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SUMMARY  
OF  
THE PRINCIPAL MEASURES  
OF  
THE VICEROYALTY  
OF  
THE MARQUESS OF DUFFERIN AND AVA  
IN THE  
DEPARTMENT OF REVENUE AND AGRICULTURE,  
VOL. II.

*December 1884 to December 1888.*

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Note on the Principal Measures of Administration under consideration in the Revenue and Agricultural Department during the Viceroyalty of His Excellency the Marquis of Dufferin and Ava, K.P., G.M.S.I., G.M.I.E.

CHAPTER I.—Prefatory.

This Note is so arranged as to follow in sequence and order of division the similar narrative prepared for the preceding four years of Lord Ripon's Viceroyalty. That Narrative commenced with a chapter containing an account of the constitution of the then new Imperial Department, and of the causes which led to its formation; and continued with a further series of chapters, in which each of the various subjects dealt with by the Department and the Provincial Departments was separately discussed. The same arrangement will be followed now. It was explained in the former Note that the main duty of the Revenue and Agricultural Department was the fulfilment of the programme urged upon the Government of India by the Famine Commissioners appointed in pursuance of the orders of the Home Government; and the present Narrative will deal mainly with the progress which has been made in this direction under the Government of Lord Dufferin. Three new chapters have, however, been rendered necessary by the transfer to the Department during Lord Dufferin's Viceroyalty of three branches of Administration previously under the Home Department, *viz.*, Forests, Archaeology, and Patents; and it has been found convenient to deal separately in a final chapter with the legislative measures initiated in the Revenue and Agricultural Department, and assented to by His Excellency during the period under review.

CHAPTER II.

ORGANIZATION OF AGRICULTURAL DEPARTMENTS.

The original intention of the founders of the new branch of Administration was, that the Imperial and Provincial Departments, but especially the latter, should be Departments of Agriculture rather than of Revenue; but the policy which has been carried out has been to consider the administration of Land Revenue, and more

Primary duty of Agricultural Departments, Revenue administration.

particularly of its assessment, the primary duty of the Imperial Department, and the most important aim of the cognate Departments in the Provinces. To this policy Lord Dufferin has given increasing support. It will be seen on reference to the second chapter of the former narrative to which reference has been made, that, after correspondence with the India Office, the programme adopted for the Departments in the Resolution of 1881, under the sanction of the Secretary of State, was divided into three main heads—Agricultural Enquiry; Agricultural Improvement; and Provision against Famine. These divisions were deduced from the Secretary of State's despatch on the Famine Commissioners' report, and were held by the Government of India to reflect the intentions of the Home Government. It was thought, both at Home and in India, that many of the imperfect results of our administration, including the undue distress and death-rate consequent on the failure of the monsoons, were in great measure due to want of accurate knowledge of the country. Such was the key-note of the Resolution issued in 1881.

While, therefore, making sufficient arrangements, under rules embodied in a Famine Code, for dealing in each Province of India with any serious scarcity and drought which might occur, the Government of India imposed on the new Departments, as their first duty, the organization of a machinery for the collection of accurate facts and information regarding the agricultural circumstances of every part of the Empire. In other words, Provincial Departments were required to make their leading aim the careful analysis of the agricultural condition of every tract in each Province. Positive measures for the actual improvement of agriculture were to hold a secondary place in the scheme. It was considered that, beyond giving a general impulse to the agricultural progress of the country by the development of railways and canals, the Government could not safely attempt or advocate, at any considerable cost to the exchequer, improvements in the methods and processes of agriculture until the agricultural population had reached a higher level of education, and could themselves take part in the introduction of new practices and principles. To these views Lord Dufferin has given full support.

In the meantime the measures which were taken under Lord Ripon for the organization of Agricultural Departments had begun to bear fruit in the



development and systematic arrangement of the local establishments by whom village records and agricultural statistics are maintained and controlled. A primary result of this reform was that it became possible to institute a more efficient administration of the assessment of land revenue. It has been to this branch of its duties that Lord Dufferin has, in the interests of the revenue-paying classes as well as those of the exchequer and the general community, chiefly directed the energies of the Imperial and, with the co-operation of Local Governments, of Provincial Departments; at the same time that, in association with the general policy of promoting a scheme for technical instruction, he has permitted the foundation to be laid for the education of the Agricultural classes, and for the improvement of the agricultural system.

In considering the prominent part which has thus been taken during Lord Dufferin's Viceroyalty in connection with the administration of land revenue, a subject only dealt with as a subsidiary question in the papers leading to the foundation of the new Department, the fact must not be overlooked that the "administration of land revenue" was already a duty of an existing Department, from which it was transferred to the new Department, whereas "Famine and Agriculture" involved duties of a more novel character to which special attention had to be drawn by the Famine Commissioners and the Secretary of State. Land Revenue was hardly discussed. But this circumstance did not render it less necessary to accord to the older subject a leading position among the duties of the Department. As a fact, the representation made to the Secretary of State in 1881, that the Home Secretariat could not deal with Land Revenue as well as with its other duties, was found to be true. Leisure had hitherto never been found for a thorough investigation and control of the land revenue system, in which the Imperial Government had a stronger interest even than the Provincial Governments, and reform in which could only be effected by continuous personal communication between the officials of the Imperial and Provincial Governments. The financial exigencies of the Empire, as well as the necessity of bringing under orderly arrangement the most important branch of internal administration, compelled Lord Dufferin to require that the first place should be given to questions concerning it, and to invite Local Governments to arrange for conferences between the Revenue and Survey officials on the Imperial and Provincial staffs for the purpose of introducing economy and punctuality into the system of revenue assessments. The

Importance of Revenue Administration.

reform was necessary and important. A Resolution was issued under Lord Dufferin's orders by which, in order to give greater significance to the priority to be attached to the administration of Land Revenue in the scheme of Agricultural Departments, their designation was in future to be Departments of Land-Records and Agriculture. The policy has already borne good fruit. In the Financial Statement of 1888 it has been estimated that in the current decade, 1887 to 1896, embracing the periods of two Provincial contracts, a sum of not less than 200 lakhs will be saved to the State.

The allusion which has just been made to conferences between Imperial and Provincial officials makes it desirable to revert to the proposals which were originally submitted to the Secretary of State in 1881 regarding the constitution of the new Imperial Department. It was then a matter of considerable doubt whether the Department should be administered by a Secretary or an Inspecting Director. Strong arguments were adduced, chiefly in regard to the question of agricultural improvement, in favour of the latter course, but rejected in consequence of the urgent need of relieving the existing Home Secretariat of its revenue work. As a matter of fact, however, it has been found that the improvement of the revenue system necessitated, more than any other subject, constant personal intercourse between the Imperial and Provincial authorities; and arrangements were accordingly sanctioned by Lord Dufferin under which the Secretary in the Department was permitted to travel for a portion of the year, and to meet in conference officials deputed for the purpose by Local Governments. The main result of the conferences which have taken place has been that practical reforms have been introduced in various Provinces, and have realized the financial economies already noticed.

The course thus taken in devoting the primary energies of the Department to Land Revenue has been justified in a remarkable manner. The Famine Commission of 1879, which gave rise to the establishment of the new Departments, was followed in 1887 by a Finance Commission, under the presidency of the Secretary to the first Commission. The second Commission, having been required by the Secretary of State to consider how far the expenditure on Agricultural Departments

Justification of duties assigned to Agricultural Departments.



could be justified, determined that the issue on which the verdict should rest was the question, whether by economies effected in the system of land revenue assessment, the Provincial Departments earned enough to compensate for the outlay devoted to them. The necessity for agricultural improvement alone was not considered sufficient to justify their existence. Had not therefore Lord Dufferin promoted the policy already indicated, the Departments created on the recommendation of the Famine Commissioners might not improbably have been discarded as expensive luxuries.

As it is, the reports from all Local Governments, an abstract of which will be found in the Despatch referred to in Chapter IV, and printed in the Appendix, indicate that the Departments must be accepted as necessary to sound revenue administration, and positively profitable to the State. The gain due to them is represented to be not less than 12 to 16 lakhs a year.

In thus justifying the continued existence, on financial grounds, of the new Departments by insisting on their introducing economy in the system of assessments, Lord Dufferin has not neglected to draw the attention of Provincial Departments, with the co-operation of Local Governments, to certain measures of important agricultural reform, which will be described in Chapter XI of this Narrative, and which mainly concern the suitable instruction of the agricultural population, or the improvement of the general condition of cultivators and their cattle. Among the subjects to which special attention has been paid, Agricultural Chemistry and Veterinary Science are prominent. His Excellency has also insisted on the development of the analysis of agricultural tracts, which has been laid down as a leading duty of Agricultural Departments, with a view to maintaining a continuous knowledge of the circumstances and conditions of the agricultural population of every part of the Empire. Details of an enquiry of this character, made under Lord Dufferin's order in connection with inland immigration, will be found in Chapter III of the Narrative.

The policy adopted under Lord Dufferin has, then, been to make the new Departments, firstly, remunerative; secondly, conducive to the better technical education of the agricultural community; and finally, to require them to become the depository of all facts and data necessary to enable the Government to relieve suffering and distress, or to meliorate the condition of the agricultural community.

Agricultural improvement postponed not neglected.



## CHAPTER III.—Famine Relief.

A great famine devastated the population of India in 1877-78.

Absence of serious famine since 1879, and progress of protective measures.

In 1879 a Famine Commission was appointed, under the orders of Parliament, to investigate the causes of famine, and to recommend measures of protection against the consequences of drought. From that year, however, to the end of Lord Dufferin's Viceroyalty no serious failure of the monsoon, and consequently no severe scarcity, has occurred. This has been fortunate. For the absence of anything like widespread famine for a period of nine years has enabled the administration to make considerable progress in the scheme of protection, and to establish a system which, as the Famine Commissioners wished, should enable the Government to keep touch with the condition of the people in every part of the Empire. The last act of Lord Dufferin's Viceroyalty in connection with internal administration has been to insist on the further fulfilment of this object, to attain which has been one of the most steadfast aims of his administration.

Another happy result of the continued freedom from famine which the country has enjoyed since 1878 has been the rapid extension of communication and railways in directions calculated to relieve tracts liable to drought and famine. Nothing like the disaster of 1877-78 can ever recur on the same scale. Food can now be carried from a large proportion of centres of supply to those of demand. Much, however, remains to be done. One experiment, suggested by Sir James Caird, the President of the Famine Commission, has been, under Lord Dufferin's orders, instituted in the Forest Department, in constructing tramways which, in ordinary times, can be utilized for carrying timber from the forests to populated tracts, and in times of famine for carrying grain from one centre to another. The experiment is one which is to be watched and thoroughly tested, and if successful, can be made to receive substantial extension. Meanwhile, the country has been placed in a better position to withstand the effects of drought, by the improvement of irrigation, and the greater facilities afforded for the grant of agricultural loans in times of scarcity and distress.

The action taken previously to Lord Dufferin's assumption of office regarding the adoption of a Famine Code in each Province, with the view of maintaining a



continuous state of "preparedness" against famine, and in the event of its occurrence of providing an organized system of defence against its devastations, has been described in the Narrative of Lord Ripon's Viceroyalty. A Provisional Famine Code, based on the principles urged by the Famine Commissioners, had been published by the Government of India, which was to hold good in every Province until each Provincial Government and Administration should develop a Code more suitable to its own local requirements. Between the year 1883, when the Provisional Code was published, and the year 1888 correspondence continued to be conducted with Local Governments and Her Majesty's Secretary of State until every Province had adopted a thoroughly approved Code. The only point which need be mentioned here as having given rise to important controversy during this period, was the question raised by the Bombay Government whether poor residents of villages, who are judged unable to perform even light labour by reason of age, sickness, or other infirmities, should not be compelled to enter and receive relief in a poor-house. The Government of India hesitated to legislate for such a purpose; and the Secretary of State, to whom the question was referred, agreed that compulsion would be objectionable, and that people who refused to take advantage of the aid of a poor-house should be considered responsible for their own lives. "The risk," wrote the Secretary of State, "is their own."

The only occurrences of scarcity since 1885 have been of a very local character, hardly deserving a record in this Narrative. Mention may, however, be made of outbreaks of scarcity, 1885 to 1888. distress due to floods in Lower Bengal and Orissa in 1885, and to partial drought in the same year in two of the Deccan districts of the Madras Presidency. In 1886 some alarm occurred in a portion of the Central Provinces, but with improved rains speedily subsided; and in 1888 a serious failure of crops was reported from the newly-acquired Shan States and from Orissa. The last named occurrence has been the most serious, although confined to a very small area, *viz.*, a subordinate division of the district of Puri. A few deaths have been attributed to starvation; but they appear to have occurred in circumstances which would bring them under the classification of the Secretary of State as those of persons who would not avail themselves of offered aid. The Famine Code was, in fact, worked by the local officials with satisfactory success; and their efforts saved the lives of several hundreds, who in



the absence of organized arrangements would have starved. In the other cases referred to above prompt action was, on each occasion, taken in providing relief works for those in distress under the provisions of the established Codes. All occurrences of the nature of Famine have therefore been satisfactorily dealt with under Lord Dufferin's Administration.

Notwithstanding the proved excellence of the working of the Famine Codes on the outbreak of distress, Lord Dufferin has considered that it is also the duty of the administration to anticipate, during times of peace and prosperity, the dangers of famins, by relieving of its surplus population those tracts which appear to be too greatly crowded; and has accordingly not only instituted a special enquiry from this point of view into the condition of the lower classes in each part of India, but has also required the issue of an important Resolution advocating the promotion of any measures likely to lead to the relief of congested areas, by providing for the migration of the inhabitants to the cultivated tracts at the disposal of Government in Burma, the Central Provinces, and elsewhere. The Resolution will be found in the Appendix, and should be read in full. It gives an account of the successful colonization of the waste land on the Sinhnai Canal in the Punjab, where by careful supervision a number of families from overcrowded districts have been settled. Allusion is also made to other attempts, some successful, some unsuccessful, which have been made in various parts of India to bring population to waste tracts. Roads are the chief agencies in colonization; and population will flow easily when communications are once established. The annexation of Upper Burma is regarded as a most fortunate circumstance in connection with the problem of the relief of over-populated tracts, inasmuch as that country will provide land in tracts where the climate will not affect the agricultural classes of India prejudicially. Special officers have recently, at Lord Dufferin's instance, been deputed from Bengal and the North-Western Provinces, in which lie the most congested districts, to consult with officers in Burma and the Central Provinces as to the best course to follow; and already a lease of land in Burma has been arranged with a planter of Bengal, well known for his success in the colonization of jungle tracts, who has undertaken to carry cultivators from Behar to waste lands in Tenasserim. The experiment is one of considerable interest.



## CHAPTER IV.

### ASSESSMENT OF THE LAND REVENUE.

The remarks made in the second chapter of the Narrative will have made it clear that the main efforts of the Revenue and Agricultural Department have, under Lord Dufferin's Administration, been directed to reforms in the system of assessing land revenue. Improvement was called for in three directions. Firstly, in that of relieving the agricultural population of the burden and vexation caused by the invasion, for periods of several years, of one district after another by armies of settlement and survey officials. Secondly, in that of securing punctuality and economy in land settlement operations now current. Thirdly, in that of introducing a more economical method into the settlement system of the future.

The first object has been effected by substituting for temporary establishments periodically appointed, the permanent officials attached to villages and districts.

Savings due to (1) abolition of special settlement establishments; (2) punctuality in assessment.

The second has been effected by measures arranged in conference with the authorities of each Province for the more punctual and economical assessment of settlements now in hand. The third by requiring records and maps to be maintained from year to year by the permanent establishments. The economy effected under the second head was in the Financial Statement of 1888-89 declared to be not less than 200 lakhs in the current decade; while the saving under the third head is, in a Despatch now under transmission to the Secretary of State, estimated to be not less than 400 lakhs during a period of thirty years, which, in the majority of Provinces, is the term during which a settlement remains unaltered. The portion of the Financial Statement in which the land revenue system is discussed, gives a brief account of the present position in each Province, and is appended to this chapter. The despatch to which reference has been made indicates the prospects and probable results of future settlements under each one of the Local Governments, and will be found in the Appendix to this Narrative. It is unnecessary, therefore, to enter further into details, which will be found in these papers; and it will suffice to give in this place a brief explanation of the system which the Government of India has, under Lord Dufferin, put forward as the model up to which each Local Government should, as far as circumstances admit, endeavour to work.

In the first place, it has been considered right that all village and field maps should be based on a correct frame work, and that, wherever possible, this basis or frame work should be supplied once for all by a professional survey party. Secondly, that all details in maps and field books should be filled in by those local officials attached to each village and district whose duty it is to maintain the annual land records. Thirdly, that all records and maps should be annually maintained up to date by the permanent establishments to which allusion has just been made. Fourthly, that schools should be kept up for the proper education of the responsible officials. Fifthly, that the district officers should be assisted and guided by the staff of the Department of Land Records and Agriculture in the supervision of the special operations required for the maintenance of maps and records. Lastly, that the officers in charge of districts, and not as heretofore settlement officials independent of them, should be responsible for the punctual and just assessment of the territories under their administration.

The advantages of this system are that the maps and records will always be ready to hand for purposes of land assessment, instead of requiring a term of some years for their preparation; that the increments of revenue due to the State will be collected on the day on which they are due, instead of after a delay which has hitherto cost the Exchequer several hundreds of lakhs; that the assessments will be based on the actual statistics and facts of a period of several years, instead of on the exceptional circumstances and often fraudulent returns of a single year; that there will be no periodical disturbance of the agricultural population involved by the introduction of large bodies of surveyors and valuers of soils; and, finally, that the assessments will be supervised by resident officials who have had the opportunity of gaining a more or less intimate acquaintance with the circumstances of the agricultural community and their land.

The experience which has been gained during the last two or three years has proved that the average rate of expenditure per square mile involved by the new system is, compared with the former average rate, as Rs. 50 to Rs. 300, exclusive of the cost of permanent establishments, and that inclusive of the permanent charge, the cost can be kept considerably below Rs. 100. Even on the assumption that the rate will reach Rs. 100



a square mile, the annual saving to the State was, in the Financial Statement of 1888, estimated at about 24 lakhs or, for the period of settlement, 720 lakhs, in addition to the saving due to punctuality of assessment. This gain to the revenues of the State will be accompanied by an important diminution of the vexation, expense and trouble caused to the agricultural community by a periodical settlement.

Lord Dufferin's Government has also led the way to a further financial improvement by admitting, in the Central Provinces, the substitution of shorter terms of settlement for the ordinary term of thirty years. It has been found that the rapid advancement of agricultural wealth, and the great increase in the value of produce in outlying districts, due to the capital provided by the State for the construction of Railways and the improvement of communications, makes it difficult for the Government to recover after a long term of years that portion of the value of produce which, under long established custom, has been the admitted share of the State. For the sudden diminution which would be caused in the income of landholders by an assessment on their estates of the full demand to which the Government is entitled would be fatal to their prosperity. Political considerations have interfered with any present alteration of the period of thirty years in the settlement system of some parts of India; but in the Central Provinces the term has been reduced to periods varying from twelve to twenty years, and the example thus set may still be followed elsewhere. The contraction of the term of settlement carries with it the advantage that a lenient assessment can be imposed on an agricultural community without such excessive sacrifice of the interests of the general tax-payer, as is caused by the surrender of a part of the share due to the State after the longer term.

The measure taken in the Central Provinces must be considered an important one, both as affecting the Exchequer and, the interests of the agricultural population.

#### APPENDIX TO THIS CHAPTER.

*Extract from the Financial Statement for 1888-89 presented by the Hon'ble Mr. Westland, Finance Minister.*

" 32. The figures of Land Revenue shew considerable irregularity when they are made up by the financial year, as will easily be understood from

the circumstances stated in paragraph 9. But if the accounts are made up by the 12 months ending September, so as to close at a time when the collections of one season are for the most part finished and those of the next not yet begun, the figures present a more regular appearance and shew a steady advance of revenue year by year.

*Land Revenue during the twelve months ending September 30th.*

(In thousands of Rs.)	1881.	1882.	1883.	1894.	1885.	1886.	1887.
India . . . . .	99	91	59	96	110	110	116
Central Provinces . . . . .	608	609	612	613	613	615	619
Burma . . . . .	1,036	1,060	1,090	1,166	1,133	1,137	1,222
Upper Burma . . . . .	...	...	...	...	...	39	235
Assam . . . . .	385	379	396	401	410	420	401
Bengal . . . . .	3,687	3,880	3,801	3,690	3,915	3,790	3,736
North-Western Provinces and Oudh . . . . .	5,653	5,848	5,782	5,769	5,809	5,784	5,793
Punjab . . . . .	2,112	2,099	2,075	2,053	2,153	2,157	2,146
Madras . . . . .	4,777	4,556	4,721	4,779	4,492	4,807	4,861
Bombay . . . . .	3,119	3,095	3,083	3,407	3,316	3,342	3,373
TOTAL . . . . .	21,476	21,617	21,657	21,972	21,951	22,210	22,510
See Note . . . . .	665	694	677	676	784	811	880

The figures in the lowest line are the alienated Land Revenue of Bombay, which, in the system of accounts of that Province, are added on the Revenue side, and charged again as expenditure under Assignments, Land Revenue, and Police. The amounts are neglected in the statement itself. It will be remembered that a portion of the total receipts of Land Revenue is in the accounts shown under the separate head of Irrigation.

" 33. Although the growth of revenue shewn in the above figures has been very steady, it can hardly, from a financial point of view, be said to be satisfactory in amount. It has been less than one per cent. a year, and is on the whole a poor return for the money which Government has spent, in the form of railways and of canals, in improving its estate.

" But the fact is, that the period covered by the above statement represents, in a general way, the close of the thirty years' settlements in several of the provinces; and the Government is only now beginning to reap its share in the advance of the past two or three decades. Settlement operations are at present being carried on on a more extensive scale than at any previous time, and we have every reason to expect a handsome increase of revenue under this head.

NEW SETTLEMENT SYSTEM.

" 34. During the last few years (and in a great measure in preparation for this re-settlement of revenue) a very great improvement has taken



place in Northern India in the administration of this important head of revenue, and in the means adopted by the Government to assess and settle from time to time that share of the produce of the land which has in all ages been the main source of the revenue of the sovereign powers in India.

“As no systematic review has recently been published of the position and prospects of this our most important head of revenue, I propose to take up the subject in some detail, both from an administrative and from a financial point of view, the materials having been supplied to me by Sir Edward Buck, the Revenue Secretary to the Government of India, to whom personally is due by far the largest share of the credit of the improvements effected.

“35. The system of land-assessment has hitherto, in every Province, involved the complete survey, field by field, of every village—an operation which was rendered necessary by the absence of correct maps at the commencement of the thirty-year period. The object of the system now introduced is to preserve, and to correct up to date, the records upon which the surveys and settlements are based, so that the re-settlements, when they fall due, may be made upon existing records, and may not require an elaborate investigation *de novo*. The maps which have been provided by the great cadastral survey, which has now almost drawn to an end, are in future to be corrected up to date from year to year by permanent establishments in which the patwāris or village accountants occupy the most important place. In the same way, the settlements now being completed have involved a complete revision of all records-of-rights, including details of the occupancy of every field; and these records, like the maps, are in future to be maintained from year to year by the permanent establishments. The assessment included also the valuation of the soil and productive powers of every field; but the valuation made during the past thirty years will in future revisions of settlement be accepted without material alteration. Three important elements of expenditure have thus been eliminated from future settlement operations, *viz.*, the cost of periodical field surveys, of revisions of records-of-right, and of soil valuations. The introduction of the new system is made possible both by the more complete maps and records which have been supplied by the operations of the past thirty years, and by the creation of Agricultural Departments which are permanent Departments of Survey and Settlement.

"36. An examination of the cost under the old and new systems has recently been made in pursuance of the enquiries of the Finance Committee with the object of ascertaining the financial effect of the new arrangements and the probable cost of future settlement operations. This investigation is not complete, but it points to a maximum expenditure, in future, of Rs. 100 a square mile, including the cost of additional establishment, and in some Provinces to a considerably lower figure.

"The comparative results are shewn in the following table, in which a maximum rate of Rs. 100 is applied to all provinces :

Province (excluding Assam).	Rate per square mile under the old system at rates recently prevailing.	Average expenditure per annum at rates in preceding column.	Average expenditure per annum at the maximum rate of Rs. 100 per square mile.
	Rs.	Rx.	Rx.
North-Western Provinces and Oudh	350	115,000	30,000
Punjab . . . . .	200	50,000	25,000
Central Provinces . . . . .	220	35,000	15,000
Bengal . . . . .	350	17,500	5,000
Madras . . . . .	440	70,000	15,000
Bombay . . . . .	260	65,000	25,000
TOTAL . . . . .	303	352,500	115,000

showing an ultimate annual saving of Rx. 237,500.

"The above table is based on an estimate of the maximum cost which may be incurred in the revision of assessments when the new arrangements have been completely established. In the meantime some saving has been already made by their partial introduction and by measures which have recently been taken to accelerate the current revisions of settlement. Under the programmes which have been arranged in recent conferences with the local authorities, there has been effected a saving either in the expenditure on survey and settlement, or in the more punctual recovery of increments of new revenue, which in three Provinces—the Central Provinces, Punjab, and Madras—is estimated at a gross amount of Rx. 2,000,000 during the next ten years, or an average of Rx. 200,000 a year during the next decade. In these and other Provinces the new increments of Land Revenue to which the Government is entitled will henceforth be assessed and collected up to date, while



hitherto they have in many cases come into force only several years after the date of the expiry of the old settlement.

“ 37. The general growth of the Land Revenue is exhibited in the following table :

*Table shewing growth of Land Revenue (including Permanently-settled Tracts).*

(The figures are thousands of Rs.)	Receipts, 1856-57.	Receipts, 1870-71.	Average annual growth (14 years).	Percentage of increase (14 years).	Receipts, 1886-87.	Average annual growth since 1856-57 (30 years).	Percentage of increase (30 years).	Receipts, 1890-91 (rough estimates).	Average annual growth since 1870-71 (20 years).	Percentage of increase (20 years).
North-Western Provinces . . .	3,920	4,130	15	5	4,390	10	12	4,560	21	10
Oudh . . . . .	970	1,320	25	36	1,410	15	45	1,470	7	11
Punjab . . . . .	1,840	1,070	10	7	2,150	10	17	2,210	12	13
Central Provinces . . .	670	600	2	5	620	2	9	650	2	8
Bengal . . . . .	3,540	3,760	16	6	3,740	7	6	3,800	2	1
Madras . . . . .	3,800	4,400	43	16	4,800	35	28	4,900	23	11
Bombay(a) . . . . .	2,150	2,050	67	37	3,370	41	56	3,450	25	17
Assam . . . . .	60	210	10	102	400	11	400	420	10	100
Lower Burma . . . . .	410	600	14	46	1,220	27	197	1,230	31	105
Minor Provinces . . .	20	20	—	—	120	3	500	120	5	500
	17,300	19,000	100	15	22,280	166	20	22,810	142	14

(a) Excluding Alienations.

“ The figures shew actual collections both of Land Revenue and of miscellaneous items classed as Land Revenue, e.g., sale-proceeds of waste-lands; water-rates in Madras; nominal revenue assessment on lands assigned for service in Bombay; capitation-tax and receipts from fisheries in Burma and Assam.

“ 38. Three periods are taken, viz. :—(1) the first 14 years after the mutiny, during which the growth was at the rate of Rx. 190,000 a year; (2) a period of thirty years from the mutiny to the present time, during which the growth was at the rate of Rx. 106,000 a year; (3) a period of twenty years (partly estimated) from 1870-71 to 1890-91, during which the growth is at the rate of Rx. 142,000 a year.



“ 39. It will not fail to be seen that, while the fourteen years preceding 1870-71 shewed an annual increase of Rs. 190,000, the rate of increase in the twenty succeeding years has averaged only three-fourths of this. The reasons for this are, that the first period was, in many parts of India—Oudh and Orissa, for example—a period of active re-assessment and settlement, and that, therefore, during the second there was less of the growth of revenue which comes in from settlement operations; that a large accession of land revenue occurred after the mutiny in consequence of confiscations; and, finally, that there was, between 1860 and 1870, a rapid increase in the cultivated area of the provinces of Bombay and Madras, in which the system of land-settlement is such that newly-tilled land comes under annual assessment, and in which the demand for cotton during the American war gave a powerful impulse to cultivation. On the other hand, a corresponding check to cultivation occurred in the same Provinces during the last of the three periods in consequence of the drought of 1877-78.

“ 40. Notwithstanding these causes of exceptional growth in the beginning of the post-mutiny period, it may reasonably be expected that the capital outlay which the Government has recently devoted to irrigation and railways will, during the next few years, bring to it a larger return from the land, by reason of the great improvement of its produce, both in quantity and value, by the agency of canals and the opening-out of communications. In these accessions to the landed income of the State strict regard will be had to the principles which have invariably been followed by the Government of India in the assessment of the land, its guiding policy having always been the lenient consideration of the proprietary classes. During thirty years of peace and progress, the rentals of tenants have, through the cultivation of new fields or the imposition of new rents by landlords, been continually expanding, and in some of the most fertile areas of India, the landlords themselves have, without the intervention of the Government, materially enhanced the rent paid to them, while at the same time that proportion of it paid by them to the State has been continuously reduced to lower and more definite limits. In the same way, a lenient consideration is extended to the agricultural community in Provinces where the cultivators or cultivating proprietors are assessed by the State itself, so that in these also the percentage of produce paid as land revenue has been constantly decreased.

“ The growth of land revenue, therefore, which is to be anticipated will be a growth due to that peace and prosperity which directly spring from a lenient and careful administration rather than to any direct action of the Government in the direction of raising rentals.

“ A brief review of the position in each Province will now be given.

#### REVIEW BY PROVINCES.

“ 41. *North-Western Provinces.*—The old system comes to a final end within the next two years. The greater part of the Province is held by tenants on small holdings of a few acres paying rent to landlords who are charged with a payment of 50 per cent. of their assets to Government. The advanced condition of the Province led the Secretary of State to enquire, so long ago as 1863, whether a permanent settlement could not be introduced; but a final consideration of the subject between 1882 and 1884 ended in the adoption of the system already described, under which annually revised maps and records are made the basis of assessment.

“ The rate of growth of land revenue in the North-Western Provinces since the mutiny year has, however, been moderate. In the first fourteen years it was only 5 per cent. (say  $\cdot 35$  per cent. per annum), but it has in the current period of twenty years risen to 10 per cent. or  $\cdot 5$  per cent. per annum. There was in the North-Western Provinces less room for extension of cultivation than in most parts of India. Lying mainly in the fertile alluvial plain between the Himalayas and the high-lands of Central India, the Province attracted a large population at an early historical period, and it was at the period of the mutiny highly assessed. But the large amount of State capital spent since that time in the form of railways and canals, and the contemporaneous rise of prices has given a fresh impulse to agricultural wealth, and the Province is now in many districts as lightly, as it was formerly heavily, assessed. A considerable amount of relief was given at the commencement of the thirty years period of settlement now expiring, by the reduction of the standard of the State demand from 66 per cent. of assets to 50 per cent.—a change which was, however, somewhat counterbalanced by the high valuation of assets made under the rules which governed the operations of the Settlement Officers. The relief is now made complete by the elimination of soil valuation from the assessment system which, except in cases of suspected



fraud, requires that the recorded assets should be accepted as a basis of assessment. Rentals are in many districts still growing at a rate of about 1 per cent. per annum, and in certain tracts the growth is likely to be so great that, even under the lenient system now adopted, some difficulty may be anticipated in taking the Government quota in full at the next settlement from the landlords, on account of the large and sudden increase which would be involved in such an assessment.

“ 42. *Oudh*, with the exception of a closely populated tract between Lucknow and Benares, came under much later development than the North-Western Provinces. Its revenues were not, until after the mutiny, brought under the effective administration of the British Government, who applied to it the same system of settlement as that which prevailed in the North-Western Provinces. The tenants of Oudh have less positive rights than those of the adjacent Province, as in the latter the greater number are more securely protected by statutory rights against unlimited enhancement of rent. There is, therefore, a prospect of a larger growth of rental, and also of revenue, in Oudh than in the North-Western Provinces. The land is rich, the climate favourable, and although since 1860 the extension of cultivation has been very large, considerable areas still remain to be brought under the plough. Competition for the land is likely to increase, and with it the enhancement of rents by the landlords, who have in Oudh practically a free hand. The development of the Province under British rule has been very great, and is still, with the extension of railways, progressing at a rapid rate. The Province will come under reassessment, on the new or economical system, between 1892 and 1906.

“ 43. In the *Punjab* there is a large proportion of dry sandy soil which is only capable of development under the influence of irrigation. Subsoil water is generally too far from the surface for wells, and the growth of revenue depends mainly on the expenditure of State capital on canals. The revenue-payers are, for the most part, cultivating proprietors paying direct to Government, no part of the produce being intercepted by middlemen. A large amount of State capital has been in recent years invested in the Province in railways and canals. Under these circumstances the growth of the land revenue, which has since the mutiny been slow, should now progress at a rapid rate.

“The revision of settlement has, under the old system, involved, as in the North-Western Provinces, a high rate of expenditure and protracted operations, but only a very few districts now remain to be completed under that system, and measures have recently been taken to expedite their assessment. The whole Province will then come under the operation of the new rules which require the settlement to be based on annual maps and records.

“44. The *Central Provinces* have shewn a very small development of land revenue since the mutiny. They have been to a great extent cut off from the railway system and have at the same time been lightly assessed. The revision of settlement takes place during the current decade, commencing with the first year of the present Provincial Contract, 1887-88, and it is estimated, after nine years, to yield an increase of Rs. 180,000. Owing to the backward state of the Province, the low rates now paid to Government, and the new development of the railway system which is taking place, it has been determined to make the new settlements for terms varying between twelve and twenty years, so that the reassessment of the Province will recommence shortly after the termination of the existing revision.

“The revision of settlement is being made at present partly on the old and partly on the new system, but at a low cost not exceeding Rs. 100 a square mile. The same necessity for a complete series of maps and records has existed in this as in other Provinces, but owing to the circumstance that the revision of annual records was commenced, with the creation of the Agricultural Department, five years before the old settlements began to expire, there has been more time than elsewhere to utilize the village and district establishments in the work of preparing for settlement. Arrangements were made under which a large number of parties of the Survey of India have covered the surface of the Provinces with a network of triangulation available both for topographical and revenue purposes. These are filled in by the village officers under the supervision of the local Revenue officers, and they provide sufficiently good maps as a basis for future revisions of assessment. The revision of the record is also primarily effected by the permanent establishments, leaving only the valuation of soils and general supervision to be effected by a special staff. At the close of the present revision, nine or ten years hence, the new system will be introduced and the cost be brought considerably below the new maximum of Rs. 100 a square mile.



“The land is held, as in the North-Western Provinces and Oudh, by cultivators of small holdings paying rent to proprietors from whom the Government takes revenue. But whereas in those Provinces the landlords have the power, which is freely used, of raising rents contemporaneously with increase of competition and rise of prices, they have no such power in the Central Provinces. The growth of rent and, therefore, of revenue entirely depends, except in land newly taken into cultivation, on the periodical assessments of rent made by the Government at the time of settlement. The existing rents are, in most parts of the Province, an unusually small fraction of the total value of the produce; while, in consequence of the rising prices due to the extension of the railway system, the disproportion is continuously becoming greater. The area of culturable land still to be brought under the plough is exceptionally large. The Province is one, therefore, from which a material growth of land-revenue may be looked for.

“45. Thus far the provinces dealt with are those popularly known as the ‘temporarily-settled zemindari’ or ‘landlord’ provinces. I will next refer to *Bengal*, which is recognized generally as a ‘permanently-settled landlord province.’ But there are in Bengal not less than about 14,000 square miles which belong to the temporarily-settled landlord class and of which the old settlements will shortly fall in. In respect of this tract preparations are now being made for punctual assessment on much the same plan as in the Central Provinces, and at equally moderate rates of cost, by the Agricultural Department of the Province.

“The area in question comprises large tracts in Orissa and Chittagong and several Government estates. It will hereafter come entirely under the new system. An increment of land revenue of 20 per cent. would in this area be equivalent to a fixed addition of 10 lakhs a year to the annual demand.

“46. The Province of *Madras* must be divided into two sections—the permanently-settled zemindari or landlord area, and the temporarily-settled ryotwari or tenant-proprietor area. The first is about 48,000 square miles and the second about 93,000 square miles, or roughly one-third and two-thirds respectively. The settlement on the old system, which required a complete series of field maps and a valuation of soils, is now drawing to a close and is being hastened by assistance lent to the local survey department by the Government of India. In a few years the whole Province will, in accordance with the intention which

for some time has been declared by the Madras Government, be permanently relieved of special Settlement and Survey establishments.

"The growth of land revenue in the tenant-proprietor tracts takes place in two different directions. There is the periodical growth due to the increase of rent-rates at the end of every thirty years period, and the annual growth due to the gradual increase of the area brought under cultivation. For in Madras all tenant-proprietor waste land has an annual rate attached to it at the time of assessment which is applied and collected whenever the land is occupied. The periodical growth (that is, the increase of rates between the last settlement and the one now being completed) is roughly estimated at from 5 to 7 per cent. and the annual increment due to increased cultivation at Rs. 10,000 per annum. The rate of increase under this latter head will necessarily fall off as less land becomes available.

"47. In *Bombay* the same general conditions prevail as in the ryotwari or tenant-proprietor area of Madras. The growth rate, however, is not checked by the presence of permanently-settled land, and has, as in the temporarily-settled section of Madras, a double growth, the one being due to the periodical increase of rent-rates every thirty years, and the other to the annual occupation of fresh land at the revenue-rates which were attached to it at settlement.

"The whole Province has in recent years undergone a thorough and searching revision of assessment which is now drawing to a close. This revision has been in the hands of a separate Survey Department which will within five or six years be gradually broken up and absorbed in the new establishments, and the Province will then come permanently under the new system. It may be noticed here that both in the Madras and Bombay Presidencies the holdings or small farms of tenant-proprietors have had their boundaries fixed once and for ever by the Survey Department, and that instead of, as in other Provinces, the map requiring annual revision in order to keep it in accord with changing boundaries, it is here necessary to maintain the boundaries in accordance with the map as originally made. This duty, as well as that of the maintenance of the statistical record is, on the close of settlement operations in each district, made over to the Agricultural Department.

"The growth of land revenue has been more satisfactory in Bombay than in any Province. It began in a marked degree with the impetus given to cotton production at the time of the American War, and has been continued under the influence of rising prices, extended cultivation (and,



in Sind, extended irrigation), supplemented by a careful system of assessment.

