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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Rule DEPARTMENT

Copy

G.O. No. / B.P. No.	1544. (1)	Press. / Mis.
Dated	16. 11.	1881

Not to be folded or roughly handled

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No. 17.

Extract from the Proceedings of the Government of India in the Revenue and Agricultural Department (Meteorology), dated the 27th October 1881.

READ again—

Letter No. 10, dated 24th February 1881, from the Home, Revenue and Agricultural Department, reviewing the Meteorological Report for the year 1879-80.

Read—

Letter No. 38., dated 8th June 1881, from the Meteorological Reporter to the Government of India, replying to the above.

Joint Memorandum on additional ratufall [illegible] by Mr. E. C. Buck, Officiating Secretary to the Government of India, Home and Agricultural Department, and Mr. H. F. Blanford, Meteorological Reporter to the Government of India.

RESOLUTION.

THE Government of India in reviewing (Home, Revenue and Agricultural Department's letter No. 10, dated 24th February 1881) the Meteorological Report for the year 1879-80 and the [illegible] which it gave of the progress of meteorological observations in India during the last five years, took the opportunity of drawing the attention of the Meteorological Reporter to the suggestions contained in paragraphs 84 to 141, Part I, of the Report of the Famine Commission, and called for information and proposals on the following points:—

(1) The existing practice in regard to the preparation and distribution of daily weather reports, and the measures considered necessary in order to secure a wider and more prompt publicity.

(2) The communication of timely and continuous information regarding the character of each passing season to the executive authorities, whose duty it would be to provide for famine.

(3) The wider diffusion of knowledge of the causes and nature of the periodical rains, not only amongst Government officials, but amongst the public generally.

(4) The improvement and extension of the existing system of meteorological observation.

(5) Continuance of the investigation of solar physics in relation to the fluctuations of the rainfall and the state of the sun's surface.

2. Mr. Blanford's reply is contained in his letter No. 38. of the 8th June 1881, and his proposals have since been fully considered in consultation with him.

3. In regard to the first head of inquiry, the Meteorological Reporter explained that under the existing system two kinds of daily weather bulletins are issued by the Calcutta Meteorological Offices; the one relating to the whole of India, is published by the Meteorological Reporter to the Government of India; and the other, relating to the storms of the Bay of Bengal only, is published by the Meteorological Reporter to the Government of Bengal.

The daily weather bulletin published by the Meteorological Reporter to the Government of India gives the results of observations at 50 stations in the fine season and of 84 in the rains. Of these stations, 50 are observatories which report throughout the year; 10 others are observatories reporting during the rainy season only, and 24 are stations which, though not observatories, telegraph the rainfall daily during the rains. From the 15th May to 15th October the daily bulletin is published at Simla, and the [illegible] figures are supplemented

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by a brief commentary written by the Meteorological Reporter himself. During the rest of the year, however, the frequent absences of the Meteorological Reporter on tour in connection necessitate the discontinuance of these remarks, and the figures alone are published by the Calcutta office. These daily reports are distributed free of charge to about 60 officials and offices in India, and till recently, when the number was reduced to two, they were also supplied to about 47 newspapers.

Besides the daily weather reports, the Central Meteorological Office prepares a daily chart based on the data collected at all the observatories in India, but this is not published save on special occasions.

The Bengal Meteorological Office issues daily a statement, sketch chart and verbal summary of observations at stations around the coasts of the Bay of Bengal. This report is distributed in the afternoon of the day to which it refers to the Government officials, 27 newspaper publishers, merchants, and others, who pay a monthly subscription of Rs. 2.

4. With a view to improve these reports and extend the distribution of his daily weather bulletins, Mr. Blanford made the following proposals:—

(1) To attach a chart showing the distribution of pressure, wind and rainfall, to the daily weather statements, and to elucidate these by a verbal description throughout the year instead of during the Simla season only.

(2) To distribute the daily reports to all divisional and district officers stationed within one or two days' post of the place of publication, and to any other persons who may wish to have them; to make them available to the public generally on payment of a subscription of Rs. 2 per mensem, and to furnish them gratis to such newspapers as agree to publish them.

(3) To telegraph to provincial towns and other seats of Local Governments, for the information of Government and the public press, a condensed summary of the remarks which accompany the daily weather reports.

(4) To put the Meteorological Office at Simla in direct electrical communication with the Telegraph Office, and to lithograph the report and chart in the Meteorological Office, so as to issue them as far as possible by the afternoon of the day to which they relate.

