Public Works (189 ) Department.

G.O., No. 2219 W

DATED 31st August 18

[Despatch Abstract.]

Sanitation

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P. W. Current No: 7020

# Government {1898} of Madras.

## LOCAL AND MUNICIPAL.

*Read.* 23. 8. } 1898. *Enclosures* -

*Regd.* 23. 8. } *Spare copies* 20.

**G.O., &c., Nos. 1475, 1476 L., 13th August 1898.**

2736 w 2.10.97
2490 w 27.8.96

No 2219 w 31.8.98
B

Communicated to Superintendent for information.
HEK
10.8.98.

**AUGUST.**

Superintendent with thanks
2 Vol 1898
3 Vol 1898
on

**Sanitation.**

Reviewing the reports on — for 1897.

BACK PAPERS.

| G.O. | No. | Department. | Date. | G.O. | No. | Department. | Date. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

FURTHER PAPERS.

| G.O. | No. | Department. | Date. | G.O. | No. | Department. | Date. |
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GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper:—

From the Sanitary Board, dated 23rd June 1898, No. 353-S.

ABSTRACT.—Submitting the sanitary reports for 1897.

ORDER—No. 1475 L., dated 13th August 1898.

With the Proceedings read above, the Sanitary Board submits the reports of the Sanitary Commissioner and the Sanitary Engineer on the administration of their departments for the year 1897 and a separate report of the work done by the Board itself during the same period. The delay of more than one month in the submission of these reports, which were due in the Government Office on the 15th May 1898, has not been explained. Every endeavour should be made to submit them punctually in future, as desired by the Government of India in its resolution communicated with G.O., Mis. No. 599 L., dated 28th March 1898.

GENERAL SANITATION.

2. *Rainfall.*—The total average rainfall of the Presidency was 48·14 inches against 45·94 in the previous year and an average of 45·46 inches for the ten years ending with 1894. The mean quantity of rain registered during the south-west monsoon was 34·35 inches or 9·04 inches more than the average, the increase being considerable in the Nilgiris, South Canara and Malabar. On the other hand, the rainfall during the north-east monsoon was only 8·19 inches against an average of 15·17 inches and was about half the usual fall in all the districts, except Ganjám, Vizagapatam and Gódávari, where it did not materially vary from the average, and in Kurnool and Nellore, where it was only 2·4 and 5·84 inches against an average of 8·0 and 19·81 inches respectively.

3. *Prices of food-grains.*—The following table shows the prices of the principal food-grains, as compared with those of the previous two years and with the average for the ten years ending with 1894:—

| | Number of seers for the rupee. | | | Average for the ten years ending with 1894. |
|---|---|---|---|---|
| | 1897. | 1896. | 1895. | |
| Rice .. .. .. .. | 9·9 | 12·7 | 12·8 | 14·0 |
| Ragi .. .. .. .. | 17·2 | 25·8 | 26·5 | 28·1 |
| Cholam .. .. .. .. | 14·5 | 22·6 | 23·5 | 26·4 |

In consequence of the failure of the north-east monsoon of 1896 there set in a rise in prices in all districts, which was intensified by the lateness of the south-west and the failure of the north-east monsoons of 1897. In consequence, the year closed with a feeling of anxiety amongst the agricultural classes, it being feared that, should the south-west monsoon of 1898 prove a failure, there would be widespread famine. The Sanitary Commissioner states that much of this feeling was due to the existence of a prophecy by native astrologers that the year 1898–99 would be one of extensive disaster and that this probably affected the prices of grains in the districts depending chiefly upon the north-east monsoon.

4. *Vital statistics* *.—With reference to the remark of the Sanitary Commissioner that in accordance with the desire of the Army Sanitary Commission he has made no

* The figures given in this paragraph include Europeans and Eurasians numbering some 40,000; the succeeding paragraphs give statistics relating to natives only. Full particulars regarding Europeans and Eurasians will be found in Appendix XIII.



allusion to the "estimated" population, it is observed that he has overlooked paragraph 5 of G.O., No. 1997 L., dated 15th October 1897, which permits calculation on the basis of population corrected according to the intercensual rate of increase.

