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[Despatch Abstract.]

Reorganization of the Army dept.

Drawing orders on certain proposals for the — and despatching a letter to the Govt of India on the subject.

[Letter abstract]

Submitting remarks on with reference to the proposals of the Govt of India for the —.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.

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Government {1897} of Madras.

PUBLIC.

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Regd. } *Spare copies*

G.O., No. 435, 17th April 1897.

APRIL.

Reorganization of the Sanitary Department.

Passing orders on certain proposals for the —, and despatching a letter to the Government of India on the subject.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

Read—again the following paper :—

G.O., No. 1000, Public, dated 9th December 1895.

Read—the following Extract from the Proceedings of the Government of India, in the Home Department (Sanitary),—under date Simla, the 26th October 1895, No. 11-Sanitary—313-326 :—

Read—

Resolution recorded in the Home Department, No. 10—533-44, dated the 29th September 1887.

Resolution recorded in the Home Department, No. 4—340-51, dated the 7th June 1888.

Resolution recorded in the Home Department, No. 2-Sanitary—106-117, dated the 18th June 1894.

Read also—

Resolution passed in the Public Health Section of the Indian Medical Congress regarding the present organization of the Sanitary Service in India.

RESOLUTION.

At the Indian Medical Congress held in Calcutta in December 1894, a discussion, which was initiated upon a paper read by Dr. W. J. Simpson, took place upon the need for a Sanitary Service for India. This discussion will be found recorded in the Transactions of the Congress to which the Governor-General in Council desires to invite the attention of Local Governments and Administrations.

2. The Governor-General in Council has, in connection with this discussion, had under consideration the question of the constitution of, and work performed by, the Sanitary Department. In the first place, His Excellency in Council would remark that the sanitation of the army and of the military cantonments has already been completely separated from that of the general civil population, as was suggested at the Congress. The Cantonment Committee is the local authority responsible for the sanitation of a cantonment, in accordance with the regulations issued under the Cantonments Act. Neither do the local civil authorities control the administration of sanitary matters within cantonments, nor has the Sanitary Commissioner with the Government of India any executive power of interference in such matters within cantonments. He acts as the adviser of the Government of India on sanitary points connected with the construction of barracks and hospitals for European and Native troops, and on measures for improving the sanitary condition of cantonments and all matters connected with the health of the army in India. He also exercises a general supervision over the compilation of the mortuary and health statistics of the army. Whatever action is taken on his advice is the action of the Government of India and not that of the Sanitary Commissioner. The Governor-General in Council sees no reason for reconsidering the existing arrangements in this respect. All that His Excellency in Council would say here in regard to the sanitation of cantonments is that, should the local military authorities at any time seek from Local Governments and Administrations the assistance or advice of the Sanitary Commissioner or the local civil district and medical officers, it should be freely given to them.

3. Turning to the question of the work of the Sanitary Department among the general civil population, it appears to the Governor-General in Council to be a defect in the existing organization of the department that it is too much separated from the Civil Medical Department which is responsible for the distribution of medical relief. The Sanitary and Vaccination Department is engaged on preventive, and the Medical Department on curative, measures, but these two departments, though working with the same aim in view, viz., the improvement of the health and conditions of life of the civil population, have not in the past been associated together in such a manner as most efficiently to further this aim. The Sanitary Department consists in the larger provinces of a Sanitary Commissioner, aided by one or more Deputy Sanitary Commissioners who are officers of the Indian Medical Service, with a subordinate staff of inspectors, sub-inspectors and other supervising agents of the registration of vital statistics and vaccination, who have received no special education in sanitary matters. In the smaller provinces the duties of Sanitary Commissioner are combined with those of Inspector-General of Civil Hospitals, and there are no Deputy Sanitary Commissioners. The executive branch of the department does not furnish the proper machinery for carrying on local sanitary work, and there is not an efficient agency either to advise or impel municipal or local boards in the matter of every-day sanitation as distinguished from larger schemes for the supply of pure water or the improvement of drainage. As a result of these defects in organization, the duties of the superior officers of the Sanitary Department have, beyond inspections which lead to the discovery of local sanitary defects but not always, the Government of India fear, to their removal, been mainly limited to the collection of vital statistics and the control of vaccination. The Governor-General in Council has much pleasure in acknowledging the good results which have been attained in the encouragement of vaccination, but the improvement secured in the registration of vital statistics (though, as the Government of India stated in the Home Department Resolution, No. 2-Sanitary—106-117, dated 18th June 1894, there was a gradual but slight improvement in the registration of both births and deaths between the census of 1881 and that of 1891) and in sanitation has not, in the opinion of His Excellency in Council, been hitherto at all commensurate with the expenditure on the department.

4. It appears to the Governor-General in Council that, if any tangible improvement is to be effected in sanitary work, particularly in rural areas, the quality of the supervising agency must be improved, and that it is essential, in order to make this agency efficient, to require that it should be specially trained in hygiene, though it will not, in the opinion of His Excellency in Council, be necessary to require that a very high standard of qualification in sanitary knowledge should be attained by the subordinate members of the department. The Government of India understand that in some provinces, at all events, an attempt is made to give lectures on the principles of sanitation, but, so far as the information before them goes, it would appear that present arrangements are incomplete and unsatisfactory. The Governor-General in Council will be glad to learn from the different Local Governments and Administrations what is the present state of instruction in this subject and how they would propose to improve and extend it. His Excellency in Council favours the idea of instituting a system of granting special diplomas in public health, and is anxious that Local Governments and Administrations should consider the course of teaching which should be prescribed, and the examinations which should be instituted for superior and inferior qualifications and for the grant of diplomas. The Government of India have at present under consideration the question of establishing an Imperial Laboratory, and if this proposal is carried into effect, it will probably be found possible to arrange for a certain number of the students in hygiene to attend a course of bacteriology at this laboratory.