5. Mr. Blanford further stated that as the daily summary of the telegraphic weather returns can only be prepared by a scientific officer, it would be necessary to entertain an assistant capable of taking charge of the Meteorological Office during the Meteorological Reporter's absence. In view of the increased work involved by the several proposals, sanction to a small additional establishment and to certain contingent charges was also requested. The total estimated cost of the Meteorological Reporter's proposals under this head amounted to an annual charge of Rs. 12,793, and a special outlay of Rs. 3,300.*

6. The Governor General in Council, while concurring generally in the recommendations made by the Meteorological Reporter for improving the present arrangements in regard to the daily weather report, is of opinion that the end in view will be sufficiently obtained if a descriptive summary is appended throughout the year to the daily issues. The addition of a chart may, for the present, be dispensed with as it would involve a heavy outlay, and the report and statements should continue to be printed by the Government Press. This will effect a saving of the items numbered 4, 5, 6 and 7, and of Rs. 240 under 8 in the table marked annexure A to this Resolution. Subject to these modifications and to the Secretary of State's approval to the appointment of a Scientific Assistant, the proposals are sanctioned. They will involve an annual expenditure of Rs. 11,233.

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* See annexure A.

The request for a Scientific Assistant to the Meteorological Reporter has before been under the consideration of the Government of India. The need of such an officer was recognised, but final decision of this matter had, in 1879, to be postponed owing to financial pressure. The Government of India now considers that for the improvement of the meteorological reports on the lines of the Meteorological Reporter's proposals the permanent addition of another scientific officer to the Department is indispensable. It is most desirable also to provide that in case of the Meteorological Reporter's sickness or absence from head-quarters, the daily meteorological work, which needs continuity of skilled supervision, should suffer no interruption. His Excellency in Council has therefore decided to apply to the Secretary of State for the services of a duly qualified officer.

8. In connection with the preparation of the daily weather reports, Mr. Blanford also recommended that the number of observatories sending daily telegrams throughout the year should be increased from 50 to 80, and that reports of rainfall only should be obtained from 35 additional stations during the rainy season, instead of from 24 as at present. The estimated cost of this proposal is Rs. 12,550, but as the whole of this sum represents merely telegraph charges, the expenditure is of a nominal character. The additional reporting stations have since been arranged on the basis of definite principles by Mr. Blanford in consultation with the Government of India, with the result that there will now be in all 116 observatories or stations which will furnish during the rains telegraphic returns of the rainfall.

9. With reference to the second and third points upon which the Meteorological Reporter was requested to submit his views, he proposed—

(*a*) to publish a periodical report monthly during the rains and bi-monthly during the fine season, giving such a resumé of the character of the season as can be gathered from the daily weather bulletins supplemented by the weather and crop reports received in this Department, and forecasting, where this can safely be done, the ensuing prospects of the season;

(*b*) to publish a popular treatise on Indian meteorology founded on the data already collected.

It has further been arranged that the monthly and bi-monthly reports shall in future be periodically supplemented by a short historical summary in a

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* Punjab.

Peshawar, Murree, Rawalpindi, Dera Ismail Khan, Multan, Lahore, Sialkot, Jullundur, Ludhiana, Umballa, Simla, Delhi, Sirsa.

North-Western Provinces and Oudh.

Chakrata, Mussoorie, Naini Tal, Roorkee, Meerut, Sarsawa, Aligarh, Agra, Baraitch, Lucknow, Cawnpore, Hamirpur, Fyzabad, Rai Bareli, Allahabad, Jaunpur, Benares, Gorakpur, Mirzapur, Jhansi.

Rajputana and Central India.

Jeypore, Ajmere, Mhow, Mount Abu, Neemuch, Indore, Deesa, Sirohi.

Bengal.

Moorshedpore, Patna, Gya, Bhaugulpore, Purneah, Dinajpur, Darjeeling, Hazaribagh, Burdwan, Dacca, Calcutta, Saugor Island, Chittagong, Cuttack, False Point.

Assam.

Dhubri, Gauhati, Nowgong, Sibsagar, Silchar.

Central Provinces.

Raipur, Jubulpur, Sangor, Seoni, Nagpur, Khandwa.

Berar.

Amraoti, Akola.

Bombay.

Jacobabad, Hydemabad, Kurrachee, Bhuj, Rajkot, Deesa, Ahmedabad, Surat, Dhulia, Malligaon, Ahmednagar, Bombay, Poona, Satara, Sholapur, Kaladgi, Belgaum, Goa.

Hyderabad.

Secunderabad.

Madras.

Gopalpur, Vizagapatam, Rajahmundry, Masulipatam, Nellore, Cuddapah, Gooty, Kurnool, Bellary, Madras, Salem, Negapatam, Madura, Coimbatore, Tuticorin, Cochin, Calicut, Cuddalore, Mangalore.

Mysore and Coorg.