The population for which returns of births and deaths were received was 32,638,243 according to the census of 1891, or 122,966 less than in 1896. There was a decrease of 127,453 in Vizagapatam, and an increase of 4,487 in Ganjám; but these variations have not been explained. The system of birth and death registration continued the same as in the preceding years. A proposal made by the Deputy Director of Agriculture to utilize the birth registers throughout the rural areas for the purpose of checking vaccination was under the consideration of Government at the end of the year. The Sanitary Commissioner states that its adoption will not only aid vaccination, but will form a good check upon false registration.

5. *Births.*—The number of births registered during the year was 935,845 or 28·7 per mille of the census population against 979,981 or 29·9 per mille in 1896, the rates for the urban and rural areas being 32·7 and 28·4 against 34·4 and 29·5, respectively, in that year. The decrease is explained in paragraph 21 of the report. Excluding Madras, the highest birth-rate was, as in the previous years, recorded in the Chingleput district (37·1 per mille), and the rate in Bellary, Kistna, the Nilgiris, Salem, South Canara and Tinnevelly was also fair, being above 30 per mille; but in Ganjám and Malabar it was only 23·9 and 20·8, respectively, per mille against 26·6 and 22·5 in the previous year. The Collectors of these two districts should give their earnest attention to this matter. Among municipalities, Vániyambádi returned the highest birth-rate (53·9), as in the previous three years. The rate was more than 40 per mille in Erode, Guntur, Periyakulam, Coonoor, Gudiyáttam and Tiruppattúr, where similar results were recorded in 1896. In 33 towns it was between 40 and 30 and in sixteen others between 20 and 30, while in Berhampur and Chicacole it was only 18·2 and 18·6, respectively. From the statement annexed to paragraph 17 of the report, it appears that in only 37 municipalities were the compulsory provisions of the Act resorted to. This is very unsatisfactory. The Government trusts that greater energy will in future be displayed by the municipal councils in compelling obedience to the law in regard to the registration of births. The Chairman of the Municipal Council of Berhampur is requested to explain why a record of prosecutions was not maintained by him.

6. *Deaths.*—The following statement shows the number of deaths per mille of the population during the year under review as compared with the figures of the previous five years:—

| | 1892. | 1893. | 1894. | 1895. | 1896. | 1897. |
|---|---|---|---|---|---|---|
| Cholera .. .. .. .. .. | 2·3 | 1·0 | 1·3 | 0·6 | 1·5 | 4·4 |
| Small-pox .. .. .. .. .. | 1·3 | 0·8 | 0·3 | 0·1 | 0·3 | 0·7 |
| Fevers .. .. .. .. .. | 8·3 | 7·7 | 8·0 | 8·3 | 8·0 | 9·0 |
| Dysentery and diarrhœa .. .. .. | 1·0 | 0·7 | 0·7 | 0·7 | 0·7 | 1·2 |
| Injuries .. .. .. .. .. | 0·3 | 0·3 | 0·4 | 0·3 | 0·3 | 0·3 |
| Other causes .. .. .. .. | 9·1 | 8·8 | 9·3 | 9·6 | 9·8 | 9·8 |
| Total .. | 22·3 | 19·3 | 20·0 | 19·6 | 20·6 | 25·4 |

7. The total number of deaths registered was 827,525 against 675,787 in the previous year, the increase appearing chiefly in the seven districts of Ganjám, Vizagapatam, Gódávari, Anantapur, Bellary, Cuddapah and Kurnool affected by famine and in South Canara, Malabar, Tanjore and Tinnevelly. The mortality among infants under one year of age in the rural tracts was 164·5 per mille of the registered births or 7·6 per mille more than in the preceding year, while in municipalities it fell from 232·9 to 223·1. The rates of infantile mortality for each district and municipal town have not been furnished—an omission which should be supplied in future reports.

