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[Despatch Abstract.]

*Recording for S. Loe
2 Mump! dept. receiving
the Sanitary Commission
& Sanitary Engineer's
reports for 1891—*

READ AGAIN ORDER OF GOVERNMENT, DATED
18, No. , MISCELLANEOUS.

ENCLOSURES.

CURRENT No.

STATEMENT WITH DITTO.

ORDER OF GOVERNMENT.

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO

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1773

OF 18
93

9TH JULY 1892, Nos. 1596, 1597 L., LOCAL AND MUNICIPAL.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following papers :—

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated Fort St. George, 8th February 1892, No. 267.

With reference to the last sentence in paragraph No. 2 of G.O., dated the 22nd August 1891, No. 2004 L., Local and Municipal, I have the honour to forward the Administration Report of this department for the year 1891.

2. It has been possible this year to complete the report even rather earlier than the date named by Government, but this has been so because I was not away on any long tour during the months of December or January. Were the beginning of the year taken up exclusively in touring, I fear that I should not be able to submit the report before the end of February, though, of course, every endeavour would be made to do so.

3. I meantime send three copies of the report; my report when the Sanitary Commissioner's is ready will be bound therewith and form one report as laid down in G.O., dated 22nd August 1891, No. 2004 L., Local and Municipal.

From Surgeon Lieutenant-Colonel J. A. LAING, Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Fort St. George, 1st June 1892, No. 1564-S.

I have the honour to forward four stitched copies of my Sanitary Report for 1891.

2. Two copies have, as usual, been forwarded to the Sanitary Commissioner with the Government of India.

3. The title page, table of contents, cholera map and the diagrams will be inserted in the bound copies.

ORDER—dated 9th July 1892, No. 1596 L., Local and Municipal.

With the letters read above the Sanitary Commissioner and the Sanitary Engineer submit the reports on the administration of their departments during the year 1891. The instructions issued in paragraph 1 of G.O., dated 22nd August 1891, No. 2004 L., regarding the submission of these have since been modified by G.O., dated 5th December 1891, No. 3044 L., in which it was considered sufficient to have the report of the Sanitary Board submitted in two parts, each part signed by the member responsible for it. The Government is glad to observe that the Sanitary Commissioner has submitted his report on the prescribed date, and that the Sanitary Engineer was able to send in his report 20 days before time.

2. The rules framed for the guidance of the Sanitary Board which were printed as Appendix II to the General Sanitary Report for 1890 continued in force during the year, and in accordance with these the Sanitary Commissioner dealt with all

questions of general sanitation, and the Sanitary Engineer with schemes for improving the water-supply and drainage of Municipal towns and the conservancy of rivers within their limits and such other works as he was deputed to carry out or investigate.

GENERAL SANITATION.

3. *Rainfall and Prices of Food-grains.*—In the year under review the mean quantity of rain registered was 38·26 inches, which was less than that of any of the previous nine years and was 7·54 inches below the average of the 10 years ending with 1888. The rainfall was below the above average in every district except Anantapur, Salem and Tinnevely (where the excess ranged from 8 to 11 inches). The deficiency was, as in the previous year, most marked in the three central districts on the East Coast—Madras, Nellore and

	Inches.
1882	49·21
1883	47·42
1884	47·08
1885	45·08
1886	47·70
1887	51·04
1888	43·92
1889	48·38
1890	39·49

Chingleput—as well as in all the Ceded districts except Anantapur. Both the West Coast districts—Malabar and South Canara—received less than the average fall.

In consequence of the failure of the rains above referred to, the prices of the three principal food-grains, which had been steadily rising since 1887, rose still higher in the year under review. The following table shows the prices of the year as compared with those of the preceding two years and the average for the last five years :—

	Number of seers per rupee.			Average for the last five years.
	1891.	1890.	1889.	
Rice	11·8	12·7	13·6	14·3
Ragi	22·4	26·2	27·8	28·3
Cholum	21·1	21·6	24·6	25·6

The prices of the principal grains were above the average of the 10 years ending with 1888 in every district except in Vizagapatam, where they were below the average, and in Ganjam and Malabar, in each of which districts the price of one of the three sorts was slightly below it. Omitting the Nilgiri district, the circumstances of which are peculiar, prices continued, as in the previous year, to be exceedingly high in the districts of Nellore, Madras, Chingleput, North Arcot, South Arcot, Tanjore, Trichinopoly, Madura, Tinnevely and Coimbatore, and to rise steadily during the year. The rise was still more marked in the Ceded districts.

