

GOVERNMENT OF INDIA.

DECENTRALIZATION COMMITTEE

FOR THE

ROYAL COMMISSION

ON

DECENTRALIZATION.

NOTE ON METEOROLOGY:

(WITH SUGGESTIONS)

BY

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A. R. TUCKER.



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METEOROLOGY.

PART I.

Early History.

The earliest attempt at the systematic collection of meteorological facts on an extensive scale by Government agency appear to have been due to the requirements of sanitary and medical administration. Observations for rainfall, temperature, etc., were introduced in the Upper Provinces in 1863 at the instance of the Sanitary Commissioner, and afterwards extended to the Punjab. In 1864 the destructive cyclone which visited Lower Bengal in that year led to the establishment of a local Meteorological department for the purpose of providing storm warnings. Ten years later the question of extending weather observations to the whole Indian area was taken up and the appointment of Meteorological Reporter (subsequently designated Director-General) to the Government of India was created. But the value of meteorology to the administration was not fully appreciated till the first Famine Commission (1880) urged the primary importance of the "early and punctual supply of information to executive governments and officials in all departments concerned with the agriculture of the country or the preparations required to meet famines." Since that date great advances have been made in the knowledge of Indian climatology, and the perfection of the machinery for the collection of meteorological data has been steadily kept in view.

A., Progr., December 1875, Nos. 1-3.

Need for centralization.

2. In establishing an Imperial Meteorological department in 1875, the Government of India accepted the principle that, to ensure efficiency, a weather bureau must be organized on a basis of centralized direction and control; and that observations extending over so wide and diversified an area as that of India should be co-ordinated under one head, to whose intelligence and scientific knowledge the formation and administration of the entire system should be entrusted so that the operations of the whole department throughout India might be conducted with a single aim and on properly organized scientific methods. The Director-General is accordingly not merely an advisory officer but in actual responsible charge of the work and organization of the entire department, the present constitution of which is as follows :—

Number and distribution of observatories.

3. In 1905-06 there were 214 observatories belonging to the department, distributed between the coast of Africa on one side and the Chinese frontier on the other,

These are divided into four classes according to the character of the observations recorded at them, and most of the first class observatories are located at the meteorological head quarters referred to in paragraph 4. The minor observatories are supervised by local officials of the district establishments, the actual observers being for the most part subordinate officials of other departments who are remunerated by a small allowance. Besides the regular observatories there are over 2,000 Provincial rainfall recording stations scattered over India, which are mostly in charge of the Revenue establishment.

4. The inspection of observatories, tabulation and examination of the data collected, weather reporting and research work, are carried out by the superior meteorological staff located at Simla, Calcutta, Allahabad, Bombay and Madras. Except at Simla, the Meteorologists at these stations are officers of the Educational, Telegraph or other departments who receive a local allowance for their meteorological duties. They are appointed by the Government of India in consultation with the Director-General and the Local Governments and, in addition to their work for the central bureau, issue any weather reports or information required for local purposes, or by the shipping and trade interests. The office at Calcutta is also responsible for the working of the storm warning system over the whole of the Bay of Bengal area.

5. On the staff of the central bureau located at Simla, consisting of the Director and three wholtime Meteorologists recruited in England, fall the general direction and control of the department, the conduct of special investigations, the duty of issuing daily for the whole Indian region a telegraphic weather summary and detailed weather report and chart, and the responsibility of warning the ports on the west coast of approaching storms and irrigation and district officers inland of impending floods. The central bureau also issues forecasts of the seasonal rains, and various other publications designed to keep the Imperial and Local Governments and the public fully informed of current weather conditions over land and sea.

6. Since 1899 the Director-General's jurisdiction has been extended to astronomical and physical observatories, and seismological observations have also been placed in his charge. An astronomical observatory existed for many years in Madras and a magnetic observatory in

Annual Report, 1905-06.

A. Progs., September 1905, Nos. 1-3.

Meteorological staff.

File No. 97 of 1905.
" " 19 of 1905.

Duties of Central Weather Bureau.

Control of Astronomical and Physical Observatories.

Bombay, both under Provincial control ; but the management of both these institutions having shown the need of central direction they were, with the consent of the Local Governments, imperialized in 1897. These observatories are each under a Director (one of whom is an Indian) and their work is annually brought under review by the Director-General and the Observatories Committee of the Royal Society.

A. Progs., September 1906, No. 3, File No. 19.

Altered designation of Head of Department and Staff.

7. In consequence of his extended sphere of duties, the designation of the Meteorological Reporter to the Government of India was changed in 1906 to Director-General of Observatories, and from the same date the officers of the gazetted staff under him were designated Meteorologists instead of Meteorological Reporters.





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PART II.

Nil.

PART III.

Suggestions for decentralization.

8. With the exception of mere raingauge stations, the whole expenditure as well as the management of the department is Imperial. Local Governments may establish raingauge stations (the cost of which is Provincial), but the establishment of any additional observatories under the Meteorological department requires the sanction of the Government of India, though the annual cost of a minor meteorological station is in itself insignificant. For example the Bengal Government desired to have a third class observatory set up at Monghyr, the recurring cost of which would be an allowance of Rs. 10 a month to an observer; but it required a long explanatory letter to the Government of India to get this done. Meteorology is no doubt pre-eminently a branch of work in which centralization makes for efficiency and economy, but it should not be necessary for petty references of this description to come to the Government of India and, if the suggestion made in paragraph 13 is accepted, they might be left for disposal to the head of the department subject to the condition that any case in which he was unable to agree with the proposal of the Local Government should be submitted for the orders of the Government of India.