"48. In *Assam* the very backward state of the Province and the absence of communication with the seaboard in the years immediately succeeding the mutiny, have made the growth of revenue in latter years appear to be exceptionally rapid. A part of the Province (about 9,000 square miles) is, however, under the permanent settlement system of Bengal, and the growth of revenue depends on the remaining area which is temporarily settled, chiefly with tenant-proprietors, at rates which are practically fixed, as there is hardly any competition for land on account of the great extent of waste area which can be taken up. The most fully occupied portion has been revised on the system employed in other temporarily-settled Provinces, and this revision is nearly completed. The remainder will probably be surveyed and settled on a cheaper system under the direction of the Agricultural Department, and the whole Province will thereafter come under the new arrangements. As in Bombay and Madras, there is an annual growth (estimated at from Rx. 8,000 to Rx. 10,000 per annum) which is almost solely due to new occupation, as there is here no periodical growth due to increase of rates.

"49. *Lower Burma* has been undergoing for some years a regular revision of settlement, of which about one-fifth, or nearly 10,000 square miles, is completed. Each District, when it leaves the settlement officer's hands, is made over to the permanent care of the Agricultural Department, which will henceforward be responsible for maintaining the maps and records. The land is held by tenant-proprietors, and there is again in this Province a double growth, due to annual increase of occupation and to periodical increase of rates. The annual assessments are complicated by the release of all fallow land from payment of any but a nominal revenue, but there is a steady extension of cultivation which, supplemented by the effect of a careful survey and assessment, has resulted in a growth of from two to three lakhs a year on a comparatively small total revenue. Lower Burma is practically a large rice field formed by the alluvial deltas of the river systems, and at present it yields only 1 per cent. of other produce. About 37,000 square miles, or 84 per cent. of its cultivable area, are still uncultivated, and there is room for further growth both by extension of cultivation and by the improvement of the agricultural system through the introduction of other crops. The soil is rich.

"50. *Upper Burma* is composed of high-lands, the agricultural value of which is under examination. The land revenue is, like that of all border Provinces on first occupation, initially small; but there is an equal promise of the same steady growth in the future which has taken place elsewhere.

"51. The increase of revenue in minor Provinces under the direct control of the Government of India is mainly due to the re-assessment of the little district of Ajmer and the addition of Quetta."

## CHAPTER V.

### COLLECTION OF THE LAND REVENUE.

The system of collecting the Land Revenue was a subject to which the Necessity for elasticity in collection. Famine Commissioners drew particular attention as one which concerned very intimately the well-being of the agricultural population. But beyond laying down general principles for the guidance of Local Governments, the Government of India has no functions to perform in connection with this important branch of administration. The actual business of collection is in the hands of the Provincial authorities. Nevertheless the Government of India has, under Lord Dufferin's Administration, taken one step which may lead the way to considerable reforms in many Provinces, and to the amelioration of the condition of agricultural communities in tracts liable to scarcity and famine. The main defect of the system of collecting land revenue substituted by the British Government for that prevailing under native rule, is the absence of elasticity. Instead of a cultivator or landowner being required, as formerly, to surrender to the State a proportional share of his crops, he is now compelled to pay into the Treasury at each harvest a fixed sum, without any regard to the outturn of his fields. This alteration has seriously affected the prosperity of all agricultural communities who raise produce under insecure conditions. They have to pay as much when crops fail as when they succeed. The question of making in these cases some return towards the old native system was pressed upon Local Governments in connection with the Famine Commissioners' report, but, except in the Punjab, where tracts liable to inundations are subjected to an elastic demand, no active reforms in the required direction had been adopted in





any Province. It was therefore determined by the Government of India to introduce by way of experiment an elastic system into the district of Ajmer of which the Imperial Government held direct control. Ajmer is a typical tract. It lies on the margin of the monsoon watered area. In other words, the rains of the south-west monsoon just reach it, but afford an uncertain supply. The countries in India which are subject to similar conditions are both numerous and extensive, and it is with a view of proving to Local Governments and Administrations how far an elastic system on a self-acting method can, without friction and undue expenditure, be worked, that Lord Dufferin's Government has carried out and completed a measure, which may prove of great advantage to the future prosperity of the agricultural population in various parts of India. Many of the Provincial authorities supported the introduction of the principle of elasticity, but none of them ventured to try the experiment on a large scale. It was left for Lord Dufferin's

*Fluctuating assessments in Ajmer.*

Government to do this. Without entering into details of the system adopted, it may be briefly explained that it has consisted, first, in providing a skeleton framework or traverse map of the tract to be dealt with. Next, in training the local officials to fill in details of cultivation, crops and irrigation each year. Thirdly, in requiring the district officers to check these returns, and to ascertain, carefully, the general character of the season as regards its effect upon agriculture. Lastly, in measuring the revenue demand of the year by the results both of the statistics and of the general enquiry, in accordance with certain prescribed and definite rules. So far the system has worked without friction, and without greater cost to the State, than any other in practice elsewhere.

A remarkable illustration of the danger of the substitution of the  
*Danger of a rigid system of absolute collection.* rigidity introduced by the British administration, for the elasticity of native rule was placed before Lord Dufferin in the papers submitted in 1887, regarding the relief of the Jhansi landowners who had in past years been more or less ruined by the change of system. Such relief as could be afforded was sanctioned by the Government of India, but in many cases the remedy was found to have come too late.

Legislation of importance affecting the administration of the land  
revenue was enacted by Lord Dufferin in respect  
*Revenue Legislation.* to three Provinces, the Panjab, Assam, and

Upper Burma. The first of the three measures, the Punjab Land Revenue Act, XVII of 1887, has been quoted as "the most complete Code of Provincial Revenue Law which exists in India," embodying, as it does, the principles with respect to the framing and maintenance of annual records which have now been extended to the whole of British India. It has also given increased facilities for the introduction of a system of assessments, which may under it be made to fluctuate with the season on the principles noticed in the previous paragraphs. The second measure, or the Assam Regulation, has done for Assam what the Punjab Act has done for the Punjab. The Regulation for Upper Burma is of a temporary character provided for emergent purposes, and will be re-enacted in 1890. With the exception of Upper Burma, every Province in India has been now furnished with a Land Revenue Code of a complete character. Further details of the legal measures relating to Land Revenue which have been considered in the Legislative Council of the Governor General, and received Lord Dufferin's assent, will be found in the last Chapter of this Note.

## CHAPTER VI.

### THE RELATIONS OF LANDLORDS AND TENANTS.

The measures taken, under Lord Dufferin's Administration, for the improvement of the relations between landlords and tenants consisted mainly in the confirmation of the Tenancy Acts of Bengal and Oudh, which had been considered and prepared during Lord Ripon's Viceroyalty, and in dealing with a similar Act for the Punjab. These legislative measures are described in Chapter XX of this Narrative, and need only be briefly noticed here.

The legislation for the Punjab conferred upon all tenants of that Province a right to compensation for disturbance from their holdings, as well as for any improvements they might have effected during their tenancy, and thus afforded considerable security to a section of the agricultural community which, with the exception of a few privileged tenants, had hitherto been practically without any protection at all against the avarice or unscrupulousness of landlords.

Turning to Bengal and Oudh, it is satisfactory to note that the Tenancy Acts for those Provinces have, since they came into operation, worked without friction

Bengal Tenancy Act.

Punjab Tenancy Act.

Tenancy Legislation.



and to the great benefit of the tenantry. Lord Dufferin has, however, in the case of Bengal, supported the view held by Lord Ripon, that the full advantages offered by the Tenancy Act will not be completely obtained otherwise than through the medium of a field survey and record-of-rights, and that without these protecting agencies, the status of tenants cannot be satisfactorily secured. The experimental survey of the district of Muzaffarpur in Bengal was brought to a close in 1886, for financial reasons, under the orders of the Secretary of State; but Lord Dufferin has urged upon the Government of Bengal the desirability of re-opening the question, when the experience now being gained in the survey and settlement of temporarily settled estates in that Province may enable the revenue authorities to submit a programme for permanently settled tracts less expensive to the State than that which was, on the first occasion, presented to the India Office. The responsibility of taking further action has thus, for the present, been imposed upon the Bengal Government. The Government of India has, in the meantime, strengthened the hands of the Provincial authorities by placing at their disposal as many of the Imperial Survey parties as may be required for the scheme. The project is of great importance to Bengal tenants, who, in the northern districts of the Province, require stronger protection against landlords than perhaps in any other part of India, and demand, more than anything else, a carefully prepared record-of-rights.

The following extract from Sir Alfred Lyall's report on the Revenue

Oudh Tenancy Act.

Administration of Oudh for the year 1885-86  
 will give a sufficient indication of the useful re-

sults expected from the new tenant law in that Province. In dealing with the so-called "tenancies-at-will," the most common tenure in Oudh, he remarked that, although the tenures bear this name, yet that now "each tenant has the right to the undisturbed occupation of his holding for a period of seven years from the date at which it was let, and to re-entry for a similar period at the expiry of that term with a limitation on enhancement. The conditions of the tenant's occupation have thus been greatly ameliorated. The change which gives them a greater security and interest in their lands has been effected with the cordial assistance of the great landlords of the Province, and there is the greater reason to hope that a reform that has been accepted in a spirit of good-will and generous feeling, will produce a substantial development of agricultural prosperity in which the landlords as well as the tenants will participate."

Lord Dufferin warmly thanked Sir Alfred Lyall for the valuable services he had rendered to the Oudh Administration "by the ability and judgment with which he has effected the introduction of a Rent Law for the better protection of the tenants of the Province," and desired it to be placed on record that "when Sir Alfred Lyall entered upon the high office which he is now about to resign, the improvement of the position of the Oudh tenants had become one of the most anxious questions with which the Local Government was called upon to deal. His Excellency in Council feels that, by the successful introduction of the new Tenant Law into Oudh, Sir Alfred Lyall has conferred a lasting benefit upon the Province."

One of the immediate effects of the Oudh Tenancy Act, which came into force on the 1st January 1887, was a reduction in the number of notices of ejection from 92,500 to 2,000.

It is interesting to note that with the passing of the three Acts referred to in this chapter, a fairly complete Tenant Law has now been provided for all Provinces in India; and it may be safely asserted that with the legislation concluded during Lord Dufferin's Viceroyalty, the maximum protection has been conferred upon tenants throughout the Empire that is consistent with the circumstances and political condition of each Province. In every case one or more steps have been taken to advance the position of the tenants, and to give them greater security against any encroachment on their right by landlords.

Legislation for Tenants' protection now complete.

## CHAPTER VII.]

### STATE AID TO AGRICULTURAL CLASSES.

Landed and agricultural classes receive direct assistance from the State in two different ways. In the one case the State intervenes to save the property of incapable or embarrassed proprietors from mismanagement or ruin; in the other it lends money to the landlord or tenant to improve his land or tide over a bad season or calamity or buy the means of husbandry. The two functions are quite distinct and may be separately treated.

In the case of incompetent proprietors, Government exercises its intervention as a Court of Wards, and where political and other considerations demand it, it provides by special legislation in exceptional cases for the

Management of estates of indebted or incompetent proprietors.



relief of indebted proprietors and the liquidation of their debts. The extent to which Government acts as steward or manager of private properties may be estimated from the fact that the annual income of the estates under its charge at the present time exceeds 200 lakhs. To free the estates from their liabilities is the primary object of management; but this being provided for, the policy pursued has been to ameliorate the condition of the tenantry; to devote surplus funds to works of improvement; and to discourage the accumulation of large balances which too frequently furnish the reinstated proprietor with the means of useless extravagance. These estates also furnish a useful field for the introduction of improved implements, seeds, methods of cultivation, &c., of which

Policy pursued in regard to them. the utility has previously been thoroughly tested and proved by the Departments of Agriculture in Government experimental stations under their charge. But although satisfactory progress has been made in this direction in some Provinces, the district establishment to which the duties of management are ordinarily entrusted, have neither the leisure or training to give the matter sufficient attention. The Government of India has, therefore, strongly advocated the employment of special trained Managers wherever means permit.

With the exception of Act IX of 1886 for the extension of the Chutia Nagpur Encumbered Estates Act, 1876, to the estate of the Raja of Deo in the Gya district in Bengal, no legislative measures have been required or undertaken by the Government of India during the four years under review, but several enactments passed before Lord Dufferin assumed office have continued in operation; among others, the Oudh Taluqdars Relief Act, 1879, the Dekkan Agriculturists Relief Act, 1879, the Sind Encumbered Estates Act, 1881, and the Jhansi Encumbered Estates Act, 1882.

Lord Dufferin has had the satisfaction of witnessing the operations of the Jhansi Encumbered Estates Act of 1882 brought to a successful conclusion. The case of the Jhansi district has been referred to in Chapter V as an illustration of the ill effects of an inflexible system of revenue collection in precarious tracts, but it is also an instance, and not a solitary one, of Government interposition to save the landed classes of a whole district from ruin, which has been attended with the happiest results, and in this connection it deserves further mention.

Under the settlement made by the British Government, the village headmen of the Jhansi district, comprising an area of 1,500 square miles, received proprietary rights in their village lands, and were at the same time made responsible for the payment of a fixed revenue demand. Their new liabilities, to quote the Local Government, "created the need, and their new proprietary rights the means of borrowing." Depredations during the mutiny, famine, disease and murrain fell upon the district in succession, and under these accumulated misfortunes there grew up an overwhelming burden of debt. "The people were little better than slaves of the Marwari usurer who had advanced money for the payment of the revenue." At the time that special legislation was undertaken, the revenue balances against the district amounted to over  $1\frac{1}{2}$  lakhs in spite of large remissions, and the aggregate of the sums claimed by creditors exceeded  $16\frac{1}{2}$  lakhs, or more than four times the annual assessment of the district. The first scrutiny made by the special Judge appointed under the Act reduced the private claims to  $11\frac{1}{4}$  lakhs, and the amount finally decreed after full investigation was under 8 lakhs. These claims have now been adjusted by cash payments, sales of property or loans from Government, the latter amounting to  $3\frac{1}{4}$  lakhs repayable in ten years. "The net result of the operations," writes the Local Government, "has, therefore, been that more than nine-tenths of the number of land-holders who were in need of relief have been cleared of all debt except a liability to Government which they will find no difficulty in discharging, and that to effect this it has only been necessary to sell land amounting to about 3·4 per cent. of the revenue paying area of the district, while the creditors have been paid more than 14 annas in the rupee of a debt, the fair amount of which has been determined with judicial impartiality." The total cost to the State of the special establishment employed to carry out the provisions of the Act, was less than one lakh.

Advances of money to agricultural classes are governed by Acts XIX of 1883 and XII of 1884. These measures were passed during Lord Ripon's Viceroyalty with the object of facilitating the grant of loans for permanent works of improvement or for the relief of more temporary necessities caused by the loss of crops, murrain, &c. A strong inducement is offered to applicants for advances of the first description by securing to them, free of assessment for a term of years, the fruits of any improvement they may construct. During Lord

Money advances to agriculturists.



Dufferin's Administration a set of rules has been provided for each Province for giving effect to the provisions of these Acts, and for simplifying the procedure to be followed in granting loans, the formalities required under previous rules having been found unduly restrictive and discouraging to applicants. Ample funds have also been provided for such advances; a fixed sum suited to the needs of the Province is assigned to each Local Government for annual expenditure, and the aggregate of these allotments exceeds 20 lakhs. It is, however, only in years of scarcity, when loans cannot be obtained from the village money-lender on the customary security of the crops, that any extensive use is made of the assistance offered by Government.

An explanation of the disinclination of the agricultural classes to accept loans from the State except under the pressure of adverse seasons is probably to be found partly in the circumstance that, however lenient the terms may be, a certain inflexibility is inseparable from any system of money lending conducted by the State, which is unable to accommodate its demands to the individual convenience of each debtor. The question was one to which the Government of India was required in dealing with the recommendations of the Famine Commission to give careful consideration.

Attempt to establish Agricultural Banks.

It was hoped that a solution might be found in a proposal put forward to establish private Agricultural Banks with the assistance of the State, and a definite scheme with this object, initiated by Sir W. Wedderburn, was fully discussed during the years 1882 to 1884. The essentials of the scheme were that the necessary capital for the liquidation of existing debts should be lent by Government, and that the claims of the Bank should be recovered in the last resort through the agency of the Revenue Courts. Special legislation would probably have been necessary to carry out the project, and it was found after receiving the fullest consideration, to present so many difficulties, and to offer so little prospect of success, that Lord Dufferin was reluctantly compelled to accept the decision at which the Government of Bombay arrived in July 1887 that the question should be allowed to drop.

The policy which the Government of India has, under Lord Dufferin's Administration, finally determined to adopt may be thus briefly described :

The impossibility of carrying out any scheme which would involve a detailed banking business, or, in other words, the business of lending money through the agency

Scheme definitely abandoned.

of officials to each individual cultivator, who might be in need of funds, has been accepted. A business of this kind would require an enormous machinery, such, indeed, as now exists in the form of money lenders and bankers throughout the country, each of whom works in a small circle within which he becomes acquainted with the character and solvency of each of his clients. The principle has now been accepted that any attempt to replace this private agency would land the Government in financial embarrassment, and that State aid must be confined to large measures calculated to prevent agricultural indebtedness, to the advance of funds for works of improvement, and to the relief of distress occasioned by drought, floods or other disasters.

The measures which are considered the most effectual for the prevention of agricultural indebtedness, and to the promotion of which Lord Dufferin's Government has paid special attention, are the extension of railways and canals (dealt with in the Public Works Department), the adjustment of the system of land revenue collection, and the promotion of migration from over-crowded tracts. These subjects are noticed in other chapters of this Narrative. The introduction of elasticity into the system of revenue collection is the one form in which advances can be made to the agricultural population without the establishment of a special machinery for the conduct of banking business—seeing that the suspension of a revenue demand or a portion of it, and its collection at a date more convenient to the revenue payer, *viz.*, at the conclusion of a good harvest instead of at the end of a bad one, is an operation which can be effected by the permanent staff employed for the collection of the State income derived from land. A suspension of the Government demand is in fact a loan. So far, therefore, it has been decided that the State can usefully perform the functions of a money lender, and to this extent the policy of making advances to the agricultural population has been accepted and encouraged by Lord Dufferin's Government. The practical experiment instituted by the Revenue Department in Ajmer is explained in Chapter V.

#### CHAPTER VIII.—Irrigation.

Irrigation is a subject which belongs to the Department of Public Works, rather than that of Revenue and Agriculture. The latter Department is only concerned in promoting indirectly the policy of extending irrigation for the purpose of securing the country against drought, and of increasing the

Connection of Revenue and  
 Agricultural Department with  
 Irrigation.



revenue derived from land. It has, in connection with the first object, reviewed and supported the various schemes developed in the Public Works Department for the construction of canals, and has advocated the principle of devoting State funds to those parts of the Empire in which water is essential to agriculture, rather than to those portions of it in which irrigation is only an useful and not a necessary adjunct to cultivation. In connection with the second object, it has, in the case of the two Provinces, the North-Western Provinces and the Punjab, in which canals are a prominent feature in the agricultural system, advocated the periodical adjustment of the rates

paid for canal water on a more careful system than that hitherto prevailing. At recent

conferences held with the Provincial authorities it has been proved that the State has lost a portion of the return legitimately due to capital outlay on canals, and that the loss has been due to a neglect to assess a fair price on canal water at a time when the charge could have been made without the embarrassment to the agricultural population, which results from any adjustment made at a later date, when the profits have been for a long period absorbed by the landlords or cultivators, and have become therefore a part of their accustomed income. Instructions have been issued in this Department by Lord Dufferin's Government, which will tend to prevent the recurrence of the position.

#### CHAPTER IX.—*Surveys.*

The main feature of the administration of the Survey Department during the last four years, has been the diversion of its labours from an unremunerative to a remunerative programme. In other words, the Department has been diverted as far as possible from the prosecution of mere cartographical work, to the conduct of surveys calculated to bring in a larger revenue from cultivated land or forests. It was considered during Lord Ripon's Viceroyalty that expenditure on surveys was unduly large. The Budget for 1883-84, amounted to a total of 26½ lakhs, of which 15½ lakhs, representing for the most part the cost of cartographical and scientific work, were debited to the Imperial Exchequer. But without dismissing a large number of survey officials—a step which in consideration of the pensions that would have to be paid to them would have been false economy—no material reduction in the staff could be made. It was, therefore, determined, while making such few reductions as were possible,

to adopt the more statesmanlike measure of supplying the department with remunerative work. The urgent need of preparing for reassessment 40,000 square miles of land in the Central Provinces, 10,000 square miles in Bengal, 5,000 square miles in the North-Western Provinces, and 17,000 square miles in Madras, gave full opportunity for carrying out this policy; and it is fair to say that a great portion of the 200 lakhs which in the Despatch referred to in the fourth chapter of this Memorandum, is stated to have been saved by reforms in the current settlements, is due to the aid given by the Survey Department. The task threw on the Department a great strain which was considerably enhanced by the annexation of Upper Burma, and the demands of the Military Department on the North-Western Frontier. The schedule attached to this chapter, showing changes which have taken place in the programme of the Department between 1883-84 and 1888-89, indicates the important character of the work on which it is now engaged, and the improvement, from a financial point of view, which has taken place in its programme. The total budget for 1888-89 is 29·4 lakhs of which 11½ lakhs is debited to the Imperial estimates, the remainder being charged to Provincial revenues or private estates.

The policy has also been adopted of introducing a larger number of natives into posts of responsibility, one-fourth of which, in the Junior Division of the Department, are now reserved for natives of British India. This was considered the largest number for which competent candidates could at present be found.

A further economy has recently been effected by arranging for the utilization of the Imperial Survey Department for Forest Surveys, in such a manner as both to obviate the necessity for creating separate Forest Survey Establishments in Bombay and Madras, and also to introduce a cheaper system of working in those Presidencies than had hitherto prevailed.

The following summary indicates the extent and character of surveys, exclusive of Military and Trans-Frontier surveys, effected by the Department during Lord Dufferin's Viceroyalty:

Surveys accomplished.

Dufferin's Viceroyalty:

Cadastral	...	...	...	16,753 square miles.
Traverse	...	...	...	45,800 " "
Topographical	...	...	...	71,208 " "
Forests	...	...	...	2,726 " "
City Surveys	...	...	...	

Thirteen large towns including Calcutta, Quetta and Mandalay.



In explanation of the above table, it is necessary to state that "cadastral" and "traverse" represent the essentially remunerative portion of the programme, and that the proportion of these classes was considerably greater in the final than in the initial year of Lord Dufferin's Viceroyalty.

The character of the work performed under the head of Military and Trans-Frontier Surveys and explorations is thus described by the Surveyor-General :

The Officers of the Afghan Boundary Commission have procured Surveys of the greater part of Afghanistan amounting to about 120,000 square miles, in addition to which 6,000 square miles of country between Nushki and Kwaja Ali, and 9,000 square miles in the Helmand Valley, north of Jawani, have been added to our stock of knowledge about these hitherto unknown regions. The whole province of Herat, including the Taimani and Firozkubi country, the province of Afghan-Turkestan, with part of the Hazara country, Eastern Khorassan, the more important passes of the Hindu Kush, and the route from Herat to Kirman and Bandar Abbas *via* Birjand through the Lut Desert, have all been surveyed and mapped in a more or less complete way.

An area of nearly 10,000 square miles in the almost unknown districts of Yasin Chitral, Hunza, and Wakhan has also been surveyed by the officers attached to the Gilgit Mission.

In Upper Burma the Survey Officer with the field force has, partly by his own exertions, and partly by a careful compiling of reconnaissances contributed by officers and soldiers of the force, added the large area of 31,930 square miles to our geographical knowledge.

In Baluchistan the outturn of survey amounts to 32,300 square miles, and, finally, on our North-East Frontier and the Kobo Valley, to an additional 7,550 square miles.

The system organized by the late Major Montgomery, of the Survey of India, of sending out trained native explorers into countries where it is impossible for Europeans to penetrate, has been persevered in, and has been instrumental in adding much valuable knowledge of the countries bordering India on the north and north-east. During the four years under review, Explorer M. H. passed through Nepal and Thibet, furnishing 400 linear miles of entirely new work and supplying a long existing desideratum in geography. Explorer R. N. succeeded in penetrating through Bhutan, and has furnished 280 miles of new routes, connecting Pemberton's work of 1838 from the south with the Pundit's and the Lama's work from the north. The country north and north-west of Kanchanjanga has also been explored and approximately mapped.

In addition to the Field Surveys above indicated, the Survey Department has made further progress in geodetic operations. The great "triangular" net work,

which serves as the basis of all scientific cartography, had just been completed when Lord Dufferin arrived in India; but there have been various other directions in which the essentially scientific section of the Department has been at work, of which the chief have been Astronomical operations, Coast surveys and Tidal and Levelling work. These have rendered great service to our shipping interests, and, among other results, have enabled no less than 164 beacons, lighthouses and landmarks to be fixed on the West Coast of India.

The Government of India has, during the last four years, given its support to the policy of the Surveyor-General to make the Imperial Cartographic Office independent of aid from Europe, and with this view has allowed him to take all action necessary for introducing the latest improvements from abroad. Maps are now supplied from the Calcutta Survey Office with a celerity and perfection that are commendable. The matter is one of importance in consideration of the urgency with which maps are required, not only for purposes of revenue administration but for military or political objects. The trans-frontier operations of the Government of India have, in fact, been very greatly facilitated by the rapidity and correctness with which maps have been supplied by the Survey Department—a result due partly to the energy of the departmental staff and partly to the policy of giving every encouragement to the introduction of the most improved processes. The number of maps printed during the last four years has been nearly three millions, including, besides ordinary topographical and revenue maps, such publications as Atlas Sheets, Military Railway and Geological maps, maps illustrating the religions and languages of the people, the density of population, crops, rainfall, canals, emigration, internal trade and statistics of various kinds.

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*Statement shewing employment of Survey Parties in 1883-84 and 1888-89.*

No. of Party.	Whether employed on topographical, cadastral, traverse, or scientific work.		Whether employed in remunerative, un-remunerative, or necessary duties.	
	In 1883-84.	In 1888-89.	In 1883-84.	In 1888-89.
1	Topographical, Punjab ...	Traverse, Punjab ...	Un-remunerative ...	Necessary.
2	Topographical, Burma ...	Cadastral, Central Provinces.	Un-remunerative ...	Remunerative.
3	Traverse, Ajmer ...	Traverse, Central Provinces.	Remunerative ...	Remunerative.
4	Cadastral, North-Western Provinces.	Cadastral, Traverse, Bengal.	Remunerative ...	Remunerative.
5	Cadastral, North-Western Provinces.	Cadastral, North-Western Provinces.	Remunerative ...	Remunerative.
6	Cadastral, Assam ...	Cadastral, Assam ...	Remunerative ...	Remunerative.
7	Cadastral, Burma ...	Cadastral, Burma ..	Remunerative ...	Remunerative.
8	Cadastral, Burma ...	Cadastral, Bengal ...	Remunerative ...	Remunerative.
9	Topographical, Central India Agency.	Traverse, Central Provinces.	Un-remunerative ...	Remunerative.
10	Topographical and Forests, Bombay.	Topographical, Bombay	Necessary ...	Necessary.
11	Topographical, Bombay..	Traverse, Central Provinces.	Un-remunerative ...	Remunerative.
12	Topographical, Bombay..	Traverse, Central Provinces.	Un-remunerative ...	Remunerative.
13	Traverse, Central Provinces.	Traverse, Central Provinces.	Remunerative ...	Remunerative.
14	Topographical and Cadastral, North-Western Provinces.	Forests, Central Provinces.	Un-remunerative ...	Necessary.
15	Topographical, Baluchistan.	Topographical (Military), Baluchistan.	Necessary ...	Necessary.
16	Topographical, Rajputana.	Suspended ...	Un-remunerative ...	.....
17	Topographical and Forests, Bombay.	Forests, Bombay ...	Necessary ...	Remunerative.
18	Topographical, Darjeeling.	Topographical and Traverse, Himalayas.	Un-remunerative ...	Necessary.
19	Topographical, Mysore ...	Topographical or Forests, Madras.	Un-remunerative ...	Remunerative.
20	Forests, Burma ...	Forests, Burma ...	Necessary ...	Necessary.
21	Topographical, Andaman.	Topographical, Upper Burma.	Un-remunerative ...	Necessary.
22	Scientific ...	Scientific ...	Necessary ...	Necessary.
23			Necessary ...	Necessary.
24			Necessary ...	Necessary.
25			Necessary ...	Necessary.
26	Topographical, Assam ...	Abolished ...	Un-remunerative ...	.....

## CHAPTER X.—Statistics.

Systematic collection and publication of statistics of vital, agricultural and economic facts was one of the principal functions attached to Agricultural Departments by the Famine Commission; and a brief account will be given in this chapter of the directions in which the Department has worked during the past four years to improve and increase the statistical information at the command of the Administration, under the three heads with which it is mainly concerned, *viz.*, Internal Trade, Agriculture and Economic Products.

Trade statistics are dealt with in the Department of Finance and Commerce, and in the Revenue and Agricultural Department. The former Department prepares

Internal Trade Statistics. statistics of Foreign Trade by sea and land and the coasting trade; to the latter belongs the duty of organizing a system for collecting statistics of the movements of trade within the country (Internal Trade). Various schemes had been tried in previous years for this purpose, which met with only partial success owing to the difficulty of providing, at a reasonable cost, a reliable agency for the registration of traffic along the great net work of internal communications by road and river. In 1877, however, the Agricultural Department of the North-Western Provinces had found, in the way-bills of railway companies, a means at once accurate and economical for obtaining statistics of the more important traffic of those Provinces, and the system having been successfully developed, it was determined when this Department took up the work, to extend it to other parts of India, and to avoid, except for local and special purposes, any attempt to register the traffic by roads and minor waterways. The system is not open to the abuses to which registration by special agency is liable; the information supplied is accurate and punctual; and with the rapid extension of railway communication it furnishes the data for a fairly complete review of the Internal Trade.

### System of registration.

A division of each railway line into sections (which, together with the tracts of country which they serve, are termed "blocks") forms the key to the plan adopted. Each Province (excluding Burma, in which railway communication is as yet undeveloped) and group of Native States constitutes, with its railways, a "block" and is again divided into internal blocks arranged on geographical or administrative considerations, and usually including one or more locally important trade centres. The



principal seaport towns of the maritime Provinces touched by railways also form separate blocks, and the statistics secured by the system embrace—

- (a) the trade between the internal blocks of a Province, and between them and other Provinces, and the seaport towns ;
- (b) the total trade of Provinces with each other, and with seaport towns.

With this information, a fairly accurate idea can be gained of the destination of goods imported by sea and distributed from the port towns ; of the extent to which different parts of the country supply the demands for foreign export ; and of the nature and extent of local trade. The system thus supplements and completes the statistics of commerce with foreign countries dealt with by the Department of Finance and Commerce, and it is useful in its results not only to the mercantile public but to Government, to which it furnishes a ready means of ascertaining the material progress of the country, and indicates any abnormal condition affecting the state of the food supply.

During the past four years, the Department has been engaged in perfecting and enlarging the system. Among other reforms may be mentioned the inclusion of the great river-borne trade which centres in Calcutta and Karachi, the more equable distribution of the work of tabulation among railway offices, and greater uniformity in the method of calculating values which, it should be explained, are not given in the railway returns.

In considering the next head of statistical enquiry entrusted to this Department, *viz.*, Agricultural Statistics, it is necessary to bear in mind that the first requisite for ascertaining facts connected with agriculture is an efficient machinery for recording the history of each field from year to year. As already explained in the chapter on the assessment of the Land Revenue, the improvement of the organization for maintaining the village record where it survives, and its resuscitation as far as possible where it has disappeared, have throughout been recognized as the primary duty of Departments of Land Records and Agriculture. Upon its successful accomplishment depends the establishment of a system, which will be as advantageous to the revenue-payer as it will be economical to Government, in their relation of tenant and landlord, and which will, at

the same time, provide a continuous supply of those facts relating to agriculture and the agricultural community, upon a just consideration of which, all measures for their amelioration and advancement must proceed.

Of the magnitude of the scheme some conception may be formed from the following calculation : The area of land under occupation, for which statistics in more or less detail are needed, may be taken roughly as 800,000 square miles. Assuming the charge of a village accountant

Magnitude of the village agency or patwari to be four square miles, which is required, rather above the average size of his circle in the

North-Western Provinces and Oudh the establishment required for this area, and which must ultimately be provided, would number not less than 200,000 patwaris with a proportionate supervising staff, and the probable annual expenditure at the average rate current in the North-Western Provinces and Oudh (Rs. 100 for each patwari) would be not less than 200 lakhs. In most Provinces provision is already made for the cost by a special cess, but, in the North-Western Provinces and Oudh, the cess previously levied was abolished in 1882 to lighten taxation, the charges, which amount to 30 lakhs, being met from general revenues. In Bengal the question is still in abeyance, the Secretary of State having withheld his assent to a legislative enactment proposed by the local Government and submitted to His Lordship in 1886, which had for its object the creation of a village agency for that Province. This large and populous division of the Indian Empire is, therefore, still represented by a blank in all agricultural returns; but measures are in

progress, which, in the course of the next few years, will bring under cadastral survey several thousand square miles of its area; and it is hoped that, before these operations are far advanced, a scheme will be devised for permanently maintaining the maps and records which they will provide, and that Government will, in the not distant future, be relieved of the reproach that it possesses no statistical knowledge of the current agricultural conditions affecting 190,000 square miles of its territory, and 66 millions of its subjects.

Meanwhile, in other Provinces Agricultural statistics are annually improving in fullness and accuracy, and the results are to be traced in the tabular state.

Progress made in other Provinces.



ments appended to the annual provincial records of revenue administration, and in the Imperial Tables which are compiled in the Central Office itself for the Secretary of State and for the information of Parliament. As an illustration of the progress made during the four years of Lord Dufferin's Viceroyalty, it will suffice to mention that the area classed in these tables as the area for which statistics are not available, has been reduced during that period from 97 to 86 millions of acres.

In addition to the annual series of agricultural returns, the Department issues weekly a telegraphic summary of reports on the state of the crops, the character of the harvests, condition of cattle, prices, food stocks, and other matters of current agricultural interest. Since November 1887, the district reports formerly published in full have been relegated to the Provincial Gazettes, and the Imperial Bulletin, condensed to a full abstract telegraphed from the head-quarters of each Province, is supplemented by a note contributed by the Meteorological Reporter to the Government of India on the weather and rainfall of the week. This change has effected a considerable reduction in the cost of preparing the report without detracting from its value or popular interest. The publication of the special report on the wheat crop commenced in 1884 has also been continued. Three such reports are issued, one in January, when the area sown has been ascertained and tabulated by the village staff, the second in March, when the crop is sufficiently advanced to admit of a forecast of the probable outturn, and the third in June after the completion of the harvest: their utility to

*Crop Forecasts.*

the commercial community has been generally acknowledged and they have been the means of bringing, under periodical review in the Central Department, one of the most notable developments which has taken place in recent years in the export trade of the country. Forecasts are also published of some other crops of special interest by individual provincial Departments; for example, oilseeds in the North-Western Provinces and Oudh, jute in Bengal and rice in Burma; and an endeavour is being made to arrange for a general report on the prospects of the cotton crop. Hereafter the list may be enlarged to include other staples, but the Government of India has hitherto refrained from pressing for further reports until the organization of the village agency is sufficiently advanced to meet such demands.

While the arrangements described above were designed to secure increasing completeness and accuracy in the collection of facts and statistics relating to the

Economic Products.

agriculture and trade of the country, research into its varied mineral, vegetable and animal products, to which the Famine Commission directed the attention of Agricultural Departments, has not been neglected. The importance of the extensive field of enquiry presented by the wide range of subjects comprised in the term Economic Products, and the scientific and commercial utility of bringing together and completing all that is known of their actual and probable uses, had long been felt in connection with the demands made from time to time for representative collections for various exhibitions and institutions. A scheme has now been organized which will meet these wants. As a detailed description of it will be found in Chapter XIII,

Scheme for an Economic Survey.

it will be enough to mention here that the scheme has for its objects, the compilation and publication of all existing information on the economic uses of the products of the country, the prosecution, on a systematized plan, of original investigation into botanical resources, and a census of its arts and manufactures.

## CHAPTER XI.—Agricultural Improvement.

The policy of Lord Dufferin's Government has, as already explained, been to encourage the utilization of Departments

Policy in regard to Agricultural Improvement.

of Land Records and Agriculture in connection with land records rather than agriculture. The fact has been recognized that until the people themselves are more ready to accept or adopt improvements and are, in this view, more specially educated, there is risk of much financial extravagance in the promotion of extensive operations of experimental character under civil officers. The attention of the Provincial Departments has, therefore, been mainly directed to laying down a sound foundation of agricultural facts and statistics upon which agricultural improvement may eventually be built up. The Government of India has accepted the policy that until fuller knowledge of the country has been thus obtained, and until the agricultural classes have been educated to a higher standard, expenditure on agricultural improvement should be restricted; but Lord Dufferin has, at the same time, given every encouragement to Local Governments to enlist natives in the cause of agricultural progress,



and has bestowed special honours upon several native gentlemen who, unsolicited by officials, have devoted their time, money and labour to agricultural experiment.

Lord Dufferin has also permitted two measures to be taken of a more positive character. The first, in requesting Her Majesty's Secretary of State to send out a scientific officer qualified to investigate the various problems which the country presents in connection with agricultural chemistry, and to give instruction to educated natives in that science. The second, in laying the foundation of a properly organized Veterinary Department. Both of these projects have for some time been contemplated, the last having been especially urged by the Secretary of State, but could not until recently be carried out on account of financial difficulties. Lord Dufferin has now given to both of them practical effect.

The first measure, *viz.*, the introduction of a first class Agricultural Chemist into the country, has been facilitated by the policy adopted of expanding and raising the status of the Imperial Forest School at Dehra in the North-Western Provinces, with the view of affording to educated natives a more thorough instruction than has heretofore been available in the sciences connected with forestry. Of such sciences agricultural chemistry is one of the most important. It is still more necessary to the interests of agriculture. In the despatch which was recently sent home on the subject, it was urged that of this branch of science, which had done so much to develop the agricultural wealth of Europe and America, almost complete ignorance prevailed in India. It was held that, however true it might be that, in the ordinary operations of agriculture, the cultivators of the country required little or no outside aid, yet that they could not, without the assistance of men of science from Europe, make any progress in the use of chemical and mineral manures to which at present they have no access, and of which they do not even know nor understand the need.