5. The Government of India would propose to substitute for the existing inefficient machinery of the Sanitary Department an agency specially trained in the manner indicated above. But the change can only be brought into effect gradually with due regard to financial considerations and to the claims of existing incumbents. Subject to these considerations, it appears to the Governor-General in Council that the duty of inspecting and checking the work of the vaccinators and of looking after village sanitation should be gradually transferred to men who have gone through a course

of hygiene and hold sanitary qualifications. It will have to be considered whether candidates for these appointments should be required to go through a full medical course or to obtain a medical qualification. Among the advantages to be gained from taking officers for the Sanitary Department from members of the general body of Assistant Surgeons and Hospital Assistants, who have been through a special course of hygiene, would be that the field of selection would be wider and that men with medical qualifications, employed in the Sanitary Department and provided with appropriate medicines and instruments for treating minor ailments, would be able not only to afford proper medical relief to many who do not now obtain it, but also by this means to render their advice in sanitary matters more acceptable than it might otherwise be. They would also be extremely useful in outbreaks of epidemic disease. If Assistant Surgeons or Hospital Assistants are appointed, it will be necessary to give them some addition to their grade pay, which might perhaps be fixed at 15 per cent., as otherwise the better qualified men will not desire employment in the department where they will lose the opportunity of private practice. Local Governments and Administrations are invited to consider what addition to their grade pay would be required.

6. The Government of India are in favour of the suggestion that each municipality or group of municipalities or local bodies should be required after a certain date to appoint a Health Officer to superintend vaccination, sanitation and the collection of vital statistics. The more highly qualified of those who obtain sanitary qualifications would naturally be appointed to such posts, and the Government of India would hope that in the course of next few years a sufficient supply of trained men will become available to justify the local bodies being required to appoint Health Officers before the beginning of the year 1900. Another method in which sanitation in municipalities might be improved would be by requiring that candidates for certain municipal offices should be required to possess the lower qualification in hygiene, and this suggestion is communicated to Local Governments and Administrations for their consideration. In large municipalities in which special Sanitary Committees have not hitherto been appointed for the control of sanitary matters, it is desirable, in the opinion of the Governor-General in Council, to arrange for the appointment of such committees, with a medical man (the Civil Surgeon if possible) as President to supervise the expenditure on sanitation. Under present circumstances, though funds are in most cases readily provided by municipal bodies for sanitary work, they are not, the Governor-General in Council fears, always expended to the best advantage. When a Health Officer is appointed to a municipality he would work under the control of this committee.

7. The head of the district organization in vaccination and sanitary as well as in medical matters should, in the opinion of the Government of India, be the Civil Surgeon. The Governor-General in Council is aware that in nearly all provinces Civil Surgeons have now been entrusted with the work of supervising vaccination operations. They are also the sanitary officers of their districts, though, the Government of India believe, their duties in regard to rural sanitation have not in all cases been properly defined. In Provinces where this matter has not as yet been clearly provided for, steps should, in the opinion of the Governor-General in Council, be at once taken to declare the authority and enforce the responsibility of the Civil Surgeon in such matters. The duties of sanitary officer of a district cannot be efficiently performed unless frequent opportunity is taken of visiting the interior of the district, and at the larger stations where the Civil Surgeon's duties at head-quarters are multifarious, it will be necessary to furnish him with an Assistant Surgeon of superior qualifications as his Personal Assistant either to relieve him from time to time of his head-quarter duties, or to visit the interior on his behalf and under his instructions. Where it is necessary to appoint an Assistant Surgeon for this purpose, he might also be employed as Health Officer of the head-quarters municipality, and, as he will in this position be debarred from private practice, he should receive some addition (say, 25 per cent.) to his grade pay.

8. In the Home Department Resolution, No. 10—533-44, dated 29th September 1887, the Governor-General in Council expressed his opinion that the Sanitary Commissioners had not invariably shown themselves as active in the performance of

their duties as the Government had a right to expect of them. His Excellency in Council observed that Sanitary Commissioners were in some cases permitted to spend time in the hills which should be employed on inspection duty in the plains, and requested Local Governments and Administrations to impress upon Sanitary Officers the imperative necessity of exercising vigour and activity in the discharge of their functions, particularly in the work of inspection. The Governor-General in Council left Local Governments to consider whether the work of Sanitary Commissioners might not be more efficiently discharged if younger officers were selected for the appointments. It appears to His Excellency in Council that Sanitary Commissioners are still kept too much at the head-quarters of the Local Governments, and that they do not spend sufficient time in moving about on tour through their charges. It ought, in the opinion of the Government of India, to be the rule that the Sanitary Commissioner of a Province should be engaged in moving about within it during the greater part of the year, and, in order to secure that this shall be done, it is desirable that junior officers with special qualifications should in future be posted to these appointments. By the Home Department Resolution, No. 4—340–51, dated 7th June 1888, it was decided that the term of the tenure of the office should be fixed at 7 years subject to the condition that an extension not exceeding 3 years might be granted on the recommendation of the Local Government. In view of the appointment of junior officers to the post, it might, it appears to the Government of India, be desirable to reduce the initial pay to Rs. 1,000, and the Governor-General in Council would be glad to receive the opinions of Local Governments upon this point as well as on the question whether any alteration is required in the rules laid down in the Resolution of 7th June 1888 as to the tenure of the appointment.

9. In the Resolution of 29th September 1887, referred to above, the Governor-General in Council decided that it was not possible to amalgamate the offices of Sanitary Commissioner and Principal Civil Medical Officer under the Local Governments as is done in the case of similar appointments under Local Administrations. His Excellency in Council adheres to the decision that the two appointments should not be amalgamated in the larger Provinces where matters connected with town and village sanitation provide full employment for the whole energies of a Sanitary Commissioner, but it appears to him that the dissociation of the Surgeon-General in Madras and Bombay and the Inspector-General of Civil Hospitals in Bengal, the North-Western Provinces and Oudh, and the Punjab, from any direct authority in sanitary matters, has impeded the progress of sanitary reform. It appears to the Government of India that there is reason to apprehend that so long as Civil Surgeons who are in direct subordination to the Chief Civil Medical Officer in a Province are not ultimately responsible to him for the performance of their duties in connection with vaccination and sanitation, those duties may not receive proper attention especially as many of the Civil Surgeons will be senior in service to the junior officers whom it is proposed to appoint in future to the post of Sanitary Commissioner. The Governor-General in Council is therefore of opinion that the provinces in which there is a separate office of Sanitary Commissioner, the Sanitary Commissioner should be subordinated to the Head of the Medical Department. The amalgamation of the office establishments would probably lead to greater efficiency as well as economy, while the work of local inspection might be so distributed between the two superior officers as to bring a larger area annually under inspection.