4. *Vital Statistics.*—The total population for which returns of births and deaths were received shows a slight falling off as compared with 1890. No explanation has been offered for the decrease which occurs in Vizagapatam—an omission which should be supplied at an early date. In paragraph 10 of the Memorandum by the Army Sanitary Commission on the Provincial Sanitary reports for 1889, it was suggested that, with a view to improve the registration of births and deaths, more use should be made of the vaccination staff for the purpose of testing the accuracy of the returns, and in commending this suggestion for adoption, the Government of India, in paragraph 2 of its letter, dated 24th February 1892, No. 2—Sanitary-35, requested that the details of the arrangements made in this connection might be furnished in the report for the current year. The Sanitary Commissioner, however, states that this plan has been in operation in this Presidency since 1879, Deputy Inspectors of Vaccination being required to examine the returns of the villages or towns they visit and to note in their weekly diaries the condition, &c., of registration as found on personal inspection.

5. *Births.*—Notwithstanding the large variations still noticeable in the birth-rates reported from the several districts, there has been some general improvement in the

accuracy of these returns in the year under review. The average birth-rate for the Presidency was 32·4 per mille, which is the highest yet recorded. In Madras, Salem, Kurnool and Bellary—Anantapur, the birth-rate was 40 per mille or above. There appears to be no reason why similar results should not be obtained in other districts. The worst results are reported from Godáviri (22·7), Malabar (23·6), Ganjam (25·8) and Nilgiris (28·3); in the last two districts, however, there was a marked increase as compared with 1890. The figures for Godáviri and Malabar show clearly that the measures reported to have been adopted by the Collectors of these districts to ensure greater accuracy in registration have not as yet been attended with any appreciable success. The special attention of the Collectors concerned is again drawn to the matter. In Vizagapatam and Nellore there was some, though not a satisfactory advance as compared with the preceding year. As the special report called for from the Collector of Vizagapatam in paragraphs 4 and 6 of G.Os., dated 26th August 1890 and 22nd August 1891, Nos. 2135 L. and 2004 L., respectively, regarding the low birth-rate in that district in 1889, has not yet been received, it should be submitted without further loss of time and the delay which has already occurred in the matter should be explained. In Chingleput, Kurnool, Malabar, Tinnevely and Trichinopoly, the birth-rates were lower than those for 1890. The birth-rate exceeded the death-rate in all districts, except Madras and South Arcot, the total increase for the Presidency being 6·2 per mille. In the Madras town alone the latter exceeded the former by 14·7 per mille owing to the large number of deaths which were caused by cholera, fevers, dysentery and diarrhoea.

The average birth-rate for all District Municipalities was 33·6 per mille against 31·5 per mille in 1890. This result, though better than that of the previous year, cannot be regarded as satisfactory, in view of the fact that registration is compulsory under the District Municipalities Act and that the actual birth-rate for the Presidency may be taken as not less than 40 per mille. It is, however, satisfactory to note that in 12 towns, against 9 in 1890, the birth-rate exceeded 40 per mille. In 31 towns it was between 30 and 40 per mille, and in the remaining 12 towns it was less than 30 per mille, being very low in Cocanada, Cuddapah, Negapatam, Chicacole, Nellore and Mannargudi. The poor results achieved by the Councils of the first four of these towns in 1890, were prominently brought to their notice in paragraph 6 of G.O., dated 22nd August 1891, No. 2004 L., and it is to be hoped that this will during the current year have a beneficial effect. The advance made in Cuddalore, Cannanore, Trichinopoly and Chidambaram, though slight in the last two cases named, is noted with satisfaction. The facts that the death-rate exceeded the birth-rate in 17 towns, and that the birth-rates in Parlákimedi and Cannanore rose suddenly from 24·3 and 20·4 per mille in 1890 to 42·8 and 31·5 per mille, respectively, in the year under review, indicate how carelessly registration had been attended to and how easily it can be improved by local effort. The rural exceeded the urban birth-rate in many instances, the excess being more than 10 per mille in Chingleput, Cuddapah and Kurnool, while the urban exceeded the rural birth-rate by more than 7 per mille in Ganjam, Malabar, Nilgiris and South Canara. The special attention of the Collectors concerned is again drawn to this matter as furnishing further evidence of the untrustworthiness of the returns.

