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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

REV DEPARTMENT

G.O. No.	62	Press
B.P. No.		Mis.
Dated	13. 1.	1873
		196 .

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Department,
30th December 1872.

No. 61. Read the following Proceedings of Government in the Revenue Department, dated 11th November 1872, No. 1536 :—

Read the following Despatch from the Right Honourable the Secretary of State for India (Sanitary), to His Excellency the Right Honourable the Governor in Council, Fort St. George, dated India Office, London, 8th August 1872, No. 7 :—

The Revenue Despatch of your Excellency in Council, dated 15th February, No. 5 of 1872, transmitting copies of papers, embodying statistics, and information relative to the public health in the Madras Presidency, has been considered by me in Council.

2. In reply, I forward, herewith, for the consideration of your Excellency in Council, and for the issue of such orders as may be deemed necessary, copy of some observations by the Army Sanitary Commission on the subjects discussed in those papers.

13th June 1872.

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Enclosure No. 1.

Memorandum by the Army Sanitary Commission on "Proceedings of Madras Government, embodying information relative to the Public Health of the Presidency during Fasli 1280 (1870-71)."

The most important practical subject dealt with in these papers is the occurrence of epidemic malarial fever in the Godavery District, and the presumed relation of this fever to the irrigation works carried out of late years in the river delta.

The question is a similar one to that raised in Dr. Plank's report on the outbreak of fever in certain irrigated districts of the North-West Provinces, described in the Commissioner's remarks on this report of August 25, 1871, and both questions have an important bearing on the whole subject of Indian irrigation.

2. The Godavery fever, according to the report of Mr. Wright, the Medical Officer, is an ague accompanied, in certain cases, with remittent or bilious remittent symptoms, sometimes assuming typhoid character. The mortality, so far as this can be ascertained in the present state of the mortuary statistics, was very high in 1869-70.

3. In the irrigated taluqs of the Godavery delta the death rates per 1000 were 7·43, 9·17, 9·60, 15·73, and 23·03 ; average 13·0. In the non-irrigated taluqs above the irrigation works the death rates per 1000 were 11·28, 13·86, 14·89, and 19·12 ; average 14·79.

4. Mr. Cornish gives the death rates for five years, ending December 1870, as follows :—

In irrigated taluqs	8·12 per 1000
In Zemindari estates, mostly on the sea-board and irrigated...	8·5 ,,
In non-irrigated taluqs above the delta	11·05 ,,

5. An important point of comparison might be supplied by the fever death rates of other districts in Madras Presidency, but unfortunately the registration of deaths cannot yet be depended on for accuracy.

A mortality table for (1870) Fasli 1280 in the papers gives the fever death rate for Godavery District as 8·05 per 1000. There are twenty districts in the table, twelve of which have lower death rates than Godavery ; two districts have the same fever death rate ; and in five districts the fever death rate exceeds the Godavery rate. But not much importance can be attached to this comparison for the reason stated.

6. According to Mr. Cornish, as cited by Mr. Wright, the deaths are as 1 to 50, 60, or more of the attacks—a fact which will show the immense prevalence of the disease, and the baneful effects it is likely to exercise on the health and productive power of the population.

7. The most important facts regarding the frequency and fatality of the disease appears to be that it increases rapidly after the rains, that it is comparatively quiescent during the dry warm months, that the disease is most active during winds blowing from the north-east, and from northerly directions generally; so much so that its increase may be predicted if there be heavy rainfall in the north-east monsoon. It is aggravated by cold winds acting on constitutions imperfectly nourished and indifferently clothed and sheltered, and the mortality is no doubt increased by barbarous native medical treatment of the sufferer, which Mr. Wright proposes to abolish, at least the starvation part of it, by law. It would be useful also in any further inquiry to ascertain whether the disease is not aggravated by ordinary sanitary defects in the houses, such as overcrowding, damp, defective ventilation, filth, and impure water.

8. The natives, it appears, have an impression that the Godavery delta was formerly healthy, and that this fever has notably shown itself since the introduction of the Godavery Irrigation Works. The fact is called in question on the ground that native impressions are not to be trusted, but notwithstanding this fact one can scarcely suppose that such an idea would have arisen regarding works of undoubted benefit to agriculture, had there not been some ground for the idea.