In making these proposals Lord Dufferin's Government argued the necessity, under present financial circumstances, of restricting high-class education in agricultural science to one or two national centres. In the words of the despatch, it was held to be a mistake, in the present backward condition, both of the technical training of the country and of its financial resources, to encourage in any single Province excessive expenditure on scientific

His duties to be national, not Provincial.

teaching or experiment of a highly technical character. "For some years," the despatch continued, "it will be sufficient to establish one or more centres at which the more advanced technical sciences of Europe can be taught to the natives of India. As time goes on, men will be found who, born and bred in the country, will avail themselves of the opportunities thus created, and will be of sufficiently high intellectual capacity to enable them to communicate to a larger number of their own countrymen the knowledge which they have themselves been taught. We apprehend, moreover, that the method of confining high-class training of a technical character to single Provinces would lead, on the one hand, to the multiplication of inferior training establishments and to unequal results, and, on the other, to the complete exclusion from the country of really first class scientific instruction. In this view, we are guided by the experience of the larger countries of Europe in which the training institutions of first rank are national, and not provincial or local."

Returning now to the second measure to which reference has been made, *viz.*, the establishment of a Civil Veterinary Department, the same policy has been adopted as in the case of Agricultural Chemistry of utilizing for the benefit of all Provinces an Imperial agency. The Horse Breeding Department, consisting of a Superintendent, one of the senior veterinary officers on the Military staff, and three junior veterinary surgeons, has, under Lord Dufferin's sanction, been transferred from the Military to the Civil Department. The head of the Department and one assistant will remain Imperial. The other two with six veterinary officers, whose services had already been lent temporarily by the Military Department to various Provinces, are to be placed at the disposal of local Governments on condition that they will be surrendered to the Military Department in the event of serious war. The whole number of the Provincial veterinary surgeons in civil employ will now take part not only in the superintendence of horse-breeding operations but in the treatment of cattle-disease and in the instruction of natives, while the two Imperial officers will retain charge of laboratory work and investigations of a specially scientific character. The foundation of a Civil Veterinary Department has thus been laid without present additional cost to the State.

Besides adopting these measures, Lord Dufferin has invited Local Governments to pay serious attention to the necessity of incorporating agricultural instruction with the scheme of technical education, and has led the way in this



direction by making the Forest School at Dehra available for the education of natives in those sciences with which agriculture is connected. The plan which had been adopted by the Bengal Government of sending, at the public expense, a series of students to the Royal Agricultural College at Cirencester, has been discouraged. These students on their return to India either expected highly-paid appointments or utilized their English education in other professions, and the policy has been now accepted that means for the education of natives in agricultural science should be provided in this country.

This chapter will not be complete without an allusion to action taken in special subjects, which has been taken in dealing with some important problems affecting the agricultural wealth of the country. The first relates to sericulture. The decadence of the silk trade of Bengal is a fact which has long been known and deplored. An investigation made at the instance of the Government of India indicated that it was in great part due to silkworm disease of the same character as that which has been successfully eradicated in France and Italy. It was accordingly determined to depute one of the Bengal agricultural students, a native who had taken the gold medal at Cirencester, to study the Pasteur system at Paris and elsewhere, as well as to commence in Bengal operations of the same kind as those adopted in Italy and France. The measure promises to secure successful results.

In the next place, similar action was taken in deputing an European Veterinary Surgeon to Paris for the purpose of studying the Pasteur system of coping with cattle-disease, which is in various forms prevalent in many parts of India.

Thirdly, experiments have been encouraged in the North-Western Provinces, having for their object the reclamation of lands which are rendered unculturable by an excess of saline matter, and which occupy an area of several thousand square miles in that Province alone. The experiments shew promise of success.

Fourthly, the study of agricultural entomology with the view of ascertaining the best methods of dealing with insect pests injurious to agriculture, has, at the instance of the Government of India, been taken up in communication

with Provincial Departments of Agriculture by one of the staff attached to the national museum at Calcutta.

Finally, the system on which experiments on Government Farms in the Provinces should be conducted, was dealt with by the Imperial Government in 1885, and instructions were issued in the Resolution No. 143A., dated 28th December 1885, printed in the Appendix to this Narrative, of which the object was to place agricultural experiments on a scientific as well as an economical basis, and to maintain the continuity which is essential to their usefulness.

Other measures of minor importance have been taken in connection with agricultural improvement which are not of sufficient interest to deserve special mention in this summary.

The expenditure on agricultural education, experiments and improvements in each Province is shewn in the following table:

*Statement shewing expenditure on Agricultural experiments and education, estimated for the year 1888-89.*

Heads of expenditure.	Madras.	Bombay.	Bengal.	North-Western Provinces and Oudh.	Punjab.	Central Provinces.	Burma.	Assam.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Experimental Farms ...	...	20,000	12,000	20,700	6,500	8,950	2,000	...	70,150
Miscellaneous agricultural experiments.	6,100	10,000	5,000	22,500	7,000	5,250	2,800	100	53,750
Agricultural Education...	17,000	4,800	...	...	...	...	...	...	21,800
Total ...	23,100	43,800	17,000	43,200	13,500	14,200	4,800	100	1,50,700

## CHAPTER XII—Emigration.

Emigration is classed in this chapter under three heads: (1) *Colonial*, or emigration to colonies involving a long sea voyage. (2) *Adjacent*, or emigration to British possessions, including Burma, which are within easy reach of India proper. (3) *Inland*, or emigration from one part to another of the Indian continent.

Classification of Emigration.



Colonial emigration has fallen off considerably during the period under review. In 1884-85, over 22,000 Natives of India emigrated to the Colonies. In 1887 the number of emigrants was about 6,000. This falling off is accounted for by the decline of the sugar industry contemporaneously with prosperous seasons in India. The following table indicates the colonies to which India emigrants proceed, and also shews, for the two years taken for the purposes of comparison, the number of coolies who have gone to each colony :

Name of colony.							1884-85.	1887.
BRITISH	Demerara	...	...	...	...	...	6,034	3,836
	Fiji	...	...	...	...	...	2,316	NIL.
	Trinidad	...	...	...	...	...	2,191	2,130
	Natal	...	...	...	...	...	3,548	658
	St. Lucia	...	...	...	...	...	964	NIL.
	Jamaica	...	...	...	...	...	601	NIL.
DUTCH	Mauritius	...	...	...	...	...	4,109	265
	Grenada	...	...	...	...	...	177	NIL.
FRENCH	Surinam	...	...	...	...	...	1,009	NIL.
	Guadeloupe	...	...	...	...	...	495	NIL.
							22,134	6,889

The rules framed under Act XXI of 1883, the Act which controls colonial emigration, have, since their institution in April 1886, worked smoothly, and the amendments which have been made in conference with the Emigration Agents in Calcutta are of minor importance. The reports received from British Colonies indicate that Indian immigrants are prospering and are valued and respected by the colonial administrations. The reports from our representatives in the French colonies reveal a different state of things, and contained evidence which led Lord Dufferin to take action of a decided character. Emigration to the French colony of Reunion had been suspended during the administration of the Marquis of Ripon and is still suspended in spite of the constant efforts which have been made by the Reunion Government to re-open it. Emigration to Cayenne has also been suspended, and the question of re-opening emigration has still to be decided. But emigration to Martinique and Guadeloupe was allowed to proceed, and it was not until an exhaustive report was received on the condition of Indian immigrants in those colonies that Lord Dufferin decided that it was expedient in the interests of India to prohibit emigration to those islands. The prohibition came into effect from November 1st, 1888. This measure, which has met with the complete approval of the Home Government,

Condition of coolies in British and Foreign Colonies.

Suspension of Emigration to French Colonies.

will practically prevent Indian emigrants from going to French colonies, and was considered by Lord Dufferin to be amply justified by the injustice and cruelty with which Indian emigrants have been treated by the French Colonial Administrations.

It may here be mentioned that the policy adopted by the Government of India in the matter of colonial emigration has always been to encourage and aid emigration by all legitimate means when it is beneficial to this country, provided it does not entail any burden upon Indian finances. Judged in the light of this policy it was obviously expedient and right to stop all emigration to French colonies, since in the first place no benefit resulted to Indian coolies from a residence in countries where they were persistently harassed by vexatious police regulations and inequitable taxes, and whence they only obtained repatriation when they were no longer fit for work, broken, and paupers. And in the second place, emigration to the French colonies while causing annually a serious deficit in the emigration accounts, also entailed an annual expenditure of £650 on Indian revenues. And apart from these two broad lines of policy, there was a further reason which rendered it most desirable to close emigration to the French colonies, which lay in the fact that the abuses which attended emigration to those colonies were likely to render all colonial emigration unpopular.

Unlike the French, the Dutch colonies have always treated Indian emigrants in a proper manner, and in pursuance therefore of the policy of encouraging emigration when it offers advantages to the people of India, negotiations have been permitted by Lord Dufferin to be opened with the Government of Netherlands India, which are not unlikely to lead to emigration to the Dutch possessions in the East. Applications have also been received from British North Borneo, and Lord Dufferin has agreed that if a guarantee can be given that the conditions of life in that island are suitable, and that the administration can secure the welfare of Indian immigrants, no objection will be raised to an emigration treaty. The same view has been taken in respect to the Congo State which is also anxious to obtain Indian labour.

“Adjacent emigration” includes emigration to Ceylon, Burma, the Straits Settlements and the Protected Native States in the Malay Peninsula. Every effort

Adjacent Emigration.



has been made to free the emigration from all unnecessary or unduly troublesome restrictions, and the movement proceeds with advantage to the overcrowded districts of Madras and to these adjacent countries.

The lower classes of the population of the nine crowded districts of South India find considerable relief in the outlet afforded to them by the demand for labour in the adjacent countries on the opposite side of the Bay. The Burmese and the Malays are as lazy as the Indian coolies are industrious. The consequence has been a continuous ebb and flow of thousands of labourers from the one coast to the other, which has been much facilitated by the action of the Government of India in encouraging steamer communications, and in removing any unnecessary restriction with which previous legislation had somewhat hampered the movement. Lord Dufferin has given a further impulse to this class of emigration by inviting the Burma Administration to take positive action in opening up the waste lands of both Upper and Lower Burma to emigrants from Bengal and Madras.

“Inland emigration,” so far as it is controlled by law, consists of

the movement of population from Bengal, and  
*Inland Emigration.* in a smaller degree from the North-Western

Provinces and Oudh, to the tea plantations of Assam. Such emigration is governed by two Acts—Act XIII of 1859 and Act I of 1882. At the time of the passing of the latter Act it was recognized that such legislation was exceptional, but it was agreed both by the Indian and the Home Government that the time had not yet arrived when, in the interests of the tea labourer any more than of the planter, it was possible to abandon the principle of exceptional legislation for immigration into Assam. During Lord Dufferin's Administration the annual reports have shown on the whole, that the relations between the planters and the labourers have been satisfactory and that the death rate among the coolies has diminished ; but recently facts have been brought to notice which suggest that abuses in the shape of obstruction to the law by force or by fraud do occur, and also that some sanitary protection for the large numbers of free labourers who now proceed to Assam is needed. Lord Dufferin has decided that the effects of the present legislation shall be thoroughly examined during the present and coming year, and a careful enquiry is now being made into the circumstances attending inland emigration to Assam, which may possibly lead to an amendment of the existing law early in 1890.

Besides the inland emigration which is controlled by law, there is a large movement of population, which proceeds naturally and which, under the encouragement which has been given by Lord Dufferin's measures, is likely to attain important dimensions. A striking instance of what can be done in the way of moving population from over-crowded districts to new lands is presented by the "Sidhnai Canal" colonization scheme, which has been successfully undertaken by the Punjab Government in the Multan District. Mention has already been made of this scheme in Chapter III, *Famine*, and the measures with which Lord Dufferin has so strongly identified himself will be found dealt with under that head.

Spontaneous migration.

## CHAPTER XIII.

### MUSEUMS AND EXHIBITIONS.

The chief event to be recorded in this chapter is the representation of India at the Colonial and Indian Exhibition of 1886. In the opening letter on the subject addressed by His Royal Highness the Prince of Wales to the Viceroy, Lord Dufferin was invited to send to London a collection which should be completely illustrative of the products, arts and manufactures of the Empire. The invitation met with a full response, and the results proved that India was represented in a manner worthy of the country. A brief account will be given in a subsequent paragraph of the Indian contributions. It is first desirable to explain how the arrangements involved by the Exhibition of 1886, have led to the establishment of a system under which not only are collections of products, arts and manufactures now placed on an organized basis, but also information and statistics relating to them collected and published on a definite plan.

Colonial and Indian Exhibition of 1886 : its results.

The despatch of 1881, in which Her Majesty's Secretary of State confirmed the establishment of a separate Secretariat of Revenue and Agriculture, required the new Department to undertake, as one of its most prominent duties, the collection and publication of "statistics of vital agricultural and economic facts for every part of India, in order that Government and its officers may always be in possession of an adequate knowledge of the actual condition of the country, its population and its resources."

Economic survey enjoined by the Secretary of State.



It was found, however, that the duty was one which could not be satisfactorily performed by a Secretariat Office alone, which possessed neither the scientific knowledge nor the executive functions involved in its performance. The opportunity afforded by the Exhibition of

Appointment of Reporter on  
 Economic Products.

1886 gave occasion to attach temporarily to the Department a scientific officer as well as a staff competent, with the assistance of provincial officers, to undertake the executive work connected with collections. The foundation was laid through their agency of a properly organized system, under which the orders of the Secretary of State could be carried out. But the work accomplished by their means for the Exhibition, sufficient as it was for immediate purposes, was hardly more than the commencement of a series of operations necessary to fulfil the duty which was attached permanently to the Department by the despatch of 1881. The collections provided for the Exhibition of 1886 only illustrated, in an imperfect manner, the resources of the country, and the descriptive catalogues accompanying them went but a little way towards bringing together the information existing in the various record rooms or commercial libraries throughout India. As the work proceeded it was found more and more evident that considerable time would be required for the proper collection of facts and statistics obtainable even from existing records, and that a still longer period would be wanted for the investigations necessary to complete the information. Influenced by these facts, Lord Dufferin permitted a despatch to be addressed to the India Office in which Her Majesty's Secretary of State was asked to allow the temporary arrangements developed by the Exhibition to assume a permanent form. His requests was granted. There is now, therefore, a reasonable expectation that the resources of the Empire will be thoroughly investigated and information regarding them published on a scientific plan and in an intelligible manner.

The system adopted may be thus briefly explained: All products, arts and manufactures are initially divided into two classes—national and provincial. So far as they are national the facts and statistics regarding them are primarily collected and published in the special branch of the new Secretariat entrusted with

Preparation of Dictionary of  
 Economic Products and Illustrative collections.

the duty, at the same time that samples of them are obtained by the authorities of the National Museum (to which a special staff has been attached for the purpose) and deposited in the appropriate section of the Calcutta building. So

far as they are provincial, or, in other words, of a local character, the aid of Provincial Departments of Agriculture or of officers in charge of Provincial Museums is, under the general direction of the local Governments, obtained and utilized. The stage which operations have now reached is this : in the section of economic products, which is the most important, a descriptive catalogue, or Dictionary, is being compiled by the officer who was placed in charge of the Economic Court at the London Exhibition, and is now, under the sanction of the Secretary of State adverted to above, permanently attached to the Revenue Department. The Dictionary, based on the catalogues prepared for the Exhibition, is far more complete in character than they could be, and is intended to bring together in one series of six volumes the whole of the facts and statistics now scattered throughout the various official, scientific or commercial records in every part of India. It is contemplated, after the completion of the work, to commence the further task of investigation ; but as at present only two volumes have left the Editor's hands, the operations of the economic section of the Department have been restricted to compilation. As the volumes issue from press the collections which correspond to them in the National Museum (and which were initially prepared in an imperfect form, at the same time that collections were sent to the London Exhibition) will be brought gradually into complete accord with the scientifically arranged descriptions in the published volumes. Under this system, as the greater part of the economic products of India are of a national character, *i.e.*, not restricted to any single Province, much less work will now be imposed upon provincial institutions in connection with this section of collections than has heretofore been the case—a reform much needed in view of the troublesome character of the duties thrown upon provincial authorities by constantly repeated requisitions for collections of provincial products. Side by side with the work of compilation and collection, measures have been taken to promote systematic research into the botanical resources of the country by bringing the labours of the botanists

Botanical Survey.

attached to the provincial establishments in Bengal, Madras and Bombay, and of the corresponding officer for North-Western India, who has been transferred to Imperial control, into closer association, and in defining the areas of their charges so as to provide for the gradual exploration of every part of India.

In the section of Arts, the Imperial Department, and its coadjutors, the Trustees of the National Museum, have been necessarily more



dependent upon provincial aid in consequence of the very local character of India art manufactures. A national collection, of which the basis was

Investigation of Art Industries. a collection made by this Department for the Bengal Exhibition in 1884, is being formed in the

Indian Museum at Calcutta, but must rely for its continuous development on the assistance afforded from local museums. A national catalogue, descriptive in character of art manufactures, has, however, during Lord Dufferin's Viceroyalty, been continuously published under the direction of the Revenue Department in the form of an Indian Art Journal, to which provincial officers, and especially those in charge of museums, freely contribute, and which is illustrated by the well known Publisher Mr. Griggs of London. It is anticipated that in the course of a few years this publication either will itself become or will provide material for a complete dictionary of art manufactures.

In the section of commercial manufactures, a commencement was made in connection with the London Exhibition by enlisting the aid of Chambers of Commerce and other mercantile associations in the work of providing representative collections. Lord Dufferin has approved of the development of the same plan for providing the Imperial Institute with commercial collections, and the proposal has been made, with the assent of His Excellency in Council, to hold a conference with the Trustees of the Indian Museum and commercial authorities at Calcutta for the development of a workable programme.

The ultimate aims of the united efforts of the Revenue Department and its special branch, of the Trustees of the National Museum at Calcutta, of the authorities of the Agricultural Department, and of the commercial bodies whose aid is enlisted are thus, under the policy approved by Lord Dufferin, *firstly*, to maintain continuously in the National

Summary of objects aimed at. Museum at Calcutta, and, so far as they may be required, in Provincial Museums also, collections

products and manufactures arranged on a uniform and scientific basis, and corresponding *inter se* in classification; *secondly*, to maintain and periodically publish a descriptive catalogue in each section which shall embody all information obtainable up to the date of its publication; *thirdly*, to institute investigations regarding any products, art or manufacture of which the character and circumstances are insufficiently known; and *fourthly*, to arrange for the provision, when required, of more or

less complete duplicate collections for foreign museums and exhibitions on such a system as may give the minimum of trouble to provincial authorities.

The encouragement or improvement of industries relating to products, arts and manufactures has not yet been included in the programme of the Department, although laid down as one of its probable duties by the Famine Commissioners. But Lord Dufferin has given a lead in this direction by suggesting, in a recent Resolution issued in the Home Department on Education, that Agricultural Departments should be associated with that scheme, and has thus laid the foundation of what may prove to be an important work for the Department.

It is necessary now to return to the historical summary of events which come under record in this chapter, and of which the principal is the London Exhibition of 1886.

The invitation to take part in the Exhibition was received by Lord Dufferin from His Royal Highness the Prince of Wales in June 1884 and was cordially accepted. But the proposals placed before His Excellency for the equipment and management of the Indian Section were felt to be unduly restrictive in regard to expenditure, and to be open to objections of an administrative nature. It was, therefore, determined that the Secretary in the Revenue and Agricultural Department should be deputed on furlough to lay the views of the Government of India before Her Majesty's Secretary of State and the Royal Commissioners for the Exhibition; and the decision ultimately arrived at provided, with the liberal co-operation subsequently given by the Chiefs of Native States and the leading nobles of the country, sufficient means for a thoroughly representative collection. In one respect, however, the arrangement sanctioned left room for regret. While the responsibility of the Government of India for the proper equipment of the Indian Courts was recognized, no authority was given to attach to them a sufficient staff of officers capable of acting as interpreters between the Indian producer and the European consumer. The management and control in England were unconditionally entrusted to the Royal Commissioners, and with the despatch of exhibits from India the responsibility of the Government of India ceased.

Account of the Colonial and Indian Exhibition, 1886.



On provincial officers fell the chief burden of preparing and despatching exhibits, and to their zeal and ability the success of the Indian Courts was primarily due; but the Revenue and Agricultural Department, notwithstanding its incomplete organization for such purposes, endeavoured, as far as possible, to relieve the heavy strain thrown on the provincial establishments by undertaking the collection and despatch of exhibits of raw products and rough manufactures.

It should here be explained that in deprecating the proposal which was made to entrust the collection of exhibits to an Agent of the Royal Commission, and in insisting that this duty should rest with the Indian Government, Lord Dufferin was anxious that the interest of provincial authorities in the Exhibition should be both aroused and acknowledged as essential to success. That the results justified the course taken is attested by the following telegraphic message addressed to the Viceroy by His Royal Highness the Prince of Wales, as President of the Royal Commission, on the 4th May 1886, the day the Exhibition opened :

From—His Royal Highness the Prince of Wales,

To—His Excellency the Viceroy and Governor General of India.

At a meeting of the Royal Commission for the Colonial and Indian Exhibition held 3rd May, the following Resolution was unanimously adopted. That this Meeting consider it a pleasing duty to record the deep obligation we are under to His Excellency the Viceroy and the Supreme Government of India for the admirable organization which, under the direction of Mr. Buck, has been displayed by the Revenue and Agricultural Department and by the officers who have assisted it; and, further, that we request the Viceroy to express our acknowledgments to their Highnesses the Princes of India who have by their liberal contributions so materially added to the beauty and interest of the Indian Sections.

It is satisfactory to be able to add that the cost of the Exhibition to Indian Revenues was proportionally less than that of any previous undertaking of the same kind. All private exhibitors were paid in full the value of their exhibits, and of the expenditure incurred by the Imperial and Provincial Governments amounting to somewhat less than three lakhs, about one-half was recovered. The net cost to the State of the largest and most complete collection contributed from India to any exhibition was thus less than a lakh and a half of rupees. Of this latter sum the greater part represents the value of exhibits transferred to the Imperial Institute and other museums for permanent preservation.

Financial results.

The Imperial Institute, founded in commemoration of the Jubilee year of the reign of Her Majesty the Queen-Empress, for the purpose of developing the material resources of the British Empire, has received loyal support from the people of India. In announcing to the public the desire of His Royal Highness the Prince of Wales to inaugurate this national monument, Lord Dufferin was particularly desirous that no official influence should be exercised in inviting contributions, and the patriotic and liberal response which has been made by all classes has been witnessed by His Excellency with much gratification; up to date the contributions from India amount to over nine lakhs.

As previously stated, arrangements are now under discussion for providing the Institute with a continuous supply of commercial products, and for bringing into association with it the scheme of economic research already established in India. As this investigation progresses new facts and new products will be brought under notice; and, in order to admit of a thorough examination of their industrial value, it is obviously necessary that the collection of samples in the Imperial Institute available to merchants and manufacturers should be regularly renewed and supplemented. Lord Dufferin has, therefore, permitted the necessity for maintaining the collections supplied from India to be urged in the strongest terms; and although the Secretary of State has been unable to accord his sanction to any expenditure from Indian revenues for the purpose, it is hoped that the means for giving effect to the proposal will be found by the authorities of the Institute. Unless the collections purchased from them can be made to serve some more practical object than museum specimens, which would be the case if they were not maintained and renewed, the subscriptions obtained from India will have been provided to little purpose, and this argument has received Lord Dufferin's full support. In other words, the policy advocated has been strictly one of practical usefulness, and the same policy has guided the Government of India during Lord Dufferin's Viceroyalty in its dealing with the National Museum at Calcutta.

Reference has been made to the addition to the Imperial Museum of the section devoted to arts manufactures and products. This measure formed the subject of prolonged correspondence between the Supreme Government, the Government of Bengal and the Trustees of the Museum upon the details of which it is unnecessary to enter. The proposals of the Government

Reorganization of the Indian Museum.



of India that the separate economic and arts museum maintained by the Government of Bengal should be amalgamated with the national institution was eventually accepted, and it was at the same time agreed that the number of Trustees should be enlarged, in order that the views of the local Government might be fully represented on the Board. The legislation necessary for this purpose received Lord Dufferin's assent in 1887, and the transfer of the Bengal collections took effect from the 1st April of the same year. With these collections were also transferred a large series of specimens commenced in the Revenue and Agricultural Department as a basis for a national collection, and the establishment engaged in its preparation.

The Imperial Museum as now organized forms the channel for supplying the requirements of exhibitions and foreign institutions, and in its new capacity has already done useful work in connection with the Glasgow Exhibition of 1888, and in meeting requisitions from Australia, Russia, &c., for representative collections of raw products.

In other respects also, endeavours have been made, with the consent of the Trustees, to invest the Museum with useful executive functions by utilizing its officials as scientific referees, instructors and collators of information in co-operation with Agricultural Departments, as, for instance, in the study of the silk-producing lepidoptera of India and the insect pests injurious to agriculture.

## CHAPTER XIV.

### ARCHEOLOGICAL SURVEY.

This branch of work having been transferred to the control of the Revenue and Agricultural Department in April 1887, it falls to this Department to record the more important measures which have been carried out in connection with the organization of the Archæological Survey during Lord Dufferin's Administration.

Although many disconnected attempts had been previously made to explore the interesting and valuable remains of antiquity which exist throughout India, it was not till 1870 that a government department was organized on a permanent footing for the purpose, and a systematic survey commenced under the control of a Central Director. The Survey thus organized

Archæology transferred to Revenue and Agricultural Department.

Organization of Archæological Survey Department.

continued uninterruptedly till 1885, by which time the greater part of Northern India had been fully explored. In 1885 the retirement of General Sir A. Cunningham, who had held the post of Director ever since its creation, rendered a partial reconstruction of the Department expedient. Under the new arrangement sanctioned by Lord Dufferin the conservation of ancient monuments was associated with the work of exploration and survey. The appointment of Director General was abolished, and the provinces of Northern India divided among independent survey parties subordinate to the local Governments concerned, but working under the general supervision and guidance of the Archæological Surveyor in charge of the Madras and Bombay Presidencies.

Subsequent changes.

Subsequently, it was, however, found necessary on administrative grounds to bring the operations of the local Survey parties, so far as the actual work of Survey was concerned, into more direct subordination to a competent central authority, and with this intention the designation of the Archæologist for the Southern Presidencies was changed to that of Director General of the Department; at the same time the separate appointment of Epigraphist to the Government of India was dispensed with, funds being placed at the disposal of the Director General to enable him to secure the assistance of experts in Europe or elsewhere in deciphering and translating inscriptions. No change was introduced into the position or functions of the archæological surveyors attached to each Province as professional advisers to local Governments in the work of conservation, except in so far that their recommendations were submitted through the Director General; and the responsibility of local Governments for deciding and carrying out measures of restoration or repair was reaffirmed.

These arrangements have been sanctioned tentatively for five years, and are still in force; but when the term expires it will probably be necessary to introduce some

Further changes probable.

further changes. Meanwhile several minor measures have been taken to promote economy and efficiency in the operations of the survey, by the substitution of photography for the more expensive and lengthy process of drawing. Steps have also been taken to turn its labours to practical account by bringing to the knowledge of native artizans and Schools of Art by means of clear and accurate illustrations the various beautiful architectural and ornamental designs bequeathed by ancient Indian civilization.



The special points which have pressed themselves on Lord Dufferin's attention in considering the future of the Department are the necessity for the preparation of a definite programme which will ensure the completion of the remaining work of the survey within a reasonable time, and of a final list of the buildings and other objects which are worthy of preservation either for their antiquity, beauty or historical interest. With the completion and publication of a systematic record and description of all known remains a guide will have been furnished to the scientist and scholar interested in the study of Indian antiquities, and the work which a Government Archaeological Survey Department can usefully undertake, will have been achieved.

## CHAPTER XV.

### MINERALS AND GEOLOGICAL SURVEY

An important impetus has been given to the development of the mineral resources of India during the administration of Lord Dufferin. In the first place the annexation of Upper Burma has placed the Government of India in possession of a country which is known to possess mines of great value, and is believed to abound in mineral wealth. A careful enquiry has been made into the ruby mines by an expert sent out from England, and in all probability the mines will be worked by a syndicate of English capitalists. In order to further examine the mineral resources of Burma, an officer of the Geological Survey Department has been specially deputed to that country, and more officers will be sent there as soon as they can be spared, in accordance with the declared policy of Lord Dufferin, which is to give the development of mineral wealth precedence over purely scientific investigation. It may here be noticed that in pursuance of this policy a scheme has been under consideration, the principle which is to create one Scientific Department in the place of the many little Departments—  
 Botanical, Geological, Meteorological, Archaeological, &c; all more or less permanent, and working independently of one another. Some of these Departments are overmanned, while others are undermanned; some branches, and those the least financially profitable, receive too much consideration, while others which bear upon the daily life interests of the people are entirely neglected. The principle which has been accepted by Lord Dufferin is to calculate the actual cost of all the Scientific Departments

Measures taken for the development of mineral resources.

Scheme for a Scientific Department.

proper, and to make an annual assignment of that amount for scientific purposes as a whole, leaving the allotment under the orders of the head of the Department and subject to the usual Financial rules, to vary from time to time with the requirements of the country.

A further step has been taken towards the exploitation of the mineral resources Burma in deputing competent officials to study the system of tin mining in the Straits Settlements, with the view of developing, in a similar manner, the tin mines of Tenasserim, where it is known that that metal exists in considerable quantities. Next, an important step has been taken in connection with the exploitation of the oil fields of the Punjab, in which Province a carefully guarded concession of certain oil fields has been made to a syndicate of persons who have a practical knowledge of oil-mining. In Assam, again, an enquiry has recently been made, which confirms the opinions previously held, regarding the existence of rich springs of petroleum in that Province, and the local Government has been desired to take measures for their early development. Coal, which, in the interests of Railway extension and manufactures, is of first importance, has been very largely developed during the period under review. Among the mines which have been opened or extended during Lord Dufferin's Administration may be mentioned the Warora mines in the Wardha Valley, Central Provinces; the Umaria and Sohagpur fields in the Rewah State; the Singareni Mines in the Nizams' territory; the rich field at Makum in Upper Assam; the valuable colliery at Dandot in the Salt Range, Punjab; and, lastly, the Kale coal-fields in Upper Burma.

Some idea of the development of the coal mining industry may be gathered from the fact that the exports of coal from Bengal have risen from 641,807 tons in the year 1882 to 755,831 tons in 1886, while the exports from the Central Provinces have risen from 26,451 tons to 56,125 tons during the same period. The Makum mines supply nearly all the coal used in the Assam Valley, besides furnishing large quantities for exports. There are at present 105 coal mines in India with an annual output of 1,388,600 tons.

In all parts of India there are indications that the public are turning their attention to the mineral possibilities of the country, but it is unnecessary here to notice in detail the various operations which are now in progress, or to mention the numerous applications which have been received for mining licenses. It is, however, important to advert to a few of the general principles which have been accepted by Lord Dufferin's Government.

Exploitation of minerals : Tin,  
 Petroleum, Coal.

Improved out-turn of coal mines.

Increase in applications for  
 mining licenses.



In the first place, it may be stated that no definite policy has yet been accepted regarding mining concessions, and that hitherto each case has been dealt with on its own merits. The increasing number of applications which have been received have led to a discussion of the main principles involved in the grant of mining concessions, and the experience thus gained will enable the Government of India to lay down definite rules on the subject. The procedure adopted up to recent years consisted of two parts—first, a prospecting license, which could be granted by a local Government for short periods; and, second, a mining lease, which could be only granted under the sanction of the Government of India. The prospecting license gave the possessor exclusive rights against other persons; but on a careful consideration of certain applications for prospecting licenses in coal fields in Upper Burma it was decided that, so far as coal mining was concerned, no such exclusive licenses to prospect should be given in the future, and that the right of prospecting should be thrown open to all, on the understanding that if more than one applicant was in the field, priority would be given, *ceteris paribus*, to the first applicant. A further principle has also been accepted regarding the necessity of preventing a concessionaire from alienating his rights in a mining lease to third parties without the consent of the Government of India, and careful provision to this effect has been made in the two most important mining cases which have occurred during the period under review. In view of the prominence which mining operations have obtained in recent years, and of the desire of the Government of India that the revenue from minerals should receive greater consideration than heretofore, local Governments have been asked to submit an annual statement shewing the various mines which are being worked and the revenue derived from them. In other ways also the attention of the provincial authorities and of the Geological Survey Department has been especially directed to the importance of developing the mineral resources of the country.

While, however, the chief reform introduced by Lord Dufferin has been to direct the Geological Survey Department to a policy which will prove of direct financial advantage, the purely scientific work of the Department has not been neglected. The important question of the connection between the Peninsular and Extra-Peninsular series of formations has received additional light through further work in the Salt Range, arising out of the discovery of new carboniferous fossils; while the homotaxial

Principles adopted in dealing with them.

Progress of scientific geological work.

relations of India with Australia, South Africa, China, and—according to latest views—with Brazil, during the Lower Gondwana period have been further worked out by present as well as retired officers of the Survey. In connection with the Afghan Boundary Commission the Survey has once again in regions beyond India, chiefly Baluchistan and Afghanistan to Persia, gained geological touch with the work of H. von Abich and Grewink, &c., in Europe-Asia. The problem of Himalayan Geology is still in hand; extended observation has been carried again beyond the snows; while the Survey is, on that side of the country, indebted to the independent researches of Colonel McMahon, Dr. Warth, and Dr. Giles, the last of whom furnished interesting observations in the country beyond Gilgit.

Of literary work, Part IV (Mineralogy) of the Manual of the Geology of India; five memoirs (Geology of the Geological publications. Lower Narbada Valley, Geology of Kathiawar,

Coal-Fields of South Rewah, Geology of Barren Island, and the Southern Coal-Fields of the Satpura-Gondwana Basin); eleven parts of the Palæontologia Indica (by Lydekker, Professor P. Martin Duncan and W. Percy Sladen, and Feistmantel), and the completion (four parts) of Dr. Waagen's first great volume of the Salt Range Fossils; and four volumes of the Records (containing 97 papers on all the branches of the current Survey work) have been published during the period under review. Besides these a catalogue of the Library, three more catalogues of collections in the Museum, and a Descriptive list of Exhibits for the Colonial and Indian Exhibition have been issued.

#### CHAPTER XVI.—Meteorology.

Impressed with the importance of securing, as a means of timely preparation against drought, the fullest and earliest information regarding the arrival and progress of the periodical rain yielding winds on which the agriculture of India depends, Lord Dufferin has given his cordial support to measures for the advancement of Indian Meteorology. Several important changes directed towards this end have been initiated or carried into effect in the Meteorological Department during His Excellency's Administration. The objects of these improvements have been, in the first place, to extend the work of the Department in the collection and publication of meteorological data for the information of the Government and public, and to place it as early as possible in their hands; and, in

Importance of Meteorology to the Administration.



the second place, to introduce various improvements and extensions of work without actual increase of the cost of the Department to the State, by the greater concentration of work in the central offices at Calcutta and Simla, and by the reduction or abolition of unnecessary or useless observatories.

As meteorology is yet in the empirical stage the chief method by which progress can at present be effected is to accumulate accurate and satisfactory data, and from those to infer the more important relations between weather changes and the principles or laws which underlie those relations, for guidance in forecasting weather, &c. The most important features of the weather in India are undoubtedly rainfall and storms. The largest part of the work of the Department during the past four years has been devoted to the investigation of the laws underlying these two important features of the weather. A valuable and elaborate monograph on the "Rainfall of India" has been published in which the average distribution of the rainfall, season by season, in different parts of India is very fully discussed, all the available data embodying returns from stations in every part of India having been collected, examined and included. An attempt is also made in it to co-ordinate the variations of the rainfall of the years 1876-81, with the more important variations in the other elements of observation, more especially pressure, wind, and snowfall on the Himalayas. Similarly, the cyclonic storms that have occurred in the Bay of Bengal during the past ten years have been fully investigated, and the result published in a series of memoirs included in the Meteorological Memoirs. As the result of these investigations a fairly complete knowledge has been gained of the formation and chief features of cyclonic storms in the Bay of Bengal, which has proved of the highest importance in forecasting the arrival of storms to any part of the coasts of the Bay, and in giving timely warning by means of storm signals with even greater certainty than has been attained in Europe.

Other investigations of a more scientific character have been carried out, such as into the variation in the intensity of the solar heat, and the temperature of the earth's surface at different depths.

There has been no very large actual extension of the work of observation. Several new observatories have been opened in Upper Burma and steps have been taken to bring the Meteorology of the Punjab which differs considerably, more especially in the cold-weather months, from that of the rest of

Summary of important work done.

Extension of observatories.

India in consequence of its peculiar geographical relations and position under closer investigation. Lord Dufferin has also given the greatest encouragement and assistance to the establishment of observatories in Persia, Baluchistan and Afghanistan. Observations are now regularly taken at Bushire, Baghdad, Meshad as well as at Quetta and Aden. The development of this part of the work of the Department will, it is hoped, link on the meteorology of India to that of Europe and perhaps throw light on the cold-weather storms of Upper India, which are, agriculturally, of great importance, as they provide the main supply of the cold-weather rains of Upper India and the snowfall of the Himalayas. Arrangements are also being completed to extend the work of collecting meteorological information regarding the seas to the south of India.

The practical applications of the two chief lines of enquiry and investigation of the Department during the past four years are numerous.

The study of the relations between the south-west monsoon rainfall and the antecedent conditions have led to the attempt to forecast yearly, at the commencement of the south-west monsoon, its general character and the distribution of the accompanying rainfall. This has been carried out during the past year and the forecasts have on the whole been in very fair accordance with facts. If these forecasts continue to prove fairly correct and useful, and thus indicate that the method is based on correct principles, this extension of the work of fore-casting will be one of the most important advances yet made in practical meteorology. Forecasting, based on meteorological principles is, in Europe and America, limited to the next 24 hours. To forecast the average character of the south-west monsoon rainfall for six months is a step, the importance and difficulty of which have perhaps hardly been fully realized.

The influence of forests on rainfall, has been investigated but with doubtful results, rainfall observations in India not having until quite recently, been made with the necessary exactness for an enquiry of such a delicate nature; hence, although it is almost certain that forests do tend to increase rainfall, the amount of this influence in India is as yet quite unknown. An important result of these inquiries has been to shew the necessity for the adoption of a uniform system of rainfall registration in India, and of more effective supervision of the returns in order to secure fairly accurate

Attempts to forecast the South  
West monsoon.

Study of the influence of forests  
on rainfall.



rainfall data. One of the last acts of Lord Dufferin was to sanction this important improvement.

The Daily Weather Report published at Simla for the information of Government and the public was very greatly improved in 1887. Previously to that year it was published in an unwieldy sheet without a chart, and the remarks were of a very brief and uninteresting character. The sheet was reduced to a much more compact form in June 1887, and a neat chart shortly afterwards added, showing the distribution of pressure and of rainfall and the winds for the day. In this way all the more important facts of the observations are presented at a glance to the reader; the remarks are, moreover, based on the chart, and in them it is endeavoured to shew the salient features of the weather of the previous day, and the indications which can be deduced from them as to the weather of the next 24 hours. In all these respects the Daily Weather Report and chart may now compare favourably with those published by meteorological bureaux in Europe.