8. As usual, the death-rate of 35·8 per mille in the city of Madras, though less than that of the previous year by 2·4 per mille, was higher than any found in the districts. This may be ascribed partly to the insanitary condition of the city and partly to the greater accuracy of the returns. No substantial advance was made in the sanitary condition of the city; but many useful improvements have been and are being carried out. The long contemplated scheme for the drainage of the city has been

sanctioned by Government and the Commissioners have undertaken the drainage of Mylapur to start with. Steps are being taken to put an end to the practice of intramural burial; a slaughter-house in Triplicane situated in the midst of habitations was closed, a few parcherries were improved and others were laid out on correct sanitary principles. Arrangements have also been made for laying out new streets in the Tinnevelly settlement, which is one of the most insanitary and overcrowded parts of the city. But until the drainage scheme is completed, the river Cooum purified, and the proposed improvements in the water-supply effected, the city of Madras cannot be expected to become healthy.

9. The average death-rate in rural villages was 24·8 per mille against 19·9 in 1896, the mortality being highest in Ganjám (50·7). The rate was more than 30 per mille in Bellary (30·4) and Vizagapatam (31·6), and ranged from 20 to 30 per mille in Anantapur, Chingleput, Cuddapah, Gódávari, Kistna, Kurnool, Madura, Malabar, the Nilgiris, South Arcot, South Canara, Tanjore, Tinnevelly and Trichinopoly, while in the remaining districts of Coimbatore, Nellore, North Arcot and Salem, it was below 20, the last mentioned district having returned the lowest death-rate (19·0). In rural towns, the rates were very high in some cases and very low in others, as shown in the margin. These figures indicate the untrustworthy nature of the returns. Ambúr which recorded a death-rate of 34·4 in 1896 has registered a rate of 7·3 in 1897, being a little more than the figure recorded in 1895, viz., 6·1. Collectors of districts where registration is obviously neglected will be called upon for explanation.

| | |
|---|---|
| Párvatípuram ... ... ... ... | 46·4 |
| Ambúr ... ... ... ... ... | 7·3 |
| Samalkot... ... ... ... ... | 9·7 |
| Shendamangalam ... ... ... | 9·8 |
| Rajapalaiyam ... ... .. ... | 13·3 |
| Virudupatti .. ... ... ... | 13·9 |

10. Turning to municipalities, where more trustworthy figures are available, the average rate was 33·3 per mille against 30·7 in the previous year, while the individual rate ranged from 56·8 in Cannanore to 15·7 in Bimlipatam. It was very high in Cannanore (56·8), Kurnool (53·2) and Calicut (50·5); in nine other towns it ranged from 40 to 50; in 22 others from 30 to 40 and in 21 others from 20 to 30, while in the remaining three, Srívilliputtúr, Tiruvannámalai and Bimlipatam, it was between 18·3 and 15·7. There was a large decrease in Vániyambádi (53·8 to 32·9) and Tiruppattúr (41·8 to 26·8). These figures show that notwithstanding the repeated directions of Government on the subject, the registration of vital statistics does not receive careful attention on the part of some of the municipal councils.

11. *Principal Diseases—Cholera.*—The mortality under this head was large, being 4·4 per mille of the population against 1·5 in 1897. The disease was prevalent throughout the year, being most fatal in January, July, August and December. No district was free from this epidemic, and in all the districts, except Anantapur, Bellary, Cuddapah, Kistna, Kurnool, Nellore, the Nilgiris and South Canara, it prevailed throughout the year. It was most severe in Malabar and Ganjám, where the death-rate was 10·4 and 12·5, respectively, per mille of the population, while in Nellore and the Nilgiris it was below one per mille. The Sanitary Commissioner states that in Malabar and Ganjám, the predisposition of the population was increased by conditions of scarcity and that the medical officers of both districts maintain that diarrhœa of a character simulating cholera was due to the eating of unfit food by the people. The average death-rate in municipal and other towns was 5·0 per mille against 2·3 in 1896 and that in rural tracts 4·3 against 1·4. None of the municipalities enjoyed perfect immunity from this disease, while Cannanore headed the list with a death-rate of 28·5 per mille, followed by Parlákimedi and Calicut with rates of 23·6 and 23·1, respectively, per mille. In seven municipalities the rate was between 10 and 20, while in nineteen others it was below 3 per mille. Among rural towns, the rate exceeded 10 per mille in Aruppukóttai (10·3), Porto Novo (10·7), Dowlaishweram (11·7), Káyalpatnam (11·9), Paramagudi (13·9), Párvatipuram (14·0), Tadpatri (14·1), Arcot (15·9), Saluru (16·5) and Kálahasti (19·8).