Bangalore, Mercara, Chitaldrug.

British Burma.

Akyab, Theyet Mio, Prome, Tounghoo, Diamond Island, Rangoon.

popular form of the weather discussion of each half-year. The first will embrace the period from 1st May to the 31st of October (including an account of the south-west monsoon), and the second from 1st November to 30th April (giving an account of the cold weather rains in the north of India and the Carnatic monsoon in the south-east of India). The dates of publication will be the 1st January and the 1st July respectively in each year.

These proposals are tentatively approved by His Excellency in Council.

10. The extension and improvement of the existing system of meteorological observations form the fourth subject for consideration. The Meteorological Reporter's proposals fall under two separate heads:—(*a*) establishment of additional observatories, and (*b*) collection of information on the meteorology of Indian seas.

11. In regard to (*a*), Mr. Eliot proposed to create 7 new observatories, of which 3 should be in Madras (Cuddapah, Kurnool and Rajahmundry), 1 in Assam (Gauhati), and 3 in the Himalayas (one at Kailang in the upper valley of the Chandra Bhaga, and the other two at places to be selected in the interior of Kumaon). He further proposed to allow a salary to the observers at Cotacamund, Simla, and Katmandu, who have hitherto received no remuneration. He also recommended the appointment of a well trained European observer, who should visit the various observatories and instruct, where necessary, the observers in charge. He also proposed to grant small additional allowances to a certain number of deserving observers as a reward for good and accurate work.

These measures, he estimated, would entail a special outlay of Rs. 2,800 and an annual charge of Rs. [illegible] (see Annexure B).

12. It appears to His Excellency in Council that as the Scientific Assistant referred to in paragraphs 6 and 7 will not have to superintend the preparation of a daily chart as originally proposed, he might be partly employed in instructing observers at outlying observatories as occasion may demand. He would also at the same time visit such observatories as come within the line of his journey, and thus afford material assistance to the Meteorological Reporter in a direction in which the proposed European Instructor could render little or no aid. For these reasons the appointment of a special Instructor is considered unnecessary; the other proposals detailed in the Annexure B, are sanctioned. Items Nos. 2 and 3 in the table will stand, as the allotments will probably be required to cover the travelling allowance charges of the Scientific Assistant. In fixing the position of the new observatories, the Meteorological Reporter will communicate with, and obtain the assent of, the Local Governments concerned.

13. For the purpose of promoting the study of marine meteorology Mr. Blanford solicited a grant of Rs. 5,000 to carry out the reduction and discussion of the 20 years' statistics of Indian marine meteorology received from the London Meteorological Office. He also proposed to introduce under the immediate supervision of Mr. Eliot, Meteorological Reporter to the Government of Bengal, a system of collecting information regarding the weather on Indian seas through the medium of the Hooghly pilots and the logs (where obtainable) of vessels coming into the port of Calcutta.

The expenditure required for this purpose is shown in Annexure B, and amounts to Rs. 3,138 a year, besides a special outlay of Rs. 5,000.

14. The importance of extending our at present very imperfect knowledge of the meteorological phenomena over Indian seas, intimately connected as they are with the annual rainfall over continental India, has long been recognised. His Excellency in Council is therefore pleased to sanction as an experimental measure Mr. Blanford's proposals under this head. The concurrence of the Government of Bengal to Mr. Eliot's co-operation will be obtained.

15. The sixth and last question on which a report was called for was the best means of carrying out the recommendation of the Famine Commission, that the investigations already on foot as to the supposed coincidences between the fluctuations of rainfall and the state of the sun's surface should be continued.

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Mr. Blanford reported that, besides the solar investigations undertaken by the Great Trigonometrical Survey, actinometric observations are made at Alipore. But as the skies there are ordinarily unfavourable to the observer, preliminary steps have already been taken to obtain actinometric observations at Leh in Kashmir under the supervision of Mr. Ney Elias, the Assistant Commissioner of Leh.

Mr. Blanford further recommended that a trained European should be sent up to Leh to start these observations and instruct the permanent native observer attached to the observatory. The Solar Physics Committee have volunteered to select a sapper of the requisite qualifications in England, who will be there instructed in the use of the Winstanley instrument as an adjunct to the actinometer. The term of his engagement should, it is proposed, be for two years, at the end of which the native assistant observer at Leh will probably be able to conduct the work without further supervision. The pay of the sapper is estimated at Rs. 250 per mensem, and that of the native assistant Rs. 150, or an annual expenditure of Rs. [illegible]. The cost of the Winstanley instrument would be in addition to this.

The Governor General in Council is pleased to approve of these proposals, and they will be submitted for the sanction of the Secretary of State.