Perhaps, on the whole, the most important extension of the work of the Department in practical directions has been the introduction of a complete system of storm-warning for the whole coast of India. Four years ago the only ports which were systematically warned of the approach of storms were the Bengal and Bombay ports and the port of Madras. During the years 1887-88 the ports on the Burma and Madras coasts were included in the system, and uniform methods adopted, based on the requirements of the ports warned. It is hardly too much to say that the approach of a storm to any port is now announced, directly or indirectly, by the Department from 24 to 48 hours beforehand. This system, which was finally sanctioned in 1887, was gradually introduced as the storm signals were supplied to ports during the year 1887, and has worked very successfully during the year 1888.

#### CHAPTER XVII.—Forest Conservancy.

The Forest Department was, during Lord Dufferin's Viceroyalty, transferred from the Home Secretariat to the Revenue and Agricultural Department, and this change was effected in consideration, amongst other matters, of the circumstance that the interests of Agriculture are closely connected with, and in some respects dependent on, Forest Conservancy.

The State property under the control of the Forest Department has increased considerably, both in extent and value.

The annexation of Upper Burma added to the possessions of the Crown that which is probably the most valuable forest property in the world; but the forest administration of the Empire has prospered apart from this large addition to its timber resources, and a general extension and improvement of forest domains has been followed, during the past four years, by a sensible increase in the wealth of the country.

The results of forest administration during Lord Dufferin's Viceroyalty may be briefly reviewed under the following main heads:

- (a) Constitution of Government forest estates; by which is meant their creation on a legal basis, including forest settlements and demarcation.
- (b) Organization of forest estates, by means of surveys and working-plans.
- (c) Improvement of forest estates, by general and special measures.
- (d) Exploitation.
- (e) Results of systematic management and protection.
- (f) Yield in material.
- (g) Financial results.

As regards the constitution of Government forest estates, the policy of the Supreme Government, under Lord Dufferin's Viceroyalty, has been to favour the formation of finally settled forest areas or Reserved Forests (in which the rights of the State, and of persons, have been definitely separated), as affording the best means for securing the necessary permanency to forest conservancy and management, as well as for preventing the gradual absorption, and final extinction, of existing State rights in forest property which might otherwise ensue.

The area of Reserved Forests, which, in 1884, comprised 48,765 square miles, now aggregates 52,223 square miles; but though the constitution of permanently settled forest estates has made considerable and satisfactory progress, much still remains to be done. The scope of settlement operations has, moreover, been greatly increased by the annexation of Upper Burma, and the feudatory Shan States,



which contain extensive forest areas that have now become the property of the Empire. The policy of the Government of India has already been vigorously initiated in these new Provinces.

In order to facilitate, in the first instance, the constitution of Government forest estates, and thereafter to secure their protection and management, the Indian Forest Act has been extended to Coorg, and the Madras Act to the Scheduled Taluks in the Godavari District of that Presidency; and special forest laws have been passed for Berar, Baluchistan, and Upper Burma.

*Legislation.*

Experience has brought to light some flaws which existed in the earlier forest enactments, and it is probable that an amendment of the Forest law will be undertaken.

The demarcation of Government forest estates has continued to receive constant attention, and may be considered almost completed as regards such estates as have been permanently constituted.

*Forest Surveys.*

Under the head of organization of forest estates, the progress made has been satisfactory. The surveys have been partly executed by the Imperial Survey of India, as in Burma, the Central Provinces, and the Punjab, and partly by the Forest Survey Branch, the main work of which was done in Berar, Chutia Nagpur, the North-Western Provinces, and also in the Punjab. The forest maps produced in India created a favourable impression at the Forestry Exhibition in Edinburgh, and on the Continent. Till lately, the whole cost of forest surveys was borne by Imperial revenues, but it has now been decided that the Provincial Governments shall participate in the cost.

*Working-plans.*

The number of forests worked according to pre-considered working-plans has largely increased during the last few years, with the almost universal result that the more thorough investigation of the forest resources, which such working-plans imply, have shewn that the previous working, founded as it principally was on general information, erred too much on the side of caution, and that the annual outturn available exceeded in most cases that which had been previously taken to be the normal yield. Apart, therefore, from the certainty and stability which working-plans give to forest management, their introduction has led to a considerable increase of forest revenue.

As regards the improvement of Government forest estates by means of general measures of protection, the high percentage of convictions that continues to be maintained in forest cases brought to the notice of the courts shews that the forest laws are worked with great consideration for the people; while the law-abiding character of the populations is seen in the circumstance that the total number of cases, including trivial offences, amounts, each year, to less than one for every four square miles of Reserved Forests, which as yet form but a small portion of the whole forest area.

The area under fire-protection has constantly and largely increased during Lord Dufferin's Viceroyalty, and the average of effectively protected forests has risen during this period from 15,570 to 18,691 square miles. It must be explained that these areas include only such forests as are protected by fire-traces and watchers, in fact by the efforts of the Department, and not such as escape conflagrations by the nature of their ever-green composition, and their situation. Considerable areas have also been withdrawn from the abuse of wasteful nomadic grazing, which is excusable only in thinly populated districts, unfit for agricultural purposes.

Satisfactory progress has been made in the exploitation, on scientific principles, of the State forest property. The conditions favourable to the growth and propagation of different kinds of trees, are being constantly studied and better understood, and form now one of the chief elements in all systematic working-plans. Artificial reproduction plays a comparatively unimportant part in Indian forestry, as it bears such a small proportion to the vast forest area under the control of Government. It has not, however, been neglected, and valuable additions have been made to the planted areas in Lord Dufferin's time. The teak *taungya* plantations in Burma, and the mahogany and teak plantations in Madras, are, perhaps the most valuable operations coming under this head.

The yield in forest produce has greatly increased during the last few years. This is, to a great extent, the result of improved means of communication, and the opening out of new forest tracts. In this connection, Lord Dufferin has urged the employment of movable tramways, which would be available



in times of famine or war, and an extension of the scheme is only awaiting a further development of the general railway net-work, and its nearer approach to some of the more important forest areas. The increase in the outturn of material is, however, also the consequence of the growing prosperity of the country, of which the use, in many localities, of sawn timber and scantlings for building proposes, where rough unworked poles were formerly considered sufficient, is a good criterion. The record of yield is, as yet, too incomplete to permit of the compilation of reliable figures for purposes of comparison; but the financial results under the different heads prove the truth of the above statement. The direct revenues realized from State forests averaged 67 lakhs in the period 1876-77 to 1879-80; 94 lakhs during Lord Ripon's Viceroyalty; and 116 lakhs during that of Lord Dufferin. Practically, these figures do not include any income from Upper Burma, of which the forest revenues have been absorbed, until quite recently, by the adjustment of liabilities created by the former Government. The leases granted by the late King have now, been placed on a sound and satisfactory footing, and a considerable and permanent forest revenue may, in future, be expected from the new Province, and this with the greater certainty that all forests in the feudatory Shan territories have, following the precedent of former sovereigns of Burma, been declared State property.

No changes of importance have, during the period under review, taken place in the organization of the controlling staff in the older Provinces, but a new staff, comprising 21 officers, has been sanctioned for the forest administration of Upper Burma. The weakness of the Forest Staff, as compared with the work to be done, has for some years engaged attention, and a reorganization scheme, based, to some extent, on the recommendations of the Public Service Commission, is under consideration. This, while reserving the most important appointments in the Department for officers who have received a European training at Cooper's Hill, opens a sufficiently wide field for the employment of natives of India, and offers facilities for the acquirement of an advanced forest education within the country itself. The organization of the Forest College at Cooper's Hill, which was begun in 1885, and has, since then, been permanently established, is, probably, the most important step in the past history of Indian forest administration, and one which will be felt not only in India and its dependencies, but in the mother country and the colonies as well.

## CHAPTER XVIII—Fisheries.

It is only in two Provinces, Assam and Burma, that inland fisheries are at present controlled on an organized system, and form a separate source of revenue to the State. Elsewhere, although the right of Government to a share in the profits of fisheries is recognised, these profits, where they exist, are usually taken into account as a miscellaneous asset in the assessment of the Land Revenue.

The necessity of bringing under general supervision and protection the valuable food-supply offered by the innumerable rivers, lakes and tanks of the country, which at present too often suffers from wasteful and destructive methods of fishing, has more than once been under the consideration of Government. But apart from the difficulty of providing a suitable machinery for the purpose, the subject is surrounded with difficult questions arising out of immemorial usage and custom, which require the most careful deliberation. The Government of India has therefore hesitated to undertake any legislation until the necessity for it has been unanimously accepted by local Governments. Recently a representation from the Government of the Punjab has brought the matter again under discussion, and the opinion which has been arrived at after conference with local officers is that a simple law applicable to every Province which provided for the adoption of the following measures would be desirable:

- (1) The prevention of the use of dynamite and other explosives for the destruction of fish.
- (2) The prevention of the practice of poisoning waters for the capture of fish.
- (3) The enforcement of fish ladders on weirs, &c., in rivers of any size—10 yards' width was suggested as a minimum.
- (4) The regulation of fixed obstructions and engines in rivers as above.
- (5) The protection of stock-pools.

The members of the conference were not unanimous as to the desirability of regulating the meshes of fishing nets, prohibiting the practice of baling out streams for the purpose of catching fish, or defining by law the right to fish in the waters or rivers of a Province. The whole question has, however, yet to be considered by Local Governments, to whom it is proposed to circulate the draft of a Bill.

Draft Bill prepared.



CHAPTER XIX.

**Inventions and Designs.**

Transfer of the work to Revenue and Agricultural Department.

Under the Inventions Act of 1859, the registration of inventions was carried out in the Home Department; but the Government of India having had under its consideration the constitution of an Inventions Office under the Revenue and Agricultural Secretariat, power was taken, when the law came under amendment in 1888, to provide for the discharge of the functions of Secretary under the Act by any officer appointed by the Governor General in Council. The new Act received the assent of His Excellency Lord Dufferin on the 16th March 1888, and the business connected with its administration was transferred to the Revenue and Agricultural Secretariat with effect from 1st July 1888.

Need for a competent Examiner of Inventions.

During the brief period this Department has dealt with the subject, no questions of special importance have arisen, and it is as yet too early to form an opinion on the working of the Act; but the need for a properly equipped Patents Office under skilled supervision is already strongly felt. At present applications for exclusive privilege are referred for opinion to the various departments under Government, which seem best able to advise on the utility or novelty of the particular invention claimed; but it has been frequently represented by the officers consulted that no satisfactory examination is possible without the assistance of a properly organized Patents Office. Should the new law have the effect anticipated of increasing the number of applications, which hitherto have not exceeded an average of 200 a year, it will probably be necessary, in the interests of inventors as well as of the public, to secure the services of an officer possessed of the requisite technical knowledge to act as adviser to Government, and to report, with reference to the several conditions specified in the Act, on the validity and merits of claims filed by applicants. In any case it is indispensable that arrangements should be made for placing the office, which is permanently located at Calcutta, under responsible supervision throughout the year; and the means of effecting this arrangement is now engaging attention in the Revenue and Agricultural Department.

Provisions of the new Act.

The Act of 1888 for the protection of inventions and designs is a consolidating and amending measure. It repeals the second Inventions Act of the Indian Code passed in 1859, a Patterns and Designs Act passed in 1872, and

a subsidiary Act passed in 1883 for the protection of inventions displayed at exhibitions. No change has been made in the main principle of the old law under which the inventor acquires exclusive privilege by the operations of the law itself, and not, as in England, by the grant of Letters Patent from the Crown ; nor has there been any material alteration in the former procedure, which has worked well ; but difficulties which have arisen on points of law have been removed, and improvements beneficial to the inventor have been introduced. The procedure under the Act is of a simple description. An applicant for exclusive privilege submits a petition setting forth the invention which he claims. His application is then examined, as far as means permit, with reference to the novelty and utility of the invention. If the examination be satisfactory, leave is granted to file a specification ; and on the specification being filed, the applicant acquires such exclusive rights of user and ownership as the Act confers. It is, however, open to any person to dispute the validity of these rights in a High Court on all or any of the following grounds : *viz.*, that the invention is of no utility ; that it is not new ; that the applicant is not the inventor ; that his application does not fulfil the requirements of the Act ; or that it contains misstatements or fraudulently includes something already known. To bar the acquisition of exclusive privilege for stale inventions, it has also been laid down that no application is admissible if made after the expiration of one year from the date of acquisition of exclusive privilege in any place beyond the limits of British India and the United Kingdom.

Against infringement of his rights, an inventor must seek the assistance of the ordinary courts of law ; but the new Act has improved his protection against piracy by giving him power of performing all acts through an agent, and of assigning his rights in any province or local area as he may see fit. A check is also imposed on frivolous law suits by authorizing the Courts to demand security for costs where the validity of a patent is impeached. Another important change advantageous to inventors, has been made in adopting the provisions of the English Patents Act of 1883 in regard to fees and the duration of patents. Under the expired law a fee of Rs. 100 was levied on all petitions for leave to file a specification, and there was a fixed term of fourteen years for the duration of exclusive rights. Light fees are now levied in respect of petitions, and increasingly heavy fees periodically in respect of the continuance of an exclusive privilege. By omitting to make the payment, an inventor may abandon the exclusive



privilege at any time, and his invention becomes available to the public. In this way the inventor is made the judge, whether it is worth his while to maintain his patent or not ; and patents for inventions of small value will be speedily eliminated, and cease to stand in the way of more valuable combinations. The limit of the term of a patent has been retained at fourteen years, but for special reasons it may be extended for a further period not exceeding fourteen years more, subject to the condition in all cases that, when a patent expires in the country of its origin, it shall also expire in India.

The above are some of the more important provisions of the new law, and are in principle repeated in the second part of the Act relating to Designs. Trademarks have been excluded from the scope of the Act, a Bill for the registration of trademarks prepared some years ago, having been abandoned in 1881 at the almost unanimous request of the mercantile community throughout the country.

## CHAPTER XX. LEGISLATIVE MEASURES.

Of the Acts and Regulations which have been passed by the Governor General in Council under 24 and 25 Vict., c. 67, and 33 Vict., c. 3, respectively, from the commencement of the Viceroyalty of His Excellency the Marquis of Dufferin and Ava up to the date of this Note, eighteen Acts and nine Regulations were initiated in the Revenue and Agricultural Department.

The following are the eighteen Acts referred to in the foregoing paragraph :

- (1) Straits Settlements Emigration Act Repealing Act, XXI of 1884 ;
- (2) Bengal Tenancy Act, VIII of 1885 ;
- (3) Oudh Estates Act Amendment Act, X of 1885 ;
- (4) Indian Sea Passengers Act, XII of 1885 ;
- (5) Central Provinces Government Wards Act, XVII of 1885 ;
- (6) Land Acquisition (Mines) Act, XVIII of 1885 ;
- (7) Bengal Tenancy Act Postponement Act, XX of 1885 ;
- (8) Mirzapur Stone Mahál Act, V of 1886 ;
- (9) Bengal Tenancy Act Amendment Act, VIII of 1886 ;
- (10) Deo Estates Act, IX of 1886 ;

Acts and Regulations initiated in Revenue and Agricultural Department.

- (11) North-Western Provinces Rent Act, XIV of 1886;
- (12) North-Western Provinces Land Revenue Act Amendment Act, XV of 1886;
- (13) North-Western Provinces Lieutenant-Governor's Functions Act, XIX of 1886;
- (14) Oudh Rent Act, XXII of 1886;
- (15) Glanders and Farcy Act Bombay Extension Act, XXIV of 1886;
- (16) Indian Museum Act, IV of 1887;
- (17) Punjab Tenancy Act, XVI of 1887; and
- (18) Punjab Land Revenue Act, XVII of 1887.

The nine Regulations referred to are:

- (1) Assam Land and Revenue Regulation, I of 1886;
- (2) Santál Parganas Rent Regulation, II of 1886;
- (3) Santál Parganas Laws Regulation, III of 1886;
- (4) Upper Burma Land Acquisition Regulations, IX of 1886;
- (5) Upper Burma Forest Regulation, VI of 1887;
- (6) Upper Burma Revenue Regulation, VII of 1887;
- (7) Ajmere Irrigation Regulation, VIII of 1887;
- (8) Upper Burma Ruby Regulation, XII of 1887; and
- (9) Hazára Tenancy Regulation, XIII of 1887.

The objects sought to be attained by the several Acts and Regulations mentioned in the above list will appear from the following synopsis in which the several measures are arranged according to the subjects with which they deal.

#### *Revenue Acts and Regulations.*

North-Western Provinces Land Revenue Act Amendment Act, 1886.

The object of this Act was to enable the Government of the North-Western Provinces to appoint additional Commissioners and distribute business between them and Commissioners.

The Punjab Land Revenue Act, 1871, was the first attempt to codify the Revenue Law of an Indian Province. A far better attempt was made in 1873, when the North-Western Provinces Land Revenue Act was passed, and that attempt was succeeded by still more successful codes for Oudh in 1876, and the Central Provinces in 1881. The Punjab Land Revenue Act, 1887, which repeals the Act of 1871, is the product of the accumulated experience of sixteen years, and is the most complete code of provincial Revenue Law



which exists in India, embodying, as it does, the principles with respect to the framing and maintenance of records-of-rights and annual records which were applied to the North-Western Provinces some twelve years ago, and have since been extended to the whole of British India. Among the novel features of the Act the following may be mentioned :

- (1) the Act authorises the substitution of a village-officers' cess at a rate not exceeding one anna of every rupee of annual value, for the numerous cesses now levied in the Punjab for the remuneration of chief-headmen, headmen, kánúngos and patwáris ;
- (2) it declares the emoluments of these officials to be exempt from liability to attachment and to be incapable of alienation ;
- (3) it describes the mode in which records are to be framed and maintained ;
- (4) it declares all earth-oil in the Punjab to be the property of the Government, and confers upon the Government all powers necessary for the proper enjoyment of its right there-to ;
- (5) it abolishes the practice of taking from landowners *darkhwasts* or engagements for the payment of land revenue, leaving it optional with them to refuse an assessment and accept a *malikana* allowance ;
- (6) it recognizes the system of assessments fluctuating according to seasons which are imposed in some parts of the Punjab, and the substitution, in other parts of that Province, of public service for the payment of land revenue ;
- (7) it enables the Government to limit the responsibility of each member of a body of landowners to the amount of the revenue payable in respect of his own holding ;
- (8) it prescribes the procedure for the partition of estates and holdings, and of tenancies in which a right of occupancy subsists ;
- (9) it maintains a system of arbitration, peculiar to the Punjab, under which awards may be accepted, modified or rejected as the Revenue officer making the reference to arbitration thinks fit ;

- (10) it enables the Government to regulate the levy of village cesses ;  
and
- (11) it makes provision for the summary ejectment of a co-sharer  
encroaching on land which has on a partition been reserved  
for the common purposes of the co-sharers.

The Punjab Tenancy and Land revenue Bills were drafted under the direction of Sir Charles Aitchison, as Lieutenant-Governor of the Punjab, and the sittings of the Select Committee appointed to consider the Bills extended almost from day to day over ten weeks. Probably no enactments ever passed by the Governor General in Council have received more anxious and prolonged consideration than these and the Bengal Tenancy Bills.

This Regulation was drawn, in the first instance, by Mr. W. E. Ward and, in its present shape, by Mr. Fitzpatrick. It was based mainly on the Burma Land and Revenue Act, II of 1876, and parts of it were suggested by Act XI of 1859, the Land revenue Acts of the Punjab, the North-Western Provinces, Oudh and the Central Provinces, and the Acts of the Lieutenant-Governor of Bengal in Council, V of 1875 (Survey), VII of 1876 (Registration) and VIII of 1876 (Partition). The Regulation is for Assam what the Punjab Land revenue Act, 1887, is for the Punjab, save that the Act was substantially a declaration of existing law and practice, while the Regulation, following Part II of the Burma Land and Revenue Act, 1876, created the "landholder" in Assam. The Regulation saves all existing rights of owners of permanently-settled and revenue-free estates ; creates the landholder and defines his rights ; authorises the Chief Commissioner to regulate migratory cultivation (*jhum*) and to substitute a hoe-tax or house-tax for a land revenue assessment ; requires the preparation of accurate records of rights and annual records ; reproduces in most other respects the clauses to be found in most Land revenue Acts ; and repealed the whole of no fewer than forty-one Regulations and Acts extending to Assam, and parts of three other such enactments.

This is a Regulation to provide for the collection of revenue in Upper Burma. It authorises the recovery of revenue by the issue of writs of demand, the arrest of defaulters and their imprisonment for a period not exceeding one month, and the attachment and sale of any of their property except their cattle,



seed-grain and implements of husbandry or tools. The Regulation was intended as a temporary makeshift, and is to expire at the end of the year 1890 unless its operation is extended beyond that time by an order of the Governor General in Council.

*Rent Acts and Regulations.*

The history and objects of this Act are well described in the following extract from Mr. G. A. Grierson's Note on the Administration of the Lower Provinces of Bengal during the Lieutenant-Governorship of Sir Rivers Thompson from 1882-83 to 1886-87 :

" When Sir Rivers Thompson assumed the administration of Bengal in April 1882, the question of the amendment of the rent law in the Lower Provinces, which had for nearly ten years been the subject of agitation and discussion, had reached a stage at which it was certain that some legislative measure would be introduced, though the nature of that measure had not yet been finally determined. The necessity for legislation had, indeed, been apparent ever since the occurrence, in 1873, of the serious agricultural disturbances in Pubna. The Behar famine of the following year diverted the attention of the Government to more pressing duties, but the report of the Famine Commission dwelt strongly on the necessity of placing the relations of landlord and tenant in Bengal upon a sure basis. The Agrarian Disputes Act of 1876 was passed by Sir R. Temple's Government as a temporary measure to meet emergencies like those of 1873 pending the fuller consideration of the whole question. A Bill dealing with the principles upon which rents should be fixed was prepared in 1876, but was not further proceeded with, and in 1878 the Government of Bengal proposed a measure intended to provide only for the more speedy realization of arrears of rent. This Bill was introduced into the Bengal Council, but it was found impracticable to confine it to the limited object indicated by its original title. The Select Committee on the Bill recommended that the whole question of a revision of the rent law should be taken in hand, and in April 1879 the Government of India sanctioned the appointment of a Commission to prepare a digest of the existing law and to draw up a consolidating enactment. Proposals which had been separately made for amending the rent law in Behar were also referred to the Commission for consideration.

" The report and draft Bill of the Commission were presented in July 1880, and after the whole question had been further considered the matured proposals of Sir Ashley Eden's Government were submitted to the Government of India in July 1881. In March 1882 these papers were forwarded by the Government of India to the Secretary of State, with an important despatch, in which the history of the question was reviewed and the views of the Governor General in Council, of which Sir Rivers Thompson was a member, were fully explained.

" Such was the position of affairs when Sir Rivers Thompson became Lieutenant-Governor of Bengal. The reply of the Secretary of State was received in September 1882. His Lordship, while concurring in the view that legislation was necessary, and, while accepting the majority of the recommendations made by the Government of

India, demurred to a proposal which formed a prominent feature of the despatch. The Rent Commission had desired to maintain the existing rule by which the occupancy-right was acquired by twelve years' continuous possession. The Government of Sir Ashley Eden had recommended that the occupancy right should be enjoyed by all resident raiyats. But the Government of India proposed to take the classification of lands instead of the status of the tenant as the basis on which the recognition of the occupancy-right should be effected, and to attach the right to all raiyati lands. It appeared to the Secretary of State that this involved a great and uncalled-for departure from both the ancient custom and the existing law of the country, and he declined to sanction it. The Government of India defended their proposals in a subsequent despatch written in October 1882, but the Secretary of State adhered to his former opinion, though he expressed his willingness to assent to the introduction of the Bill in the form which the Government of India preferred. The Government of India, however, declined to introduce a Bill in a form of which the Secretary of State disapproved, and it was determined that the measure should be framed upon the lines suggested in the Secretary of State's despatch.

"A revised draft of the Bill was prepared in the Legislative Department of the Government of India, and on the 2nd March

His Honour the Lieutenant-Governor.  
Sir Stuart Bayley.  
Mr. Ilbert.  
„ Hunter.  
„ Quilton.  
„ Kristodas Pal.  
The Maharaja of Durbhanga.  
Mr. Reynolds.  
„ Evans.  
Major Baring.

1883 Mr. Ilbert moved in Council for leave to introduce it. On the 12th March Sir Stenart Bayley, in whose charge the Bill had been placed, moved that it should be referred to a Select Committee. After a long debate, extending over two days, the Bill was referred to a Select Committee consisting of the gentlemen named in the margin. Mr. Gibbon and Mr. Amir Ali were

afterwards added to the number and, on the death of Mr. Kristodas Pal, Mr. Peñri Mohan Mukerji succeeded him as a member of the Committee. The meetings of the Committee commenced in November 1883, and were carried on till the following March, when the Committee presented a preliminary report accompanied by a revised draft of the Bill. Four members of the Select Committee recorded minutes of dissent from the report.

"The revised Bill was re-published, and was subjected to a careful examination by divisional conferences of the executive officers of Government, as well as by judicial officers and by the non-official public. When these opinions had been received and considered, the views of the Government of Bengal were submitted to the Government of India in a letter dated the 15th September 1884. The letter is of interest as containing a detailed and authoritative exposition of the Lieutenant-Governor's views. Among other points of less importance Sir Rivers Thompson proposed to allow the free transfer of occupancy-holdings in Bengal, giving the landlord, however, a veto if the transfer were to any but an agriculturist; to leave such transfers in Behar to be regulated by custom; to omit the clauses of the Bill which gave the landlord a right of pre-emption; to abandon the provisions for enhancement on the ground of the prevailing rate, or of the increased productive powers of the land; to withdraw all limitations upon enhancement by suit, but to maintain them in cases of enhancement by contract;



to restore the check which limited enhancements to a certain proportion of the gross produce; to provide that tables-of-rates should be prepared only on the application of parties; to retain substantially the existing law of distraint; and to provide for a cadastral survey and the preparation of a record-of-rights.

"The Select Committee resumed its sittings in November 1884, and early in the following year it presented its final report, which was accompanied by minutes of dissent from several members of the Committee. The debate, however, which followed showed that the great majority of the dissentients fully accepted the principles of the Bill, though they thought some of its provisions unsatisfactory or incomplete.

"On the 27th February 1885, the Bill was brought forward in Council by Sir Stuart Bayley, who moved that the report of the Select Committee should be taken into consideration. To this an amendment was moved that the Bill should be re-published before being further proceeded with. After an exhaustive debate, which extended over two days, and in which the principles of the Bill were fully discussed, the amendment was rejected by a large majority. The Council then proceeded to discuss the clauses of the Bill. Above 200 amendments were placed upon the notice paper; but many of these were formally withdrawn or were tacitly dropped. Upon all the important provisions, however, of the Bill there was an animated debate which extended over the 4th, 5th, 6th, 9th and 11th of March. During this discussion it was the object of the Government of Bengal, while resisting those amendments which subverted or weakened the principles which the Bill was intended to establish, to strengthen the position of the occupancy raiyat by extending the right to the pargana instead of confining it to the village; to modify the rule of enhancement on the ground of the prevailing rate; and to give the non-occupancy-raiyat the security of a five years' initial lease. These amendments were not accepted by the Council, but the Government of Bengal was successful in maintaining, against strong opposition, a limitation upon the enhancement of an occupancy-raiyat's rent by private contract. The Bill was passed by the Council on the 11th March, it received the assent of the Governor General on the 14th, and became law as Act VIII of 1885. The Act came into force on the 1st November following, except the chapters relating to distraint and to deposit of rent, the operation of which was postponed to the 1st February 1880, to enable the High Court to frame the necessary rules.

"The Bill which thus became law differed in some important particulars from the measure which had been introduced into Council two years before. Perhaps no legislative enactment was ever subjected to fuller examination, or to more searching criticism. The question had engaged the attention of the Government and the public for more than ten years; the Select Committee, which included members holding the most diverse views, held no less than 64 meetings, and had before it several hundreds of reports, opinions and memorials. The result was that the Bill which finally commended itself to the approval of the Council was in some respects a compromise, and, if it was less thorough and complete, was certainly a more practical and workable law than the draft which was originally laid before the Council. Some of the more important modifications which were introduced may be briefly noticed here. The Bill as originally brought in embodied the provisions for the sale

of patni taluqs ; but it was eventually determined to leave Regulation VIII of 1819 untouched. The settled raiyat acquired by the original Bill an occupancy-right in all land held by him in the village or estate. The Act limited this to land held in the same village. The occupancy-raiyat was empowered to transfer his holding subject to a right of pre-emption by the landlord at a price to be fixed by the Civil Court. The pre-emption clauses were struck out and the power of transfer was left to be regulated by local custom. The rent of an occupancy-raiyat could not be enhanced under the Bill to an amount exceeding one-fifth of the gross produce, nor that of a non-occupancy-raiyat to an amount exceeding five-sixteenths ; but no limitation of this kind finds a place in the Act. In suits for enhancement the Bill provided that no increase of demand in excess of double the old rent should be awarded ; but there is no corresponding provision in the Act. A prominent feature of the Bill was the preparation of tables-of-rates, by which lands were to be classified according to the capabilities of the soil, and rent rates were to be fixed which should be in force for not less than ten, or more than thirty years ; but this chapter was entirely struck out. The Bill provided that the non-occupancy-raiyat, if he were ejected from his holding, should receive compensation for disturbance ; but no such stipulation will be found in the Act.

“ The only material point in which the Bill was modified in the opposite direction was in the enhancement of an occupancy-raiyat’s rent by contract out of Court. The Bill allowed such enhancements to the amount of six annas in the rupee upon the old rent ; but the Act reduced this to two annas in the rupee, the Government of Bengal being strongly impressed with the danger of allowing pressure to be put upon tenants to enter into contracts which would virtually defeat the object of the legislature. It was, however, provided that higher rate of rent might be recovered by suit if it had been actually paid for three years.

“ The Bengal Tenancy Act—perhaps the most important measure which has passed into law since the Regulations of 1793 were promulgated—will be found on examination to have had three main objects in view, to one or other of which almost all of its sections can be referred. The ancient agricultural law of Bengal was founded on a system of fixity of tenure at customary rents. But this system was gradually ceasing to be suited to the altered economic conditions of the country, and the attempts which were made to solve the question by the substitution of positive law for customary usage had hitherto been unsuccessful. In some parts of Bengal, in which the zamindárs were powerful, the raiyat was treated as a mere tenant-at-will ; in other parts, in which the population was comparatively sparse, the raiyat refused to pay any rent unless the zamindár agreed to his terms. Act X of 1859 rather added to the difficulty than removed it. On the one hand, this Act made it almost impossible for the raiyat to establish a right of occupancy ; on the other hand, it placed insuperable obstacles in the way of the zamindár who sued for an enhancement of his rent. The Courts of law, with rigid impartiality, required the raiyat to establish his occupancy-right by shewing that he had cultivated the same plot of ground for twelve successive years, and demanded from the landlord the impossible proof that the value of the produce had increased in the same proportion in which he asked that his rent should be enhanced. The legal maxim, *semper presumitur pro negante*, was never more



copiously illustrated than in the various phases of this rent litigation. The party upon whom lay the burden of proof was almost certain to fail. To this evil the Tenancy Act was intended to afford a remedy. The principle of the Act may be said to be based upon a system of fixity of tenure at judicial rents; and its three main objects are—first, to give the settled raiyat the same security in his holding as he enjoyed under the old customary law; secondly, to ensure to the landlord a fair share of the increased value of the produce of the soil; and thirdly, to lay down rules by which all disputed questions between landlord and tenant can be reduced to simple issues and decided upon equitable principles. A good example of the first will be found in the clause which throws upon the landlord the onus of disproving the raiyat's claim to a right occupancy; the second is illustrated by the section relating to price-lists, which relieves the zamindar of the trouble of showing that the value of the produce has increased; the third pervades the whole of the Act, and is specially conspicuous in the valuable section which authorises an application to determine the incidents of a tenancy and in the chapter which relates to records-of-right and settlements of rents. The maintenance of the principles of the Act is further safeguarded by a section which restricts the power of entering into contracts in contravention of its fundamental provisions.

"In pursuance of these main principles the Act lays down rules to guide the Courts in determining whether a tenant is a tenure-holder or a raiyat; it provides a procedure for the registration of the transfer of tenures; it defines the position of raiyats who hold at fixed rates of rent; it simplifies and facilitates suits for the enhancement or reduction of rent; it establishes a system for the commutation of rents payable in kind; it specifies the grounds on which a non-occupancy-raiyat may be ejected; it prescribes rules for instalments, receipts and interest upon arrears; it encourages the making of the improvements; it restricts subletting; it provides for cases in which holdings are surrendered or abandoned; it protects the interests, both of the parties and of the general public, in cases of disputes between co-sharers; it lays down a procedure for recording the private lands of proprietors; it introduces a new system of distraint; and it gives protection to sub-tenants when the interest of the superior holder is relinquished or sold in execution of a decree.

"That the Act is a complete and final settlement of the questions with which it deals has not been alleged by its most strenuous advocates. But that this want of completeness and finality was not merely natural but inevitable was forcibly urged by Mr. Ilbert in the course of the debate on the Bill, and the question can hardly be better summed up than in the words he used. 'What the Council have to consider' said the Honourable Member, 'as practical men is not whether this is an ideally perfect measure, not whether it is a final settlement of questions between landlord and tenant in Bengal, not whether it is likely to usher in a millenium either for the zamindar or for the raiyat, but whether it represents a step in advance, whether it does something substantial towards removing admitted defects in the existing law, whether it does not give some substantial form of security to the tenant, some reasonable facilities to the landlord. It is because I believe that the measure, however it may fall short of ideal perfection, does embody substantial improvements in the existing law that I commend it to the favourable consideration of the Council.'

"The Act came into operation on the 1st November 1885, and has, therefore, been too short a time in force for a full estimate of its working."

This Act was an ephemeral enactment, and its sole title to notice is the fact of its having suggested the useful provision embodied in section 4 of the General Clauses Act, 1887.

Bengal Tenancy Act Postponement Act, 1885.

The object of this Act was to limit the registration of mortgages in landlords' records to those mortgages which are accompanied by possession and usufruct, and thereby to give effect to what was the intention of the legislature when the Bengal Tenancy Act, 1885, was passed.

Bengal Tenancy Act Amendment Act, 1886.

North-Western Provinces Rent Act, 1886.

The objects of this Act were—

- (a) to check the growth of an irregular system of appeal which had arisen from an abuse of the power of applying for revision of certain orders of Revenue Courts;
- (b) to enable the Local Government to relieve Commissioners of a portion of their judicial work by empowering them to transfer appeals pending before them to Collectors for disposal;
- (c) to give a right of appeal in rent-suits decided by a Collector or an Assistant Collector of the first class, where the rent payable is disputed and determined;
- (d) to enable the Board of Revenue to transfer suits, applications or appeals from one subordinate Court to another; and
- (e) to apply the rules respecting the sale of distrained property to the sale of moveable property in execution of a decree.

The object of this Act was to secure to tenants-at-will in Oudh some protection against arbitrary eviction from their holdings and enhancement of their rents, and to declare their right to make, and receive compensation for, improvements on their holdings. Under the Oudh Rent Act of 1868 tenants who had not a right of occupancy were absolutely unprotected against eviction and enhancement, provided their landlords observed certain easy formalities in issuing notices of ejectment and in raising rents. Such notices had increased in number from 23,600 in 1876 to 92,602 in 1885, and there had been a rise of 24 per cent. in the rental of Oudh in fifteen years.

Oudh Rent Act, 1886.



The Act maintains the provisions of the Act of 1868 in so far as they related to the 8,000 tenants having a right of occupancy in Oudh, but materially alters the provisions of that Act in so far as they affected the 1,800,000 tenants-at-will. It enables tenants-at-will to make improvements on their holdings and entitles them on ejection to receive compensation for any subsisting improvements which they have made within thirty years preceding their ejection. It declares every such tenant to be entitled to retain his holding for a period of seven years from the date of his rent being settled in accordance with the provisions of the Act. That rent must not be more than  $6\frac{1}{4}$  per cent., or one anna in the rupee, in excess of the rent payable during the preceding seven years' tenancy. If on the expiration of such a tenancy the landlord desires to eject a tenant-at-will, he must cause a notice of ejection to be issued and pay in respect of the notice a court-fee equal in value to half the annual rent payable for the holding of the tenant, or, where the rent exceeds fifty rupees, a court-fee of twenty-five rupees. This check on ejection was imposed at the instance of the Oudh Taluqdárs, who were unanimously and very strongly opposed to any such compensation for disturbances as is payable on an ejection under the Central Provinces Tenancy Act, 1883.

The Act, from its inception to its being passed, was framed in consultation with the Taluqdárs, who recognised the insufficiency of the protection afforded to tenants by the Act of 1868 and readily co-operated with the Government of Sir Alfred Lyall in effecting a just settlement of the relations of Oudh landlords and tenants.

The main objects of this Act were to correct the language of the clauses of the Punjab Tenancy Act, 1868, which defined the classes of tenants who are to be deemed to have a right of occupancy; to incorporate in the Tenancy Law, and amend, the provisions of the Punjab Courts Act, 1884, relating to Revenue Courts; to embody in the Tenancy Law of the Punjab several useful provisions in recent legislations for the Central Provinces and Bengal respecting the relations of landlords and tenants; to substitute for the difficult and almost impracticable rules of section 11 of the Act of 1868, with respect to the enhancement of rents of tenants having a right of occupancy, rules enabling such rents to be adjusted with reference to the land revenue, according to the classes to which the tenants belong; to extend the period which must elapse between successive enhancements of rent; to enable landlords to recover rent out of the

proceeds of produce which has been attached in execution of a decree or order of a Court; to restrict the effect of leases granted for periods exceeding the term of an assessment of land revenue; to make more liberal the provisions of the Act of 1868 for the payment of compensation for improvements made by tenants; to provide for the compensation of clearing tenants on their ejection from land which they have brought under cultivation; to enable any number of tenants in an estate to be made parties to any proceeding relating to the rent of their tenancies; to declare tenants during the continuance of the occupancy of their tenancies not to be liable to imprisonment on the application of their landlords in execution of decrees for arrears of rent; and to define with more precision the effect of the Tenancy Law on records-of-rights and on agreements between landlords and tenants.

It would be out of place here to describe the minor objects sought to be attained by the Act.

This Regulation was an adaptation of the Punjab Tenancy Act, 1887, to the circumstances of the Hazára district, for which special Tenancy Regulations, in modification of the Punjab Tenancy Act, 1868, had been passed in 1873 and 1874. The Regulation of 1887 repealed those Regulations and declared the Punjab Tenancy Act, 1887, to extend to the Hazára district, subject to certain modifications with respect to tenants having a right of occupancy.