12. *Small-pox.*—The number of deaths from small-pox was 21,678 against 9,410 in 1896 and 5,111 in 1895. The rate of mortality in the districts was 0·7 and in municipalities 0·2, against 0·3 and 0·2, respectively, in the previous year. Ganjám suffered most severely from this disease, no less than 14,515 deaths having occurred under this head. The disease was also severely felt in the districts of Anantapur (0·9) and North Arcot (0·8), while in Malabar, where it was very destructive in



past years, the rate was only 0·006. Among municipalities, the death-rate was heavy in Kurnool (1·7), Berhampur (1·3) and Chicacole (1·1). This shows that the provisions of compulsory vaccination are not strictly enforced in these towns. Twenty-five towns against twenty in the previous year enjoyed perfect immunity from this disease.

13. *Fevers.*—The number of deaths under this head rose from 260,769 or 8·0 per mille of the population in 1896 to 292,292 or 9·0 per mille in the year under review. The highest death-rates were recorded in Vizagapatam (23·8), Ganjám (19·2), Kurnool (18·1) and the Nilgiris (17·0), and the lowest in Tanjore (2·0), Tinnevelly (4·0), Trichinopoly (4·0) and Anantapur (4·8). Compared with the previous year, there was a large increase in the two northern districts of Vizagapatam and Ganjám, in the two western districts of Malabar and South Canara, and in the four Deccan districts of Anantapur, Bellary, Cuddapah and Kurnool. Among municipalities, the rate was more than 10 per mille in Kurnool (21·7), Bellary (14·2), Vániyambádi (13·9), Tirupati (12·5), Cuddapah (12·1), Adóni (12·0), Tiruppattúr (12·0), Karúr (11·4) and Gudiyáttam (11·2) and it was low in Dindigul (3·3), Cocanada (2·1) and Palni (2·0). In Madras, the rate fell from 13·6 to 12·4.

14. *Dysentery and Diarrhœa.*—The deaths recorded under these heads numbered 38,716 or 1·2 per mille of the population against 24,802 or 0·7 per mille in the previous year. The mortality in the rural areas was 1·0 per mille against 3·5 recorded in municipal and other towns, in which the insanitary conditions are more operative. The district-rate varied from 0·4 in Kistna, Nellore and Trichinopoly to 3·3 in Malabar, while in Madras it fell from 5·3 to 4·5. The mortality in municipalities was high in Bimlipatam (8·5), Cochin (7·8) and Coonoor (7·2) and low in Palni (0·2), Cuddapah (0·8) and Tiruppattúr (0·9).

15. *Injuries, &c.*—The number of deaths due to injuries, suicides, &c., rose from 10,822 to 11,583, while those from unspecified causes numbered 319,811 against 322,137 in the previous year.

16. *Sanitary Works—Civil.*—The subjects dealt with by the Sanitary Commissioner under this head will be fully noticed in the reviews of the administration reports of the local bodies concerned and in the general Local Fund and Municipal reviews.

With reference to the continued presence of plague in the other parts of India, the Government accepted the advice of the Sanitary Commissioner against any attempt at quarantine by land or by sea for healthy persons or ships. Observation stations were established at Guntakal, Pódanúr, Arkónam and Perambúr on the Madras Railway, at Hospet on the Southern Mahratta Railway, and at Kondapalli on the Bezwada Extension Railway, where railway passengers were examined by the special medical staff entertained for the purpose, and persons found to be suffering, or suspected to be suffering, from plague, were detained and kept under observation. Regulations under the provisions of the Epidemic Diseases Act III of 1897 for the City of Madras and for municipal towns and villages in the mufassal were also issued by Government with a view to enable the local authorities to adopt at once the necessary measures, both precautionary and preventive, in the event of plague appearing in this Presidency. Surgeon-Major Bannerman, the Deputy Sanitary Commissioner, was deputed by Government to Bombay to study under Mons. Haffkine the method of inoculation and other bacteriological matters connected with plague. The Government trusts that the knowledge he has acquired in Bombay will prove of much value in the event of plague appearing in this Presidency.

