7,850	11,89,280	9,72,310	11,38,910	12,33,339	12,92,237	12,56,247	10,65,523	11,67,477	11,18,522	
16,58,250	16,01,340	14,44,820	13,86,670	15,68,040	16,14,740	15,65,463	17,15,508	20,25,324	22,80,446	23,97,318	24,33,428	
10,32,430	10,14,500	11,07,720	10,68,470	14,74,430	14,00,770	13,50,842	14,47,558	15,86,408	17,17,777	18,74,443	17,81,653	Punjab.
32,74,200	34,14,550	38,18,270	40,85,200	42,22,960	43,05,230	45,43,363	36,06,453	37,22,602	49,73,247	54,85,700	65,21,766	Burma (Lower).
21,62,580	22,81,280	25,61,680	31,29,060	41,27,930	35,06,820	35,11,081	22,67,485	30,16,451	33,45,288	34,74,056	38,08,163	Burma (Upper).
4,35,090	4,25,030	4,36,440	3,84,820	3,98,180	5,68,100	5,49,521	5,12,963	5,80,200	6,75,732	8,15,677	11,06,096	Eastern Bengal and Assam.
10,08,630	9,96,940	7,73,320	7,80,050	9,95,100	8,19,260	9,63,062	11,15,723	16,84,428	19,98,032	20,13,452	24,49,131	Central Provinces.
1,53,050	1,35,250	93,000	1,30,910	1,55,070	1,62,410	1,97,596	1,70,242	1,90,730	2,24,031	1,93,087	2,45,419	Coorg.
12,840	15,640	12,370	15,540	14,420	10,270	10,646	6,865	8,736	13,884	17,297	15,002	North-West Frontier.
1,14,530	1,32,120	3,62,370	4,33,710	2,29,460	2,60,600	2,77,866	2,66,903	3,28,035	4,32,381	6,20,796	5,82,511	Ajmer.
2,790	4,310	2,850	2,890	2,360	3,210	3,657	3,545	3,252	3,033	3,557	3,080	Andamans.
80	510	400	220	290	420	327	473	3,034	431	...	...	Forest Surveys (Imperial).
1,05,55,120	1,09,42,870	1,19,87,190	1,26,26,950	1,41,78,090	1,37,95,830	1,41,49,286	1,24,22,451	1,45,09,229	1,67,89,118	1,81,57,621	2,02,00,515	Total. Madras. Bombay.
18,94,330	21,10,570	23,3,430	21,36,490	21,10,520	23,02,290	23,41,170	25,43,430	26,13,819	26,57,727	28,29,216	29,67,604	
37,50,030	35,36,670	30,32,710	26,16,660	22,95,150	24,15,200	29,61,529	23,79,729	23,29,156	27,51,539	30,20,558	34,84,993	
1,62,99,180	1,65,90,110	1,73,23,230	1,73,80,100	1,85,83,760	1,85,14,320	1,94,50,985	1,73,45,610	1,94,52,204	2,21,98,384	2,40,07,395	2,66,53,112	Total (British India). Berar. Forest Surveys (Berar). Baluchistan.
4,73,400	4,94,340	5,17,820	4,00,350	4,99,840	4,78,230	3,02,552	4,63,393	↑	↑	↑	↑	
16,300	14,930	15,460	15,040	14,920	17,060	16,956	14,712	19,336	18,363	22,555	21,481	
1,67,88,880	1,70,99,380	1,78,56,510	1,77,95,490	1,90,38,520	1,90,09,610	1,97,70,493	1,78,23,715	1,94,71,540	2,22,16,747	2,40,29,950	2,66,74,593	GRAND TOTAL.

furnished by the Comptroller and Auditor General, undistributable and petty local items. Provinces.

DIFURE.