10. The arrangements for the future administration of the Sanitary Department which approve themselves to the Government of India thus contemplate frequent inspection by Civil Surgeons and the Sanitary Commissioner and control on the part of the head of the Medical Department. It appears to the Governor-General in Council that under these revised arrangements the necessity will no longer exist for retaining Deputy Sanitary Commissioners. They will certainly not be required for the supervision of vaccination operations, but it might possibly be desirable to retain in the larger Provinces one Deputy Sanitary Commissioner, whose main function would be to inquire into special outbreaks of disease and their causes or continued unhealthiness of any particular tract of country. Any saving which could be effected in the cost of Deputy Sanitary Commissioner would be available for the most important point in the reorganization of the department, *viz.*, the improvement of the District

Sanitary staff, and the duties now made over to Deputy Sanitary Commissioners of securing a proper supply of pure and efficient lymph for vaccination operations can be otherwise provided for. The matter is one which should be carefully considered by Local Governments.

11. The foregoing sketch of the general lines on which the reorganization of the Sanitary department might, in the opinion of the Government of India, be effected is placed before Local Governments and Administrations for their consideration, and the Governor-General in Council will be glad to receive in due course their opinions in regard to it. As has already been pointed out, the most important feature of the scheme—viz., the substitution of a qualified agency to supervise vaccination and sanitary operations in place of the existing establishment of unqualified inspectors and other supervising agents—can only be gradually effected as properly qualified candidates for employment become available and as vacancies occur to which they can be appointed. The Government of India will be glad if Local Governments and Administrations will now endeavour to formulate proposals for the eventual reorganization of the Sanitary department as such agency becomes available. So far as the Government of India are able to judge, it should be possible to effect the changes required in the organization of the department without increasing the cost of it, but if this is not possible, the question of how far local funds should be called upon to contribute towards any increase of expenditure involved in reorganizing it should be carefully considered by Local Governments and Administrations.

Order.—Ordered that a copy of this resolution be forwarded to all Local Governments and Administrations.

Ordered also that a copy be forwarded to the Foreign Department / Surgeon-General with the Government of India for information.

(True Extract.)

(Signed) L. M. THORNTON,
Dy. Secy. to the Govt. of India.

Order—No. 1000, Public, dated 9th December 1895.

Communicated to the Surgeon-General and the Sanitary Commissioner for early and full report, and to the Local and Municipal Department for favour of remarks.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

To the Local and Municipal Department.

Read—also the following papers:—

From Surgeon-Major-General C. SIBTHORPE, F.R.C.P.I., Surgeon-General with the Government of Madras, to the Chief Secretary to Government, dated Madras, 19th December 1895, No. 572.

With reference to G.O., No. 1000, Public, dated the 9th December 1895, referring the extract from the Proceedings of the Government of India in the Home Department (Sanitary No. 11—313-326, dated the 26th October 1895), on the subject of the re-organization of the sanitary service in India, for my remarks, I have the honour to submit the following report.

2. With reference to paragraphs 2 and 3 of the Proceedings, I concur largely in the remarks, but would wish to point out what I consider is a very important point as bearing on a closer amalgamation of the medical and sanitary branches of the service. The superintendence of the administration of medical institutions for medical relief and the study necessary to advise Government on such points as are referred to him are quite enough, combined with the annual inspections, to occupy the attention of the Surgeon-General with Government. I consider it requires quite

a different training and class of mind to fit him for such duties from those required to make an efficient Sanitary Commissioner. The Sanitary Commissioner should also have had medical training, but should essentially have devoted himself to the much broader questions of the prevention of disease and the promotion of health and contentment amongst large populations. These subjects are ever increasing in importance and require constant study and attention.

3. With reference to paragraph 4 of the resolution, I am convinced that if any tangible improvement is to be effected in sanitary work, particularly in rural areas, the quality of the supervising agency must be improved, and that it is essential, in order to make this agency efficient, to require that it should be specially trained in hygiene.

In this presidency seven years ago an admirable system of training was adopted by the university of Madras (see page 107 of the calendar for 1895–96). It was worked out from the experience in the universities in Great Britain and adapted to the requirements of this country.

In paragraph 4 of my letter recorded in G.O., No. 615, Educational, dated 18th August 1894, I pointed out it was most desirable that the locally educated medical men should be encouraged by Government to take up the special line of studies which are represented by this degree and that with such qualifications they would be fitted to take up the duties of medical officers of health. I also dealt with this subject in paragraph 16 of my letter No. 541, dated the 13th October 1894, now before Government, and pointed out that the accurate study of this branch of science by trained native medical men was most desirable, for they would help to educate the native public in the facts regarding sanitary science.

This degree deals with the superior qualification to fit medical men to become useful Health Officers. As regards the lower qualification for Sanitary Inspectors the orders of Government in G.O., No. 1914 M., dated 10th December 1894, have dealt fully with this subject, and I have suggested in my letter No. 562, dated 17th December 1895, that medical men of the hospital assistant class, who showed a predilection for sanitary work should be encouraged to qualify as Sanitary Inspectors.

4. The question of establishing a bacteriological laboratory, which will form such an important element in the education of these Health Officers, has been referred to in G.O., No. 990, Public, dated 2nd December 1895, and was fully dealt with by me in the correspondence recorded in G.O., No. 662, Public, dated 3rd August 1895. Until such a Bacteriologist is appointed and furnished with the means of carrying on his work, our system of training for the sanitary science degree will not be complete. A single laboratory for the whole of India at Agra would not at all meet the requirements of the Madras Presidency.

5. The proposal in paragraph 5 of the resolution to substitute for the inefficient machinery of the Sanitary department an agency in the manner trained above is an admirable one. The Sanitary department now consists of a Sanitary Commissioner, a Deputy Sanitary Commissioner, and 53 Inspectors of Vaccination who draw from 40 to 60 rupees a month according to grade, to work in the 22 districts in the Presidency. The District Medical and Sanitary Officers, Civil Surgeons and the Assistants to the District Medical and Sanitary Officers have a certain amount of supervision over the work of the Inspectors of Vaccination.

In paragraph 15 of my letter No. 541, dated the 13th October 1894 I proposed that nine Assistant Surgeons should be appointed as Resident Medical Officers of hospitals above 100 beds and in paragraph 12 of my letter No. 26, dated the 15th January, I proposed that all other hospitals should be placed in sub-charge of a lower grade Assistant Surgeon.