6. *Deaths.*—The following statement shows the total number of deaths per mille caused by the principal diseases as compared with the previous five years :—

	1886.	1887.	1888.	1889.	1890.	1891.
Cholera	0·4	1·0	2·1	2·7	1·2	3·5
Small-pox	0·6	0·7	0·8	1·0	1·0	1·4
Fevers	7·9	8·6	7·3	8·2	9·2	8·6
Bowel-complaints	0·9	0·9	1·0	1·0	0·9	1·2
Injuries	0·4	0·6	0·4	0·4	0·4	0·4
Other causes	9·5	9·8	9·8	10·2	10·1	11·1
Total	19·7	21·6	21·4	23·5	22·8	26·2

* Dysentery and diarrhoea only.

From the above it will be seen that the mortality in 1891 was higher than in any of the preceding five years and that the increase as compared with 1890 occurs under all the heads except fevers. In fact, the mortality in 1891 was higher than that recorded in any year of the last twenty, excluding, of course, the figures of 1877 and 1878. The high figure is due in the main, to the ravages of cholera which carried off 98,773 persons as against 41,868, the average for the preceding ten years. Improved registration had, however, doubtless something to do with the increase.

Cholera apart, the year was, as the statistics show, an unhealthy one. To its unhealthiness the meagre rainfall, resulting in scantiness and deterioration of the supply of drinking-water, contributed.

The mortality among infants under one year of age was higher than in 1890, being no less than 172.0 per mille of the infantile population against 160.5 per mille in the previous year. The Sanitary Commissioner, however, states that, applying the principle (adopted in England) of calculating the death-rate of children under one year of age on the number of children born during the year, the death-rate in this Presidency was 167.4 per mille against a rate ranging from 137 to 227 per mille in the 28 principal towns in England.

Taking the districts individually, the highest death-rate (59.4 per mille) occurred, as usual, in Madras. As observed in paragraph 7 of G.O., dated 22nd August 1891, No. 2004 L., this is due, not only to more efficient registration, but also to the extremely insanitary condition of the town. It is, however, hoped that when the contemplated improvements in the drainage and water-supply of the town and in the sanitation of the river Cooum, which have recently formed the subject of investigation by an expert from England, are carried out, and when the proposed scavenging cess is introduced, there will be an appreciable reduction in the death-rate of the town. The Sanitary Commissioner has failed to submit a brief report on this town as required in clause 3, paragraph 7, of G.O., dated 22nd August 1891, No. 2004 L. This omission should be supplied at an early date. Excluding Madras, in every district (with the exception of South Canara and Ganjam), the death-rate was higher than the average rate of the previous ten years. The death-rate was higher than in 1890 in all districts except Salem and South Canara. The highest death-rates are reported from South Arcot (35.3), which suffered severely from cholera, Kurnool (32.9) and Chingleput (32.8), and the lowest from Ganjam (13.5), Vizagapatam (17.3), Nellore (20.5) and South Canara (20.6). These figures clearly show that registration is very defective in the last four districts, in all of which, except South Canara, the birth-rates returned were also very low. The Collectors concerned are therefore requested to report the steps which they propose to take with a view to improving the present state of affairs. It is to be remarked that the attention of the Collector of Nellore was called to this matter in the last two Sanitary reports, while in the last report the Collectors of Ganjam and Vizagapatam were requested to institute enquiries into the causes of the low death-rates returned from their districts.

The average death-rate for all the District Municipalities taken together, was 31.8 per mille against 29.1 per mille in 1890. In 32 towns in which registration appears to have been well conducted, the death-rate ranged from 30.1 per mille in Vellore to 64.3 per mille in Bezvada. In this latter town, the death-rates for the two preceding years were excessive, being 50.4 and 57.8 per mille respectively. Palni

	1890.	1891.
Adóni	19.2	44.5
Cochin	27.4	43.9
Anantapur	28.7	40.9
Dindigul	30.2	40.0
Nellore	20.9	36.0
Guntúr	20.4	34.5

and Calicut come next with rates of 49.7 and 47.6, respectively, per mille, caused mainly by cholera and small-pox as in the preceding year. It is observed that the death-rates in the towns noted in the margin were much higher than the figures of 1890. Mortality from cholera was mainly the cause of this in Adóni, Anantapur, Nellore and Dindigul. In Cocanada, Chicacole, Berhampore, Ootacamund, Tellicherry, Cannanore, Parlákimedi, Mannárgudi and Gudiyátam, the death-rate was very low, being less than 25 per mille. There is no doubt that in these towns registration has been very much neglected, particularly so in the two towns first named, for

which the recorded birth-rates were very small. The Government has again to impress on Municipal Councils the importance of the duty of properly supervising the registration of vital statistics.