84,950	80,410	74,950	84,300	85,460	96,550	83,578	79,539	85,017	89,315	83,058	83,767	Imperial* Bengal. United Provinces.
2,97,390	4,66,070	6,90,040	6,53,440	4,86,320	5,45,210	5,70,806	6,57,131	6,38,014	7,03,508	6,88,589	5,99,579	
9,36,310	9,42,670	9,06,040	9,17,850	9,72,030	9,42,380	9,63,433	10,08,739	10,13,958	10,81,438	13,91,583	14,05,182	
7,27,120	6,78,420	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	12,63,664	Punjab.
13,78,230	13,57,740	15,03,290	14,04,110	15,29,570	15,01,470	15,24,766	14,26,438	15,53,753	20,30,397	20,06,666	24,49,352	Burma (Lower).
5,58,760	5,75,860	6,25,300	7,92,500	8,96,620	9,45,970	11,29,951	12,20,021	13,36,510	13,22,007	14,40,258	14,88,711	Burma (Upper).
2,72,010	2,35,140	2,82,010	2,88,830	3,05,360	3,57,140	3,47,977	3,29,112	3,27,499	4,25,484	5,03,655	5,93,910	Eastern Bengal and Assam.
9,76,030	9,2,240	9,50,990	9,21,440	8,71,330	10,41,440	9,31,763	9,75,217	12,57,288	12,80,966	13,20,616	13,07,153	Central Provinces.
83,140	85,840	71,630	87,020	80,100	74,220	70,905	82,333	89,437	92,131	83,820	95,718	Coorg.
14,900	15,730	22,010	14,670	16,300	15,350	16,782	19,510	15,927	16,877	16,680	17,131	North-West Frontier.
1,22,780	1,02,020	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	Ajmer.
65,980	67,950	67,380	60,320	68,370	73,550	71,238	76,290	66,338	59,339	61,424	80,669	Andamans.
29,840	29,950	31,970	23,950	23,970	33,980	33,991	33,730	33,985	33,935	28,229	30,044	Forest Scho. of. Forest Surveys (Imperial).
56,26,470	56,41,330	62,70,050	62,78,310	63,31,170	69,79,660	67,71,671	70,66,987	77,14,098	86,18,429	90,53,282	88,40,083	Total. Madras. Bombay.
13,96,350	14,45,610	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	
20,67,920	19,58,390	19,69,160	20,73,190	18,39,250	21,28,330	24,08,581	17,19,680	16,76,441	17,75,937	19,03,804	21,26,093	
90,80,740	90,45,330	97,73,510	99,24,350	97,68,090	1,07,61,620	1,08,95,683	1,04,96,221	1,12,26,091	1,21,45,296	1,29,43,184	1,42,33,778	Total (British India). Berar. Forest Surveys (Berar). Baluchistan.
2,51,640	2,45,510	2,41,870	2,44,050	2,38,070	2,34,380	2,35,103	2,24,687	↑	↑	↑	↑	
40,910	41,770	29,770	27,330	27,760	28,680	29,254	24,480	23,240	21,697	24,672	25,743	
92,73,290	93,32,610	1,00,45,150	1,01,95,730	1,00,33,920	1,10,24,680	1,11,60,040	1,07,46,388	1,12,49,331	1,21,66,993	1,29,67,856	1,42,58,521	GRAND TOTAL.

certain home charges, and undistributable and petty local items.

PLUS.