The oppression to which the Santáls had been subjected by farmers and other speculators in land, European and Native, induced Sir George Campbell to propose a Regulation under the Statute 33 Vict., c. 3, for further "deregulation" the Santál Parganas and settling the rights and rents of the Santáls. This Regulation was passed as the Santál Parganas Settlement Regulation, 1872. Section 9 authorised the Lieutenant-Governor to order a settlement to be made "for the purpose of ascertaining and recording the various interests and rights in the land"; sections 17 and 18 enabled the Settlement-officer to fix fair and equitable rents to be paid to zamindárs by headmen, and to headmen by raiyats; and section 19 enacted that these rents should remain unchanged for not less than seven years and "thenceforward until a fresh settlement or agreement be made."

The rents were fixed accordingly, and in 1881, the periods for which some of them were to remain unchanged, were expiring.



It was then felt, on the one hand, that the Santáls ought not to be left to the mercy of the speculators whose proceedings had obliged the Government to pass the Regulation of 1872, and on the other hand that legal means ought to be devised by which the zamindárs might obtain a reasonable increment of their rents with reference to the advancing values of agricultural produce. But section 9 had been so drawn that Sir Ashley Eden was advised that one settlement and no more could be ordered under it. Sir Ashley Eden himself thought this was the intention of the framers of the Regulation. Any way, if this was the legal effect of the section, a second settlement could not be undertaken under the Regulation, and fresh legislation would be necessary to attain the Lieutenant-Governor's object of protecting the Santáls, and at the same time of securing fair rents to their zamindars. Sir Ashley Eden therefore proposed a Regulation of which the main points were—

- (a) that rents should not be varied except on application to and by order of the Deputy Commissioner; and
- (b) that, when so varied, they should hold good for ten years at least.

When the case came to the Government of India, the Hon'ble Mr. Stokes thought a second settlement might be made under the Regulation, but that it would be better to legislate. His Excellency the Viceroy (the Marquis of Ripon) was of opinion that rents once fixed should hold good for fifteen years, and his Council and Sir Ashley Eden concurred in that opinion.

When the Bengal Tenancy Act had been passed and the Lieutenant-Governor of Bengal had submitted his final proposals after consultation with the Deputy Commissioner of the Santál Parganas and the Commissioner of Bhagalpur, the Rent Regulation was settled. It begins (section 3) by laying down the principle that rents are not to be changed by agreement or otherwise than in pursuance of an order of a Settlement officer under the Settlement Regulation of 1872 or of the Deputy Commissioner under the Regulation of 1886. It then (section 4) amended section 9 of the Regulation of 1872 by empowering the Lieutenant-Governor to order a settlement as occasion may require; and (section 5) repealed section 19 of that Regulation, which (a) limited to seven years the period for which rents were after being fixed at a settlement to remain unchanged, and (b) authorised the adjustment

of rent by agreement. It then provides (section 6) that rent fixed at future settlements under the Regulation of 1872 are to remain unchanged for fifteen years unless in the meantime they are set aside in the course of a revision of that settlement.

But there is no intention of placing the Parganas under settlement again at present. When the period of protection afforded by the late settlement (seven years usually and ten years in some cases) has expired, the zamindar, headman or raiyats of a village may, if dissatisfied with the rents payable in the village, apply to the Deputy Commissioner for revision of the rents (section 7), and, if good cause is shewn, the rents are to be revised (sections 9-11), and, when revised, to hold good for at least fifteen years unless the village comes under settlement during that period (section 18).

Section 20 provides for alluvial lands which vary in character so much from year to year that it was found impracticable to settle them under the Regulation of 1872.

Section 25 will suffer the continuance of the unwritten law under which a Santál is not liable to be ejected so long as he pays his rent and gives the Government no trouble by stirring up insurrection.

#### *Wards and Encumbered Estates Acts.*

Sections 13 and 20 of the Oudh Estates Act, 1869, required the wills of taluqdars and grantees and their heirs and legatees to be registered, and "registered" was defined by the Act as meaning "registered according to the provisions of the rules relating to the registration of assurances for the time being in force in Oudh." In 1884 the Judicial Committee of the Privy Council held (L. R. 11 I. A. 121) that a will deposited under Part IX of the Indian Registration Act, VIII of 1871, or under Part IX of the Indian Registration Act, III of 1877, is not registered. The object of Act X of 1885 was to declare, subject to certain savings, that "registered", where used in the Oudh Estate Act, 1869, with reference to a will, means and is to be held to have meant either registered according to the law for the time being in force relating to the registration of assurances, or deposited with a Registrar according to the law for the time being in force relating to the deposit of wills.

The object of this Act was to make better provision for the superintendence of Government wards in the Central Provinces, Regulation LII of 1803 of the Bengal Code applying, if it applied anywhere, only to the

Oudh Estates Act Amendment  
 Act, 1885.

Central Provinces  
 Ward Acts, 1885.

Govt.



districts forming the old Saugor and Nerbudda territories to the north of the Provinces. The Act is a selection of the most approved provisions of enactments relating to Courts of Wards, and has recently, under the name of the Ajmer Government Wards Regulation, 1888, been adapted to the circumstances of the Chief Commissionership of Ajmer.

The object of this Act was to extend the Chutia Nagpur Encumbered Estates Act, 1876, with certain modifications, to the estates of the Rájá of Deo in the Gya district. The estate was heavily encumbered with debt and could only be preserved, even in part, by resort to protective legislation. The family of which the Rájá is the head had from time to time rendered eminent services to the British Government, and the Act was passed with the assent of his creditors, of whom two appear in the schedule to the Act as charging the Rájá with interest on their loans at the rate of seventy-two per cent. per annum.

Deo Estates Act, 1880.

### *Irrigation.*

The Regulation is supplemental to section 5 of the Ajmere Land and Revenue Regulation, II of 1877, which provides that the Government is to be presumed, until the contrary is proved, to be entitled to the exclusive use and control of the water of all rivers and streams flowing in natural channels, and of all natural collections of water, and of all tanks constructed by the Government. It places on a legal basis the system of tank-irrigation which Colonel Dixon during his long service in Ajmer-Merwára had established in that province, and provides for the assessment to water-revenue of lands irrigated from wells which drive their water from percolation from a tank constructed by the Government. The rules which the Regulation authorises the Chief Commissioner to make with respect to water-rates, the distribution of water, the powers and duties of Irrigation officers, and other matters, have recently been approved by the Governor General in Council, and will, with the Regulation, take effect during the current year.

Ajmer Irrigation Regulation, 1887.

### *Emigration Acts.*

The object of this Act was to leave emigration from India to the Straits Settlements uncontrolled by law in British India save as regards the requirements of the Native Passenger Ships Act. It was ascertained that labour flows

Straits Settlements Emigration Act Repealing Act, 1884.

as naturally to and from the Straits as it does between Burma and India, and that attempts to control its movement in British territory merely induced it to seek an outlet from the French ports of Pondicherry and Karikal.

Act II of 1860 declared certain sections of the English Passengers Act, 1855 (18 and 19 Vict., c. 119) to be applicable to the carriage of passengers from certain Indian ports to the colonies to which emigration from British India was lawful in 1860. Between 1860 and 1884 emigration to ten other colonies became lawful, and, these colonies not being specified in Act II of 1860, there was no means of recovering expenses incurred in maintaining emigrants and forwarding them to their destination when they happened to be shipwrecked on their way to any of these colonies. The primary object of the Act was to specify all colonies to which emigration was lawful in 1885, and its secondary object was to adopt certain amendments introduced into the English Passengers Act, 1855, by 26 and 27 Vict., c. 51. The Act repealed and re-enacted the Act of 1860.

#### *Museums.*

The object of this Act was to give effect to an arrangement, made with the approval of the Government of India, whereby—

Indian Museum Act, 1887.

- (a) the Bengal Government was to be represented among the Trustees of the Indian Museum;
- (b) the Bengal Government was to make over to the Trustees the custody and administration of the Economic, Ethnological, Indian Art-ware and Fine Art collections belonging to that Government; and
- (c) the Trustees, in consideration of the provision by the Bengal Government of additional accommodation required by them, were to surrender certain land adjacent to the Museum on which that Government might build a School of Art and Art Gallery.

#### *Minerals.*

The object of this Act, which is based on the Railway Clauses Consolidation Act, 1845 (8 Vict., c. 20, ss. 77 *et seqq.*), is to enable the Government to acquire land under the Land Acquisition Act, 1870, without acquiring the coal,

Land Acquisition (Mines) Act, 1885.



ironstone, slate or other minerals lying under the land and belonging to private persons. The Act extends in the first instance to the territories administered by the Governor of Fort St. George in Council and the Lieutenant-Governor of Bengal, and may be extended by any other local Government to the whole or any part of the territories under its administration.

This was an Act to adapt to modern circumstances the provisions of Bengal Regulation II of 1800 "for laying open to public use the stone-quarries at Chunar, Ghazipur and Mirzapur, in the Province of Benares, subject to a fixed duty." Much of the Regulation of 1800 was also obsolete, and the provisions of parts of the Regulation which were not obsolete were so harsh as to be unenforceable in practice. The Act defines the rights of the Government, as established by custom and the decisions of the Courts, and enables the Government to make such rules, consistent with the Act, as may be necessary for the protection of the revenue and the avoidance of disputes among quarriers.

The ancient reputation of the Ruby Mines of Burma and the interests taken by the public in the subject, imparted a wholly fictitious importance to this enactment, which was a small measure, drawn on the lines of the Opium Act, 1878, for the regulation of a monopoly which yielded less than £15,000 annually to King Thebaw and is not likely to yield more than £30,000 or £40,000 to the British Government. The Regulation prohibits the raising, possession or sale of precious stones in certain tracts except in accordance with rules to be made under the Regulation; prescribes penalties for breaches of the rules; and confers on the Deputy Commissioners and other local authorities such powers as are necessary for the protection of the revenue derivable from the exclusive rights which the Government possesses with respect to rubies, spinels and sapphires raised at Mogauk and other places in Upper Burma.

#### *Forests.*

This Regulation was a reproduction, with some modifications the Burma Forest Act, XIX of 1881. It extends to the whole of Upper Burma except the Shan States, and has been extended, under section 8 of the Upper Burma Laws Act, 1886, to nineteen of those States.

*Miscellaneous.*

When the office of Lieutenant-Governor of the North-Western Provinces was established, certain powers which were vested by Bengal Regulations in the Governor General in Council were assumed by the Lieutenant-Governor without any declaration under 5 and 6 Will. IV, c. 52, s. 2, or other lawful authority. These powers were exercised without question by the Lieutenant-Governor for nearly half a century, and the primary object of Act XIX of 1886 was to confer the powers upon him for the future and to validate the past exercise of them by him.

Occasion having arisen in the Bombay Presidency in 1886, as it did in Upper India in 1879, for a law to provide for the better prevention of glanders among horses, the Government of Bombay expressed a wish that the Glanders and Farey Act, 1879, should be extended to Bombay. The Act was extended accordingly.

The Santál Parganas Settlement Regulation, 1872, was in part a Laws Regulation. It set forth in a schedule the Regulations and Acts in force in the Parganas, and empowered the Lieutenant-Governor to introduce enactments and to withdraw enactments which he had introduced. But the Lieutenant-Governor was not authorised to withdraw Regulations or Acts specified in the schedule. Hence the schedule became encumbered with a number of enactments of which some were obsolete, while others might with advantage be withdrawn to make way for new laws. The object of the Regulation of 1886 was to bring the schedule up to date and to enable the Lieutenant-Governor, with the previous sanction of the Governor General in Council, to modify it as occasion may from time to time require.

This Regulation was an adaptation of the Land Acquisition Act, 1870, to the circumstances of Upper Burma.





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## APPENDICES.

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### Appendix I.

*Schedule of important despatches received from, or addressed to, Her Majesty's Secretary of State for India, during the Viceroyalty of His Excellency the Marquis of Dufferin and Ava, on subjects administered in the Revenue and Agricultural Secretariat.*

[Note.—With the exception of numbers 8 and 12, which are reprinted in this volume, these despatches are bound as a separate Appendix.]

No. in list.	No. and date of despatch.	Subject.	Remarks.
ORGANIZATION OF AGRICULTURAL DEPARTMENTS.			
1	To, No. 10 Agriculture, dated 30th May 1885.	Reorganisation of the Madras Agricultural Department and Board of Revenue.	Vide Appendix III.
2	From, No. 73 Revenue, dated 13th August 1885.		
3	To, No. 228 Financial, dated 31st July 1886.		
4	From, No. 90 Revenue, dated 7th October 1886.		
5	From, No. 56 Revenue, dated 30th June 1886.	Cost of Land Record and Agricultural Departments and savings in expenditure on land settlements due to their organization.	
6	To, No. 18 Agriculture, dated 11th September 1886.		
7	From, No. 103 Revenue, dated 11th November 1886.		
8	To, No. , dated 1888. (Under issue.)		
9	To, No. 3 Revenue, dated 10th May 1887.	Permanent constitution of the Department of Land Records and Agriculture, Bengal.	
10	From, No. 61 Revenue, dated 18th August 1887.		
FAMINE RELIEF.			
11	From, No. 27 Revenue, dated 12th March 1885.	Bombay Famine Code. Outdoor &c. Poorhouse Relief.	Vide Appendix II.
12	To, No. 3 Famine, dated 30th October 1888.	Condition of the lower classes of the agricultural population and measures for the relief of densely populated tracts.	



No. in List.	No. and date of despatch.	Subject.	Remarks.
ASSESSMENT OF THE LAND REVENUE.			
13	From, No. 4 Revenue, dated 8th January 1885.	Principles on which future revisions of settlements in the North-Western Provinces should be regulated.	
14	To, No. 6 Revenue, dated 30th May 1885.		
15	From, No. 34 Revenue, dated 26th March 1885.	Revision of settlements in the Central Provinces.	
16	To, No. 12 Revenue, dated 5th September 1885.		
COLLECTION OF THE LAND REVENUE.			
Nil.			
RELATIONS OF LANDLORDS AND TENANTS.			
17	To, No. 14 Revenue, dated 22nd September 1885.	Legislation for protection of Tenants in Oudh.	
18	From, No. 107 Revenue, dated 3rd December 1885.		
19	To, No. 35 Legislative, dated 9th July 1886.	Tenancy Act for the Punjab.	
20	From, No. 35 Legislative, dated 4th November 1886.		
STATE AID TO AGRICULTURAL CLASSES.			
21	From, No. 95 Revenue, dated 23rd October 1884.	Proposal for the establishment of an Agricultural Bank in the Deccan.	
IRRIGATION.			
Nil.			
SURVEYS.			
22	To, No. 307 Financial, dated 28th September 1886.	Training of Burmans in Surveying.	
23	From, No. 105 Revenue, dated 18th November 1886.		

No. in list.	No. and date of despatch.	Subject.	Remarks.
STATISTICS.			
24	To, No. 41 Legislative, dated 7th August 1885.	Organization of village record establishments and surveys and records-of-rights in Bengal.	
25	From, No. 1 Legislative, dated 7th January 1886.		
26	To, No. 8 Revenue, dated 4th May 1886.		
27	From, No. 21 Legislative, dated 15th July 1886.		
28	To, No. 6 Revenue, dated 23rd June 1888.		
29	From, No. 66 Revenue, dated 16th August 1888.		
AGRICULTURAL IMPROVEMENT.			
30	To, No. 2 Cattle Breeding, dated 10th July 1886.	Creation of a Civil Veterinary Department.	
31	From, No. 75 Revenue, dated 2nd September 1886.		
32	From, No. 110 Revenue, dated 2nd December 1886.	Introduction into India of Mons. Pasteur's system of vaccinating cattle as a preventive against anthrax.	
33	To, No. 1 Cattle Breeding, dated 18th January 1887.		
34	To, No. 3 Cattle Breeding, dated 27th September 1887.		
35	From, No. 103 Revenue, dated 15th December 1887.		
36	To, No. 1 Cattle Breeding, dated 20th March 1888.		
37	To, No. 3 Agriculture, dated 3rd May 1887.	Scheme for the Botanical Survey of India.	
38	From, No. 53 Revenue, dated 21st July 1887.		
39	To, No. 197 Financial, dated 21st July 1888.	Appointment of an Agricultural Chemist in India.	



APPENDICES.

[ Appendix I.

No. in List.	No. and date of despatch.	Subject.	Remarks.
EMIGRATION.			
40	From, No. 2 Public, dated 5th January 1888.	Various matters relating to emigration of Indian coolies to French Colonies.	
41	To, No. 2 Emigration, dated 10th January 1888.		
42	To, No. 7 Emigration, dated 9th June 1888.		
43	To, No. 11 Emigration, dated 18th August 1888.		
44	From, No. 94 Public, dated 6th September 1888.		
45	To, No. 10 Emigration, dated 4th August 1888.	Expenditure from Indian Revenues in connection with emigration to Foreign Colonies.	
46	To, No. 17 Emigration, dated 10th July 1886.	Marriage Law for Indian coolies in Demerara.	
47	To, No. 13 Emigration, dated 29th May 1886.	Recruitment of Indian coolies in Natal for the Congo State.	
48	To, No. 3 Emigration, dated 13th March 1888.	Emigration of Indian labourers to North Borneo.	
49	To, No. 20 Emigration, dated 6th November 1888.	Emigration of Indian labourers to Netherlands India.	
50	To, No. 18 Emigration, dated 17th July 1886.	Working of the Inland Emigration Act of 1882.	
51	From, No. 102 Public, dated 4th November 1886.		
MUSEUMS & EXHIBITIONS.			
52	To, No. 3 Museums and Exhibition, dated 13th March 1888.	Colonial and Indian Exhibition of 1886.	
53	From, No. 9 Statistics and Commerce, dated 20th January 1887.	Co-operation of India in the Imperial Institute founded to commemorate the Jubilee year of Her Majesty's reign.	
54	To, No. 8 Museums and Exhibition, dated 1st November 1887.		
55	From, No. 25 Statistics and Commerce, dated 29th March 1888.		
56	To, No. 5 Museum and Exhibition, dated 30th June 1888.		

No. in list.	No. and date of despatch,	Subject.	Remarks.
	MUSEUMS AND EXHIBITIONS—condt.		
57	To, No. 5 Agriculture, dated 21st July 1888.	Collection of economic products for Royal Gardens, Kew, and the Imperial Institute.	
58	To, No. 124 Financial, dated 21st May 1887.	Appointment of Reporter on Economic Products.	
59	From, No. 59 Revenue, dated 11th August 1887.		
60	To, No. 230 Financial, dated 7th August 1886.	Addition of an Arts and Economic Section to the Imperial Museum, Calcutta.	
61	From, No. 37 Statistics and Commerce, dated 3rd March 1887.		
	METEOROLOGY.		
	Nil.		
	MINERALS.		
62	To, No. 1 Minerals, dated 5th October 1886.	Action taken in India for protecting the claims of the State to minerals and for regulating the working of mines and the grant of mining licenses.	
63	To, No. 21 Surveys, dated 23rd November 1886.	Employment of Natives in the Geological Survey Department.	
64	To, No. 2 Minerals, dated 4th June 1887.	Lease of the Ruby Mines in Upper Burma.	
65	To, No. 3 Minerals, dated 11th June 1887.		
66	To, No. 5 Minerals, dated 6th August 1887.		
67	To, No. 7 Minerals, dated 19th May 1888.		
68	To, No. 12 Minerals, dated 9th October 1888.	Concession granted for working the earth oil deposits in the Punjab.	
69	To, No. 8 Minerals, dated 1st November 1887.		
70	To, No. 5 Minerals, dated 1st May 1888.		
71	To, No. 11 Minerals, dated 11th August 1888.		



No. in list.	No. and date of despatch.	Subject.	Remarks.
FOREST CONSERVANCY.			
72	From, No. 83 Revenue, dated 23rd September 1886.	Sir D. Brandis' suggestions regarding the Indian Forest Service.	
73	From, No. 5 Revenue, dated 15th January 1885.		
74	From, No. 85 Revenue, dated 30th September 1886.	Reorganization of the Forest Staff in Assam and Upper Burma.	
75	To, No. 3 Forests, dated 23rd July 1887.		
76	From, No. 88 Revenue, dated 3rd November 1887.		
77	From, No. 11 Revenue, dated 17th February 1887.		
78	To, No. 2 Forests, dated 15th May 1888.	Training at Cooper's Hill College of candidates for the Indian Forest Service.	
79	From, No. 52 Revenue, dated 19th July 1888.		
80	From, No. 18 Revenue, dated 8th March 1888.		
81	To, No. 172 Financial, dated 30th June 1888.		
82	To, No. 110 Foreign, dated 25th June 1886.		
83	From, No. 89 Revenue, dated 7th October 1887.		
84	From, No. 106 Revenue, dated 18th November 1886.	Lease of Forests in Upper Burma.	
85	To, No. 3 Forests, dated 9th June 1888.		
86	From, No. 62 Revenue, dated 9th August 1888.		
87	To, No. 8 Forests, dated 9th October 1888.		
INVENTIONS AND DESIGNS.			
Nil.			



No. in list.	No. and date of despatch.	Subject.	Remarks.
ARCHAEOLOGICAL SURVEY.			
88	To, No. 48 Financial, dated 17th February 1885.	} Reorganization of the Arch- aeological Survey.	
89	From, No. 39 Statistics and Commerce, dated 23rd April 1885.		
90	To, No. 236 Financial, dated 7th August 1886.		
91	From, No. 104 Statistics, and Commerce, dated 30th Sep- tember 1886.		
FISHERIES.			
Nil.			
LEGISLATIVE MEASURES.			
Nil.			

## Appendix II.

*Review of reports in the condition of the lower classes of the agricultural population and of measures for the relief of densely populated tracts.*

DESPATCH TO HER MAJESTY'S SECRETARY OF STATE FOR INDIA, No. 3  
FAMINE, DATED SIMLA, 30th OCTOBER 1888.

MY LORD,—We have the honour to forward, for Your Lordship's information, a copy of a Resolution which we have caused to be issued regarding the economic condition of the lower classes of the agricultural population and the measures which might be taken for the relief of densely populated tracts.

2. Copies of the reports referred to in the Resolution are also forwarded.

*Resolution No. 96, dated Simla, the 19th October 1888.*

1. In the Resolution which was issued in December 1881 on the organization of Agricultural Departments, and which dealt with the



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1. In the Resolution which was issued in December 1881 on the organization of Agricultural Departments, and which dealt with the



recommendations of the Famine Commissioners for the protection of the country against scarcity, distress and famine, His Excellency the Viceroy in Council directed that an analysis of agricultural tracts should gradually be set on foot with the view, firstly, of ascertaining in what parts of the Empire the agricultural population and the lower classes of the people are suffering from an insufficiency of food or agricultural capital; secondly, of discovering the causes of any conditions of degradation which might be found to exist; and, lastly, of suggesting or providing such remedies as might be found necessary or desirable. The policy of the Famine Commissioners was explained to be the maintenance of agricultural operations at a high standard of efficiency. The Government of India fully accepted its obligation to assist in the accomplishment of this important duty. It was urged upon Local Governments and Administrations that efficiency of agricultural operations could only be maintained at a proper standard by securing that cultivators and labourers, their families and cattle, are properly fed, and their need for labour and agricultural appliances adequately met. Insufficiency of food was pronounced to be one of the leading causes of agricultural degradation, and on this account as well as on account of the suffering due to an inadequate food-supply, to be a question which demanded the fullest investigation by Agricultural Departments.

The Government of India is aware that since the issue of the Resolution of 1881, the new Departments have been occupied in organizing a system under which complete information will eventually be collected regarding the condition and prospects of each village or tract of agricultural land, and which will ultimately lead to an intimate knowledge of the circumstances of the lower classes in every part of British India. The existence of distress and of the causes which may have produced it will then, it is anticipated, have been fully examined, and the time will then come for the application of the remedies which must, so far as they are within the means of the administration, be provided. His Excellency the Governor General is not, however, satisfied to leave to a future time, of which the distance is as yet unknown, the commencement of positive action towards the fulfilment of a duty which the Famine Commissioners appointed by Her Majesty's Secretary of State declared to be one of the most necessary functions of the Government. The recent expenditure of capital upon railways and canals has, it is true, done much in two important

directions to provide for the protection of the lower classes against scarcity and distress. But there are some other remedies enumerated in the 10th paragraph of the Resolution already quoted which in His Excellency's opinion admit to some extent at least of early application. Prominent among these is the promotion of emigration whether to Colonies or to other parts of British India. It is with the latter question—the promotion of inland emigration—that the present Resolution will deal.

2. It will be well in the first place to advert to emigration which already to a certain extent obtains in some parts of India, and to notice the more salient points indicated in the Census reports of 1881.

The relief afforded by emigration to the Colonies of Great Britain, France, and the Netherlands, which have, within the last ten years, taken only 151,955 Indian immigrants, is too small to meet the difficulties revealed by the Census returns of 1881. The movement is, however, beneficial to India, and may with the revival of the sugar trade again assume its former proportions. In any case the fact that natives of India can be induced even to this extent to emigrate to foreign countries seems to show that the problem with which we have to deal is not as hopelessly insoluble as it has sometimes been represented to be, and to justify the belief that they may be induced to move in larger numbers to unoccupied lands in the Indian Peninsula and Burma. There is, however, an advantage attending Colonial emigration which is wanting in any scheme which can be proposed for a comprehensive system of migration within India—in that the capital necessary to enable the emigrant to leave his home and to establish himself abroad is supplied by the planter. This advantage is also held out to emigrants who proceed to the tea gardens of Assam, and it is believed that during the last ten years nearly 300,000 persons have migrated thither; but although the relief thus afforded by the field of employment in Assam is undoubtedly perceptible, and is likely to become still more valuable as communications improve and capital increases, there are climatic influences which must at present preclude Assam from becoming a field for colonization on any very large scale. The annual movement of population to Burma, Ceylon, and the Straits Settlements is also considerable, and serves to keep up the standard of comfort in districts like Madura in Madras.

The census taken in 1881 disclosed the fact that in parts of India the pressure of population had reached a point beyond which further



increase would be attended with danger. In Bengal eight districts had a village population of more than 700 souls to the square mile, and the mean of the eight districts was reported to have "reached the astonishing figure of 802.66." In the North-Western Provinces and Oudh twenty-one districts had a population of more than 500 to the square mile; and in Benares, Balia, Jaunpore, Azamgarh, and Lucknow the mean density of population per square mile exceeded 700. In the Punjab no such figures were attained, but in eight districts the rural population varied between 300 and 400 per square mile—a condition of things which suggested the remark that "in the most populous districts the capacity of the soil to support agricultural population had been strained to the utmost."

Madras had no single instance of an entire district in which the density exceeded 600, and in the ordinary settled districts the extremes of density varied from 583 per square mile in Tanjore and 515 in Vizagapatam to 91 in Kurnool; but in certain taluks of the Tanjore district aggregating an area of 1,323 square miles the density of population was 877 per square mile. In Bombay the density of normal population nowhere reached a high figure; but the census taken in that Presidency indicated that in some districts the struggle for subsistence was severe.

As was to be expected, the density of the rural population was found to a great extent to depend on the fertility of the soil and on a favourable rainfall. In one district a population even of 800 to the square mile may live in comfort, while in another 200 to the square mile may mean starvation. But there can be little doubt that even in the most fertile districts of India, in some of which, as in Azamgarh, the population amounts to over 1,000 to each square mile of cultivation, the situation must be perilous.

Among other facts brought to light by the census operations of 1881 was the migration within India of large numbers of people from the province of their birth; and this fact suggested to His Excellency the Viceroy the desirability of, in the first place, instituting an enquiry into those cases in which a considerable population had been induced to move from overcrowded districts to sparsely inhabited tracts. The practical object of the enquiry was to set forth the agency or influences employed to initiate such movements, the difficulties attending them, and in the case of unsuccessful efforts, the causes of failure. The result has been the acquisition of valuable information, which is published in a condensed form as an Appendix (B) to this Resolution.

3. In anticipation of the detailed analytical examination of agricultural tracts, which it is the duty of the Departments of Land Records and Agriculture eventually to provide, but which may not be fully worked out for many years to come, His Excellency next considered it desirable that an enquiry should be made into the condition of the lower classes of the population, with a view to discovering what localities are, on account of the pressure of population and insufficiency of produce, in urgent need of relief.

The replies to the enquiry thus instituted are, on the whole, of an encouraging nature, and testify to the great progress in the prosperity and protection of agricultural interests which has followed the extension of railways and canals. But the Government of India desires it to be distinctly understood that the enquiry to which reference is now made was necessarily only of a cursory and incomplete character, and in no way supersedes the obligation, placed upon Departments of Land Records and Agriculture by the Resolution of 1881, to continue to work out the careful analysis of agricultural tracts, which is necessary in order to ascertain with certainty and precision in what localities any section of the lower classes of the population is suffering from insufficiency of food, or from other causes which tend to a degradation of agricultural operations and to local distress. In the meantime, the enquiry which has been made enables the Government of India to place before Local Governments and Administrations a sketch (Appendix A) of the general condition of the lower classes in India, and to indicate roughly the localities in respect to which it appears desirable to examine the question whether the inland migration can be usefully encouraged.

4. It may be stated briefly that, over the greater part of India, the condition of the lower classes of the agricultural population is not one which need cause any great anxiety at present. The circumstances of these classes are such as to secure in normal seasons physical efficiency for the performance of agricultural work, though in the tracts classed as "insecure" there is always a risk in the event of a failure of the rains, that the more indigent class of the people may be overtaken by distress in various degrees and forms, and be deprived of the wages ordinarily provided by the agricultural operations on which in normal seasons they depend for their livelihood. There is evidence to show that in all parts of India there is a numerous population which lives from hand to mouth, is always in debt owing to reckless expenditure on marriages and other ceremonies, and in consequence of this indebtedness



and of the fact that their creditors, the middlemen, intercept a large proportion of the profits of agriculture, does not save, and has little or nothing to fall back upon in bad seasons. Nevertheless, in the majority of cases, there is no sufficient cause for the direct interference of Government.

In one or two parts of the country, however, there seem to be grounds for anxiety. In Behar, it is believed, that 40 per cent. of a population of 15,313,359 is in a state of agricultural degradation. The chief remedy suggested by the Government of Bengal is emigration. Emigration to the Colonies, to the tea plantations of Assam, and with far greater effect to the eastern districts of Bengal, already relieves, in a certain measure, the congestion of population in Behar; but the obstacles of climate and language and the risk to health in reclaiming land in Assam or Eastern Bengal have hitherto impeded emigration on a larger scale. In the North-Western Provinces and Oudh there is now no evidence of marked agricultural degradation, and even in districts such as Balia, where the density of population is over 700 to the square mile, the fertility of soil which is the cause of the density of population secures general prosperity. Still the census figures, which show that in twenty-one districts there is a population of more than 500 to the square mile, suggest the inference that the time may not be far distant when it may be necessary to relieve over-population by some comprehensive scheme of emigration. This remark especially applies to the districts east of Lucknow. And although the Government of the North-Western Provinces and Oudh is of opinion that there is at present nothing which demands special action in those Provinces, it recognizes as the best corrective for local distress the emigration of the surplus population from one part of the country to another. In the rest of India, with the one exception of the Ratnagiri District in the Bombay Presidency, no precautionary measures of exceptional character seem to be immediately called for; so that in existing circumstances Behar is the tract which demands the chief and closest attention of the Administration. But as before remarked the enquiry which has been made and which has led to the above conclusion is only of a preliminary character and must be supplemented by the careful analysis of agricultural tracts which was enjoined on Departments of Land Records and Agriculture in the Resolution of 1881.

5. In considering the areas which are or may be rendered available for the relief of these overpopulated districts (which may briefly be

described as the alluvial region between Lucknow and Patna), it will be convenient to make some attempt to group unoccupied tracts under the several classes into which they naturally fall when certain well marked physical peculiarities are taken into consideration. The classification thus roughly assumed is not however put forward as accurate or exhaustive.

Land which is either unoccupied or insufficiently occupied may be divided into four classes:

- (a) culturable land which can support no population without irrigation;
- (b) culturable land which can support only a scanty population until supplied with irrigation or other protection against drought;
- (c) waste culturable land which when reclaimed can support a full population;
- (d) land unculturable owing to natural causes inherent in the soil.

Broadly speaking, the entire country west of a line from Peshawar to Bikanir and Bikanir to Karachi lies within class (a), and comprises about a third of the Punjab, with Sind, and the adjacent Native States. The average monsoon rainfall is much below 10 inches; the soil, though fertile, is arid, except along the line of rivers; water occurs only at a considerable depth, and wells are difficult of construction. Expanding population in these tracts must follow canal irrigation, which has been largely extended in recent years both in the Punjab and Sind, and will continue to be developed as rapidly as means permit.

The second division (b) embraces the regions to which the south-west monsoon gives only a rainfall varying from 10 to 30 inches. It is split into two sections, a northern and a southern, which together occupy about a third of the whole peninsula. The northern section lies within the angle formed between a line from Peshawar to Allahabad and a line from Allahabad to Baroda, and is of course, exclusive of the tract already classed under (a). The southern section is roughly represented by the interior of a triangle having the delta of the Godavery for its apex and the inner line of the Western Ghats for its base. Though sparsely populated, these regions are already almost wholly occupied, and the areas at the disposal of Government for colonization are small. But even if extensive areas were available, it is open to grave doubts whether Government would act wisely in encouraging the increase of population in these districts. Except in the lower half of the southern section, which is fed by the



north-east or cold weather monsoon, the rainfall is exceedingly precarious, and the population has at various periods been reduced by famine. Of recent years railways have done much to open up these tracts; but while improved communications will mitigate the loss of human life from starvation, they exercise no protective influence on agriculture, or the principal agencies through which agriculture is maintained—water and cattle. Protection can only be efficiently afforded by artificial irrigation, and in a great part of the tracts in question the means of irrigation are wanting, while in others the soil is unsuited for irrigation.

A consideration of climatic conditions and physical characteristics leads to the conclusion that the area grouped under the second class, though large and in parts fertile, affords little or no suitable outlet for redundant population.

A more hopeful prospect is offered by the tracts which may be grouped under class (c). These comprise the whole of the sub-Himalayan belt, large tracts in the Central Provinces, the unreclaimed forests lying between those Provinces and Madras, and so much of Burma as is not yet cultivated. A great part of this area, particularly in Burma, is at the disposal of Government; the soil is fertile, and the rainfall sufficient and regular. There is already a spontaneous expansion of agriculture going on; but ample opportunity exists for a more rapid and regular effort at colonization. In the central and western sub-Himalayan tracts there is perhaps but little land which could be utilized, while in the eastern portion of the same belt which lies below Darjeeling and in Assam, waste lands are already being opened up under the influence of European capital and improved communications, and it would seem unwise to interfere with or hasten this development. But in the Central Provinces there exists a fairly considerable area of Government land possibly suitable for emigrants from the North-Western Provinces; and in Burma, where the acquisition of the Upper Province has given to India an accession of culturable land, of which the area is sufficient to meet the needs of the redundant population of Madras and Bengal for many years, there are extensive tracts of land fitted for settlers from those Provinces. His Excellency the Governor General in Council has consulted the Local Governments as to the measures which may be taken to bring these lands under colonization.

Coming to class (d), it may be said to comprise all the barren tracts of pure rock, sand and saline soils which are to be found scattered over India, and which amount roughly to one-sixth of the total area of

British territory. Though at present unfitted to support population, certain of these tracts may by skilful treatment be rendered culturable; and with this object in view, it is of importance that they should be retained in the possession of Government. The measures which may be taken for their reclamation deserve discussion: they do not, however, come within the scope of the present enquiry.

6. It is of importance to bear in mind the exact words of the Famine Commissioners when alluding to a possible scheme of migration. They spoke of the "physical wants and the mental and moral idiosyncracies of the Indian agricultural population," and the following typical instances of migration, which will be briefly noticed, show that these wants and idiosyncracies require most careful attention.

The Jagdispur jungle in the Shahabad district, Bengal, about 8,000 acres in extent, was cleared by Government, and a lease of it given to a European firm. The whole area has been reclaimed, and is now cultivated by a thriving tenantry. In 1859 there was not a single inhabitant. In 1881 the population was 8,597. The success in Jagdispur is, to a large extent, due to the cautious manner in which the lessees proceeded. They did not risk failure by gathering too many emigrants at a time. They found that a very few families sufficed to form a nucleus; and that when once a reasonable prosperity was assured to them, other families soon followed in their footsteps. They found it necessary to place some one in charge of their emigrants, who could communicate with the authorities, help them in their troubles, whether domestic, social or agricultural, and prevent them from getting into debt to money-lenders. Materials for roofing their huts, and assistance in the way of loans of seed, cattle and implements, were given, and the emigrants were secured in a right of occupancy after they had ploughed and sown the land.

In the Chanchal estate in the Maldah district, in Bengal, a ridge of waste about six miles in length was reclaimed by the Manager of the estate, who induced some 30 families of Santals to settle. For the first year the Santals were helped with seedgrain, and were given employment of various descriptions until their crops were fit to cut. Light rates were charged, and in ten years the number of families increased from 30 to 300.

Another instance of Santal migration deserves to be mentioned. In 1880 the Indian Home Mission to the Santals after prospecting the



neighbourhood of Guma Dwar in the Goalpara District of Assam took twenty Santals there as pioneers to build sheds for the coming settlers. At the beginning of 1881, 220 Santals started and after surmounting many difficulties they have established nine villages with a population of some 700 persons. They maintain their own village system, they settle their differences among themselves and are all now well to do. The success of the movement is due to the fact that it has been led and supervised by practical Europeans of the Mission who possessed the confidence of the Santals. Government has also assisted by defraying the travelling expenses of the emigrants from the Santal Parganas to Guma Dwar and by granting advances free of interest to the settlers until they could reap a crop of their own.

There are numerous other instances of successful reclamation effected by capitalists, which will be found in the Appendix (B) to this Resolution. A scheme of colonization, which was directly initiated by Government, deserves to be noticed here as the circumstances attending its failure furnish an useful lesson. The details of the Charwa colonization scheme were as follows. An agricultural colony was to be established in the Charwa jungle, in the west of the Hoshangabad district, Central Provinces, the site proposed being within a few miles of the Bombay road and the Great Indian Peninsula Railway; the land was rich and the climate good. The colonists were to be drawn from the Kurmi, Jat, Ahir, and other good cultivating castes in the trans-Ganges portion of the Allahabad and adjoining districts, and in the neighbouring parts of Oudh, and they were to be numerous enough to permit of 10 villages of 50 families each being founded. Men of character and influence were to be attracted to lead the emigration by promises of revenue free land. The colonists were to be transported by rail to Charwa; and when there, were to be supplied with plough cattle and agricultural implements. The settlement of each family was estimated to cost Rs. 200. The requisite funds, amounting to one lakh of rupees, were made available on condition that all rents paid by the colonists until the expiry of the settlement of Hoshangabad were credited in repayment of the amount advanced. In sanctioning the scheme the Government of India was not sanguine as to its success; and the subsequent history of the Charwa colony justified this doubt. It will be seen, in the first place, that one of the conditions which led to success in the Jagdispur estate was neglected in the Charwa scheme, and that an attempt was made to found off-hand 10 villages of 50 families each. Recruitment on so large

a scale made it difficult to exercise much selection ; and owing to the unfortunate choice of an agent for recruiting, the great majority of the persons who were located in Charwa, amounting at one time to 211 families of 1,056 souls, were not really cultivators ; and even those of them who were accustomed to agricultural work were by no means the substantial raiyats whose settlement it was the object of the scheme to promote. In addition to this mistake in the selection of the settlers which in itself was fatal to success, there was an entire absence of leaders among the people, and consequently of any bond of union to enable them to overcome the hardships necessarily incident to any attempt to colonise an uncultivated tract in a new country. The scheme failed utterly ; and although its failure was almost entirely due to a neglect of the principles upon which it had been based and sanctioned, the discouraging experience of the Charwa colony has perhaps led to exaggerated ideas of the difficulties attending large reclamation and colonization projects.

