

Gobt. of {1894} Madras.

REVENUE.

No 3237 to d, 17 Decr 19

Communicated to the
officers concerned for
attention with reference
to paragraph 4.

L. 20, J. B.
10

Issued

Recd.

Encl.

G.O., 30th November 1894, No. 851.

NOVEMBER.

Meteorological Department.

Communicating, with remarks, to the Board of Revenue (Revenue Settlement, Land Records and Agriculture), and the Meteorological Reporter to the Government of Madras, the Resolution of the Government of India on the report on the administration of the Meteorological Department of the Government of India for 1893-94.

S. Engineers
Ch. Ford

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following extract from the Proceedings of the Government of India, in the Department of Revenue and Agriculture (Meteorology), No. 51, dated 31st October 1894 :—

Read—letter from the Meteorological Reporter to the Government of India, No. 4122, dated 3rd October 1894, submitting the annual report on the administration of the Meteorological Department for the year 1893-94.

Resolution—

1. The number of observatories controlled by the Meteorological Department at the end of the year was 177 against 154 in 1889-90. Four new observatories were opened during 1893-94 at the distant stations of Teheran, Ispahan, Kashgar and Kabul, and the accurate and interesting observations already recorded have thrown much light upon the origin, progress and other features of the cold-weather storms of Northern India. The voluntary observatory at Kodaikānal was closed in January 1894, but two new ones were opened at Port Victoria in the Seychelles Islands, and at Gantak. The observations from the former place are promised by the Port Officer for one year, and the department is indebted to him for his assistance towards determining the value of the Seychelles as a position for a meteorological observatory working in co-operation with the Indian meteorological system.

2. Interesting and valuable information was received from 23 officers regarding the amount, distribution and time of occurrence of the snowfall in the Himalayan and Afghan mountains. The department was thus assisted in determining the probable effect of the winter of 1893-94 in modifying the distribution of the south-west monsoon rainfall.

3. It is feared that the work of inspecting rain-gauges is not always satisfactorily performed, and the Government of India desire therefore to invite attention to the orders regarding rainfall registration communicated in Resolution, No. $\frac{6}{3-19}$, dated 29th August 1890, and to commend to the consideration of Local Governments the following remarks by the Meteorological Reporter to the Government of India :—

As the whole of the rainfall data of the year is now issued in annual volumes by the Government of India, it has hence virtually assumed a certain responsibility for the accuracy of the data contained in these volumes, which are distributed to officials and others interested in rainfall statistics of India and to meteorologists in other countries; and it appears to be desirable, if not essential, that the Government of India should receive information in one form or another that the work of rain-gauge inspection is fully carried out in all Provinces, and that the results of these inspections are placed before it so as to show whether the work of rainfall registration is being carried out accurately and systematically, or otherwise.

I would venture to suggest in the first place that the attention of the Provincial Governments should be again called to the orders on this subject by the Government of India, and in the second place that in the case of those Provinces where the rainfall registration is not carried out under the superintendence of the Meteorological Reporters, the officers who are in charge of it should be authorized to submit, through their Local Governments, a brief report annually, shortly after the close of the year, on the state of the rainfall registration system under their superintendence, as shown by the comparison of the rainfall statements themselves, and also by the examination of the inspection reports they have received in the course of the year.

4. The system of storm warnings to Indian ports was continued unaltered, while 341 special warnings of approaching floods were issued during the year to the local authorities concerned. The Meteorological Reporter is, however, without information as to how far the warnings thus issued were trustworthy and of use. The Government of India would therefore be glad if officers who receive these warnings will report on this point to the Meteorological Reporter to the Government of India, and offer any suggestions that may occur to them for improving the existing arrangements.