-79,970	-77,720	-74,890	-65,170	-67,920	-90,460	-81,115	-78,058	-81,358	-81,890	-79,290	-76,512	Imperial* Bengal. United Provinces.
3,98,280	4,52,640	6,80,810	5,35,840	4,85,990	5,93,700	6,62,533	6,3,106	6,18,233	3,62,015	4,78,883	5,25,033	
7,21,940	6,58,480	6,58,430	4,68,820	5,93,090	6,72,360	5,62,824	7,06,769	10,11,326	11,99,008	10,05,735	10,28,246	
3,10,310	3,36,080	3,84,420	2,96,530	6,19,010	1,89,310	4,63,499	5,07,223	6,26,713	5,61,392	8,62,089	5,17,989	Punjab.
18,95,970	20,56,810	23,14,980	26,87,090	26,93,390	23,08,597	21,80,017	21,63,849	28,92,800	28,92,800	34,79,034	40,72,354	Burma (Lower).
16,22,820	17,05,420	19,35,150	24,36,550	32,31,110	25,60,850	30,81,130	10,47,464	16,79,941	20,23,281	20,3,798	23,19,452	Burma (Upper).
4,03,080	1,38,890	1,54,430	95,990	92,820	2,10,980	2,01,549	1,83,851	2,52,701	2,50,248	3,12,021	5,12,186	Eastern Bengal and Assam.
32,570	44,600	1,77,670	1,23,770	1,23,770	-2,22,180	32,299	1,40,508	4,27,140	7,17,066	6,32,844	11,41,978	Central Provinces.
66,810	49,410	21,370	43,890	74,970	88,190	66,691	87,909	1,01,283	1,31,840	1,09,267	1,99,671	Coorg.
2,060	90	9,610	870	1,880	5,080	8,136	6,498	47,038	41,240	16,033	53,271	North-West Frontier.
8,250	30,100	45,770	1,86,370	91,050	1,19,660	1,37,749	82,235	44,333	1,66,260	2,78,355	2,46,526	Ajmer.
6,190	63,640	64,530	61,010	61,010	70,340	67,511	72,746	63,086	56,301	57,867	77,589	Andamans.
29,760	29,440	31,570	33,730	33,680	33,560	32,664	33,257	30,951	33,504	28,229	30,044	Forest Surveys (Imperial).
50,28,650	53,01,540	57,17,140	63,48,640	78,43,920	68,17,170	73,77,615	53,55,464	67,95,131	81,70,689	91,04,339	1,03,60,432	Total. Madras. Bombay.
5,07,680	6,64,960	7,69,030	5,63,840	5,15,850	6,48,760	6,24,739	8,33,376	7,78,267	9,06,797	8,43,118	7,01,002	
16,82,110	15,78,280	10,63,550	5,43,470	4,55,900	2,86,770	5,52,948	6,60,049	6,52,715	9,75,602	11,16,754	13,58,900	
72,18,440	75,44,780	75,49,720	74,55,750	88,15,670	77,52,700	85,55,302	68,49,389	82,26,113	1,00,53,088	1,10,64,211	1,24,20,334	Total (British India). Berar. Forest Surveys (Berar). Baluchistan.
2,21,760	2,48,830	2,75,950	1,56,300	2,01,770	2,43,850	67,449	2,37,706	↑	↑	↑	↑	
24,610	26,840	14,310	12,290	12,840	11,620	12,298	9,768	3,904	3,334	2,117	4,262	
74,15,580	77,66,770	78,11,360	75,99,760	90,04,600	79,84,930	86,10,453	70,77,327	82,22,209	1,00,49,754	1,10,62,094	1,24,16,072	GRAND TOTAL.

charges and undistributable and petty local items.

APPENDIX XXIV.

[Vide Paragraph 43.]

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 1905-06.	
	Average of 5 years 1900-01 to 1904-05.	In 1905-06.	Total.	Per ton.
			₹	₹
Caoutchouc	189	279	12,82,129	4,595
Lac { Button	1,824	2,093	44,41,287	2,122
{ Shell	8,841	10,880	2,64,53,774	2,431
{ Stick and other kinds	323	750	9,06,100	1,208
Lac—dye	(a) 05	...	...	...
Sandal, ebony and other ornamental woods.	(b)	(b)	11,70,206	...
Cutch and gambier	4,141	2,754	8,64,331	314
Myrabolams	56,057	60,320	44,60,676	74
Teak	62,672	52,768	70,41,660	133
Cardamoms	95	132	2,97,513	2,254
TOTAL IN 1905-06 . . . . .	...	...	4,69,17,676	...
" " 1904-05 . . . . .	...	...	4,41,66,143	...

(a) Represents figures for 1900-01; there were no exports in 1901-02 to 1904-05.

(b) Figures are not available.