17. *General Remarks.*—The Sanitary Commissioner and his Deputy, being fully engaged in connection with famine and plague, were allowed by Government to postpone their usual inspection of municipalities. Matters connected with sanitation and vaccination were, however, brought to the notice of the village and revenue authorities by the Sanitary Commissioner, who visited 66 villages and towns in the course of his frequent and extensive tours in the famine-stricken districts. His energy in the prosecution of those tours throughout an exceptionally trying season and the care and ability with which he reported the observations he made during them are highly appreciated by Government. The District Medical and Sanitary officers visited on an average 27 places against 21 in the previous year.

SANITARY ENGINEERING.

18. During the year under review, which was the eighth since this department was organized, the Sanitary Engineer visited ten towns and the Assistant Sanitary Engineer eight, against twelve and eleven respectively, in the previous year.

19. The water-supply works of Kurnool and Conjeeveram, which were in progress in 1896, were completed during the year under review. Of the twelve water-supply and drainage works now completed, nine were executed by the Sanitary Engineer's department and the remaining three by the Public Works Department.

20. Of the five surveys undertaken during the year, three were completed and eight water-supply and drainage schemes were prepared and submitted to the Sanitary Board. The schemes for the water-supply of Vizagapatam, Tirupati, Cocanada and Ootacamund and the extension of the water works in Conjeeveram were sanctioned during the year, as also those for the improvement of the drainage of Ootacamund and Mylapore (Madras). The Sanitary Engineer visited the Madura, Dindigul, Trichinopoly and Tanjore water works during the year, while the Inspector of Steam-boilers and Prime-movers visited the pumping stations of the Cuddapah, Trichinopoly, Tanjore, Madura, Dindigul and Conjeeveram water works and made a complete inspection of the whole of the engines, boilers and pumps. The Sanitary Engineer prepared twelve type-designs and gave advice to the Sanitary Board in 114 cases.

SANITARY BOARD.

21. The constitution of the Sanitary Board and the rules for the conduct of its business continued the same as in the previous year. The Board scrutinized plans and estimates for 48 municipal and 131 Local Fund works of the estimated cost of Rs. 1,93,330, and six drainage and water-supply schemes estimated to cost Rs. 9,97,871 in the aggregate prepared by the Sanitary Engineer. The Board also examined the schemes for the three works noted in the margin, the estimated cost of which was in each case in excess of its sanctioning powers, and approved for issue 34 type-designs. Fourteen other schemes, specified in paragraph 5 of the report, were also considered by the Board.

| Locality. | Description of work. | Amount of estimate. |
|---|---|---|
| | | RS. |
| Calicut .. | Improving and extending the Mappilla burial-grounds at Calicut | 17,080 |
| Tanjore .. | Constructing a dispensary in connection with the Tanjore hospital. | 7,650 |
| Ganjám .. | Constructing a dispensary at Russellkonda. | 5,010 |

(True Extract.)

for *Secretary to Government.*

To the Sanitary Board.
„ the Sanitary Commissioner.
„ the Sanitary Engineer.
„ the Surgeon-General.
„ the Public Works Department.
„ the Public Department.
„ the Revenue Department.
„ the Deputy Adjutant-General, Madras Command.
„ the Inspector-General of Police.
„ the Inspector-General of Prisons.
„ the Accountant-General.
„ the Director of Public Instruction.
„ all Collectors.
„ all Presidents of District Boards.
„ all Chairmen of Municipal Councils.
„ the President, Municipal Commission, Madras.
Editors' Table.

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ENDORSEMENT—No. 1476 L., dated 13th August 1898.

Copy to the Government of India, Home Department.

H. TREMENHEERE,
*Secretary to Government.*

Ed. W. D'Moss.