9. Further, India is too vast a country to be efficiently served by a central weather bureau with a few subordinate offices feeding into it. The local usefulness of the department suffers by this concentration. Meteorological reporting over small areas is of much more practical value for local purposes than belated reports and weather predictions dealing with the whole continent. When crops are withering and the fate of his district is trembling in the weather balance it brings little comfort to the anxious District Officer to know that a storm is forming off the east coast which may give rain to this or that province, according as it turns north or west; but he would be very glad of a telegram telling him that the condition in his neighbourhood gave every promise of rain in his district within a day or two. Continental meteorology has been adequately provided for, and what seems to be now wanted is greater attention to local needs. Something is done in this direction, but it is very little. Therefore, although the management of the department must continue Imperial,

there appears to be room for the decentralization of meteorological work. The present position appears to be due to the almost painful efforts of the department to develop its work without increasing its expenditure. The present arrangement by which the west coast ports get their storm warnings from a station (Simla) over 1,000 miles distant, while Calcutta has a warning office on the spot, is understood to be traceable to this cause.

10. Turning to an examination of the meteorological business coming up to the Government of India, the general defect observable in the relations of the Revenue and Agricultural Secretariat with subordinate departments of numerous petty references which the head of the department should himself be able to dispose of, is very noticeable here, but the measures which the Secretariat has recently taken or is about to take to increase the powers of the Director-General of Observatories ought to go a good way towards removing it. The following further suggestions are promoted by an examination of the 121 files dealt with under the head of "Meteorology" during the year 1906. There were :—

Examination of references to Government of India.

11. (a) Twenty-six cases regarding revisions of establishment, allowances, deputations, honoraria, contingent charges, etc.

(b) Four cases regarding budget grants.

Most of these references under the Civil Service Regulations and Civil Account Code were of a minor character. The Director-General is about to be invested with considerable powers connected with the revision and entertainment of subordinate establishment, contingent charges, and transfers of budget grants, which should enable him to dispose of a large proportion of such cases himself in future.

12. (c) Fourteen case dealing with the construction and repairs of observatories.

Almost all these cases fall within the power to sanction construction and repairs up to a limit of Rs. 2,500 in each case which it has been decided to confer upon the Director-General.

13. (d) Nine cases connected with the establishment of new, or reduction or reclassification of existing, observatories; supply of instruments, etc.

The Director-General has been empowered to supply meteorological instruments in certain cases and the power might be made general. It is understood that it rests with him to determine the observatories at which special observations should be undertaken and to grant extra allowances for such observations according to a prescribed scale: if not, this power might be delegated. He might also be authorised to alter the location and classification of 2nd, 3rd and 4th class observatories within Indian limits, to abolish or establish new observatories of these classes within the same limits (provided the powers about to be conferred upon him under Article 278, Civil Account Code, are not exceeded). These are all matters upon which the proposals of the Director would almost invariably be accepted unquestioned by the Government of India and in regard to which he may, therefore, be trusted to exercise a proper discretion.

14. (e) Four cases dealing with appointments and leave. These call for no remark.

(f) Eleven cases regarding the supply and purchase of stores.

It is understood that the Revenue and Agricultural Department has under consideration the question of enlarging the powers of direct purchase of stores of the heads of its subordinate departments. Correspondence with the Director-General of Stores on matters of detail connected with articles required from or supplied by him (*e.g.*, File No. 27), and the despatch of chronometers, etc., for repair (File No. 3) pass through the Secretariat. It would probably not be difficult to arrange that the head of the department should settle such matters in direct communication with the Director-General of Stores. The return of stores purchased in India (File No. 76) might be transmitted direct to the Commerce and Industry Department.

15. (g) Six cases of returns and reports.

These call for no remark.

The department might, however, consider whether the special annual review of the rainfall, which originated in 1879 under special circumstances, Proceedings, August 1879, Nos. 12-19, is now required.

(h) Twenty-four cases regarding the supply and distribution of meteorological publications.

Whenever the Director-General despatches any of his publications to the India Office, he reports the fact to the Secretariat officially (Files Nos. 16, 26 and 113), and some publications appear to be transmitted through the Secretariat (File No. 37). The practice in both cases seems unnecessary and might be discontinued. Questions connected with the distribution of his departmental publications might be left entirely to the Director, any instructions of the Secretariat on these or other minor routine matters being obtained unofficially when necessary; and the lists showing the distribution made outside India which are sent to the India Office for record (*e.g.*, File No. 6) might be transmitted direct. Any addition to the list of officials and persons supplied with the daily telegraphic weather summary requires the sanction of the Government of India, presumably because such additions involve some expenditure (Files Nos. 44 and 82). It may be possible to lay down some general instructions or limits in this matter and leave the decision in individual cases to the Director. Action in the directions indicated would save the Secretariat a good deal of routine work.

16. (i) Eleven cases of major and 12 of minor importance relating to the work and routine of the department.

These are cases involving correspondence with the Secretary of State or falling within the general administrative control of the Government of India and call for no suggestions.

A. R. TUCKER.

I submit a note on the Meteorological Department which has been prepared by Mr. Tucker and has been concurred in by my Committee.

2. The first seven paragraphs of this note will constitute our formal memorandum on the subject for the Royal Commission on Decentralization. The suggestions made in the remaining paragraphs are for the consideration and disposal of the Revenue and Agricultural Department: they do not appear to be of sufficient importance to place before the Royal Commission.

W. S. MEYER,—25-9-07.

Revenue and Agricultural Department.



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