7. *Principal Diseases—Cholera.*—The mortality from this cause, which nearly trebled that reported in 1890, was the highest recorded since 1877. All the districts were affected by this scourge and it was prevalent all the year round, the greatest mortality occurring in the months of July, August, November and December, in the last of which it attained its maximum intensity. The disease was most prevalent in the districts of South Arcot, Madura, Anantapur-Bellary, Cuddapah, Chingleput and Coimbatore. It is noticeable that the Northern Circars were, for the second year in succession, practically free from cholera. Of the 55 Municipalities only 7, against 23 in 1890, were free from this epidemic. As in the previous year, the death-rate was high in Palni (21.9 per mille); Nellore, Adóni, Anantapur, Chidambaram and Dindigul come next with rates ranging from 18.9 to 10.6 per mille.

The cholera death-rate in Municipal towns was 5.1 and that in the districts 3.4 per mille. It is highly probable, as pointed out by the Sanitary Commissioner, that the spread of cholera depends largely on the sanitary conditions present and inferior water-supply. The short rainfall of 1891 resulted in a reduced supply of drinking-water which necessarily contained a larger percentage of dissolved and suspended impurities. The measures reported to have been adopted to check the progress of the disease are noted with satisfaction.

8. *Small-pox.*—The number of deaths recorded under this head (41,322) exceeded that of any of the preceding six years. The figure for 1890 was 28,092. The mortality among children under 12 years of age was 54.1 per cent. of the total number of deaths against 65.8 per cent. in 1890. This is an improvement and shows how much local bodies can yet effect, if they pay due attention to infantile vaccination. It is satisfactory to note that in 1891 the mortality from small-pox among infants was small. The disease was most severe in Kistna (5.3 per mille) and slightly less so in Malabar and South Arcot, the death-rates of which districts were 2.7 and 2.6, respectively, per mille. Among Municipalities, Calicut heads the list with the abnormally high rate of 20.4 per mille, which is ascribed by the Sanitary Commissioner to the unsatisfactory manner in which vaccination work is carried on in this town. The special attention of the Municipal Council is drawn to the matter. Periyakulam and Tuticorin also suffered much from this disease, while 11 other Municipal towns were entirely free from it and in 11 others the number of deaths throughout the year was below 10 each. The improvement noticeable under this head in Bezvada, Cocanada, Kumbakonam, Tirupatúr, Vániyambádi and Wárajápet is satisfactory. It is noticeable that, as pointed out by the Sanitary Commissioner, the severe outbreaks of small-pox occur every seventh year. The subject will be more fully dealt with in reviewing the vaccination report for 1891-92.

9. *Fevers.*—The mortality from this cause was 247,029 against 262,855 in 1890, the decrease being due mainly to the absence of influenza, which was so prevalent in 1890. The districts of Kurnool, Madras, Nilgiris, Cuddapah and Vizagapatam suffered most severely, their death-rates varying from 21.1 to 14.3 per mille: the least affected district was, as in the preceding years, Tanjore, in which the rate was only 2.3 per mille. The rural death-rate again exceeded the urban, but the latter was more than 10 per mille in 10 towns, the most affected from this cause being Bezvada (15.9), Parlákimedi (14.8) and Tuticorin (14.2). It is noted that Cuddapah, which in 1890 suffered a good deal more severely than any other Municipality (21.5), is now sixth on the list with a rate of 13.3. The improvement may fairly be ascribed to the improved water-supply. The decrease of mortality from fever in Coonoor is even more marked.