If these proposals were accepted, it would enable Government to utilize the present twenty-one assistants to the District Medical and Sanitary Officers as Health Officers under the District Medical and Sanitary Officers and require from all future candidates that they should hold a degree in sanitary science. If Health Officers were appointed to all large municipalities, it would then be possible to place the whole of the Sanitary department including vaccination in both municipalities and rural districts under the District Medical and Sanitary Officers and Civil Surgeons.

Trained Sanitary Inspectors should gradually take the place of the Inspectors of Vaccination as vacancies occur; but it seems to me that it would be possible to reduce the number 53 considerably in order to pay higher rates to trained men.

6. I do not think that the proposal to grant Assistant Surgeons as Health Officers and Hospital Assistants as Sanitary Inspectors an addition of 15 per cent. to their grade pay would adequately remunerate them for giving up private practice which should be compulsory. I consider their allowance should at least represent 25 per cent. on their grade pay.

7. With reference to paragraph 5 of the resolution the appointment of Assistant Surgeons holding the degree in sanitary science to all large municipalities would be a distinct step in advance and would render the working of these institutions much more efficient.

8. The appointment of the proposed sanitary committees if they were not made too large would also be a distinct step in advance and would tend to spread sanitary education and make the members take more interest in questions of sanitation. The District Medical and Sanitary Officer or Civil Surgeon should certainly be a member of such committees and should, as a rule, sit as President. In G.O., No. 1177 L., dated 26th June 1894, it is directed that the sanitary and medical portions of Local fund and municipal budgets should be drawn up by Presidents in consultation with District Medical and Sanitary Officers; but it would be still better if the sanitary portions of these budgets were prepared by the proposed sanitary committee.

9. The proposals in paragraph 7 of the resolution have been anticipated in this Presidency by the appointment of an assistant to the District Medical and Sanitary Officer to each in 21 of the 22 districts in Madras (*vide* G.O., No. 391, Public, of the 22nd February 1883). The difficulties in working this system are fully set out in the correspondence published in G.O., No. 57, Public, dated the 24th January 1895, where it will be seen that owing principally to the great areas of the districts in Madras, that too much of the District Medical and Sanitary Officer's time was taken up in making extended tours, which resulted in the important duties at his head-quarters station being neglected.

If his assistant was relieved of his medical work and properly trained in sanitary science, he would be able to do more sanitary and vaccination work with the inspection of minor dispensaries in the district and the Commissioned Medical Officer could spend more time in supervision and at his professional work at head-quarters. He should only visit the larger and more important places in his district, all the sanitary work being carried on under his or the Civil Surgeon's supervision, and he remaining, as heretofore, the adviser to the Collector on all medical and sanitary matters.

10. Paragraph 10 of the resolution does not apply to Madras; both the present and late Sanitary Commissioners and Deputy Sanitary Commissioners have spent a great deal of their time on inspection duty. In this Presidency it is most desirable that both of these officers should have some rest especially during the hot weather. I would strongly deprecate junior officers being selected for the appointment of Sanitary Commissioner who should always be an officer of extensive Indian experience and wide knowledge, preferably an officer holding a special qualification in sanitary science who had considerable experience as a District Medical and Sanitary Officer. On this subject please see my predecessor's letter to you No. 238 of 29th November 1887 and No. T.-2—6 of 9th November 1887, as Dr. Bidie had served in both offices and was fully acquainted with the duties of each. In his views I largely concur. If the appointment of Deputy Sanitary Commissioner is to be continued, he might be a more junior officer, but his advice will not be worth much or carry weight unless he has acquired actual experience of the wants of the people and the possibilities of meeting them.

In the Madras Presidency, I think it would be a mistake doing away with the Deputy Sanitary commissionership; indeed it would be better to provide a second one, so that all the municipalities and districts might be inspected annually in their sanitary and medical aspects as it is now the duty of the Sanitary Commissioner and his

deputy to inspect all medical institutions in the towns they visit and report on their administration under paragraph 4 of G.O., No. 57, Public, dated 24th January 1895; copies of their remarks are sent to the local authorities or to me for the necessary action.

11. For the reasons already given, I do not consider it would be advisable to place the Sanitary Commissioner more under the Surgeon-General than he is at present. It would be very likely to cramp him in his work which is of quite a different kind from that of the Surgeon-General.

In my opinion all requirements would be met if the Sanitary Commissioner was directed to submit all orders he wished to issue to District Medical and Sanitary Officers, Civil Surgeons and their subordinates to the Surgeon-General to be approved of by him and published as departmental standing orders.

The Surgeon-General should also have the power of issuing such instructions to the Sanitary Commissioner or through him to his deputies on the subject of inspecting medical institutions as he considered necessary.

Enclosure.

Copy of a letter from G. BIDIE, Esq., M.B., C.I.E., Surgeon-General with the Government of Madras, to the Chief Secretary to Government, dated 9th November 1887, No. T.-2—6.

With reference to G.O., No. 1452 of 31st October 1887, I have the honour to state that, in my opinion, no officer should be appointed to the post of Sanitary Commissioner who has not shown special ability, energy and tact, and who has not had considerable experience in sanitary work in India. Not only should he have a good theoretical knowledge of hygiene and cognate subjects, but also be able to investigate questions bearing on public health with full knowledge of, and according to modern methods.

2. The duty of inspection by the Sanitary Commissioner is no doubt of very great importance, but it may be carried to such an extent as to reduce him almost to the level of a nuisance inspector and leave scant time for the consideration of larger questions affecting public health. For instance it may be infinitely more important for such a functionary to spend a month in a town or part of a district investigating some special outbreak of disease than for him to rush through a dozen or two of villages taking up the oft-repeated tale of dirty drains and polluted water. In other words a Sanitary Commissioner in India, while not neglecting to press on local bodies the claims of sanitation and the measures necessary to improve and protect the public health, must also take up and be able to pursue other sanitary questions of mere general import.

3. Holding such views as to the nature of the duties of the Sanitary Commissioner I am of opinion that he should not be too young, and in addition to his special professional knowledge should be well acquainted with the people of the country and able to put suggestions before them in a lucid and convincing manner. The advantage of having a somewhat senior officer will also appear in the transaction of business with district officials.

4. If, however, it is finally resolved to restrict the appointment to a junior officer, I am further of opinion that it would be economical a saving of labour and for the public good to make the Sanitary department a branch of the general medical administration, by placing the Sanitary Commissioner under the Surgeon-General. This arrangement would be specially conducive to the thorough and frequent inspection, which the Government of India wish to maintain.