It is also instructive to notice the various attempts made by Government to encourage emigrants to settle in Lower Burma. In 1874, Bengal immigrants were introduced into Burma under a three-years' agreement. Most favourable terms were given, and about 7,000 persons were imported. Of these, 800 absconded and returned to India ; some found employment on the railways, roads, and canals ; some few enlisted in the police ; others took to domestic service ; and a very small number settled down to cultivation in the Moulmein district. The expenditure on this scheme amounted to nearly 3 lakhs of rupees, of which only  $1\frac{1}{4}$  lakhs was recovered.

In 1876 a scheme was started to introduce labour from Madras. The immigrants bound themselves under contract to work at a certain rate of wages, and Government undertook to pay them the specified wages, if no other employment were found for them. The scheme proceeded on the erroneous assumption that there were large employers of labour in Burma, who would gladly avail themselves of the services of the coolies, and who might induce the immigrant families to settle down on farms in the country. About 758 persons were imported and the scheme was abandoned at a loss to Government of Rs. 37,448.

In 1882 the Behar emigration scheme was introduced. Again most favourable terms were offered by Government. The passage of each family was paid to Rangoon, and their conveyance to the village in which they were to live was defrayed by Government. Houses



were supplied, and food given, free of cost, until wages could be earned; and work was assured to able-bodied labourers for one year. After completion of a year's work, holdings of culturable land in proprietary right of an area varying from 10 to 20 acres were to be allotted to each family. These holdings were to be exempt from land revenue for five years. Finally a special officer was to be deputed to take charge of the colonists and to guard their interests. About 70 men and 4 women were sent to the Pyuntaza plain. They remained for a few weeks on the sites selected for them, receiving Government rations and doing but little work. At the end of that time they abandoned their homes, and took employment as coolies on the railway line, or returned to Rangoon. The scheme failed after costing Government Rs. 33,000.

The failure of the above schemes has been attributed by local officers to three causes:

- (i) The dislike of the natives of India to abandon their homes and to settle down in a foreign country. The result of this feeling is, that only the lower classes of the population, who are useless as agricultural settlers, can be induced to move.
- (ii) The agency which Government is compelled to employ is very varied, and the agents often induce the people to abandon their homes by fallacious promises, the non-fulfilment of which produces discontent among the immigrants.
- (iii) Government is unable to watch over the immigrants, and protect them against the petty annoyances which they meet with in a new country amongst people differing from them in language and customs.

It may be remarked in connection with this explanation of failure that the experience gained from Colonial emigration does not support the view that the classes who are induced to move are useless as agricultural settlers, and suggests the theory that the success attending Colonial emigration is due to the existence of an agency for recruiting which understands its work. Language is an undoubted difficulty but not of serious importance, if colonization is carried out on prudent lines.

The inferences which may perhaps be drawn from the history of the Charwa scheme in the Central Provinces, and the three attempts

in Burma, are, that if private capitalists are forthcoming, it will be better to work through them than to undertake direct responsibility on behalf of Government, and that personal supervision and continuity of effort are essential to success.

7. It is encouraging to turn from these records of failure to the consideration of a scheme which has been carried out in the Multan district in the Punjab under careful personal supervision and with laudable continuity of effort. The Sidhnai canal in Multan was opened in May 1886, and can irrigate about 48,000 acres annually. The area irrigable from the canal was almost entirely destitute of population, and it was necessary to attract cultivators from other districts. For four months the Deputy Commissioner of the district failed to obtain any cultivators; but at last one man came down to prospect. He was satisfied and returned to his home in the Lahore district, whence he brought a number of his relatives. He was allowed to choose his own watercourse; and fortunately the first crop sown gave a good out-turn. Thereafter the Deputy Commissioner was inundated with applications for land; and by March 1888 some 600 adults of the cultivating classes, emigrants from other districts, were settled on plots averaging 90 acres each. The scheme has proved in every way successful; and its success is due to the fact that the Deputy Commissioner watched the location of immigrants, carefully selected the men who were to bring their relatives and friends to his district, and corresponded freely with Deputy Commissioners of other districts as to the class of men he wished to settle on the new lands.

In congratulating the Punjab Government on the manner in which this measure has been carried through, His Excellency the Governor General in Council considers that the lines laid down by that Government may be found within certain limits applicable to other parts of India. In the first place, recruitment proceeded under the supervision of district officers; and the greatest care was taken in the selection of leaders. Next, arrangements were made to enable the settlers to irrigate their lands at once, and thus, at the first harvest, to obtain a crop, without which the cattle could not have been fed. Takavi advances were freely given: and settlers were encouraged to sink wells. Lastly, as far as it was possible, men of the same brotherhood or caste, or in some way connected and having common interests, were settled in the same village.



It is, however, evident that the movement of population from Lahore to Multan involves far less change of climate, of social customs, and of language, and far fewer difficulties, than the translation of population from Bengal to Burma, or from the North-Western Provinces to the Central Provinces; but His Excellency feels assured that, with a liberal and wise use of the provisions of the Land Improvement Loans Act and the Agriculturists' Loans Act, and with fair rules for the lease of waste land, accompanied by proper supervision and continuous effort, the measure can be commenced and sustained with no very great outlay of capital.

The offer by the Local Government of a fairly liberal lease of 15,000 acres of waste land in the Tinnassery Division has recently induced a well-known pioneer of colonization schemes to undertake at his own expense the settlement in Lower Burma of agriculturists from Behar, and to endeavour to introduce new staples and new methods of agriculture, and it is hoped that others will follow this example.

8. Before coming to any decision as to the measures which should be advocated for the colonization of waste tracts, His Excellency in Council desired that the opinion of those officers who would hereafter be employed in directing the movement should be obtained; and accordingly at the beginning of April last a Conference of the Directors of the Provincial Departments of Land Records and Agriculture was held at Delhi, at which, with the permission of the various Local Governments, the question of moving population to unoccupied tracts was discussed. The details of such movements received careful consideration, and the difficulties experienced in the past were fully set forward. The Conference was agreed that it was desirable to take measures for generally promoting the policy, and that in particular every facility should be given to emigrants from Behar and the North-Western Provinces for obtaining land in the Central Provinces, or in Burma. It was pointed out that the people of Behar had much in common with the natives of the Central Provinces, and that a ryotwari settlement might be offered to immigrants from crowded districts of Bengal in the latter Provinces, but that such a system of settlement would greatly depend for its success on the liberal grant of advances by Government under the Agriculturists' Loans Act. The question of working through capitalists was discussed; and it was agreed that when capitalists or adjoining landowners were ready to undertake

schemes of colonization, it would be better to employ them and afford to them every reasonable facility. The Conference was of opinion that the best plan for carrying out a scheme of colonization from one Province to another would be to appoint in each a Special Officer, acquainted with the agricultural conditions of his own Province, for the conduct of operations or negotiations with capitalists; to circulate information as to the precise terms on which land could be obtained in the Central Provinces, Burma, and elsewhere, the nature of the soil, and the climatic conditions of the neighbourhood. The three chief difficulties which, in the opinion of the Conference, beset the scheme of colonization were climate, expense of moving and settling, and language; and in appraising the success which had attended the Sidhnai colonization in the Punjab, they noticed that these difficulties had hardly been present. Two courses seemed open in moving population on a large scale to Burma or the Central Provinces, *viz.*, either to trust to capitalists working for their own profit, or to adopt a system of emigration, under the supervision of Government officers, with advances made by Government. Although the latter course might not in some cases prove financially successful, yet considering the importance of the end in view, the Conference did not deprecate a trial of it, and their conclusions have been placed for consideration before the Local Governments chiefly interested.

The question has so far been viewed under one aspect, that of the necessity of relieving congested tracts. But there is another important aspect under which it must be regarded, *viz.*, that of the desirability of promoting the wealth of the country by developing the cultivation of tracts now lying waste and unproductive. This financial consideration is one which should not be left out of sight; and while commending the scheme to Local Governments as a means of meeting the exigencies of over population, His Excellency in Council trusts that the ultimate financial benefits of the movement may induce the various Administrations concerned to deal with the question in a liberal and far-seeing manner.

9. It must be remembered that the Government of India is in a very different position now from that in which it stood when the report of the Famine Commission was presented, and when the schemes of emigration which have been alluded to in paragraph 5 of this Resolution were undertaken. A large tract of country has recently been added to the Empire in Burma, and though the information about its agricultural





capabilities is necessarily incomplete at present, it cannot be doubted that the annexation of Upper Burma will help to solve the problem of relieving the congested tracts of India on a scale and in a manner which could never have been obtained by emigration to the limited and unhealthy area of the Central Provinces. It has been held by those who have considered the question that a large initial mortality must be expected in the reclamation of waste lands, and this opinion, so far as it relates to tracts in the Central Provinces, in the Terai, and in Assam, is more or less based on experience. But as at present advised the Government of India does not anticipate that the climate and conditions of Upper Burma will prove prejudicial to the health of the Indian agriculturist, and it seems in every way expedient that attention should be chiefly directed to that country as the possible field for relieving overpopulation in India. The first essential in colonization in India is the opening out of communications, and it is found that when once good roads are established population moves along them easily and rapidly. A great step has been already made by the construction of the railway to Mandalay, and feeder roads will probably bring within the reach of emigrants land of excellent quality. In the past the subsidies to steamers plying to Rangoon produced a much larger influx of population than any of the schemes which were directly undertaken by Government.

Some preliminary proposals of a practical nature have already been submitted by the Chief Commissioner of Burma, and are now under the consideration of the Government of India. Large grants of land to capitalists are advocated, and it is proposed to set aside 100,000 acres for this purpose in Lower and Upper Burma. It is recommended that the grantees should be allowed to settle their own terms with tenants, that the grants should at first be made on liberal conditions, that precautions should be taken to avoid the importation of immigrants at inconvenient seasons when employment is not forthcoming, that care should be taken in the selection of immigrants, that they should not be kept in dépôt in Rangoon, and lastly, that no immigrants except those who come to settle as cultivators should at first at any rate be accompanied by their wives.

10. It is especially important that the Chief Commissioners of Burma and the Central Provinces should collect information which would show the area of waste land available for cultivation, the nature of the soil, the character of the cultivation practised in the vicinity, the

climatic conditions of the neighbourhood, the routes by which the land may be reached, and the conditions under which the land is to be leased. This information will be published in all Provinces of India, the Governments of which should require the Departments of Lands Records and Agriculture to take early steps towards disseminating among the people of overcrowded tracts the particulars furnished by the Chief Commissioners, to submit definite proposals for further suitable action, and to encourage the development of such schemes as that which has already secured the colonization of a tract in Lower Burma by settlers from Bengal.

11. It will be convenient in conclusion to summarize the measures which the Government of India has, under the direction of His Excellency Lord Dufferin, already taken in connection with the subject of inland emigration: Firstly, the obligation has been placed upon Departments of Land Records and Agriculture to ascertain in what tracts relief is needed. Secondly, an enquiry has been instituted into the facts and circumstances under which population now moves from one part of India to another. Thirdly, an enquiry has been made into the condition of the agricultural population in all parts of India. Fourthly, the subject has been with the permission of the Local Governments, discussed at a Conference of the Directors of the Departments of Land Records and Agriculture whose proceedings has been placed before them for consideration. Fifthly, the Governments of the North-Western Provinces and Bengal, which contain the most crowded tracts, were invited to depute officers to the Central Provinces and Burma for discussion with the authorities there of the procedure which should be adopted.

It now remains for the Local Governments concerned to submit their opinion and advice to the Supreme Government.

[ True Extract. ]

E. C. BUCK,

*Secretary to the Government of India.*

#### APPENDIX A.

*Précis of the Reports received on the enquiry made into the condition of the lower classes of the population.*

There are many points brought to notice in the reports which are universal throughout the country. The indebtedness of the agriculturist,



and his dependence on the money-lender, is a common feature in all Provinces. The absence of thrift is a very prominent characteristic of the people; and it is not an exaggeration to say that over the greater part of the continent the small cultivators and labourers live from hand to mouth. The prevailing custom of extravagant expenditure on marriages and other ceremonies appears in every report. The depression of certain classes of artisans, whose occupation has disappeared before the inroad of foreign goods, is noticed in most Provinces; but there is evidence that this class is finding new forms of employment, and the fact need not cause much anxiety.

The information given regarding diet, clothes, and houses is both useful and interesting. In *Bengal* the two meals a day, with rice as the staple food, change in the *North-Western Provinces and Oudh* into three meals a day, consisting of maize, millets, and pulse, and, as the spring crop is harvested, of barley, peas, and gram, eked out with vegetable pottage. Milk everywhere is a great auxiliary; and in normal years the people seem to enjoy a rude plenty. In the *Punjab* the *ser ata*, i.e., two pounds of flour, is the ordinary ration; and this is supplemented by pulse, vegetables, and condiments. Similarly in *Bombay* the ration of an adult man consists of two pounds of grain, chiefly millets, and occasionally rice and wheat, helped with pulse and condiments. In *Sind* the diet is more generous. Meat is not unfrequent, and milk or eurd and ghi seldom absent. In *Madras* a wage of 6 rupees a month enables a whole family to have three meals a day of rice and ragi (millet), with toddy or fish (near the coast), and butcher's meat once or twice a week. But such a wage does not admit of the use of milk, butter-milk, or ghi.

The information given about clothing is valuable, for the style of dress very often reflects the condition of the rural poor, while the evidence as to the general use of ornaments and jewelry suggest that the mass of the people have a margin they could fall back upon when labour was not forthcoming. In *Bengal* the dress of an ordinary peasant is a *dhooti*, or cloth worn round the waist and reaching down to the knee, and a piece of smaller cloth called a *gumcha*, or scarf. This serves the double functions of a towel at the bathing ghat, and a turban in the fields. Some can afford the luxury of a shirt or *piran* and a *chadur*, or long scarf worn on the upper part of the body, a pair of slippers and an umbrella. The women wear a single *dhooti* or *sari* wrapped round from the head to the ankles. The ordinary *dhooti* costs about one rupee.

“Their clothes are always scanty, not so much from poverty, as from the fact that they are not used to wearing much clothes.” In *Behar* a *rezai*, or quilt, is added to the wardrobe for winter use. Trinkets and jewelry are common, and it is a noticeable fact that English piece-goods seem universally used in Bengal. In the *North-Western Provinces and Oudh* the men are fairly clad; most of them have a padded quilt or blanket for the cold weather. The women and children are worse off. A village woman rarely has any wraps. Most of them pass the nights in their day clothes—a cotton petticoat, wrapper, and bodice. “As a rule, they and the children sleep in the cold weather during the warm afternoons and the early hours of night, and from midnight to dawn cower over a fire of rubbish in the yard of the dwelling house.” Mr. Irwin, in *Rae Bareilly*, comments on the scarcity of warm clothing. He found among 173 persons only 10 blankets, 16 *rezais* (quilts stuffed with cotton) and 24 quilts; so that more than three-fourths of these persons went through the winter with no better covering than the common sheet. There is evidence to show that during the three months of severe cold, *viz.*, from December to February, the lowest classes, especially the women and children, are insufficiently clad. In the *Punjab*, with the exception of the notice of clothes made, in selected cases, of the *Delhi* Division, nothing is said as to dress, but the style is much the same as in the *North-Western Provinces and Oudh* though the use of *rezais* is probably more general in the colder climate of the *Punjab*. In *Bombay* full information is given. The usual clothing of a man consists of shoulder and waist-cloths, jacket, turban and shoes, with a blanket for protection against cold and damp. A woman has a petticoat, bodice and cotton wrapper, and generally shoes. The earlier tribes wear scantier clothing and spend about Re. 1-6-0 on their dress. For agriculturists generally the cost of clothes varies from about 4 to 5 rupees. In *Madras* nothing is said as to clothes. In *Assam* the dress of the people is above their station in life. In *Berar*, the people are well clad. In the *Central Provinces*, but little clothing is wanted, and the people apparently possess this. It should be noticed in conclusion, that the use of ornaments is almost universal.

The houses of the agricultural classes are of the most primitive description, but they serve the purpose of shelter. *Bengal* appears to be worst off in the matter of houses. Mud-walls and a thatch, or bamboo walls, when as in *Behar* the soil is such, that mud-walls cannot be built, make up the simple architecture of *Bengal*. In *Orissa* the houses are



built on each side of a fairly wide street with a background or garden. There ventilation is possible, and the houses are neat and clean. Elsewhere it may be said that the houses are dark and entirely without ventilation. Nothing is said about houses in the *North-Western Provinces and Oudh*, and the *Punjab*. In *Bombay* the style of houses varies. In *Gujerat* houses are either tiled or thatched, with walls of bamboo or mud. In the *Deccan* stone and sun-dried bricks are used. In the *Konkan* wattle-walls appear, while in *Sind* the vast majority of the lower classes are contented with a thatched wattle-walled hut of tamarisk twigs, which would cost about Rs. 3 a year. The Government of *Madras* states that the old thatched hut is being largely replaced by the tiled house. In the *Central Provinces* there are the usual huts, wattle-walled, clay or sun-dried bricks, with a grass thatch. In *Assam* the houses of the poorest peasants though constructed of the flimsiest materials are considered to be far more commodious than those of persons of a similar class in other parts of India.

#### *Bengal.*

It is to be noticed that there is far more prosperity in the eastern than in western districts of *Bengal*. In the  
\* Area 12,118 sq. m. Population 3,574,018. *Chittagong*\* Division the cultivators and agricultural labourers are described as being in a state of at least, comparative comfort. The people of *Chittagong* are mostly agriculturists; and even day-labourers, domestic servants, &c., have their patch of land, which is cultivated by them or their families.

Their houses are larger and better than the houses in *Western Bengal*; they wear better clothes; they eat better food, not infrequently flesh—and can afford to remain idle, and to amuse themselves for days together. Several reasons are given for the prosperity in *Chittagong*:—the low assessment of land revenue; the security from failure of the principal crop—rice; the fertility of the soil; and the facilities of water-carriage. One opinion is given by a Native official, which is utterly opposed to that given by all the other officers of the division. He considers that the struggle for existence is becoming harder; that the rise in wages has been more than counterbalanced by a rise in the price of provisions; and that the export of rice is an evil.

The condition of things in the *Dacca*† Division is still more prosperous though it should be remembered that  
† Area 15,000 sq. m. Population 8,700,000. the weavers, potters, and some other castes or classes, who cling to an hereditary employment in places where it has

ceased to be remunerative, or in numbers exceeding the demand, are no doubt in bad circumstances. Mr. Larminie, the Commissioner, writes that, "looking to their needs, the peasantry of *Eastern Bengal* are about the most prosperous in the world." In *Central Bengal*, which

• Area 12,029 sq. m. Population 8,201,912.  
 † Area 17,428 sq. m. Population 7,733,775.  
 ‡ Area 4,950 sq. m. Population 1,845,087.  
 § Area 1,891 sq. m. Population 710,148.  
 || Area 2,144 sq. m. Population 1,226,700.

is composed of the *Presidency\** and *Rajshahy†* Divisions, with the *Purneah‡* and *Maldah§* districts, the agricultural classes are almost as prosperous as those of *Eastern Bengal*. The labourer gets from 3 to 4 annas a day; and there is a great demand for skilled labour. In

*Moorshedabad,||* in the extreme west of the division, the wages of agricultural labour sometimes fall to 2 annas a day, which may be considered as the minimum consistent with the unstinted supply of food to ordinary families; but, with this exception, *Central Bengal* is a tract where the question of deficiency of food does not arise. The Collector of *Maldah* writes "the cultivators with holdings less than average (5 acres) have in ordinary years more than enough to live upon in a way that implies the best physical condition of which the climate and their habits admit, and with a margin to provide against an occasional bad season." The weavers are badly off, but the rest of the artisans are fairly well off, and the labourers, though living poorly and from hand to mouth, are not on the verge of destitution. A large proportion of them undergo suffering in bad years and need urgent relief in times of severe drought or flood. In *Purneah* the climate is enervating and the population indolent, but in ordinary years the cultivators are "extremely comfortably off." The report of Mr. Smith, Commissioner of the *Presidency* Division, contains few opinions, but many facts of importance—

"Good seasons go to balance bad seasons in the matter of the *mahajan's* bill. During times of scarcity heavier debts are incurred, which are paid off in years of plenty. It is the nature of a native of the lower classes to accept advances wherever he can get them. *Indebtedness seldom means starvation, but usually quite the reverse.*"

Mr. Forbes writes:

"The general conclusions to which the result of the enquiries points are that, while the upper classes of cultivators holding directly from the zamindar, are in easy and independent circumstances, the under-tenants, though paying comparatively high rents, are still able with ordinary ease to provide themselves with a sufficiency of food and clothing and other necessaries". . . . "there is no cause for anxiety under any ordinary circumstances, such as have obtained for many years past, as regards



any class of the labouring population suffering from an insufficiency of food-supply."

Mr. Smith's report abounds in useful statistics. His remarks upon beggars are interesting, and the following passage possesses an interest in connection with famine relief :—

"The natives of the country, both Hindus and Mahomedans, though by custom and religion exceedingly charitable, are not actively so. The recipients of charity must come to their doors to be fed. The result is that the sturdy beggar prospers while the sick and infirm, who are beggars not by choice but from necessity, are often left to starve unpitied, and their condition does not awake any active feeling of sympathy among their neighbours."

The facts quoted by Mr. Smith regarding beggars show that this numerous class is a great drain upon the resources of the agricultural classes.

The *Burdwan*\* Division, with the Metropolitan District of *Hooghly*,† *Howrah* ‡ and *Burdwan*,§ has the full benefit of the neighbourhood of Calcutta. It has been affected by the Burdwan fever, which while reducing the population has also tended to increase the demand for labour and to keep the supply of land for cultivation undiminished. "Under such conditions it appears that a sufficient maintenance may be earned even by a people debilitated by recurring illness."

Mr. Toynbee, the Collector of *Hooghly*, whose evidence before the Famine Commission as Collector of Patna was of a somewhat gloomy nature, now records :

"The condition of the poorer classes in this district, compared with that of the same classes in England, may unhesitatingly be described as superior in every respect. There is no such thing as want or starvation among them, and not one individual who does not know, when he rises in the morning, how or where he will procure food for the day. Their wants are few and easily satisfied. The climate in which they live and all their surroundings are enervating and, to our view, demoralizing; ambition they have none, beyond the immediate wants and wishes of the day; but judged from their own point of view, and by their own standard, they are prosperous and contented; and I doubt not that there are thousands upon thousands of the English poor who would gladly change their places with them."

In *Burdwan* District the effects of the fever are painfully prominent. "The sickly physique is now the ordinary physique and commands the ordinary labour rates. The healthy physique is the exceptional one and commands special and very high rates." But in spite of

\* Area 13,855 sq. m. Population 7,393,964.  
† Area 1,223 sq. m. Population 1,012,765.  
‡ Area 476 sq. m. Population 635,391.  
§ Area 2,097 sq. m. Population 1,391,823.

the fever Mr. Oldham, the Collector, is able to state after a very careful enquiry :

" Finally, taking the rates of food which have prevailed for the last 13 years, they have enough with which to procure, and they do procure, a sufficiency of wholesome food enough to support their wives, children and dependent relatives ; to bestow on their universal charity ; to expend on festivals and celebrations, and to enable them to meet at least the approaches of a time of scarcity. They are much better off than I, on a superficial view of their circumstances, or than their own fellow-residents of superior station, suppose them to be ; and the only individuals among them who have no margin, or but the slenderest margin, are their dependent relatives, the most numerous of whom are old widows and others disabled by sickness, age, or some bodily mental infirmity."

In *Midnapur*\* District the first note of distress is struck, and, although the Bengal Government in its review states that symptoms of chronic poverty appear in *Bankoorah*† District, it can hardly be concluded from the Collector's report that the situation in *Bankoorah* is at all unfavourable. He writes : " the cultivators and other people including labourers are generally beyond the power of heartless money-lenders and live more comfortably off than their forefathers. Debts are incurred for marriages and other ceremonies. Agricultural labourers get on an average 2½ annas a day, which is barely sufficient to meet their daily expenses ; but there is no want of work for them." In *Midnapur* District, however, there is evidence furnished by the native Settlement Officer which suggests that the condition of the ryots in a part of the district is unsatisfactory. Land and cattle are both stated to be deteriorating—the former from impoverishment of the soil ; the latter from want of fodder. The grazing grounds have disappeared before the weavers and other castes, who have now taken to agriculture for their subsistence. The ryots live from hand to mouth. Two full meals of coarse rice per day are a luxury to them. They cannot afford *dal* and vegetables daily : salt is their ordinary condiment and *kalmi* (a kind of aquatic plant), and boiled *brinjal* form their daily vegetable diet. The increase of salt duty has been a great hardship to them. They think themselves fortunate when they get fish and *dal* at dinner : this they hardly do more than once a week. Their physique has deteriorated from insufficient food and constant attacks of malarious fever.

Great weight should be given in *Bengal* to the opinion of a Settlement Officer, as he possesses means of acquiring information which the ordinary district officers do not enjoy, but it is to be noticed that the



sub-divisional officers of the *Midnapur* District are of opinion that all the people have a sufficiency of food. Moreover, with Calcutta near at hand, there need be no alarm for the agricultural classes of *Midnapur*, and, briefly stated, there is nothing in the circumstances of the divisions mentioned above which would justify any presumption that the people are generally in a condition requiring relief.

But on passing into the province of *Behar*,\* which includes the districts of *Monghyr*† and *Bhagulpur*‡ as well as the *Patna* Division,§ the scene changes. Excluding *Champaran*|| and *Shahabad*¶ districts where land remains to be broken up, the *Behar* Province comprises seven districts, *Patna*,\*\* *Gya*,†† *Muzzafarpur*,‡‡ *Durbhunga*,§§ *Sarun*,||| \* *Bhagulpur* and *Monghyr*, with a population of 15,313,359. Wages are low; the highest wage is 2 annas a day: employment is insufficient: rents are high and tenure is insecure.

The facts included in the following extracts apply generally to all the seven named districts of *Behar*:

The Settlement Officer, Mr. Collin, writing with special reference to two villages examined by him in the district, observes:—"From the foregoing description of the condition of the agricultural classes in this pergunnah (Daphor), it appears that they need not at present cause any apprehension and that in ordinary years they have sufficient means of subsistence. The picture which I have drawn does not, however, show any great prosperity, and shows that the lower classes, which, including the weaving class, amounting to 25 per cent. of the population, have little chance of improving their position, and that they would have no resources to fall back upon in time of scarcity." The Collector of *Monghyr* remarks that he has come across many inhabitants who were thin and apparently in want of due nourishment. The Collector of *Patna* writes of ryots holding less than four local bighas, or two and a half acres:—"Their fare is of the very coarsest, consisting to a great extent of *khesar*, *dak*, and the quantity is insufficient during a considerable part of the year. They can only take one full meal instead of two. They are badly housed, and in the cold weather insufficiently clothed." As to labourers, he adds, that their condition is rather worse: "They are almost always paid in kind, the usual allowance of a grown man being 2 to 2½ seers of the coarsest and cheapest grain, value about 1½ annas. Women receive about half this rate, but their employment is less regular. Ordinarily, male labourers do not find employment for more than eight months of the year." The conclusion to be drawn is that, of the agricultural population, a large proportion, say 40 per cent., are insufficiently fed, to say nothing of clothing and housing. They have enough food to support life and to enable them to work, but they have to undergo long fasts, having for a considerable part of the year to satisfy

themselves with one full meal in the day. With regard to Gya, the Commissioner accepts a statement made by the Collector that 40 per cent. of the population are insufficiently fed. Dr. Lethbridge, the Inspector General of Jails, writes :—" In Behar, the districts of Mozufferpore and Sarun, and parts of Durbhunga and Chumparun are the worst, and there is almost constant insufficiency of food among those who earn their living by daily labour."

The remarks of the Bengal Government on the measures which suggest themselves for relieving the pressure in *Behar* should be read. A survey and record-of-rights under the Bengal Tenancy Act, emigration and popular education, are all mentioned; but of these emigration which is now rendered possible on a large scale by the annexation of Upper Burma, appears to be the most practical and expedient.

Sufficient has been quoted to show that in the seven districts of the Behar Province the struggle for existence is very severe; but a few statements made by the Collector of *Bhagulpur* and the Settlement Officer of the Banaili and Srinagar Estate may be added. The former writes: "the mass of ryots are not under-fed, but the labourer is under-fed for about a fourth of the year. His wage as quoted in cash is miserably low, and varies from five pice in the south and extreme north to six pice over most of the district. Cash payments are rare, and although the labourer benefits to a small degree by the rise of prices, *viz.*, to the extent that his wage on grain exceeds his actual consumption thereof, the system of grain payment is a real danger to the population. For directly a crop shows signs of failing, the grain store is husbanded, and the labourers are under-fed. The weaver is the worst-fed man in the village community.

The Settlement Officer of the Srinagar estate gives interesting details as to the employment and food of the labourers. Employment is forthcoming for six months in the year; for the remainder of the year it is fitful or entirely wanting. The villagers do not purchase oil except for rubbing on the head and body occasionally. It would be luxury if they could get some oil to cook their vegetables. The conclusions of this officer are summed up thus :—The working classes with or without small holding are badly clothed, badly housed; do not enjoy any luxury of life; live from hand to mouth, but do not suffer from actual want of food in ordinary years.

The *Chota Nagpur* Division\* covers an immense area and contains

\* Area 20,066 sq. m. Population 4,212,989. races whose conditions varies from little more than savagery to orderly and civilized communities. The Inspector General of Jails remarks that the only parts of



*Bengal* in which there need be anxiety regarding sufficiency of food, are *Behar* and *Chota Nagpur*. In *Manbhoom*\*  
 \* Area 4,147 sq. m. Population 1,058,228.

District it is stated that among the labouring classes there is a section, under one fifth, which is well-to-do, but the majority have to put up with a standard of living which is barely half as high as that common among the cultivators. In the *Singbhoom*†

† Area 3,753 sq. m. Population 453,775.  
 ‡ Area 12,045 sq. m. Population 1,609,244.

District there are no indications of want, and in some parts there is distinct prosperity. In the *Lohardugga*‡ District there is good evidence to show that two meals a day is the rule, and the number of cattle and utensils argues a comfortable state of things. Emigration and employment in the local tea gardens also assist to keep up the standard of living.

In the *Hazaribagh*§ District there is no ground for anxiety, and the district reports justify the conclusion of the Commissioner that, though debt is rife and there are many poor people in the division whose livelihood, especially when there are partial failures of crops, is precarious, there is no doubt that the great majority are not ordinarily severely pressed. "The physique of different classes, castes, and tribes varies very much; but, generally speaking, it is good."

The reports for the *Orissa Division*|| are written by officers of whom many are new to the districts. As regards *Poorree*¶ District, however, there is the evidence of Mr. Taylor who possesses considerable experience, and he seems to think that the poorer classes are not under-fed. Even after three successive years' failure of the rice crop there was no sign of actual starvation or serious distress. Dr. Sandel, Civil Surgeon, however, is of opinion that the poorer classes, are not properly fed or clad. They barely subsist on coarse rice and a spinnage curry cooked without oil. As a rule, they do not have more than one meal a day.

In the *Balasore*\*\* District Dr. Zorab, who has had 15 years' local experience, testifies to a prosperous state of affairs. The Deputy Collector who has 9 years' local experience says :—" As regard sufficiency of food I may say that if there be people in this district really suffering from a daily insufficiency of food, their number is not greater than what is to be always found even in prosperous countries under special circumstances."

\*\* Area 2,066 sq. m. Population 945,250.

On the whole, the evidence for the *Orissa* Division is of a reassuring tendency.

The foregoing extracts are on the whole satisfactory. The reports indicate the prevalence of indebtedness, but there is reason to believe that indebtedness, usually the result of expenditure on marriages and other ceremonies, is quite compatible with a fairly comfortable condition of life.

On this point, Mr. Boxwell, Officiating Commissioner of *Patna*, states :

“General indebtedness of a poor agricultural community is not like, and is much less bad than, the common indebtedness of an extravagant man. It means nothing more than that in the tight season—that is, the season of ploughing and sowing—the *mahajan* advances what he recovers with interest in the harvest. The strange notion that borrowing makes a permanent addition to a cultivator's income, and the common view that a peasantry in debt is on its way to ruin, seem to be equally wrong and almost equally paradoxical. In a low state of civilization people are unable to do their own saving. Their *mahajans* do it for them, and make them pay well for it; but in an ordinary year the produce of the soil, including, of course, pasture and jungle supports the cultivator, the labourer, the *mahajan* and the landlord.”

Frequent mention is made of the depressed condition of certain classes, the artisans and weavers, who have undoubtedly been injured by the introduction of English goods. They are, however, taking to other employments. In conclusion, the following quotation which gives a summary of facts and inferences made by the Bengal Government furnishes a fair picture of the situation :

“The general result of the enquiry is that, in the greater part of the Lower Provinces, the industrious classes find no difficulty in supplying their primary wants, and are, as a rule, well nourished. Their prosperity is greatest in the eastern districts, and gradually diminishes, as we carry the survey towards the west. It is not impaired by endemic disease, even where this has reduced the population, and left the survivors to some extent emaciated or enfeebled. On the contrary, the reports from districts so afflicted show that the inhabitants are somewhat better off than in the neighbouring tracts. But the signs indicating prosperity cease when we reach Behar where, though the cultivators having holdings of a size sufficient to afford full occupation to their families are well-to-do, and the middle class enjoys exceptional comfort, wages are very low, so that those who depend for their living entirely, or mainly on their daily labour, earn a very scanty subsistence. The number of these labourers, including those who hold some land, is estimated at about forty per cent. of a population of over fifteen millions. The cause of the lowness of wages appears to be the multiplication of the labourers in a healthy climate, and under a social system founded on early marriages, up to the point at which employment can be found on the lowest terms consistent with the continued maintenance of families. This



cause is of a permanent nature, existing social and climatic conditions remaining unchanged. Its effects would not be counteracted by any conceivable development of local industry, as such development could hardly progress in geometric ratio with the increase of population. Emigration can afford a sufficient and lasting remedy, only if it be conducted on a large scale and continuously. If after a system of emigration had been established, its operations were to be checked by the occupation of lands now waste, the existing difficulty would arise again. It is possible that popular education which has hardly as yet touched this part of the population, might, in the course of many years, effect a permanent change for the better, by altering the views and habits of the people. In the meanwhile it would greatly facilitate the application of partial and temporary remedies such as the introduction of new industries and emigration."

*Assam.*

In *Assam* the enquiry was conducted in the most important part of the Province, *viz.*, the five upper districts of the *Brahmaputra Valley* and in *Sylhet*.

The *Brahmaputra Valley*.\*—The main food of the people is everywhere rice, of which there are three principal kinds, *viz.*, *Sali* or transplanted winter rice, and *bae* or broad-cast winter rice, and *ahu* or early rice. Various pulses are also grown, and certain species of vegetables are cultivated in almost every household, and others found wild everywhere are very universally used. Scarcely a meal is taken in which some one or more of them does not form an indispensable adjunct to the staple commodity, rice. The use of ghi is almost unknown in the Province. The ryots enjoy several advantages such as are not possessed by the inhabitants of most other parts of India. One of the most important of these is free-grazing for their cattle. No charge of any kind is made for grazing except in a part of the *Lakhimpur* District. Building materials are also obtained free of all charge: each ryot's household being allowed annually for its own use gratis the following articles:—bamboos 400 and cane 10 bundles; thatching grass can be had for the labour of cutting and carriage. Another advantage enjoyed by the Assamese consists in the amount of food that grows wild, while firewood also is practically unlimited. Each ryot's household is also allowed gratis four unreserved trees annually for its own use, and almost all the implements they require for household or agricultural purposes are made from wood, which is procurable almost everywhere. Another of the causes which allow the Assam cultivator to lead an easy life, are the facilities for taking up and abandoning lands, which are perhaps greater than in any other part of India. The collateral sources

\* Area 21,414 sq. mi. Population 2,240,155.

of income possessed by the Assamese are numerous. The Hindus and Mohamedans use and sell milk; others engage in sericulture: the silk of the *Eri* worm sells at Rs. 5 per seer, the cocoons of the *Muga* worm sell at Rs. 2 per 1,000, and the thread costs Rs. 10 a seer.

Labour for tea-gardens is largely met from local sources, and the pay that an Assamese coolie can earn on a tea-garden, varies from Rs. 7 to Rs. 10; while work on roads generally gives a labourer 4 annas a day or Rs. 7-8-0 a month. Rubber-cutting, another source of income, yields a rate per maund, varying from Rs. 30 to Rs. 50. Large quantities of thatching grass are also brought for sale to the more important stations during the cold weather, and sold at prices varying slightly above and below Rs. 5 per 1,000 bundles.

Breeding livestock, such as ducks, goats and pigeons, is an almost universal practice; while many cultivators also supplement their income by catching and selling fish, and others supplement their ordinary meals by shooting or snaring game. Weaving, growing lac, turning cane mills and collecting whelk shells—from which a lime which is largely eaten is made—make up the other sources of income of the ryot.

In *Sylhet*,\* as in the *Brahmaputra Valley*, the staple food is rice, of which there are six principal varieties grown. The ordinary economic condition of the people is not so good as it was a few years ago; their wealth consists of land and cattle principally. The great object of every man is to own his homestead and piece of land.

There is no such class of people who solely depend upon their earnings as hired labourers. The land revenue in *Sylhet* is lighter than in the *Assam Valley* and the district produces more rice than is needed for its own consumption.

The conclusion drawn from the evidence, taken as a whole, seems to be that while the peasantry in the district are well above anything approaching distress, their condition cannot at this moment be said to be prosperous.

In the hills the people are everywhere comfortable, muscular and well nourished (as non-Hindus, they eat freely of meat), and ready and able to earn good wages by labour.