10. *Dysentery and Diarrhoea.*—The deaths from these causes numbered 34,223 against 26,608 recorded under the head of "Bowel complaints" in 1890. In accordance with the recent orders of the Government of India, all diseases other than dysentery and diarrhoea that used to come under the head of "Bowel complaints" are now registered under "All other causes." The death-rate for the Presidency for

1891 was higher than in any year since 1882. The Sanitary Commissioner offers no explanation of this. The average death-rate for districts was only 1·2 per mille and this would have been considerably lower but for the inclusion of the Madras town. The average rate for the District Municipalities was 3·4 per mille. As in 1890, the highest death-rate was that returned from Madras (11·5 per mille), and this is followed by Chingleput with a rate of 4·2 per mille. Among Municipalities, Bezvada returned the highest death-rate (11·9 per mille); next come Tuticorin, Bimlipatam, Tanjore and Karur, with rates ranging from 8·7 to 6·5 per mille. The least affected town was Adoni with a death-rate of ·2 per mille.

11. *Injuries, &c.*—There was no considerable variation in the number of deaths reported under this head, but the deaths from unspecified causes rose from 287,149 in 1890 to 315,664 in the year under review, being the highest recorded in any of the last 20 years except 1877. A portion of the increase may, however, be attributed to bowel complaints other than dysentery and diarrhoea, which now come under this head.

12. *Sanitary Improvements carried out by Municipal Councils and District Boards.*—The subjects dealt with by the Sanitary Commissioner under these heads will be fully noticed in reviewing the administration reports of the local bodies and in the General Municipal and Local Fund Reviews for 1891-92. It will here be sufficient to make the following remarks:—

(a) The number of latrines available for public use in Municipalities rose from 958 in 1890 to 1,191 in the year under review, the increase occurring chiefly in Ootacamund, where it is satisfactory to note that the Council erected 159 new latrines. The Municipal Councils of Mannargudi, Kumbakonam, Cannanore and Ellore have also provided 15, 12, 11 and 10 additional latrines, respectively, during the year. On the other hand, 22 latrines were dispensed with. Nellore, Madura, Cochin and Tellicherry Municipalities are responsible for this retrograde step. The Chairmen of the Municipal Councils concerned are requested to explain the matter. As observed in paragraph 13 (a) of G.O., dated 22nd August 1891, No. 2004 L., there should be not less than 1 latrine to every 1,000 of the population. Fifty out of 55 District Municipalities paid little or no attention to this important matter. The Government has again to call attention to it.

(b) The private scavenging system, which in 1890 had been in operation in 43 towns, was, during the year under review, adopted in 5 more towns, and the number of private latrines dealt with was 22,918 against 17,310 in that year. There is still a great deal to be done in this direction. Excluding the five towns in which the system was newly introduced, there was, during the year under review, improvement in 31 towns and falling off in 8 others. The system was not introduced in Tirupati, Anakapalle, Tirupatūr, Vaniyambadi, Mannargudi, Ellore and Madura. The Councils concerned will report what steps, if any, they have taken or intend to take in the matter. In Karur, Bezvada, Parlakimedi, Periyakulam and Cuddalore this system should be extended, as already directed in paragraph 13 (b) of G.O., dated 22nd August 1891, No. 2004 L. The large decrease noticeable in the number of private latrines dealt with by Municipal agency in Bellary (171) and Ootacamund (95) requires explanation from the Councils concerned.

(c) The Government notes with pleasure that either the Sanitary Commissioner or his Deputy visited all the 55 Municipal towns during the year under review. There was, however, a delay of more than two months in each case, in reporting the results of the inspection by the Sanitary Commissioner of 27 towns, and this should be guarded against in future. The reports submitted showed that there was improvement since the last inspection in the sanitary condition of Parlakimedi, Cochin, Ootacamund, Tirupati, Gudiyatam and Salem. This reflects credit on the Chairmen and the Councillors concerned; but in most of the remaining towns, the defects pointed out on previous occasions had been permitted to continue unremedied in spite of the suggestions and remarks of the Sanitary Commissioner, his deputy and Government. This indifference of a large majority of the Councils to the orders of Government in matters affecting the welfare of the townspeople is much to be regretted.