5. Under the head of Marine Meteorology an increase of work is again recorded. Since the 1st January 1893, daily weather reports and charts have been issued for the whole of the Indian land and sea area. These reports give promise of valuable aid in the determination of the relations between the meteorology of India and of the adjacent seas, and, if continued, will probably furnish data for working out the meteorology of the latter, the necessity for which, in connection with the selection of the best routes for steamers and the more important lines of communication between India and the East in the different seasons of the year, has recently been brought to notice by the Ship Masters' Society of London.

6. The south-west monsoon of 1893 was of an exceptionally abnormal character, and the Government of India agree with the Meteorological Reporter that the forecast of the seasonal rainfall gave a fair approximation to the general features of the monsoon, and that the methods employed in preparing the forecast appear to be based on correct principles.

7. Partly in consequence of the absence on leave of the Meteorological Reporter to the Government of India, and partly owing to the increase of work at the meteorological offices, fewer observatories have been inspected than in previous years, but the Government of India are glad to observe that the method of inspection has been systematized and directed to the discovery of the causes of inaccurate observations detected by examination of the telegraphic reports. Measures have also been taken to secure as far as possible the instruction and training of observers by officers of the Meteorological Department, and one of the chief causes of erroneous observations will thus be minimized.

8. Observations continue to be taken in certain forest areas in order to throw light on the influence of forest growth in modifying the distribution and amount of rainfall. The Meteorological Reporter doubts whether it is desirable to continue these observations "since," he remarks, "experience as well as theory appear to indicate that any differences with regard to temperature, humidity, &c., due to forest growth will very probably be small in amount, and their determination requires not only careful and accurate, but also intelligent observation, in order that these effects may be ascertained without intermixture with other unknown effects." The Government of India have recently sanctioned proposals for the improvement of these forest observations, and they would prefer to await the result of the measures taken with this object before passing orders on the suggestion to discontinue all such observations.

9. To the publications of the department has been added a Daily Weather Report for Madras, which is understood to meet local requirements. The printing of the observations taken at Trivandrum has been unfortunately delayed. A portion is ready for issue, and it is hoped that the whole of Volume I will be issued during the present year.

10. The question raised by the observations in paragraphs 130 to 135 of the report on the inexpediency of altering the conditions of exposure in old-established observatories, and thus rendering comparison between past and future observations unsatisfactory or impossible, will be dealt with separately.

11. The Government of India again tender their thanks to Mr. Eliot for the manner in which he has superintended the department under his charge, to his assistants and to the Provincial Reporters for the good work done by them, and to the many gentlemen unconnected with the department who have rendered it valuable assistance in the matter of observations and information.

Order.—Ordered that the foregoing Resolution be forwarded to the several departments of the Government of India, to Local Governments and Administrations, to the Director-General of Telegraphs, to the Surgeon-General with the Government of India, and to the Meteorological Reporter to the Government of India.

Ordered also that it be published in the Supplement to the *Gazette of India*.

(True Extract.)

(Signed) E. D. MACLAGAN,
for Offg. Secy. to the Govt. of India.

To the Secretary to the Government of Madras.

ORDER—dated 30th November 1894, No. 851, Revenue.

Miscellaneous.

Communicated to the Board of Revenue (Revenue Settlement) and the Meteorological Reporter to the Govern-

ment of Madras whose attention will be invited to the remarks of the Government of India in paragraph 3 of its Resolution read above.

2. It is presumed that the Administration Report of the Local Reporter will deal with the working of the arrangements made in this Presidency for the inspection of rain-gauges.

3. The attention of the Meteorological Reporter is directed to paragraph 148 (page 63) of the Administration Report and her remarks thereon should be submitted to Government.

4. Orders will issue in the Public Works and Marine Departments with reference to paragraph 4 of the Government of India Resolution.

(True Extract.)

(Signed) E. GIBSON,
Secretary to Government.

To the Board of Revenue (Revenue Settlement, Land Records and Agriculture).
„ the Meteorological Reporter to the Government of Madras.

„ the Public Works Department.
„ the Marine Department.

Exd. C. M. Brisson.

75 Copies.