5. As regards the rate of pay for the appointment of Sanitary Commissioner, it appears to me that if the appointment is to be restricted to a comparatively young officer, the Bengal scale, viz., Rs. 1,200 rising to Rs. 1,800 per mensem, will suffice.

From Surgeon-Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Chief Secretary to Government, dated Fort St. George, 23rd March 1896, No. 660-S.

With reference to G.O., No. 1000, Public, dated 9th December 1895, I have the honour to submit herewith a memorandum giving the outlines of a scheme for the reorganization of the vaccination and of the Sanitary departments.

SUMMARY OF A SCHEME FOR REORGANIZATION OF THE MADRAS SANITARY AND VACCINATION DEPARTMENT.

1. The proposed department will be divided for administration purposes into "Urban" and "Rural" branches.

2. The Urban branch will attend to vaccination in all municipalities and the sanitary requirements of towns including municipalities and unions having a population of from 7,000 to 90,000 persons residing on a single site.

3. Certificated Sanitary Inspectors, whose duties are described on page 7, will be provided in the following proportion to populations:—

One 2nd-class in "towns" having population between..	10,000 and 15,000
One 1st and one 2nd class in "towns" having population between	15,000 and 22,000
One 1st and two 2nd class in "towns" having population between	22,000 and 30,000
One 1st and three 2nd class in "towns" having population between	30,000 and 43,000
One Chief Sanitary Inspector and three 2nd-class in "towns" having population between	43,000 and 60,000
One Chief and four 2nd-class in "towns" having population between	60,000 and 90,000

4. Towns having populations between 7,000 and 10,000 will be provided with a lower class of specially-trained sanitary subordinates, known as "Conservancy Overseers." They will be responsible for supervision of registration as well as sanitation in their respective charges.

5. Vaccination in municipal areas will be conducted by grouping municipalities together.

6. The Rural branch of the Sanitary Department will undertake vaccination in all towns not being municipalities and in all rural tracts, as well as the check and aid of registration and the conduct of sanitary duties.

7. Each Municipality shall be required to allot 30 per cent., and each Local Fund body 15 per cent., of the total incomes for sanitary purposes. A permanent fund, of such amount as Government may from time to time direct, shall be set aside for epidemic purposes. Of the total amount given by Municipalities and Local Fund bodies under Grant I, not less than 25 per cent. shall be devoted to new sanitary works or their repairs.

8. In each district, there shall be formed a Local Sanitary Board, consisting of the Collector as President, the District Medical and Sanitary Officer as Secretary and Member, and either the District Executive Engineer, Public Works Department, or Local Fund Engineer as Member. This board will control all expenditure under sanitary allotments, both in Municipal and Local Fund areas, set aside either for epidemic purposes or for new, or repair of, sanitary works. The fair hearing of local authorities in accordance with the scheme of self-government is arranged for by their electing two members of their own bodies to represent them during the discussion of any scheme in which they may think personal representation is necessary. These members will have the right of voting and will thus have due influence upon the decisions of the Local Sanitary Board.

9. Each district will be provided with a Medical Health Officer possessed of the qualification in Sanitary Science of the Madras University. He will be in communication with the District Medical and Sanitary Officer through the Local Sanitary Board, but will be under the direct control of the Sanitary Commissioner.

10. District Medical and Sanitary Officers will continue to inspect and report to the Sanitary Commissioner, but their efforts will more especially be directed, as Vice-Presidents of District Boards and Secretaries and Members of Local Sanitary Boards, to controlling sanitary expenditure.

11. The District Health Officers' recommendations as to new sanitary works and repairs will be subject to review by Local Sanitary Boards. They will be in a position to place their recommendations before the Local Sanitary Board by possessing an Engineering subordinate capable of making plans and estimates for improvements they may find necessary during their tours.

12. The Provincial Sanitary Board (the existing Sanitary Board, Madras,) will exercise control over all expenditure on works costing over Rs. 500 through the Local Sanitary Boards, with which it will be in correspondence through the Secretary, General Sanitation Branch, Sanitary Board, that is, the Sanitary Commissioner.

13. In addition to this organization it is suggested to weld together the various independent offices connected with local administration after the manner of the Local Government Board of England. This would involve the appointment of a Civilian of standing as President. This suggestion is not an essential part of the scheme.

14. The Deputy Sanitary Commissioner will be retained.

15. A Bacteriologist will be appointed and attached to the Sanitary Department:—

Duties.—Bacteriological research in directions required by Sanitary Commissioner;
Education of Sanitary Inspectors;
Chemical analyses for sanitary purposes;
Professor of Hygiene.

16. Reasons are given for considering that subordination to the local Surgeon-General of the Sanitary Commissioner would cripple advance; but it is considered it would be of much advantage to combine the Local Sanitary Commissioners and proposed Bacteriologists and Chemical Analysts into one service for the whole of India under one Head—the Sanitary Commissioner with the Government of India. Incidentally, subordination would thus be attained; but, at the same time, there would be secured the union of expert opinion by a system of intercommunication. This proposal is in a line with the suggestion of Dr. Simpson and the recommendations thereon by the Indian Medical Congress.

17. In accordance with the scheme for District Health Officers, and with the similar object of preparing estimates and plans for minor works and improvements, it is proposed to attach one overseer and a draftsman to the office of the Sanitary Commissioner.

18. In view of increased work demanded, three clerks, one attender and one peon are asked for as additions to existing office staff of the Sanitary Commissioner.

19. It being impossible to conduct work in rural tracts without tents, either tents or tentage are advised for the Sanitary Commissioner and Deputy Sanitary Commissioner respectively. It is pointed out that the constant wear and tear of equipment and incidental expenses to which the Sanitary Commissioner is subjected during travelling demand equally liberal treatment as in other Provinces of India where Rs. 7-8-0 is the daily travelling allowance given *plus* khalassies and tentage.

20. The contention that Military sanitation should be quite distinct from Civil is thought erroneous. Intercommunication is essential in the interests of both the Military and Civil populations.

21. It is considered that endeavouring to conduct vaccination in rural areas under a *voluntary* system, which depends upon the *persuasion* exercised by Revenue authorities, is a serious mistake, and that legal compulsion—as to which no opposition would be forthcoming—would both for social and sanitary reasons be the correct course to pursue in all parts of the Presidency other than the hill tracts.