(d) The proportion of the expenditure on sanitation to allotment in Municipalities during the first nine months of the year was only 56 per cent. against 59 per cent. in 1890. This is very unsatisfactory. In Kurnool alone the expenditure exceeded the allotment (by 10 per cent.) owing to the entertainment of a temporary sanitary inspector on cholera duty, and in Anantapur, Coimbatore, Cocanada, Periyakulam, Calicut and Vizianagrum the expenditure was more than 75 per cent. of the allotment. Expenditure was discredibly small in Tuticorin (49·1), Vizagapatam (48·8), Vellore (47·3), Parlakimedi (44·5), Palamcottah (37·9), Coonoor (29·8) and Kumbakonam (17·1). In Coonoor and Kumbakonam the execution of the drainage works under the direct supervision of the Sanitary Engineer could not be pushed forward, owing to the damage caused by heavy rains in the former case and to the presence of water in the rivers in the latter. No special reasons have been assigned for the inadequate expenditure in the other towns, as required in paragraph 13 (d) of G.O., dated 22nd August 1891, No. 2004 L.; the Councils concerned are requested to supply the omission. The attention of all Municipal Councils is again drawn to the remarks of Government in paragraph 13 (d) of the last Sanitary Review. In only 6 out of 55 Municipalities did the expenditure exceed 75 per cent. of the allotment—the minimum prescribed. The following statement shows the expenditure and the allotments under the several heads:—

	Allotment.	Expenditure.	Percentage.
	RS.	RS.	
Conservancy	4,46,415	3,16,565	70·9
Improvement of town sites	1,89,240	1,22,925	64·9
Do. of water-supply, &c.	66,375	41,964	63·2
Sanitary arrangements at fairs and festivals	12,595	8,994	71·4
Markets and slaughter-houses	35,927	12,266	33·9
Other sanitary outlay	2,46,828	54,486	22·1
Total	9,97,380	5,57,140	55·8

(e) The sanitary improvements undertaken in the areas under the control of the Local Boards and Union Panchayats were, as usual, of a petty nature. It is satisfactory to note that during the year under review, the drinking-water sources are reported to have been more effectually guarded from pollution and a fair number of tanks and wells cleaned and deepened. Out of a total of 42,862 minor towns and villages in the Presidency, 272 unions and 590 other villages were provided with scavenging establishments against 254 and 561 respectively, in the previous year. The small progress that has been effected is disappointing. Conservancy operations should be extended wherever funds permit. The Presidents of the District Boards of South Canara, Godavari, Nalgiris and Tanjore will explain why there was in their respective districts, a reduction, as compared with the previous year, in the number of non-union villages conserved.

(f) The proportion of the expenditure to allotments in Local Fund areas during the first nine months of the year was only 55 per cent. as in 1890. This short expenditure is discreditable to the Presidents of the District Boards concerned. No Local Board, except those of Chingleput, Ganjam and Nellore, has utilized as much as 70 per cent. of the allotments; the worst offenders in this respect are the District Boards of Malabar (33·6), Coimbatore (41·1), Trichinopoly (41·2) and Tinnevely (43·3). The Presidents of the Boards concerned are requested to explain the cause of the short outlay.

SANITARY ENGINEERING.

13. The first report of the Sanitary Engineer (for 1890) was, as remarked by Government, purely of an introductory nature, dealing, as it did, with only the first nine months of that officer's work. His second report now under review shows that, although he and his department were during 1891 actively engaged, it was mainly

with designs for, rather than the execution of, works. However, that such was the case was due to causes beyond the Sanitary Engineer's control. In the course of the year, the Sanitary Engineer visited 33 towns, of which 8 were visited twice, and the Assistant Sanitary Engineer 17 towns. Appendix I submitted with the report shows in one view the progress made towards the improvement of the water-supply or drainage of the towns inspected by the staff. In order to increase the efficiency of the department, the Government sanctioned the entertainment of three Assistant Engineers, each to be in charge of a circle, with the executive control of all works under execution and all surveys in progress within that circle.

14. Of the nine water-supply and two drainage schemes submitted to Government by the Sanitary Engineer, as stated in paragraph 9 of his report, all but the project to improve the water-supply of Adóni, which is still under consideration in the Revenue Department, have been sanctioned, and the Government has consented in seven cases to contribute from a moiety to three-fourths of the cost and to lend the remainder on easy terms. The drainage schemes for Kumbakónam and Ootacamund (Kandal bazaar), which were finally sanctioned in previous years, and that for Coonoor, sanctioned in 1891, were the only works which were started during the year under review, the first and the third being under the direct supervision of the Sanitary Engineer and the second under that of the local Municipal Engineer. Appendices II to IV show the details of the works executed up to the end of the year. As regards the other schemes sanctioned on which work was not actually begun during the year, it is observed that immediate action was taken in the majority of cases to prepare specifications for the required machinery, &c., and to invite tenders from contractors.