9. Mr. Cornish considers that malaria blown from unhealthy districts away from the delta may be accepted as a cause. But, on the other hand, it must not be forgotten that drainage does not accompany irrigation in the affected district, and that other experience, Dr. Plank's for instance, appears to show that the height of water level in the soil of irrigated districts has an important bearing on the amount of fever.

10. Mr. Wright states regarding the Godavery, "a large quantity of silt is yearly brought down by the Godavery and deposited on the land. But the old drainages of the delta have not, in the meantime, been improved to carry off the additional quantities of water now provided for by the anicut at Dowlaishweram. These drainages have, in the meantime, become choked up with mud and silt, and some think that the fever may be due to this circumstance."

11. Another point to be considered as bearing on this subject is the back-watering of the river itself above the irrigation works by the anicut, and the probability of the water-line in the soil above the anicut having been raised by this work.

12. The evidence as to the relation between the irrigation works and the fever is not conclusive, but it nevertheless suggests points for inquiry such as the following :—

(1.) The water level in the soil for every month in the year at a sufficient number of points over the irrigated districts might be recorded. In this way the effect of irrigation by itself and of the added rainfall might be ascertained. As a result of such an inquiry it might be determined to what extent irrigation was necessary during the rains, and whether it may not be the means of adding an element of ill-health during the rainy season without adding to the fertility of the soil.

(2.) The effect of the anicut on the water level at a sufficient number of points of districts above it might also be examined. It may be that keeping up the water level during the rainy season is an element in the question of the fever in these districts.

(3.) The condition of the old drainages mentioned by Mr. Wright appears to be a point of considerable importance, which it would be well to look further into.

(4.) The general question of drainage in connexion with irrigation appears to require consideration.

(5.) A more careful distribution and use of water and the introduction of tree planting also suggested by Mr. Wright might be attended to with advantage.

(6.) It might be well also to examine the effect of irrigation on the domestic water supply of this district. Dr. Plank found evidence, on his inquiry, of marked deterioration of the water used for domestic purposes in districts where too much irrigation water was applied.

13. Further inquiry on these and cognate points might very well be carried out, but there is evidence to show that possibly improved methods of dealing with the water having reference to seasons, to quantities, and to drainage, would improve the health of the whole district. Irrigation is not a work to be carried out once for all, and then left to itself. It is only an instrument

which must be used with the care required to ensure a maximum of advantage with a minimum of risk to health.

WAR OFFICE,
13th June 1872.

(Signed) J. J. FREDERICK,
Secretary.

Order, *11th November* 1872, *No.* 1536.

The memorandum by the Army Sanitary Commission, received with the foregoing Despatch, will be referred to the Public Department, with reference to G. O. in that Department, 14th June 1871, No. 828, for consideration and orders.

(True Extract.)

(Signed) W. HUDLESTON,
Officiating Chief Secretary.

No. 62. ORDER THEREON, 30th December 1872, No. 1414.

Resolved that the further report of Assistant-Surgeon Wright, recorded in Proceedings of Government dated 30th December 1872, No. 1413, on the causes of fever in the Godavery District, with the letters received from the Inspector-General, Indian Medical Department, and Sanitary Commissioner on the subject, be forwarded to the Secretary of State for India for communication to the Army Sanitary Commission.

2. Resolved that the Public Works Department be requested to paragraph 12 of the Memorandum from the Army Sanitary Commission, with the view to inquiries being instituted on the several points therein noted.

3. The attention of the Collector of the Godavery District, the Inspector-General, Indian Medical Department, and the Sanitary Commissioner will also be drawn to the points above referred to.

(True Extract.)

Chief Secretary.

To the Public Works Department.
" Collector of the Godavery District.
" Inspector-General, Indian Medical Department.
" Sanitary Commissioner.
" Revenue Department.

Exd. J. Wright.

7 Board's Revd Dec 15 Jany 73

Revenue 1873 Sept

Govt. of Madras

1872

PUBLIC No. 64

To

THE PUBLIC WORKS DEPARTMENT,

&c., &c.

Dated December, 30th.

Read.

G. O., 30th December 1872, No. 1414.

DECEMBER.

Nos. 61 62.

Directing that the further report of Assistant Surgeon Wright on the causes of fever in the Godavery District, with certain other papers on the subject, be forwarded to the Secretary of State for India for communication to the Army Sanitary Commission.

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