16. Excluding nominal items, the proposed and sanctioned estimated expenditure involved in the several recommendations and suggestions which have been considered above, compare as follows:—

	Proposed.		*Sanctioned.*	
	Annual. Rs.	Special. Rs.	Annual. Rs.	Special. Rs.
I. Daily weather reports	[illegible]	3,300	11,233	
II. Observatories	[illegible]	2,800	6,550	2,800
III. Marine meteorology	[illegible]	5,000	3,138	5,000
IV. Solar investigations	[illegible]		4,800	
Total	[illegible]	[illegible]	25,721	7,800
Proposals sanctioned	25,721	7,800		
Reduction	[illegible]	5,300		

17. As far as possible, the arrangements sanctioned will come into operation from the 1st of April next, subject to any modifications which Local Governments for good and sufficient reasons may be disposed to recommend.

ORDER.—Ordered, that a copy of the Resolution be forwarded to the Meteorological Reporter to the Government of India for information and guidance.

Ordered also, that a copy be communicated to all Local Governments and Administrations,* the attention of the Government of Bengal being invited to paragraph 14.

Ordered also, that copies be forwarded to the Foreign Department for communication to the Residents at Hyderabad, Mysore and Nepal and to the Agents to the Governor General for Central India, Rajputana and Baroda for information.

(True Extract,)

E. C. BUCK,

Offg. Secretary to the Govt. of India.

* Government of Madras.
" Bombay.
" Bengal.
" North-Western Provinces and Oudh.
" Punjab.
Chief Commissioner of Central Provinces.
" British Burma.
" Assam.
" Ajmere.
" Coorg.
Secretary for Berar to Resident in Hyderabad.

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ANNEXURE A.

	Annual expenditure.	Special expenditure.
	Rs.	Rs.
1. A Scientific Assistant on a pay [illegible] Rs. 500 to 750 (minimum pay + ¾ of difference = Rs. 712-8)	8,000	
2. Two Tabulators for preparing the [illegible] statements, &c., on Rs. 40, rising to Rs. 55 each, [illegible] + ¾ of difference = Rs. 102-8-0)	1,230	
3. A Daftri on Rs. 10	120	
4. Lithographic press and gas engine		3,000
5. Setting up above		300
6. Materials for engine and press	540	
7. A pressman and two assistants [illegible] of Rs. 35 per mensem and a Native engineman [illegible] total Rs. 65 × 12 =	780	
8. Travelling allowance to Scientific [illegible] and tabulators, pressman, &c.	1923	
9. Extra accommodation at Simla	600	
10. Rent of Simla telegraph line and [illegible]	700	
11. Additional postage charges	2,300	Nominal charges.
12. Additional telegram charges [illegible] summary to seats of Local Governments	8,000	
Total	23,793	3,300

ANNEXURE B.

	Annual expenditure.	Special expenditure.
	Rs.	Rs.
1. A European Instructor on Rs. [illegible] to Rs. 250 (minimum pay + ¾ of difference = Rs. [illegible] month)	2,700	
2. Fixed travelling allowance to [illegible] at Rs. 50, for nine months	450	
3. Mileage for Instructor's journeys	1,000	
4. Allowance for seven new observers and three old ones, at Rs. 15 each	1,800	
5. Good service allowances to [illegible] at Rs. 5, and to 10 at Rs. 10	3,000	
6. Contingencies at the seven new [illegible]	300	
7. Constructions at the new observatories		700
8. Instruments for ditto		2,100
Total	9,250	2,800

ANNEXURE C.

	Annual expenditure.	Special expenditure.
	Rs.	Rs.
1. Grant for temporary establishment and contingencies for reduction and discussion of [illegible] meteorological logs obtained from London		5,000
2. Special allowance to Mr. Eliot, Rs. 150 per month for superintending for two years [illegible] department of marine meteorology	1,800	
3. One copyist on Rs. 25 rising [illegible] to (minimum + ½ of difference = Rs. 32-8 per mensem)	390	
4. One draftsman on Rs. 40 to [illegible] (minimum + ¾ difference = Rs. 47-8 per mensem)	570	
5. One peon on Rs. 6-8	78	
6. Contingencies	300	
Total	3,138	5,000

GOVERNMENT OF INDIA.

REVENUE AND AGRICULTURAL DEPARTMENT.

METEOROLOGY.

RESOLUTION.

Copy

No. 1 2785

Dated Simla, the 27th October 1881.

SUBJECT.

Communicates orders on the proposals made in Meteorological Reporter's No. 38., dated 8th June 1881, for the development of meteorological observations and reports.

Govt. C. B. Press, Simla.—No. 271 R. & A. D.—1-11-81.—925.