15. The Sanitary Engineer has promised to submit to Government the Negapatam drainage, and the Bellary, Coimbatore, Cocanada, Kurnool and Ongole water-supply, schemes in 1892; the Bezvada and Karúr drainage, and the Conjeeveram, Berhampore and Salem water-supply, schemes in 1893; and the Erode drainage, and the Nellore and Guntúr water-supply, schemes in 1894. The Government agrees with the Sanitary Engineer in considering that if these schemes, as well as those which have already been sanctioned, are carried out within a reasonable period, a great advance in sanitary progress will have been made in this Presidency.

16. In addition to the work mentioned above, this department scrutinized 108 plans and 165 estimates for sanitary works amounting to Rs. 2,39,413 submitted to the Sanitary Board under No. 7 of the Rules issued in G.O., dated 8th August 1890, No. 1971 L. The department also furnished new plans and designs wherever necessary. The Sanitary Engineer was also specially deputed to report upon the effect of the Dongalcheruvu tank on the health of the town of Cuddapah and upon the water-supply of the Coimbatore and Trichinopoly jails. Final orders will be passed by Government on the detailed scheme prepared by the same officer for the improvement of the river Cooum within the Municipal limits of Madras, referred to in paragraph 14 of G.O., dated 12th August 1891, No. 2004 L., on receipt of the report of Mr. Cousins, the specialist from England, by whom it has been examined.

17. *General Remarks.*—The Sanitary Commissioner has not reported upon the condition of the rural towns and villages visited by him and his deputy, of which a list has been given in Appendix I to his report. This omission should be supplied in future. The inspection work performed by the District Medical and Sanitary Officers, though better than that of the previous year, cannot be regarded as by any means satisfactory, the average number of places visited by each being 22 against 40 prescribed in paragraph 15 of G.O., dated 22nd August 1891, No. 2004 L. The medical officer of Anantapur did no work whatever in this direction, while those of Kistna and Tanjore inspected only one place each. It is not stated how far this poor result is due to there having been no Assistant Surgeons in the districts named, during the whole or a portion of the year. It is hoped that the scrutiny now exercised by the Surgeon-General on the half-yearly returns of these officers will result in a substantial improvement in the current year. The Sanitary Commissioner states that no progress has been made since the last report in the matter of sewage farming. The attention of Municipal Councils is again drawn to the remarks of Government on this subject in paragraph 15 of G.O.,

dated 22nd August 1891, No. 2004 L., and also to the remarks and suggestions of the Sanitary Commissioner in paragraphs 80, 81 and 82 of his report. The Government notes with pleasure the testimony borne by the Sanitary Commissioner and the Sanitary Engineer, respectively, to the good services of Surgeon-Major Dymott, the Inspector of Vaccination, and of Mr. Hormusji Nowroji, the Assistant Sanitary Engineer.

(True Extract.)

Nowroji
for Chief Secretary.

To the Sanitary Commissioner.

„ the Sanitary Engineer.
„ the Sanitary Board.
„ the Surgeon-General.
„ the Public Department.
„ the Military Department.
„ the Revenue Department.
„ the Inspector-General of Police.
„ the Inspector-General of Jails.
„ the Accountant-General.
„ all Collectors.
„ all Presidents of District Boards.
„ all Chairmen of Municipal Councils,
„ the President, Municipal Commission, Madras,
Editors' Table.

ENDORSEMENT—dated 9th July 1892, No. 1597 L., Local and Municipal.
Copy to the Government of India, Home Department.

J. F. PRICE,
Chief Secretary.

Ed. A. Raiff.

Order 23rd July 92

19/7/91 R 22741

**Govt. of Madras.
LOCAL AND MUNICIPAL.**

Order 23rd July 92 No. 503

Recorded

*25/10.
for C.
25/11*

Issued

Recd. 2/8/92

Encl.

**G.O., &c., 9th July 1892,
Nos. 1596, 1597 L.**

JULY.

Reports.

Reviewing the Sanitary Commissioner's and the
Sanitary Engineer's — for 1891.

WITH ORDER