The general conclusion arrived at for the whole Province is that the question raised by the Government of India, need cause no anxiety whatever.

\* Area 5,440 sq. m. Population 1,060,000.



*North-Western Provinces and Oudh.*

IN these Provinces the enquiry was made after a succession of bad seasons, when the gravest anxiety for the present, and apprehension for the future existed. In these circumstances it might have been expected that the result of the enquiry would have been far from re-assuring, but the *North-Western Provinces and Oudh* Government consider that the consensus of opinion is to the effect that the people are not generally under-fed.

The Commissioner of *Meerut*\* thinks that cultivators have the means of supplying all their actual wants, but that labourers may be occasionally hard pressed.

Mr. Cadell, Collector of *Muttra*,† believes that the agriculturists, even after the failure of the kharif harvest, were able to hold their own; but he admits that the condition of labourers was worse, and that they had been severely tried by the

\* Area 2,379 sq. m. Population 1,313,137.

† Area 1,453 sq. m. Population 671,090.

‡ Area 1,730 sq. m. Population 750,528.

past cold weather. Mr. Crooke, Collector of *Etah*,‡ whose peculiar knowledge of agricultural life lends a great value to his remarks, considers the peasantry to be a robust, apparently well-fed population, and dressed in a manner which quite comes up to their traditional ideas of comfort. In spite of the abnormally high prices of food-grains, there has been no sudden increase of offences against property, nor did the number of beggars seem unusually great. Mr. Crooke does not believe that any thing like a large percentage of the people in *Etah*, or in any other district of the Provinces is habitually under-fed. There are times, of course, when the small cultivator and field labourer do suffer privation; but this is a very different thing from habitual privation. Indebtedness is prevalent, but the fact seems to be that with the agricultural classes a normal state of indebtedness is quite consistent with the possibility of passing a life of comparative comfort.

Mr. Crooke observes that the sanitary evils, under which the agricultural population suffer, in particular the prevalence of malaria due to canal irrigation when unrelieved by drainage, are severe, and in many cases render the agriculturists unfit to consume the varieties of grain, which are their usual food. In many villages the interruption to work produced by malaria is very serious. Mr.

§ Area 1,604 sq. m. Population 722,371.

Alexander, Collector of *Etawah*,§ saw a good many people in March last, whose appearance showed that they had been suffering from an insufficiency of food;

but writing in May, he says that none except actual paupers are in real distress.

After a careful enquiry Mr. Alexander is of opinion that the bulk of the cultivators in the villages selected for investigation, have not been suffering from want of food, and do not ordinarily do so; but that owing to high prices the labourers and a few of the smaller or exceptionally unfortunate cultivators have been pressed between December 1887 and March 1888. Mr. Porter, Collector of *Shahjahanpur*,\* writes:—"The poorer classes eat only the coarsest and cheapest grains and can eke out a subsistence as long as these are procurable, at not less than 14 seers to the rupee."

\* Area 1,745 sq. m. Population 856,946.

Mr. Holderness, writing of the *Pilibhit*† District, says "that the landless labourer's condition is not all that could be desired. The united earnings of a man, his wife, and two children cannot be put at more than Rs. 3 per month. When prices of food-grains are moderate, work regular, and the health of the household good, this income will enable the family to have one good meal a day, to keep a thatched roof over their head, to buy cheap cotton clothing, and occasionally a thin blanket. The small cultivator is slightly better off, but he has not always enough to eat, or sufficiently warm clothes."

† Area 1,373 sq. m. Population 51,801.

The Commissioner of *Allahabad*‡ remarks in a general way that there is very little between the poorer classes of the people and semi-starvation; and the Collector of *Banda*§ writes that a very large number of the lower classes of the population clearly demonstrate by their poor physique that either they are habitually half-starved, or have been in their early years exposed to the trials and severities of a famine. It may be observed that the districts of the Allahabad Division are peculiarly subject to a very precarious rainfall.

‡ Area 2,843 sq. m. Population 1,474,108.  
 § Area 3,061 sq. m. Population 608,608.

Mr. Bird, writing of the *Cawnpore*|| District, considers that the cultivators do fairly well in ordinary years, and that labourers can obtain constant employment.

|| Area 2,370 sq. m. Population 1,181,306.

Mr. Rose, Collector of *Ghazipur*,¶ has gone very thoroughly into the question. He is of opinion that no class of the agricultural community suffers from a daily insufficiency of food, but admits that a few weavers here and there know

¶ Area 1,494 sq. m. Population 1,001,662.



what it is to want a meal. On the whole, the daily supply of food may be of coarse quality, yet the quantity is sufficient, as a rule, to maintain health and strength; luxuries of any kind are unknown, and the clothing is not sufficient protection against the severity of the cold weather.

The information from *Jhansi*\* is meagre. The Commissioner thinks that the scantiness of the population precludes the idea of starvation, and he notices that labour is always in demand. The Deputy Collector of *Kalpi*, a native, is emphatic in denying the insufficiency of food.

\* Area 1,552 sq. m. Population 333,227.

The following accounts are given in respect to Oudh :

Mr. Boys, Commissioner of *Sitapur*,† appeals to the evidence of his own eyes. The cultivators in Oudh are far better off than they were 25 years ago. They are in better condition; they have more household effects, and of a better kind in the shape of cooking vessels and utensils of kinds: "they are happy and contented."

† Area 2,215 sq. m. Population 958,251.

Mr. Harrington, Commissioner, *Fyzabad*,‡ thinks otherwise. He quotes articles from the *Gazetteer* and articles of his own, and maintains that the assertion that the greater proportion of the population of India suffer from a daily insufficiency of food is "perfectly true as regards a varying but always considerable proportion of the population, for a considerable part of the year in the greater part of India." Mr. Harrington's experience, however, extends only to his own Province, in respect even to which his broad assertion must be qualified by other evidence.

‡ Area 1,688 sq. m. Population 1,081,419.

In *Gonda*§ District the Deputy Commissioner states that the poorer or even the poorest agriculturists or labourers do not suffer from insufficiency of food.

§ Area 2,881 sq. m. Population 1,270,926.

Mr. Irwin, Deputy Commissioner of *Rae Bareilly*,|| is like Mr. Harrington, regarded by his own Government as a pessimist, and his opinions expressed in his "Garden of India" certainly favoured the impression that there was a widespread want of food. He now takes a more cheerful view of the situation: "the mass of the agricultural population in ordinary times and the *élite* always do get enough to eat: a considerable minority in bad seasons feel the pinch of hunger and a small minority consisting of the sickly, the weak, the old, and the childless suffer

|| Area 1,720 sq. m. Population 951,905.

from chronic hunger except just about harvest time when grain is plentiful." Mr. Irwin incidentally notices the decreasing productiveness of the soil and the gradual deterioration of the country cattle. He advocates the stopping of the exportation of grain from India when prices in any large portion of the country reach a certain point. Recent experience, however, proves that a high price in India does, as a matter of fact, in itself act as a powerful and speedy check to exportation.

The opinions, thus submitted for the *North-Western Provinces and Oudh* based in many cases on careful observation, illustrated by typical instances, and formed at a time when there was considerable anxiety on account of bad harvests, are, on the whole, sufficiently favourable to justify a general negative to the enquiry put by the Government of India. Even the artizan class live in comparative comfort.

Sir Auckland Colvin disclaims optimist views, and points out that when any officer speaks of the more indigent class of the people as being always on the verge of starvation, the meaning is not that they are living on insufficient food, but that they run the risk in view of failure of losing employment, and consequently losing the means of obtaining food.

The remedies proposed are of the usual type : Extension of communications by railway or road ; irrigation ; land laws ; introduction of industries other than agriculture ; and, above all, facilities for the migration of surplus population. In the matter of migration the cost of transport must be faced, and Government must be willing to forego the land revenue for, probably, not less than one generation in the tracts opened to immigration.

#### *Punjab.*

There are no grounds whatever for any anxiety as to the condition of the agricultural population in the *Punjab*. Of food, the evidence given is of a very decided character. So long as men and women of the lowest classes, marry young and have families, borrow money for expenditure which is unnecessary, and are content with a low standard of living, so long will periodical suffering occur, but the masses in normal seasons get as much to eat as they want.

In the *Delhi*\* Division which contains tracts of lands which are distinctly insecure, a systematic enquiry was set on foot. There appears to be no actual want of food, but the standard of living is perilously low. Green

\* Area 5,610 sq. m. Population 1,907,084.



crops, herbs and even berries, are consumed in quantities larger than is good for health, but the officers of the *Delhi* Division consider that it is erroneous and misleading to say that any considerable portion of the population of the *Punjab*, whether urban or rural, suffer habitually from any degree of hunger. They admit that there is an unsatisfactory mass of low diet in the country even in normal conditions, but they maintain that there is no evidence to show that poor feeding is on the increase. On the contrary, they believe that the standard of general comfort is higher now than before annexation, and doubt whether the poor of India are normally worse off as regards food than in western countries. This opinion is of value inasmuch as the officers who give it are all men of experience and habits of observation, and if the assertion now under discussion were true in any part of the *Punjab*, it would be in the district of the *Delhi* Division.

The rest of the province may be dealt with very briefly. In the *Lahore*\* Division the two pounds of flour ration eked out by pulse, vegetables and condiments, is available to the vast majority. The diet is plentiful and of as good a quality as the peasantry care for.

In the *Jullundur*† Division it is untrue to say that the greater part of the population suffer from an insufficiency of food. Rai Maya Dass, Extra-Assistant Commissioner, speaking of 33 exceptional villages in the *Ferozepore*‡ District, says that many of the people lie down hungry in the evening and seldom get sufficient for both meals during the 24 hours.

In *Multan*§ District there is no distress. The Commissioner of the *Rawal Pindi*|| Division remarks that the natives of India undoubtedly suffer less from deficiency of food than in Great Britain, Canada, or British Possessions in northern latitudes.

In *Shahpur*,¶ where the recent harvests have been bad, the Deputy Commissioner writes that it is not the case that any considerable proportion of the people suffer from a normal insufficiency of daily food. He appeals to the low death-rate and the high birth-rate. The proportion of the starving

\* Area 8,987 sq. m. Population 2,191,517.

† Area 12,571 sq. m. Population 2,321,791.

‡ Area 2,752 sq. m. Population 650,519.

§ Area 5,890 sq. m. Population 651,904.

|| Area 15,435 sq. m. Population 2,529,508.

¶ Area 4,691 sq. m. Population 421,505.

poor is not excessive, and their existence may be traced to the following causes :—

1. Want of thrift.
2. Low standard of living.
3. Too rapid increase of population.
4. Rise in prices.

Ghulam Farid Khan, Extra-Assistant Commissioner, *Shahpur* District, holds that  $\frac{1}{2}$  per cent. of the Hindus live at starvation point, and that 10 per cent. have an insufficient quantity of food, while  $\frac{1}{4}$  per cent. of the Muhammadans are at starvation point and 20 per cent. do not obtain sufficient food.

The Commissioner of the *Derajat*\* Division scouts the idea that in ordinary times there is an insufficiency of food, and the Deputy Commissioners of the Division support this view. In *Dera Ghazi Khan*† District, generally speaking, all classes appear to be well fed. In one insecure tract of the *Dera Ismail Khan*‡ District, now deserted by the people, the inhabitants were reduced to the unwholesome berries of bushes and trees, but elsewhere the people have as much as they can eat.

\* Area 17,681 sq. m. Population 1,137,572.  
 † Area 4,517 sq. m. Population 363,346.  
 ‡ Area 9,296 sq. m. Population 441,619.

In the *Peshawar*§ Division there is no class of the population in want.

Briefly it may be said that in the *Punjab* in ordinary times, the greater proportion of the population does not suffer from a daily insufficiency of food; but in times of *unusual* scarcity, not amounting to famine, and high prices, the poorer classes, whose standard of living is very low are no doubt reduced to great straits, and do not get a sufficiency of food.

Sir James Lyall points to the physique of the people, to the high birth-rate and low death-rate, and to the rise in wages, and says that the *remedy* for congestion, when it occurs, lies in the construction of new canals.

#### *Rajputana.*

In *Rajputana*|| the population do not suffer from a daily insufficiency of food. Whenever there is any distress the Durbars make advances, which keep the people going until the crops ripen. In late years there has been a greater tendency to store fodder and the staple food of the masses, collected in years of plenty, to be expended when hard times come, than used to be the case.

Area 129,750 sq. m. Population 10,268,392.



As regards *Ajmere-Merwara*\* the Commissioner says that he has been specially struck by the generally hardy physique of the agriculturist, and has heard nothing about what is understood as insufficiency of food. There are few families in which, he says, there is only one bread-winner; the women and children earn something. The Judicial Assistant Commissioner remarks that the fact that the agricultural classes and village menials are seldom seen flocking to cities to partake of the charities bestowed by wealthy citizens is self-evident proof of their capability to feed themselves without relief from abroad.

### *Bombay.*

The evidence collected in the *Bombay* Presidency and *Sind* is of a very interesting character, and furnishes, so far as that Presidency is concerned, a complete contradiction to the alleged insufficiency of food. There is a peculiar line of demarcation between the upper and lower strata of the population, and the lower is known as the *Kaliparraj*, or dark-folk, and it is in this lower stratum that classes are found who live below the standard of 2 pounds of grain per man. But it appears from the reports that the early tribes who constitute the division known as the *Kaliparraj* substitute for the ordinary Bombay ration, which consists of millets and occasionally rice and wheat helped with pulse and condiments, such food as *mowra* flowers and jungle products; and that, in spite of the presumably inferior quality of this diet, they are extraordinarily healthy.

*Gujarat*† is the richest division of *Bombay*. The dark-folk form 53 per cent. of the total population, and they all drink. The standard of living has changed but slightly within the last 15 years, and many of the early tribes live during the hot weather more or less on roots, and *mowra* flowers, are miserably clothed and housed, and degraded by drink.

But it is explained that a diet of forest products does not necessarily imply an insufficiency of food, and it must be remembered that with the early tribes these products are articles of normal diet.

The causes of indigence among these classes are drink, dislike of steady work, and to some extent the restraint imposed upon them by the "Forest and Excise laws." "The high prices at which liquor is sold have added a great deal to their wretched condition. The hard struggle to obtain the usual quantity of drink

\* Area 2,710 sq. m. Population 400,722.

† Area 10,153 sq. m. Population 2,857,731.

even at the sacrifice of other necessities, has thrown them completely into the clutches of the local money-lenders and liquor-sellers."

"The middle classes are saving, or, at any rate, are earning more and live in greater comfort. Many things formerly accounted *luxuries* have become *necessaries*. The masses do not save, and live from hand to mouth; but, on the whole, poverty is not on the increase.

In the *Deccan*\* 33 per cent. of the area with a population of 1,727,250, is chronically liable to famine. The *Deccan* has no sea-board or navigable rivers, but has excellent communications by road and rail. The population is sparse, only 148 per square mile, and the lower stratum is only 23 per cent. of the total population. Employment is constant, and it is considered that there is no widespread distress anywhere in the *Deccan*.

The Commissioner of the *Deccan* remarks at the end of a graphic letter :—

The observant among us who have passed the best part of our lives in the country, who are in sympathy with the people knowing their language, respecting them for their docility and patience and their wonderful charity to each other, we who have watched all this come to pass, and have marked this steady advance, do not assert that our agricultural and labouring classes are prosperous. We know that they are poor, in the sense that they have few possessions, and those mostly their carts and bullocks and ordinary necessities. We know that they have little money. We know that they habitually live from hand to mouth; but we also know that they are not in any sense poverty-stricken, that there is no widespread distress among them, and that they have no difficulty in "filling their bellies" every day. We know that their earnings and resources have increased and with them the standard of their living.

The *Karnātāk* or Southern *Marāṭha* country comprises the districts of *Belgaum*,† *Dhārwar*‡ and *Bijapur*;§ 61 per

\* Area 4,657 sq. m. Population 864,014.

† Area 4,535 sq. m. Population 882,907.

‡ Area 5,757 sq. m. Population 638,493.

cent. of its area is chronically liable to famine.

Mr. Trimalrao Vyankatish estimates that 5 per cent. of the *Dhārwar* population is insufficiently fed, and there is supposed to be some want in the Ghat villages of *Belgaum*. The Commissioner, Mr. Probert, however, knows of no class who endure absolute want, though he estimates that poverty is universal.

"Poverty" amongst the labouring classes of the mofussil most certainly exists, and not only does it exist, but represents the normal condition of those classes. Their houses are poor, their belongings are poor, their food is poor, their clothing very poor. "Poverty," however, and "want," at any rate in India, are two very different things,



and after many years' residence amongst the people of the country, I have no hesitation in saying that while "poverty" is the rule (I still speak of the lower classes), actual "want" is the exception.

The *Konkan* includes the districts of *Thana\* Kolaba*,† *Ratnagiri*,‡ and the district of *Kanara§* has also been discussed under this Division. *Ratnagiri* is the only district about which there need be anxiety. It has a dense population and a severe landlord system known as the *Khoti* tenure under which a rent is exigible by the *Khot* amounting to from one-third to one-half the gross produce. The reports on *Ratnagiri* are despondent. The *Ghat* cultivators for the most part cannot get enough to allay hunger in the hot weather. Mr. Rand says one-fifth cannot, and according to Mr. Candy one-fourth cannot. Mr. Crawford, who before the Famine Commissioners said "there was not a single monsoon, however favourable, in which the people do not suffer without a murmur most of the hardships incidental to a famine," now maintains that the development of the country has been so great, that there are very few isolated or inaccessible spots in the whole *Southern Konkan* where chronic distress exists. Families resort to the Bombay labour market, and 9,000 *Konkanis* are annually employed in the Army. On the whole, in spite of the above assertion, it is to be feared that in *Ratnagiri* District there is distress. Near the *Ghats* the people subsist largely on roots and wild vegetables, mango and jack fruits. They do not save, and seldom have an ornament of any kind; and 90 per cent. of them are in debt.

In *Sind*|| the people are in easy circumstances, and in the absence of war or special calamity, the fear of general pauperism or acute distress will be far removed. The *Sindi's* diet is more generous than that of any other people in India. He consumes 3 pounds of grain, whereas the ordinary ration elsewhere is 2 pounds. Meat is not unusual; curds, milk, fish, and even *ghi* are common. Pulse, vegetables and condiments are almost invariable. Millets are the staple grains, but wheat and rice are also eaten. The *Sindi* drinks a decoction of *bhang*, but his drink does not cost him more than 3 to 5 rupees a year. His clothing is ample, costing perhaps 5 to 6 rupees a year.

With the exception of the *Ratnagiri* District, it may be said that the people of the *Bombay Presidency* are in fairly good circumstances.

\* Area 4,243 sq. m. Population 908,548.

† Area 1,496 sq. m. Population 381,619.

‡ Area 3,922 sq. m. Population 907,000.

§ Area 3,911 sq. m. Population 421,840.

|| Area 48,014 sq. m. Population 2,413,823.

Even in the famine only 10 or at the outside 15 per cent. of the population showed the effects of pressure by death or resort to relief, and in the scarcity of 1885, relief works were scorned in *Bijapur*. One anna per head all told, or 2 annas a day for an adult man, is sufficient to provide food; and this wage can be earned everywhere.

The *Bombay* reports are concluded by the summary prepared under the orders of the Governor :—

The causes of indigence and the localities in which it is to be found, are well known. The early tribesman with his drink and indolence, the Deccan Kunbi with his uncertain seasons and danger of famine, the Konkani with his rugged country, poor soil and swarming population—the existence and poverty of all these is recognized and felt for. Gigantic efforts have been made, in many points crowned with success, to deal with their cases. In Gujarat we see the Kolis, in Thána the Thákurs, in Khándesh the Bhils, settling to cultivation. In the Deccan, railways and great irrigation works and special legislation for debt have been called in to give relief. The worst part of the Konkan has been explored by roads, and the enterprise of steamer companies has been attracted there. The post offices have enabled surplus earnings to be remitted with increasing ease and facility and in annually multiplying amounts. The result is seen in more emigration, in cheaper clothing, higher wages, an even distribution of wealth among all including the lowest classes, and the gradual but sure diminution of distress and its localization to the least civilized and accessible tracts of the Presidency. Every Indian administrator has recognized the poverty of the people of India. A man who supports life in the Bombay Presidency on 2 or 3 annas a day will be poor, but not so poor by half as is the man who is called on to do so in England on a shilling, or what was once eight annas.

#### *Central Provinces.*

The enquiry in the *Central Provinces* has resulted in the collection of a mass of information of considerable value and interest.

In *Saugor*\* investigations of a general character conducted by the Deputy Commissioner (Colonel Repton), convinced him that the average net income of a tenant was about Rs. 70, and that the smallest sum on which a family could subsist for a year was Rs. 36, when ordinary food had to be supplemented for some months of the year by wild fruits, berries and roots. Speaking generally he seems to have found amongst the tenantry a great deal of indebtedness, but no poverty to speak of.

In *Damoh*† a considerable number of the smaller tenants seem to be hard pressed, though the Deputy Commissioner makes no mention of any cases of distress. There is a serious amount of indebtedness in

\* Area 4,005 sq. m. Population 594,950.

† Area 2,709 sq. m. Population 312,987.



this district. The Deputy Commissioner admits that "the greater part of the insolvency in the district seemed to arise from causes under the people's own control," that "few instances of harsh treatment" were found, and that the people seemed "quite cheerful owing Rs. 1,100 or Rs. 1,200."

In *Jabalpur*\* a very large proportion of the tenants was involved to greater or less extent in debt, but the excellent crop of the last season has enabled a large portion to pay off their creditors. The labouring class was found in enjoyment of little beyond a bare subsistence, but it was exceedingly difficult to get anything like reliable information from them. Village servants and artisans were better off.

\* Area 3,918 sq. m. Population 637,233.

In *Mandla*† 60 per cent. of the population is aboriginal. The Deputy Commissioner (Colonel Brooke) enquired into the circumstances of 17 families. Eleven held land, and the enquiries brought out that they were by no means as necessitous as they appeared to be. The Settlement Officer enquired into the condition of 119 families: 97 held land, and only 6 of these appeared to be in actual distress. The people whose circumstances were hardest were the Basras (basket-makers), but their poverty seems due in some measure to the habit of *mádák* smoking. Five families spent annually among them Rs. 3 in liquor and Rs. 42 in *mádák*.

† Area 4,719 sq. m. Population 301,700.

The aboriginal tribes contribute a large proportion to the population of the *Seoni*‡ District. No general distress exists in this district, and the Commissioner of the Division (Mr. J. W. Neill) is of opinion "that even the poorer amongst them manage in ordinary times, and even in time of short harvest, to maintain an existence which contents themselves and which results in an ever-increasing population."

‡ Area 3,247 sq. m. Population 334,733.

In *Narsinghpur*§ the general result of the enquiry was that cultivating classes were comfortably off, with a sufficiency of food and clothing. They were, however, in debt to a very serious extent, a fact ascribed by the Deputy Commissioner "to the facility they enjoy for raising money on their land, which has operated as a temptation to extravagance"; and he mentions in support of this a fact discovered by the Court of Wards Manager that tenants in the neighbourhood

§ Area 1,916 sq. m. Population 365,173.

of towns, where money is plentiful and temptations comparatively numerous, are more indebted than those of outlying villages. The circumstances of village servants and artizans were found to be comfortable according to these people's notions of living. A considerable portion of the blacksmiths, brass-makers and bangle makers, as a rule, had coolies in their employ to whom they paid from 2 to 3 annas a day. The field labourers were not found to be stinted in food, and all received their two meals a day. As regards the hill tribes the Deputy Commissioner writes that, in the famine of 1868-69, "the hill tribes were happy and flourishing while their brethren in the plains were famishing, because when their crops failed the jungles yielded them food."

In *Hoshangabad*\* the only classes amongst which there is any chronic distress are the hill tribes, the Gonds, Kurkus and Bhils; but there are hopeful signs that the Gonds and Kurkus are settling down to cultivation. The enquiry as regards the tenants, indicate a high standard of comfort: while the village servants and artizans are stated to be by no means impoverished, and the condition of the labouring classes appears to be distinctly better than in the preceding districts.

As regards *Nimár*† the Deputy Commissioner (Mr. Ismay) is of opinion that in the open parts of the district there is no poverty among the agricultural classes, though there is a very great amount of indebtedness, due very largely to extravagance. The artizans and village servants are fairly well off, while the labouring classes in villages in the open parts of the district, appear to be rather better off than in many other parts of the Provinces.

In *Betul*‡ tenants are fairly off, and they are well supplied with cattle. Indebtedness is however very great. Village servants and artizans are reported to live very comfortably, while field labourers in regular service receive from 10 to 20 maunds of grain and Rs. 12 or 15 in cash. Their wives earn something in addition to this, and they can generally make both ends meet.

In *Chhindwara*§ the tenants are much involved owing to extravagant expenditure on marriages and other festivals. Artizans and village servants, on the other

\* Area 4,437 sq. m. Population 488,787.

† Area 3,340 sq. m. Population 231,911.

‡ Area 3,905 sq. m. Population 304,905.

§ Area 3,915 sq. m. Population 372,899.



hand, are said to be doing well ; while the condition of the labouring classes has improved, work is more plentiful, and even women and children have no difficulty in finding regular or occasional employment.

For *Wardha*\* the report has been submitted by Mr. G. Geffert, the Manager of the Hinghanghat Cotton Mills who has had much experience of the conditions of life amongst the labouring classes.—He writes, that “artizans are, as a rule, well-to-do people who can earn good wages and have money.” The common cooly day-labourer earns 3 annas a day and won’t work for less ; but on an all-round average his daily wages in money value come to about 2 annas for ordinary field work,  $3\frac{1}{2}$  annas for *juari* cutting and 4 to 5 annas a day according to the market price at the time for these staples. His family earns another  $\frac{1}{2}$  to  $1\frac{1}{2}$  annas per day, for six months in the year. Their ordinary food is *juari* cake, linseed oil, salt and chillies, and each adult’s cost of living per annum amounts to Rs. 25 and clothing Rs. 5 : total Rs. 30. The commonest labourer in the Mills commands Rs. 6 per month, and the lowest wages of a woman learning the work is Rs.  $3\frac{1}{2}$  per month, which is subsequently increased to as much as Rs. 6 to Rs. 8 per mensem.

In *Nagpur*,† though there is a good deal of indebtedness amongst the tenants, there is very little poverty and the people bear their embarrassments very lightly. The Extra-Assistant Commissioner writes :—“Had I been on other duty than that of specially enquiring into the condition of the poor, I should certainly have declared that there was nothing like poverty arising from indebtedness. The people looked happy and contented. Their food was that of men in ordinarily good circumstances.” Again, of the condition of the labourers and artizans he says, “there is neither widespread poverty nor distress of a chronic character.”

In *Chanda*‡ the labouring class seemed tolerably well to do, while the village artizans appeared fairly well off. Enquiries into the condition of farm well-to-do tenants showed that their net expenditure was from Rs. 150 to Rs. 250 a year, a large portion of which went in marriage and festival expenses.

\* Area 2,401 sq. m. Population 387,221.

† Area 3,786 sq. m. Population 697,350.

‡ Area 10,705 sq. m. Population 610,116.

As regards the *Bhandara*\* District the opinion of the Deputy Commissioner (Mr. Tawney) is that the condition of the cultivator has greatly improved within recent years. He does not attach much importance to indebtedness as an indication of poverty. He instances the case of a *Teli* cultivator paying a rent of Rs. 17-8, and with an income of Rs. 132, who was in debt to the amount of Rs. 100 owing to marriage expenditure, and was found to have Rs. 150 out at interest! The labouring classes have a sufficiency of daily food, if they care to work for it. Mr. Tawney shows that "the ordinary cost of food for a man, his wife, and one child is  $7\frac{1}{2}$  pice a day, and that if broken rice (*Kanki*) be substituted for rice, the cost can be reduced to  $4\frac{1}{2}$  pice a day. This sum will provide the family with  $2\frac{1}{2}$  lbs. of grain and a small quantity of pulse, leaving  $1\frac{1}{2}$  pice over for salt, vegetables, and firewood. It may be observed here that living in rice districts is cheaper than in districts the staple crop of which is wheat or *juari*, in that a considerable portion of the rice crop is broken up in the process of husking, and the broken rice, which is sold very cheaply as being useless for the market, provides the poor with the means of sustaining life at an almost nominal cost." A notable feature in this district is the large number of people who annually migrate to the Berars at harvest time, subsequently returning home with their surplus earnings. Mr. Tawney understands from the people who have returned that a "woman's wages there are about equal to a man's here, and that the family can manage to save some money in consequence."

Writing of the *Balaghat†* District, the Deputy Commissioner (Mr. Nedham) says, that "it may be safely said that there is no widespread poverty amounting to distress of a chronic character affecting a special class of the population or any particular part of this district, and I may add the opinion that all these classes have in ordinary years and apart from abnormal extravagances an adequate livelihood for the support of themselves and their families." The most instructive fact brought out by the enquiries into the conditions of the labourer class, was the extraordinary cheapness of a bare subsistence. "A Baiga, basket maker, whose family consisted of himself, his wife, and two small children, made on an average 12 baskets a week, which he sold for 2 lbs. of unhusked rice or small millet each. His monthly earnings were thus about 100 lbs. of unhusked grain worth rather less than a rupee. The

\* Area 3,022 sq. m. population 689,779.

† Area 3,146 sq. m. Population 340,554.



family not only managed to live on this, supplemented with jungle fruits and roots, but saved annually about a rupee's worth of grain, wherewith they purchased the scanty clothing which sufficed for them."

In *Raipur*\* the people are better off than in any other part of the Province. Food is plentiful and living cheap; the people are, as a rule, well nourished and strong and healthy, able to perform their daily work in the fields with ease. It is greatly doubted if their state of living would be much changed, were they far better off than they are now.

The Settlement Officer notes that "what strikes one is the remarkable equality of the economic condition of the tenant, the sole difference being that one man has a cow or a she buffalo, another has not."

The condition of village artisans is not less satisfactory than that of the tenants. They are remunerated in kind and hold in addition some land of their own. Of 42 field labourers whose state was investigated, more than half were comfortably off. No clearer indication of the easy condition of life in *Chhattisgarh* is needed than that afforded by the experience of 1886, when over a large proportion of the country the rice crop barely gave a quarter outturn. A scarcity was apprehended and relief works were started, but the people passed through the trial without assistance from Government, and the number of labourers who came to the relief works was quite inconsiderable.

In *Bilaspur*† cultivators are, as a rule, well off, and village artisans and servants have also found no reason to be discontented. The people of the Zamindaris to the north of the district are largely of an aboriginal race, and include a tribe known as the Dhanwars, who live by hunting, and are to all appearance the poorest of the poor. Yet it would be a mistake to consider their condition in any way distressed, according to their own ideas of life. The Deputy Commissioner writes of them that—

"The forest supplies them with bamboos, with which they make bows and arrows to shoot animals, and baskets with which they snare fish. They dispense almost entirely with clothes and all food-grains are regarded as delicacies. The failure of a harvest would deprive them of a weekly luxury, but would in no way threaten them with famine."

Writing of the cultivators in *Sambalpur*,‡ the Settlement Officer (Mr. Nethersole) says, "physically they are in good condition, and I do not think that their clothing is scanty, considering the local custom in this respect. In

\* Area 11,885 sq. m. Population 1,405,171.

† Area 7,708 sq. m. Population 1,017,327.

‡ Area 4,521 sq. m. Population 208,409.

almost all villages but the poorest, a number of people may be seen wearing a small ring of gold in their ear or a silver bangle, and 'hawkers' find it worth their while to travel about with small mirrors, combs, boxes, beads and similar cheap pieces of uselessness." Below the small tenant comes the field labourer, hired by the year. His condition is not unlike that of the small ryot, and there is a good deal of interchange between the classes, frugal and industrious field labourers purchasing cattle and taking up land, while poverty-stricken ryots throw up their land and take to labour. The general conclusions Mr. Nethersole arrives at on the district are that "under normal conditions far more rice is produced than is required for the food of the population, and any one who chooses to work hard, has hitherto had little difficulty in maintaining himself and his family in relative comfort."

A report on the *Chhattisgarh Feudatory States* has also been furnished. The Political Agent (Mr. F. C. Berry) writing of the *Bastar*\* State says, "that the aboriginals are hardy, active, and possess a physique which certainly does not indicate that they are habitually underfed." In the *Patna†* State the condition of the agricultural population is reported by the Superintendent to be comfortable, while speaking generally of the lower classes in the *Sarangarh‡* State, the Superintendent says, "I should say that in average seasons they obtain an adequate subsistence, but in a season of deficient harvest they feel the pressure of high prices, which, however, would rarely amount to actual want in the portions of the State where the forests are still abundant." "To sum up the facts given in the reports of these States as tested by my own experience," writes the Superintendent, "I should say that the majority of the population comprised in the lower classes subsists with ease under normal conditions, a large portion manages to subsist and to make both ends meet, while a small portion leads a hand-to-mouth existence, which in seasons of high prices passes from mere poverty into distress."

\* Area 13,062 sq. m. Population 196,218.

† Area 2,300 sq. m. Population 257,959.

‡ Area 540 sq. m. Population 71,274.

Mr. Mackenzie's general conclusion on the whole enquiry is that—

"there is no doubt in these Provinces a great deal of poverty, but there is very little distress. The people are well fed and the only section of them who can be said to be hard pressed for bare subsistence are the hill tribes, who are but little more provident than the beasts of the forests, and have to undergo similar vicissitudes in daily food. The volume of wealth is rapidly increasing, and there is no lack of employment for



those who wish for it. If only more of the money which the Provinces are receiving reached the producers and less was intercepted by money-lenders and middle men, the condition of the people might be described as prosperous. But over them hangs the grip of the usurer and the shadow of the Civil Courts."

*Berar.*

In *Berar* real distress is practically unknown, and the laboring classes have attained a standard with which very few other parts of India can claim any comparison. They are generally well clad and in good case, and at their frequent festivals show a good deal of wealth in their attire. Their food comprises—juari, toor dhal, chillies, salt, and oil for cooking purposes, while they use kerosine oil for their lamps. Their marriages are conducted with the greatest prudence and economy and not allowed to trench on the year's supply. The Deputy Commissioner

\* Area 2,750 sq. m. Population

755,325.

† Area 2,804 sq. m. Population

430,763.

of *Amraoti*\* says, that there is no want of food in that district. The Deputy Commissioner of the *Buldana*† District says that a fact which

tends to prove that the agricultural labourer is well off is that, during the season the watching of the crops and gathering of the harvest is principally performed by the *pardashis* (foreigners), who *swarm* into the Province during the rains for the purpose. The Deputy Commissioner of

‡ Area 2,958 sq. m. Population

354,688.

§ Area 2,000 sq. m. Population

502,792.

the *Basim*‡ District says that all who are willing can obtain employment and fair wages. The

Vice-President of the *Akola*§ Municipality remarks that no people in *Berar* suffer from insufficiency of food throughout the year, and a Native Deputy Educational Inspector bears testimony to the fact that the lower classes get full meals and all the necessities of life, and points to the total absence of beggars in the *Mofussil* as another sign of the fair condition of the lower classes. A Native Extra-Assistant Commissioner and a Judge of the Small Cause Court at *Amraoti*, further attests that there is during times unaffected by famine, little dearth of ample food for the poorest in these tracts. He considers that the agricultural classes are particularly well off in all respects of bodily nourishment. Regarding the gipsy classes, they scarcely ever, the same official remarks, go without a daily meal, which with them is usually a substantial meat one provided by the game they capture.

*Madras.*

The *Madras* report is preliminary, and the enquiry will be continued. The opinions of the district officers are not supported by concrete

instances, but in many cases they reflect the views of men who have for years observed the conditions of agricultural life in Madras. The conclusion of these officers, which is concurred in by the Board of Revenue and by the Madras Government, is, that no considerable proportion of the population suffer from a daily insufficiency of food in ordinary years.

In the *Ganjam*\* district, though the income of agricultural labourers only just meets their expenditure, they have enough to eat.

\* Area 3,108 sq. m. Population 1,003,301.

In *Vizagapatam*† the Collector says, the agriculturists live miserably, and cannot afford a sufficiency of food.

† Area 3,477 sq. m. Population 1,790,403.

With two and sometimes three meals a day, a cloth to cover himself, and a hut to live in, "the labourer is probably the poorest creature in the world." But, as pointed out by the Madras Government, the Collector admits that the inhabitants are an unusually sturdy and muscular class of men; and this is hardly compatible with a want of food. Further, it may be added that two or three meals a day is quite up to the average; that clothes in the *Madras* climate are a superfluity; and that the hut is the customary and traditional house of the peasant.

‡ Area 6,525 sq. m. Population 1,780,013.

In *Godavari*‡ there is no deficiency of food among adults.

§ Area 8,471 sq. m. Population 1,548,480.

In *Kistna*§ prosperity is universal.

In *Nellore*|| the Collector denies any insufficiency; but the Civil Surgeon supports the insufficiency dictum, on the ground that criminals always increased

|| Area 8,739 sq. m. Population 1,220,230.

in weight after they had been in jail some time, and that a large number did not get sufficient food to develop their muscles to their full extent. The Board of Revenue remarks that the *Madras* jail dietary is the most liberal in India, and that the hard labour of a prisoner in jail is by no means such hard work as that undergone by the labourer in the fields. This question of rise in weight during incarceration is one of some importance, and has been noticed in other Provinces. Mr. Crooke in the North-Western Provinces suggests that a newly admitted prisoner has just passed through the ordeal of arrest, and that he has probably been remanded more than once or marched about the country after a Magistrate in Camp. A man like this naturally loses weight in the interval between arrest and conviction. The Indian convict is not in solitary confinement: he is well dressed and



lightly worked. If he is a cultivator, he is free from the labour and anxiety of field watching at night. He is promptly attended to for the most trifling ailments. Dr. Lethbridge, Inspector General of Jails, Bengal, also considers that the deep anxiety and often distress which precede conviction cause loss of weight. It may be added that a convict does not indulge in tobacco and opium.

Mr. Burditt, a missionary, says that the lower classes in *Nellore* do get enough to eat, and that they save money.

In *Cuddapah*,\* except from the 20th April to 20th June, every one gets regularly more than enough; and even in the slack season there is little demand for work.

Great weight is attached by the Board and the Government to the opinion of Mr. Nicholson, Collector of *Anantapur*.† He says that the people are of a strong physique; that the birth-rate is high; that in 1885 when relief works were opened few were attracted to them; and that the labouring classes, depleted as they were by the famine of 1876-78, always and everywhere in ordinary time find a sufficiency of the food to which they are accustomed.

In *Bellary*‡ it is thought that the standard of comfort has risen.

In *Kurnool*§ Mr. Benson, who is working at an analysis of the district, says that there is no large class of persons pinched for food from year's end to year's end, and that there are few beggars or loafers.