22. The suggestion is made that sufficient funds for sanitation could be obtained without additional taxation, were efforts towards advancing education not so lavish.

23. It is shown that menial conservancy staffs could be supplied for all towns, not being municipalities, of over 7,000 inhabitants resident on one site by Government recalling the order as to ceding one pie in the rupee (as lately done in view of the amount collected being in excess of requirements) for the Village Service Fund. The scheme assumes that certain proposals as to compulsory retirement of vaccinators and of Deputy Inspectors of Vaccination already submitted to Government (G.O., No. 1066 L., dated 9th May 1892, regarding reorganization of the Vaccination department) will be approved. This allows of fair play to incumbents by absorbing as vaccinators existing Deputy Inspectors, and allowing all to show by examination they are capable of the new duties required. Thus arranged, the scheme could be put into operation within 18 months of approval by Government in regard to subordinate staff both for vaccination and sanitary services, but would lack the complete addition of Medical Officers of Health for five years, although the majority of districts could be supplied also within 18 months of approval.

The following is an abstract of the expenditure contemplated, as debited to various heads:—

ABSTRACT.

I.—Municipalities.

	Rs.
Total cost of vaccination with fresh lymph at As. 3-7 per case, inclusive of the cost of preserved lymph supplied from the Vaccine Institute and that of the fresh lymph materials, amounts to	21,702
Cost of urban sanitary staff	99,330
Grand Total ..	1,21,032

or 4·85 per cent. of the total income of the municipalities for 1894–95 against 2·93 per cent. on total income of the same year of the present expenditure.

II.—Local Fund Districts.

	Rs.
Total cost of vaccination in the Local Fund districts with preserved lymph for the three-fourths of the required number of cases and the remainder with fresh lymph at As. 4-7 a case, inclusive of the cost of preserved lymph supplied from the Vaccine Institute together with the cost of fresh lymph materials, amounts to	3,88,706
Cost of urban and rural sanitary staff in towns other than municipalities having a population of above 7,000	34,410
Grand Total ..	4,23,116

or 4·28 per cent. of the total income of the Local Fund districts for 1894–95.

III.—Provincial Charge.

When the establishment reaches its maximum of cost by reason of incumbents of appointments obtaining their highest rates of pay, *i.e.*, twenty years after its introduction, the annual cost will be—

	Rs.
(*a*) Vaccine Institute	24,612
(*b*) Extra establishment for the office of the Sanitary Commissioner	4,044
(*c*) Twenty-one Health Officers and their establishments	82,404
(*d*) Twenty-one Sanitary Works Overseers and their khalassies ..	22,428
(*e*) Contingencies for (*c*) and (*d*)	5,040
Grand Total ..	1,38,528

or ·43 per cent. of the total income for 1894–95.

The subjoined statement shows the annual cost of the scheme at different periods:—

	Rs.
From 1st to the end of 7th year	88,116
„ 8th „ 10th „	90,468
„ 11th „ 14th „	1,13,868
„ 15th „ 20th „	1,15,128
„ 21st and upwards	1,38,528

General Abstract.

	Rs.	Percentage on total income for 1894-95.
Municipal charge	1,21,032	4·85
Local Fund „	4,23,116	4·28
Provincial „	1,38,528	·43

MEMORANDUM ON THE PROPOSED REORGANIZATION OF THE SANITARY AND VACCINATION DEPARTMENT.

Explanatory Remarks.

In 1881, Surgeon-General Cornish secured from Government the arrangement, that exists to this day in this Presidency that Medical officers in charge of districts be provided with Assistant Surgeons of a class capable of undertaking professional work during their absence from head-quarters.

2. In 1890, I represented the very inefficient condition of the Vaccination Department (G.O., No. 61 L., dated 12th January 1891), and, at the request of Government, furnished a report which is embodied in G.O., No. 1066 L., dated 9th May 1892.

3. In paragraph 2 (7) of my Memorandum of "suggestions in connection with G.O., No. 2055 L., dated 10th August 1890," embodied in G.O., No. 79 L., dated 16th January 1891, I made certain proposals as to forming Local Sanitary Boards consisting of the Collector of the District, the District Medical and Sanitary Officer, and either the Executive Engineer, Public Works Department, or the Local Fund Engineer. The Boards were to be held responsible for sanitary expenditure by all local authorities in the district, in communication with the existing Central Sanitary Board.

4. In paragraph 4 of my Memorandum of "suggestions for the better utilization of the services of District Medical and Sanitary Officers during epidemics of cholera," embodied in G.O., No. 231 L., dated 13th January 1891, I pleaded that, in default of the scheme for Local Sanitary Boards being sanctioned, the District Medical and Sanitary Officer should become the Vice-President for sanitation and vaccination in district boards, and thus exercise supervision over expenditure. At the same time, I pointed out that "it will be noted that, notwithstanding the existence of district and taluk boards who are charged with administrative functions, it is necessary to request that Revenue subordinates be saddled with responsibility as to epidemics. This should not be the case. It is obviously time that in connection with these bodies and municipalities there be organized an executive Sanitary Department, consisting of Nuisance Inspectors who, by special training in hygiene, are capable of carrying out intelligently directions issued to them by District Sanitary Officers. The pay offered to this class of men by municipalities at present is quite sufficient to secure the services of hospital assistants. The offer of a little better pay, and the demand that they should undergo an advanced course and examination in hygiene, would, no doubt, result in the production of a popular and efficient service. Were such men to be found in each municipality and important village, it would always be possible, after a few hours of notice, to place temporarily a staff at their disposal for special service during cholera and other epidemics."

5. In G.O., No. 1914 M., dated 10th December 1894, I obtained the sanction of Government for the training of Sanitary Inspectors employed by local bodies.

6. In my "Report on the Sanitary condition of Madras" submitted to Government (in my function as Special Health Officer 1882) and again as a member of the Committee on the drainage and water-supply of Madras (G.O., No. 1528 M., dated 19th September 1891), I drew attention to the desirability of founding a Museum of Hygiene in Madras town that should be open to the public and permit of demonstrations by models and apparatus as to the practice of hygiene.

7. In 1889, the Madras University made arrangements for giving a qualification in Sanitary Science—L.S.Sc. (Madras). The chief supporter of this movement was Surgeon-Major McNally, I.M.S., deceased.