In *Chingleput*|| the Collector thinks the mass of the people live from hand to mouth, and in adverse seasons are seriously hampered. But the Government of Madras believes that the condition of the people has improved in a marked degree within the last ten years.

In *South Arcot*¶ employment is obtainable without difficulty at wages that give the labourer a sufficiency of food.

In *Tanjore*\*\* there is no sign of widespread poverty.

In *Trichinopoly*†† wages are high, food is cheap, and the appearance of the people is most prosperous.

\* Area 8,745 sq. m. Population 1,121,038.

† Area 5,561 sq. m. Population 669,880.

‡ Area 5,602 sq. m. Population 726,276.

§ Area 7,788 sq. m. Population 700,305.

|| Area 2,842 sq. m. Population 961,861.

¶ Area 4,873 sq. m. Population 1,614,738.

\*\* Area 3,654 sq. m. Population 2,180,363.

†† Area 9,561 sq. m. Population 1,216,038.

In *Malabar*\* the people are stout, well-grown, well-nourished, and muscular. "Children swarm and are as plump as partridges."

\* Area 5,765 sq. m. Population 2,365,935.

In the *Nilgiris*† "the proportion of the population who suffer from want of food is extremely small—as small as it is in any part of the British Empire."

† Area 957 sq. m. Population 21,034.

In *Tinnevely*‡ the diet is sufficient to maintain a high degree of physical efficiency. The people are well-fed, and have a margin for superfluities, as is evidenced by the habitual use of ornaments by men and women of the common coolie caste.

‡ Area 5,381 sq. m. Population 1,090,747.

In *Canara*§ the monsoon has never failed, and scarcity is unknown.

§ Area 3,902 sq. m. Population 950,514.

In *North Arcot*|| the Collector in a burst of rhetoric suggests that grinding poverty is the widespread condition of the masses; and two missionaries state that many poor people, who though they do not actually starve, go through life on insufficient food.

|| Area 7,250 sq. m. Population 1,817,814.

In *Madura*¶ the labouring classes are very well off, and the condition of the district is no doubt good, owing to the large amount of emigration to Ceylon and the Straits Settlements.

¶ Area 8,401 sq. m. Population 2,168,650.

In *Coimbatore*\*\* no one need starve who can or will work.

\*\* Area 7,842 sq. m. Population 1,057,000.

On the whole, it may be said that in ordinary seasons the lower agricultural classes generally get throughout the year a sufficiency of food, that is, food enough to maintain them in bodily health and strength and in full efficiency for labour.

#### *Coorg.*

In *Coorg*, †† which is so favourably situated from a climatic point of view, there has not been that scope as in other Provinces for an enquiry of the kind indicated by the Government of India. In this Province there are no causes at work which tend directly to bring about a condition of widespread poverty or distress of a chronic character, and the condition of the ryots is, on the whole, one of advancing prosperity, which, in individual cases, can be frustrated only by thriftless and reckless habits among the people.

†† Area 1,533 sq. m. Population 173,302.



APPENDIX B.

*Extract from a letter from the Director General of Statistics, dated 26th March 1887, on reclamation and colonization of waste lands and migration of population.*

\* \* \* \* \*

BENGAL.—The Lieutenant-Governorship of Bengal consists of a densely-crowded centre radiating off, except on the north-west, to a very thinly-peopled circumference. But while there is a steady increase of population in the outlying districts, the movement has generally been spontaneous, and in few cases have direct attempts at colonization proved successful. Thus, in the Darjeeling District on the northern frontier, at least two-thirds of the population are returned as immigrants, or the descendants of immigrants since 1835. "The whole district," writes the Deputy Commissioner, "is a single case of general reclamation"; but "no mass of immigrants moving in a body or at one time has migrated to the district." An effort which the Deputy Commissioner made to start an immigration into the district failed, and he knows of no other such attempt. In the adjoining border district of the Western Duárs, a large influx of labour has also taken place. But this influx "has been purely spontaneous, so far as Government is concerned," and has been the natural result of the demand for labour at good wages on the tea plantations, and of the low rates of arable land.

On the opposite, or southern, border of Bengal, there has been a large influx of population into the Bánkoorah District. But here again, the inflow has been gradual and spontaneous and from the outer Santal country rather than from the central overcrowded districts. Since the Land Improvement Act of 1871, only Rs. 9,386 have been advanced by Government for reclaiming lands. The work is usually conducted on a small scale, or by jungle leases from the *zamindars*. The lessees excavate tanks and bring the land into cultivation, retaining about one-third of it rent-free, and paying a low progressive rate for the remainder.

In the South-West Frontier District of Bengal, Chittagong, and its Hill Tracts, reclamations are effected by a vagrant agricultural population, who move about in a region of spare land. It is reclamation by squatting, and their rights may be described a sort of tenure by trespass. In parts, the nomadic cultivation known as *jum* is still the most profitable. In other parts, such nomadic cultivation competes with regular tillage. But even in the settled localities, the cultivation still retains

something of the migratory type. In many cases, the squatter will only pay for the area actually cultivated, and the intervening patches yield no rent.

On the other hand, in the Sundarban maritime tracts, reclamations have been to a large extent effected by capitalists. Apart from old historical cases of this class, considerable areas have been brought under cultivation of late years by *zamindars* and capitalists. Such tracts are to a large extent cultivated by immigrant labourers who come for the season, and then depart with their wages. Many of the old cultivators as they grow rich extend their holdings by means of these immigrant labourers, or by under-tenants. Here also, as in Chittagong, reclamation by trespass and squatting is also common.

Two cases of reclamation by capitalists in inner Bengal have been prominently brought to notice—the Jagdispur Jungle and the Chanchal Estate. The Jagdispur Jungle belonged to the rebel Koer Singh, and consists of about 8,000 acres. It has been reclaimed and peopled by Messrs. Burrows, Thompson and Mylne. \* \* \* In 1859-60, there was not a single inhabitant in the tract. In 1881, there were 8,597. \* \* \* The Chanchal Estate in the Maldah District was cleared of jungle, and partly brought under cultivation by an able manager employed by the Court of Wards.

\* \* \* \* \*

Broadly speaking, the settled Hindu agriculturists, even of the most thickly peopled of the Bengal Districts, do not move to outlying tracts. The pioneers of colonization in Bengal are the hill and forest races. These tribes send forth colonizers across the heart of Bengal. But in some cases when they have cleared the jungle, and raised a few rough crops, they fail to become good permanent cultivators. Thus, in the Maldah District, they sell their clearings to Muhammadan husbandmen, and move on. The Santal is there the pioneer, and the Muhammadan cultivator enters into his labours.

THE NORTH-WESTERN PROVINCES.—Advancing up the Gangetic valley, the papers, taken together with the census, indicate that the middle river districts of the North-Western Provinces are already quite sufficiently inhabited. The movements of the population here are towards the Central Provinces on the south, and towards the outlying Oudh and Sub-Himalayan districts on the north. The advance of cultivation is to a large extent spontaneous. But there are several remarkable and very interesting examples of reclamation on a large scale conducted



by capitalists, European and Native, among which may be noticed five large estates aggregating 58,284 acres, and under reclamation by English capitalists. Within the district of Basti, indeed, the total number of considerable reclamation grants is 43, aggregating 90,152 acres.

The history of some of these reclamations is very instructive. The largest estate is the Birdpur grant, the property of Mr. Peppe, with a population of 23,688, living in 250 villages or hamlets, and running conterminous with the Nepal frontier for nine miles. Other reclamations by European capitalists have been effected in Partabgarh, Basti and Gonda Districts. A large and important case of such reclamation by Captain Chapman, assisted by Government loans, and involving expensive irrigation works, deserves mention.

Captain Chapman's case leads by an easy transition to examples of reclamation by direct Government effort. A conspicuous example of this latter class in the North-Western Provinces is the reclamation of the Kumaun *Bhabar*. This tract was a dense, almost waterless forest, the refuge of gangs of banditti. It was used as a grazing-ground during a short period of each year, but its deadly climate seemed to preclude any hope of settled cultivation. After various efforts, General Sir Henry Ramsay took the matter firmly in hand. He obtained an advance of Rs. 10,000 from Government, and was left unfettered in his management of the tract. The result is that after many vicissitudes and temporary disappointments, the *Bhabar* has now a population of 103,000 in the winter months. At least two-thirds of them are cultivators of the land, and about one-fourth seem to have settled permanently down—the census in September (the unhealthy time of the year) giving a return of 25,000. An example of unsuccessful effort to reclaim forest is afforded by the Eastern *Bhabar*. But here, it is hoped that success is only deferred until the unhealthiness of the climate yields to cultivation.

Grants of jungle tracts in the Saharanpur District have been brought under cultivation, partly by European, partly by Native agency. The reclamations in the Gorakhpur District and the attempts made by Government to settle special classes of men on the land, are of considerable interest. The change which has been effected under steady British administration would be almost incredible were it not attested by the contemporary records, "When the first Collector encamped in the environs of the city, he had to light fires to keep off the tigers.

Another Magistrate, many years afterwards, employed the convicts to dig elephant pits as a protection on the north of the town; and when the present cantonments (which adjoin the city) were formed in 1810, the Collector had to request that lines might be cut through the jungle before the boundary pillars could be erected." As British rule gave security to property, a regular scramble for immigrants took place among the native landlords and tenure-holders. Government, on its part, made four separate attempts at colonization in Gorakhpur, the history of which discloses many sides of the task of peopling a large tract by official and by native effort.

THE PUNJAB.—Proceeding still further up the river valleys, the problem of reclamation in the Punjab is, broadly speaking, a problem of irrigation. The movements of the people in this Province have been so admirably treated by Mr. Ibbetson in his Census Report, that it is unnecessary to do more than to refer to his volume. The detailed process of reclaiming and cultivating a large tract is clearly set forth in the Sirsá Settlement Report. The increase takes place both by the establishment of new villages, or the re-establishment of old ones, and by the growth of the existing villages, and the extension of the cultivated margin around them. Much of the increase is due to the fact that large tracts of the Punjab were practically depopulated by invasion and rapine in the last century. In the Sirsá District, the returns show an increase from 35 villages in 1800 to 635 in 1881.

The manner in which the population follows the canals, or springs upon either side of them, has been prominently brought before the Government. There is also evidence of the extension of village and population by means of wells. In Jhang, a lease of 50 acres is given to any cultivator who sinks an ordinary well, and a lease of 100 acres for a well with a double Persian wheel. The Deputy Commissioner reports 387 such leases, and states that applications for them are increasing. The Punjab, as a whole, exhibits a rapid extension of cultivation, with a corresponding growth of population, promoted by irrigation and roads; and without the intervention of European or Native capitalists on a large scale.

THE CENTRAL PROVINCES.—These Provinces exhibit the rapid peopling of long uncultivated or depopulated tracts. They also present in a striking light the difficulties of Government intervention. The best known case of such intervention was the Charwa scheme. The failure



of this scheme has operated, perhaps more than any other example, as a discouragement to Government efforts at colonization.

\* \* \* \* \*

Another prominent case in the Central Provinces is the reclamation in the Nimár District. The circumstances of this reclamation show exactly what can be done by direct official agency, both under British and Native rule. They also show that in such attempts, the Government must be prepared for a long continuous period to exercise a close supervision, not only in regard to advances and digging wells, but even in such particulars as re-roofing houses injured by fire.

The materials collected for the Central Provinces Tenancy Act showed that, apart from direct efforts by the Government, its general land system is leading to a rapid increase, both in the cultivation and in the number of cultivators, and also in the more intensive husbandry which results from the breaking up of holdings. One great difficulty in the way of direct Government effort seems to be that in certain parts of the Central Provinces, as in parts of Bengal, the clearers of jungle are not the eventual cultivators of the soil. In the District of Sambalpur, the process is described as follows, "The first settlers are Kandhs, propelled by the pressure of better agriculturists, such as the Agharyas from behind. They are the hardiest caste in this part of India. As soon as they (the Kandhs) have cleared a portion of the jungle with their fire-and-axe cultivation and rendered it habitable by less vigorous but more intelligent cultivators, they advance onward and are succeeded by Agharyas; and eventually the Agharyas are in turn driven onwards by the Kultas, our best agriculturists. This is the order in which cultivation is extended, and no instance has been brought to light in which waste lands—including under that term good arable land which has not as yet been brought under cultivation, but capable of the highest cultivation—have been first cleared and broken up by cultivating castes coming from an open country."

BOMBAY.—In Bombay the question of land-reclamation is disclosed in a new light. Schemes or proposals by Pársí and other capitalists for reclaiming the saline coast strip are numerous. Tank excavation on a large scale also emerges into view.

\* \* \* \* \*

MADRAS.—The expansion of agriculture has there been steady and spontaneous, and the only check upon its further extension is stated by one officer to be the want of roads to the still land-locked localities.



SIND.—The problem of reclamation in Sind is the problem of irrigation.

BURMA.—In Burma land is still so plentiful that the old wasteful system of nomadic cultivation goes on side by side with the settled tillage of the plough. The efforts made by the Chief Commissioner to promote the extension of agriculture form a salient feature in the Local Administration. Such extension takes place partly by means of temporary agricultural immigrants from Bengal and elsewhere, partly by the gradual settling down of the nomadic cultivators into regular husbandmen, partly by the rapid increase of the population, and partly by direct Government efforts. In Burma, the question is directly and inseparably connected with the system of rules for leasing waste lands.

ASSAM.—The same remarks apply to the outlying Province of Assam. But this province has formed the scene of the most interesting effort at direct agricultural colonization on a considerable scale which has taken place of late years. The Norwegian or Danish Missionaries in the Santál country on the west of Bengal, led forth a regular agricultural colony across the whole centre of the province, and settled it in Assam.

\* \* \* \* \*

There is evidence to show, first, that an enormous expansion of agriculture is steadily and spontaneously going on in the less thinly populated parts of India. Second, that, direct efforts at agricultural colonization, whether by Government or companies, or by private individuals, have frequently failed. Third, that there are, however, conspicuous examples of success. Fourth, that in such efforts, the chief difficulties lie at the outset, and that in most cases, a large initial mortality must be expected. Fifth, that the two essentials of success are close personal supervision, and persistent continuity of effort.

### APPENDIX III.

*Cost of Departments of Land Records and Agriculture and savings effected through their operations in special expenditure on Land Settlements.*

DESPATCH TO HER MAJESTY'S SECRETARY OF STATE FOR INDIA.

MY LORD,—In Your Lordship's despatch No. 56, dated 30th June 1886, our attention was drawn to the considerable and increasing expenditure



involved by the establishment of Agricultural Departments in various Provinces throughout the Empire; and a request was made that the subject should be carefully examined by the Finance Committee to which the task had been committed of considering the possibility of effecting reductions in the expenditure on the public service.

2. A preliminary answer was sent to the despatch quoted in the preceding paragraph in our despatch No. 18, dated 11th September 1886. We pointed out in our reply certain modifications that seemed to be required in the statement of expenditure appended to Your Lordship's despatch, and stated that we had referred to the Finance Committee the main question placed before us by Your Lordship, *viz.*, how far the work done by Agricultural Departments in the Provinces could be held to relieve previously existing Provincial establishments in the view of effecting economies in the latter.

3. The Finance Committee summed up the issues with which they would have to deal as follows:—

- (1) To prepare a conspectus of the expenditure of the Agricultural Departments in the various Provinces, but not of the expenditure of the Government of India.
- (2) To propose detailed economies.
- (3) To show the financial saving ultimately to be effected by the existence of the Departments.

4. The estimate of expenditure under the first head was in Your Lordship's first despatch taken at nearly 11 lakhs, exclusive of Imperial charges; but the revised estimate recorded in the Finance Committee's Note brought it down to about 10½ lakhs when based on Your Lordship's figures for 1885-86 and to a little below 10 lakhs when based on the civil estimates for 1886-87. The later estimates for 1888-89 give a total of 8½ lakhs.

5. The question of effecting detailed economies was stated, in the Finance Committee's memorandum, to have been disposed of in the Committee's Notes on Provincial Contracts.

The economies actually proposed by the Finance Committee in the body of their report affected, however, but slightly the main issue with which they had to deal in connection with the new Departments, *viz.*, the extent to which other heads of expenditure could be relieved by the charges debited against Agricultural Departments; and we may pass by this section of their Note without further remark.



6. The third issue framed by the Finance Committee was the one which involved the real enquiry desired by Your Lordship. If the new Departments could be shown to produce an ultimate financial saving by relieving the State of the necessity of employing special Survey and Settlement establishments, their continued existence would in the opinion of the Finance Committee be justified, but not otherwise. This was the form in which the Finance Committee presented the question referred to us by Your Lordship. The investigation thus formulated actually involved a deeper examination of the subject than that required by the despatch. The latter only made it necessary to ascertain how far economies could be effected in other directions; whereas the Finance Committee demanded that it should be satisfactorily shown that, putting aside expenditure on purely agricultural objects, and leaving also out of account all indirect advantages that might be due to the better organization of the land record system, the new Departments of Land Records and Agriculture actually involved an ultimate saving to the State.

7. We append to this despatch the net outcome of the correspondence which has, in connection with the Finance Committee's Note, been conducted with the Local Governments and Administrations of the Empire. The enquiry was one of some difficulty, and has involved communications with Local Governments which have not in all cases been brought to a close. But we are anxious that Your Lordship should without further delay be made acquainted with the results of the investigation so far as it has proceeded. Briefly, we may state that the financial advantage of maintaining the Departments has been more or less demonstrated in the case of all Provinces excepting Bombay and Madras, and that even in the case of these two Presidencies the investigation of the subject will probably lead to the establishment of a record system which will, financially, justify the continued maintenance of the Departments.

8. Before entering upon a consideration of the replies of Local Governments, we may briefly remind Your Lordship that our Imperial policy was soon after first establishment of the Departments directed towards their utilization in the reform of the Revenue system. We felt that, notwithstanding the urgent recommendations of the Famine Commissioners that attempts should be made to improve the agriculture of the country, it would be wise to insist on providing the Departments with a programme which would, from a



financial point of view, justify their existence; and we accept without demur the view of the Finance Committee that in weighing the value of the Departments, the indirect advantages derived, whether from the orderly and methodical maintenance of village accounts and records, or from the reform of the establishments responsible for them, or from operations connected with agriculture, should be in the first instance left out of account.

9. The importance of this view was not sufficiently recognized at the outset. Our initial policy was pronounced in the Resolution No. 6—340-50G., dated 8th December, 1881. It was based, so far as these were endorsed by Her Majesty's Secretary of State, upon the recommendations of the Famine Commissioners. The Resolution laid down that the first duty of the new Departments was the organization of the system of village accounts and records, with the primary object of obtaining accurate information regarding the circumstances and condition of every agricultural tract and of the people by whom it was occupied. Anything like lavish expenditure on agricultural experiment was deprecated, but it was not laid down that the Provincial Departments should be directly remunerative. They were, it is true, to be associated with the land settlement scheme in each Province; but rather with the view of effecting the other objects set forth by the Famine Commissioners than of inducing economy in the system of assessing or collecting the land revenue. When, however, the Imperial Department of Agriculture was constituted in 1881, the subject of Land Revenue had been transferred to it, and it was soon found that the administration of land assessment required considerable reform. The former Secretariat had, as we represented in our despatch of 1880, been overburdened with work and unable to deal efficiently with this important duty. The new Secretariat was accordingly required to take up the subject in two directions: firstly, in that of introducing economy and punctuality into the scheme of current assessments; and, secondly, in that of substituting permanent for temporary establishments in the preparation of districts for future settlements. It is the later question to which the Finance Committee has confined attention. But the financial results of the work of the new Departments, both Imperial and Provincial, in the reform of current assessments, must not be overlooked; and we therefore invite Your Lordship's attention to the appended extract from the Budget Statement of last March, in which, in three Provinces alone, the economy effected during the current decade is estimated at Rs. 200

lakhs, independently of any advantage which may be gained in respect to future assessments, which latter is the issue raised by the Finance Committee.

10. Turning now to this latter question, we offer to Your Lordship the following very brief abstract of the correspondence with each Province on the subject; and in doing so we would take the opportunity to note that by our Resolution No. <sup>61A</sup>/<sub>113-1</sub>, of the 6th October 1887, we gave significance to our view that the Provincial Departments should follow the example of the Imperial Department in bestowing their chief attention on the reform of the land revenue system by requiring them to adopt the title of Departments of Land Records and Agriculture in lieu of that of Agricultural Departments.

11. Commencing with the *North-Western Provinces*, where the special Department has had the longest existence, we are informed by the Local Government that it estimates the advantage of the new system conducted by the Special Department at a value of 460 and 637 lakhs according as a comparison is made with the one or another of the systems formerly in operation. In other words, it will henceforth cost from 460 to 637 lakhs less to re-assess the whole Province than formerly. We are not prepared, however, to accept the inclusion of compound interest in the estimate, and should prefer to place before Your Lordship the more moderate estimate of from nearly 150 to 200 lakhs as the saving in 30 years. The saving is mainly due to the elimination of special settlement establishments; but we observe that the reduced estimates are still high enough to include the salary of a well-paid Settlement Officer. The necessity for such an officer should, we consider, be eventually removed, and the cost rate (100 per square mile) of assessment should, we think, be brought materially below the figure which the North-Western Provinces Government has put forward as its minimum. It may assist Your Lordship in weighing this consideration to be informed that a reduction of each Rs. 10 per square mile would in the North-Western Provinces imply a further economy during the 30 years of about 6 lakhs.

In the *Punjab* the saving in the cost of the resettlement of the entire Province is estimated at 60 lakhs; and we see no reason to challenge the calculation. The cost rate per square mile would be Rs. 103; but in comparing this rate with that in the North-Western Provinces, the larger areas of uncultivated land must not be overlooked.



The most satisfactory results of the new system have been obtained in the *Central Provinces*, because, in consequence of the reassessment of the Province not falling due until after the creation of the new Departments, Imperial and Provincial, it became possible to apply the new principles to the settlement of the entire Province. The step was taken of transferring to the Central Provinces, an officer, Mr. Fuller, who had been trained in the work of organizing village records and establishments in the North-Western Provinces, and although the time available for training village officers and their supervision was short, sufficient progress was made under his direction, and that of Sir Charles Crosthwaite, to introduce the new arrangements. The estimate of the saving likely to take place in respect to further assessment of the Province is based therefore on actual experience of the economy effected in the present resettlement of the Province. We accept the estimate that the financial advantage will be (independently of the actual current settlement) not less than from 31 to 68 lakhs accordingly as the comparison is made with a settlement including a non-professional or a professional survey. The mileage rate will not exceed Rs. 60.

The question of maintaining a Department of Land Records in *Bengal* has been disposed of in separate correspondence with Your Lordship. The large area, something like 10,000 square miles, which has to be brought under assessment during the next few years, required the establishment of an organized system of settlement operations; and this work has now been entrusted to the special Department. A material economy will in the first instance be effected by the punctuality with which reassessments will be thus completed; but we also hope that the Department will succeed in effecting a material reduction in the mileage cost of operations, which has in Bengal been hitherto excessive. The question has been urged upon the Government of Bengal, but we are not as yet in a position to credit the Department with any actual saving, although we are confident that the scheme upon which the new assessments are proceeding must lead eventually to considerable economy. Judging from the financial results elsewhere, we feel justified in assuming that the probable reduction in mileage rates will yield a saving in 30 years of not less than from 10 to 20 lakhs.

Coming next to the ryotwari Provinces under the direct administration of the Government of India, we are met by a different set of circumstances. In *Burma* and *Assam* the progress of the Land Revenue depends more upon the correct measurement and valuation of the

annual increment of cultivated land than upon periodical assessments. A special Department is therefore needed for the supervision of maps and returns prepared each year by the village officials, with a view to recovering the full increments due to the State. (This view was taken by Sir Charles Aitchison when Chief Commissioner of Burma in instituting a "Supplementary Survey" establishment in newly assessed districts at a date considerably anterior to the foundation of the new Departments.) The saving effected by the special establishment must therefore be estimated partly in terms of the revenue saved each year by it, in other words, the difference between the amounts collected with and without its special supervision, as well as by a calculation of the reduction in the cost of settlement establishments.

The estimate made in Burma for one district of which the revenue is now 5 lakhs, is that in 15 years the gain in extra revenue realized will be 3 lakhs, and the saving in cost of settlement 2 lakhs, or 5 lakhs in all. Applying this rate to the 20 districts of Burma of which the revenue may be taken at 74 lakhs, the saving would be 74 lakhs in 15 years, or 148 lakhs in 30 years. The above estimate does not however include the cost of the central establishment which may be taken at 6 lakhs. It also gives a somewhat excessive estimate of the cost of a new settlement in the event of a supplementary survey not being maintained; we are inclined therefore to bring the estimate within the safer limits of 100 lakhs.

In Assam the saving is put at 5 per cent. of the current revenue. Taking the revenue at 28 lakhs the annual saving for the Province would be 1.40 lakhs. The cost of the establishment is estimated as Rs. 76,000 per annum, and the net annual credit would under this estimate be Rs. 64,000, or between 19 and 20 lakhs in 30 years.

12. We may now summarize the estimated saving due to the new Departments in each Province during a term of 30 years :—

North-West Provinces from	...	...	150 to 200 lakhs.
Punjab	"	...	60 to 60 "
Central Provinces	"	...	31 to 68 "
Bengal	"	...	10 to 20 "
Assam	"	...	19 to 20 "
Burma	"	...	100 to 120 "
Total			<u>370 to 498 "</u>

The annual saving deduced from these figures is from 12 to 16 lakhs a year.



The above estimate excludes the saving actually effected in current settlements, which is, as already stated, not less than 200 lakhs in the three Provinces, Madras, the Central Provinces, and the Punjab. It covers, moreover, the whole of the expenditure on the superior staff of Provincial Departments and on that section of their subordinate establishments which is employed on the maintenance of land records and maps.

13. The above table does not, however, as Your Lordship will understand, include in any way the cost of experiments or operations connected with agriculture, which in the estimates for 1888-89 does not exceed  $1\frac{1}{2}$  lakhs for all Provinces.

We take the opportunity to explain to Your Lordship that we have been brought by the experience gained during the last few years to the conclusion that expenditure by Government officials on agricultural operations of an experimental character is not, unless subjected to careful restrictions, likely to yield results sufficiently useful to justify such outlay. We append a copy of a Resolution, No. 143A., dated 28th December 1885, in which we indicated to Local Governments what some of those restrictions should be. But we do not intend, in placing before Your Lordship this expression of our opinion, to convey the idea that the agriculture of the country does not admit of improvement; that the produce of agricultural land is not susceptible of expansion; or that the State has no duties to perform in connection with agricultural progress. The capital expended from the public exchequer within the last few years on railways and canals has in itself done much to increase the agricultural wealth of the country, but beyond the action taken in this direction by our Departments of Public Works, we think that there is still much to be done by the State through the agency of the agricultural Departments: firstly, in assisting to organize a proper system of education, which will lead the cultivating population gradually to introduce improvements into their own farms and tenancies without official aid; and, secondly, in bringing into the country a knowledge of those branches of Western science, useful to agriculture, which are at present unknown in India. Influenced by these views we have, in the despatch on technical education recently addressed to Your Lordship, recommended the association of Agricultural Departments with that scheme, and have also encouraged the promotion of instruction in agricultural science at the Poona College and at the School of Forestry at Dehra. We have, moreover, taken positive action in sending Native and European officials to learn the

system adopted in France for coping with cattle and silkworm disease on scientific methods ; in urging upon Your Lordship the desirability of providing us with a first class Agricultural Chemist ; and more recently in arranging for the foundation of a Civil Veterinary Department. In adopting this policy we have not lost sight of the financial advantage of confining high-class instruction to one or two national centres, in lieu of encouraging the establishment of expensive institutions in each Province. But we consider that Provincial Agricultural Departments are not the less necessary for giving effect in each Province to the policy which we desire to adopt, and for enlisting the sympathy and co-operation of natives in the general scheme of instruction and agricultural improvement to which it will be their task rather than that of Government officials to give extended effect. We are for these reasons glad in the interests of agricultural progress, to believe that the remunerative work done by the Agricultural Departments in the direction of land settlements will justify their continued existence.

14. We cannot conclude this despatch without making some allusion to the indirect advantages resulting from the organization of the land record system, which is the main occupation of the Departments. These are strongly urged in the letter from the North-Western Provinces, where the Provincial Department has been longest at work. Putting aside the financial issue, on the decision of which we are content that the continuance of the Departments should stand, we believe that the agricultural community will be saved much expensive litigation by the orderly record which will now be maintained of their rights and possessions ; that the land revenue will be improved by the avoidance of the disorganization into which agricultural operations were thrown by periodical settlements, and that the administration of the country will be rendered easier and more economical by the accession of knowledge which will accrue from the annual compilation by the special Departments of agricultural facts and statistics.

15. Your Lordship will have gathered from the preceding paragraphs our conclusion that the Departments should be retained in view both of the direct and indirect advantages which are derived from them. But we subscribe to this view on the distinct understanding that expenditure on agricultural operations of an experimental character should be restricted within narrow limits, and that high class agricultural education should, for the present, be conducted on a national rather than on a Provincial basis. If these views are endorsed by Your Lordship, we



propose to examine more particularly the character of the expenditure incurred, or proposed to be incurred, in each Province on agricultural experiment and education, and to formulate a policy under which extravagant outlay will be repressed. A further despatch on the position of the Departments in Bombay and Madras will be submitted when the correspondence with the Governments of those Presidencies is complete.

#### Appendix IV.

*Resolution on the Conduct of Agricultural Experiments on Government Farms, No. 143A., dated 28th December 1885.*

#### RESOLUTION.

The Resolution of the Government of India, No. 48A. of the 19th April 1884, which has led to the submission of these reports, summarized the recommendations of the Statistical Conference regarding the system of carrying out and reporting agricultural experiments. Briefly, those recommendations were :—

- (a) That agricultural experiments should be systematically prosecuted in every Province where adequate machinery for the purpose exists, and that "areas should be set aside in every Province for the trial of agricultural experiments with a view to obtaining scientifically accurate results," it being left to Local Governments, subject to the principles laid down by the Government of India, to decide whether such areas should be situated on estates under Government management or on experimental farms.
- (b) That as it is important to obtain and exhibit comparative results, care should be taken that all conditions other than those appertaining to the novelty itself should be, so far as possible, identical on the two areas.
- (c) That in the management of the experimental farms, undue stress should not be laid on financial results, no portion of the area being necessarily managed with the sole object of obtaining a net profit on the outlay, and that therefore to emphasize their character such farms should in future be termed "experimental" rather than "model" farms.
- (d) That with a view to economy the area under experiment on each farm should be the smallest consistent with the object in view—that of obtaining trustworthy results.

(e) That reports on experimental farms should be strictly confined to a description of the working of the farms and to a clear and accurate account of the experiments made, excluding the discussion of all points requiring the orders of Government; and that the reports might most conveniently take the form of one progress report for each of the two main agricultural seasons of the year, supplemented by an annual report of a somewhat fuller character.

(f) That uniformity should, so far as possible, be observed in regard to farm returns and accounts.

The recommendations were generally approved by the Government of India, and Local Governments were asked to favour it with their opinion on them. Replies have been received from the Governments of Madras, Bombay, the North-Western Provinces and Oudh, and the Punjab, the Chief Commissioners of the Central Provinces, British Burma, Assam, Ajmere, and Coorg, and from the Resident at Hyderabad. An abstract of the replies is appended to this Resolution. The Bengal Government reported that it would take up the subject when its Agricultural Department had been established.

2. The points on which the opinions of Local Governments and Administrations were specially desired were—(1) whether experimental farms should be the subject of a report after each of the principle harvests, supplemented by a full annual report; (2) what forms should be adopted to show the results of farming and experiments; and (3) how far the financial results of working should be taken as tests of success.

3. As to point (1), the Governor General in Council is led to the conclusion that one annual record is sufficient for submission to the Government of India, though there is no reason why the record should not be brought out in parts after each harvest, should the Local Government consider this arrangement desirable for Provincial purposes. In accordance with the principles put forward by the Conference, the record of the experiments should be brief, concise, and positive, and should not be complicated by the discussion of questions of a speculative or administrative character. The Government of India would prefer, therefore, that if no objection is offered to this course by the Governments and Administrations concerned, reports by officers connected with Agricultural Departments or Government



Farms should be distinctly divided into two sections, of which the first or main section, containing the body of the report and dealing with the administration of the farms or questions requiring the orders of superior authority, should be submitted to the Local Government in the ordinary course, and the second or subordinate section, containing the bare record of experimental results, should, with a view to the early publication of statistical results, be forwarded directly by the Departmental Officer to the Government of India, to all Local Governments and to other Agricultural Departments, and should at the same time, be made available to the public through Agricultural Papers, Government Gazettes, or by other means.

4. The opinions expressed by Local Governments indicate that it is difficult, or at any rate premature, to prescribe any definite forms in complete detail for the record of experiments. At the same time in order that proper attention may be ensured to the principles laid down by the Calcutta Conference and approved by the Government of India, and with a view to secure an amount of uniformity sufficient to admit of the intelligible collation of results in the Central Office of the Revenue and Agricultural Department, it is desired that in framing the record of experiments the following rules may be observed :—

- (1) The record should be termed the "Record of Experiments of the Experimental Farm in the <sup>Province</sup> of \_\_\_\_\_ for the (half) year ending \_\_\_\_\_"
- (2) The results of each experiment should be embodied in the Record in a form of which the first column should invariably be headed "Object of experiment." In this column should appear such entries as these :—
  - "To test Swedish plough B pattern"
  - "To test effects of selected cotton seed."
  - "To test value of gypsum as manure."
- (3) The second column should be headed "Point or points in which treatment of experimental area differed from ordinary native treatment." Examples of entries are :— "sugarcanes planted, 1 foot apart instead of 6 inches." "X plough used three times instead of native plough ten times."
- (4) The form should also contain three columns showing :—
  - (a) Results obtained by ordinary native method in weight, value, &c., per acre, per hour, &c.

- (b) Results obtained from experiments in weight, value, &c., per acre, per hour, &c.
- (c) Percentage of difference per acre, per hour, &c.
- (5) All statistics in the record of experiments should be given under English denominations of weights and measures. No vernacular terms should on any account be employed.
- (6) The total area under experiment in all farms in each Presidency and Province must be shown.
5. The following are examples of the entries prescribed by rules (2) (3) and (4) :—

	Col. 1. Object of experiment.		Col. a.	Col. b.	Col. c.
			Results, native method.	Result of experiment.	Percentage of difference.
1	To show result of adding gypsum to ordinary manure.	...	Net Value profits 20 per acre.	Net Value profits 25 per acre.	20 per cent. gain in profits.
2	To test X sugar mill.	...	Amount of cane juice extracted by native mill per hour 40 lbs.	Amount of juice extracted by X mill per hour 44 lbs.	10 per cent. gain in juice.

It is evident that in the columns (a), (b), and (c) results may be shown in more than one way : thus, in the case of field produce, the difference in outturn might be shown per acre without reference in cost of treatment ; or again the difference in outturn of grain might be shown without reference to the outturn in straw. As a rule, however, it is desirable that whatever other results may be recorded, the column (c) should, if the calculation is not too troublesome, include the percentage of the loss or profit entailed in money per acre, per hour, &c. Thus in the second of the above examples the real value of the X mill cannot be gauged unless the cost of working it, as compared with the cost of working the native mill, be taken into account.

If there has been no comparative experiment, columns (a) and (c) must be left blank, but the Government of India desires to draw prominent attention to the second of the recommendations of the Conference cited in the first paragraph of this Resolution. The occasions on which column (a) and (c) are left blank should be few.

6. The importance of stating the results of every experiment in the terms of a common unit must not be overlooked. Thus it is of little



practical use to state that one method gave 2 maunds 20 seers on  $\frac{3}{4}$  of a bigah while another resulted in 3 maunds 2 seers on 2 acres. The general reader for whose information the record is to be published, however much he may be interested in the question, will not, as a rule, and indeed cannot be expected to take the trouble himself to reduce these statistics to an intelligible form. In the above example the results should in each case be shown as so much per acre.

7. The advantage of the above method of record may be exemplified by the following illustration. It is desired by the Government of India to collect the statistical evidence obtained each year in each Province as to the advantage of modifying the native plough. If the percentage of outturn or profit per acre due to the use of English or American ploughs (including native ploughs modified on Western patterns) can be readily found in some one column of the record of every experimental farm throughout the country, it will be a matter of no difficulty to collate the results obtained in all parts of India and to adduce statistical evidence of a decisive character in favour of modifying the native plough or the reverse. The net or average advantage (or loss) can be expressed in a single line of figures.

8. The Government of India sees no reason to change the views expressed in the previous Resolution on the question of finance. It is quite impossible that every experiment can be financially successful : on the contrary, the difficulty of procuring cheap labour on a Government farm, the improbability of initial success in introducing an untried implement or method under new conditions, before time has been given for the modifications necessary to bring it into accordance with those conditions, and the existence of unsuspected causes which may induce complete failure, render it impossible to expect a profit upon the purely experimental area. For this reason the Government of India desires that strict effect should be given to the views of the Conference that the experimental area should, if maintained at Government expense, be restricted within the narrowest limits, and that the results should be recorded in a manner which will ensure accurate information being presented in the forms employed. The Government of India cannot sympathise with any measures which involve the conduct of doubtful experiments entailing either lavish expenditure or a loose and vague record of results. For this reason it wishes that the record of the experimental area should be kept entirely distinct from the report on Model or Demonstration farms. Upon these latter the positive results

of experiments may be usefully tried with a view to financial profit, and discredit should attach to any financial failure upon them not justified by very exceptional or unforeseen causes, such as a drought, cattle-murrain, &c. Any continued failure should lead to their contraction or discontinuance. It is only on these conditions that the Government of India can believe in the utility of expending public money upon agricultural experiments. It was very distinctly pointed out in the Resolution of the Government of India, No.  $\frac{6}{340-50}$  G. of the 8th December 1881, that "agricultural improvements" must, for a considerable time, be looked upon as a subsidiary duty of Agricultural Departments, and while the Government of India admits that experiments in agriculture (as fully proved at Rothamstead and elsewhere) owe a great part of their value, to the extent of the period over which they are tried, and should, for that reason, be taken in hand at an early date, it cannot approve of any large outlay upon them, which must, however useful in its remote results, be immediately unremunerative.

9. If, as desired in the Resolution of 1881, the Officers of the Agricultural Departments are entrusted with duties connected with the maintenance of village records and agricultural statistics, or are associated with the assessments of land revenue based upon those records and statistics, and devote the greater part of their time to this class of work, the Government of India is willing that the expenditure sheet of Experimental and Model farms should not be charged with any portion of their salaries. If, however, the Agricultural Department cannot, for administrative reasons, be thus employed, it will become necessary to demand that a serious addition should be made to the farm budgets, and such addition might render the maintenance of such farms or that of the department which controls their administration, a question for serious consideration.

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