8. In offering schemes for the reorganization of the Vaccination department, I pleaded for a separate staff for the Vaccination and Sanitary department, and stated as follows :—

"But the officers required for the work of the Vaccination department need not possess the same qualities as those for the Sanitary department. In the former, it is enough that the officers should be good hands at maintaining discipline and at energetically supervising those numerous details in practice and in office that go towards getting the maximum amount of work out of the staff placed at disposal. In the latter, what is required is absolutely and solely scientific experts—men who have made special branches of sanitation their study, and who are prepared in chemical and bacteriological laboratories, that should form part and parcel of the office of Sanitary Commissioner, to devote the major portion of their time to the investigation of *disease causation*, not merely to the duty of reporting the presence of insanitary conditions. For these appointments, officers should be selected and trained in the spirit which guided the Indian Government as to Drs Cunningham and Lewis. The rules of the service should be relaxed in their favour, and study in European countries, or wherever their abilities as experts might be improved, should be encouraged to the utmost."

9. I am still decidedly of opinion that the mingling of the two departments is a mistake; but, with greater experience of the financial condition of the country and of the hopelessness, consequently, of getting a department of this nature organized for sanitation alone, in my memorandum to Government in reply to Government of India Resolution, No. 2, dated Sanitary 106—117 (communicated with Government of Madras Order, No. 477, dated 3rd July 1894,) I withdrew my request, and suggested a "Public Health department whose duties would be the supervision of sanitation, vaccination and registration under the control of Superintendents of Vaccination (Scheme No. 1 detailed in my report embodied in G.O., No. 1066 L., dated 9th May 1892) or Deputy Sanitary Commissioners, as originally proposed by Surgeon-General Cornish (G.O., No. 1537, Public, dated 21st October 1879) and of District Sanitary Officers (ex-officio Vice-Presidents of District Boards) and of the Sanitary Commissioner."

10. I recapitulate these facts with the object of showing that this office has not in past years failed to take cognizance of the necessity of re-organization as has been implied by a late resolution of the British Medical Association which was communicated to the India Office, and that the scheme now before Government for discussion *has, in all important points, been fully anticipated in this Presidency.*

11. Granting, therefore, that demands of registration, vaccination and sanitation must be met by a staff which shall have common duties, it seems to me that, with little modification, Scheme No. 1 (*a*) of my Vaccination Department reorganization report will best meet the requirements of this Presidency. As this was offered in a form much confused by the submission of alternate schemes owing to the necessity of meeting endless objections that were then extant *and must form the foundation of the scheme now proposed*, I state briefly what its nature was.

12. The scheme contemplated the use of preserved animal lymph up to certain limit. This was to be cultivated at a special Vaccine Institute. The building was to be built on principles that would allow of no doubt as to its suitability for cultivating, manufacturing and issuing preserved lymph under the best possible hygienic precautions. It was held that, irrespective of other obvious advantages, the presence of such a place would be of special advantage in rapidly supplying lymph during epidemics.

13. This institute was to serve as a training school for vaccinators who would there, besides theoretical and practical vaccination, be taught hygiene, physiology, the clinical aspect of certain human diseases and cattle diseases.

14. Fresh lymph to be used by vaccinators was invariably to be of no longer descent than one generation from the preserved lymph supplied by the institute, thus guarding from degeneration local stocks of lymph.

15. Fresh animal lymph was always to be used where 150 cases could be got together; but where less than this number was available, preserved lymph received from the institute only was to be employed.

16. On joining for training the Vaccine Institute, no candidate was to be admitted with a less standard of general education than the Matriculation examination of the Madras University. The pay of vaccinators was to be—

	Rs.
First-class	60
Second-class	45
Third-class	20

17. Above the vaccinators were to be placed Assistant Superintendents, whose duties were to be the inspection of vaccination results, and of birth and death registration. These men were required to hold the L.M. & S. degree of the Madras University. Their pay was to be as follows:—

	Rs.
First-grade	100
Second-grade	75

18. Above these, in charge of about every two districts, were placed Superintendents of Vaccination. These were to be qualified medical men holding either Local or British Medical degrees. Their pay was to be as follows:—

	Rs.
For first ten years	150
From ten to twenty years	225
Twenty years and upwards	300

The total staff was as follows:—

Fifty-two Assistant Superintendents (thirty-two at Rs. 100 and twenty at Rs. 75).
Fifty-two peons on Rs. 7 each.
Four hundred and eighty vaccinators from Rs. 20 to Rs. 60, viz.—
87 first-class vaccinators at Rs. 60.
136 second-class " " " 45.
257 third-class " " " 20.

19. In municipal areas, the various towns were formed into convenient groups and, instead of being supplied with several vaccinators each, it was arranged that a staff common to the group should arrive at each municipality on definite dates. It was ascertained that, allowing for all public holidays, it would be possible to arrange that each town should be visited during fourteen to seventeen days in each quarter of the year.

20. The staff contemplated for the total "16 groups" was as follows:—

	Rs.
Seven 1st-class vaccinators on	60 each.
Fourteen 2nd-class vaccinators on	45 "
Fourteen 3rd-class vaccinators on	20 "
One clerk	25
Twenty-one calf watchmen on	7 "

21. In municipalities the annual cost was calculated at Rs. 27,531 or 1·10 per cent. of the total available income, or As. 3–7 per case vaccinated, against As. 4–10 for 1894–95.

22. The total annual expenditure from Local funds was estimated at Rs. 3,88,706, or 3·93 per cent. of the total available income for 1894–95. The cost per case was estimated at As. 4–7, against As. 3–7 in 1894–95.

23. The annual cost to Provincial funds was estimated at Rs. 94,885, or 2·9 per cent. of total income in 1894–95.

Proposed Sanitary Department.

Provision for Sanitary Inspectors.

24. Upon the staff described in the preceding paragraphs it is now necessary to graft an organization that will fulfil the combined functions of supervising registration, vaccination and sanitation. Having regard to the varying populations to be dealt with and the financial condition of each, it is necessary to class the proposed sanitary service into two divisions, namely, "*Urban*" and "*Rural.*"

Urban Sanitary Branch.

25. The executive of this body would be represented by certificated Sanitary Inspectors and Vaccinators.

26. The duties of Sanitary Inspectors would involve the direct control and supervision of the working of conservancy staffs of towns; inspection for the purpose of abatement of nuisances, inspection of water, food and milk supplies, and the giving of advice as to licensing for offensive and dangerous trades; the personal supervision of staffs for the prevention of the spread of epidemic disease, supervision of the working as to sanitary requirements of sewage farms, water and sewerage works, slaughter-houses, night-soil and rubbish depôts, manufacture of poudrette and the mode of disposal of night-soil, &c., supervision of the local registration staff.

27. The urban sanitary staff will maintain diaries exhibiting their recommendations in connection with the duties described in the preceding paragraph. These will be forwarded weekly in original to the Senior Medical Officer of the station by the executive officer of the local authority, who will state the nature of action thereon taken by him. In connection with any matter the Senior Medical Officer may consider of importance, and which is found to have been not attended to by the local authority within a reasonable period, an extract from the diary should be forwarded to the District Medical and Sanitary Officer for information. Should he be of opinion, after correspondence with the local authority, that action is necessary though refused, or neglected, by it, he shall bring the fact to the notice of the Sanitary Commissioner for report to Government or such action as he may think fit.

28. The following are the classes and grades of pay I would advocate as the minima that will secure the desired class of Sanitary Inspectors:—

Chief Sanitary Inspector	..	Rs. 75 to 100	(five annual increments of Rs. 5).
1st-class do.	..	„ 45 to 60	(„ „ „ 3).
2nd-class do.	..	„ 25 to 35	(„ „ „ 2).

29. These would be necessary proportionately to the urban population as follows:—

Population occupying towns of 10,000 *to* 15,000.

One 2nd-class certificated Sanitary Inspector, Rs. 25 to 35 + Rs. 7–8–0 horse allowance.

Population occupying towns of 15,000 *to* 22,000.

One 1st-class certificated Sanitary Inspector, Rs. 45 to 60 + Rs. 7–8–0 horse allowance.
One 2nd-class do. do. „ 25 to 35 + „ 7–8–0 do.

Population occupying towns of 22,000 *to* 30,000.

One 1st-class certificated Sanitary Inspector, Rs. 45 to 60 + Rs. 7–8–0 horse allowance.
Two 2nd-class certificated Sanitary Inspectors, each Rs. 25 to 35 + Rs. 7–8–0 do.

Population occupying towns of 30,000 *to* 43,000.

One 1st-class certificated Sanitary Inspector, Rs. 45 to 60 + Rs. 7–8–0 horse allowance.
Three 2nd-class certificated Sanitary Inspectors, each Rs. 25 to 35 + Rs. 7–8–0 do.

Population occupying towns of 43,000 *to* 60,000.

One Chief Sanitary Inspector, Rs. 75 to 100 + Rs. 15 horse allowance.
Three 2nd-class Sanitary Inspectors, each Rs. 25 to 35 + Rs. 7–8–0 horse allowance.

Population occupying towns of 60,000 *to* 90,000.

One Chief Sanitary Inspector, Rs. 75 to 100 + Rs. 15 horse allowance.
Four 2nd-class Sanitary Inspectors, Rs. 25 to 35 + Rs. 7–8–0 each horse allowance.

30. The word "towns" in the above classification is used in the sense laid down by Mr. Stuart in his Census Report; that is, it refers to the groups of dwellings on a single site, and does not take note of "villages" according to the Revenue application of that work, the inhabited parts of which may be spread over an area of several square miles.

31. In regard to the scale of sanitary staff for municipalities, this has not been rigidly adhered to. In important pilgrim resorts and in very poor municipalities slight variations have been made to suit special circumstances.

32. There are, however, no less than 56 towns on single sites having populations between 7,000 and 10,000 which will not be subject to sanitary care on the preceding provision. Of these, 53 are Unions and the whole in time will doubtless become so. These might be attended by an inferior class of stationary sanitary staff to be known as "Conservancy Overseers." Their pay will range from 2nd class, Rs. 15, to 1st class, Rs. 20.

33. For vaccination purposes all municipalities, except Madras, are grouped in regard to their proximity to each other and facility of means of intercommunication. The vaccination staff will be as follows:—

Number of 1st-class Vaccinators	at Rs. 60	..	..	..	5
„ of 2nd-class „	at „ 45	..	..	..	11
„ of 3rd-class „	at „ 20	..	..	..	10
„ of calf watchmen on Rs. 7, at one for each group			..	..	16

34. In the calculation for total cost of vaccination to municipalities, the travelling allowances of the vaccination staff and the cost of fresh animal lymph production have been duly included. The estimate is based on the calculation that the staff, allowing for public holidays, could be present for from fourteen to seventeen days in each municipality of the group per quarter. This arrangement would allow of ample time for vaccinating all cases assembled by the municipal authorities on definite dates —vaccination in all municipalities being compulsory.

35. The groups will be arranged as follows:—

Groups.		Municipalities comprised therein.
1. Berhampur	...	(1) Berhampur, (2) Parlákimedi, and (3) Chicacole.
2. Vizagapatam	...	(1) Vizianagram, (2) Bimlipatam, (3) Vizagapatam, and (4) Anakápalle.
3. Rajahmundry	...	(1) Cocanada and (2) Rajahmundry.
4. Masulipatam	...	(1) Masulipatam, (2) Guntúr, (3) Bezwada, and (4) Ellore.
5. Nellore ...	...	(1) Nellore, (2) Ongole, and (3) Tirupati.
6. Vellore ...	...	(1) Vellore, (2) Walajapet, (3) Gudiyáttam, (4) Vániyambádi, (5) Tiruppattúr, and (6) Conjeeveram.
7. Cuddalore	...	(1) Cuddalore, (2) Chidambaram, (3) Mannárgudi, (4) Máyavaram, and (5) Negapatam.
8. Tanjore ...	...	(1) Tanjore, (2) Kumbakónam, (3) Trichinopoly, and (4) Srírangam.
9. Salem ...	...	(1) Salem, (2) Erode, and (3) Karúr.
10. Madura ...	...	(1) Madura, (2) Dindigul, (3) Palni, and (4) Periyakulam.
11. Tinnevelly	...	(1) Tinnevelly, (2) Palamcottah, (3) Tuticorin, and (4) Srivilliputtúr.
12. Coimbatore	...	(1) Coimbatore, (2) Cochin, and (3) Palghat.
13. Nilgiris	...	(1) Ootacamund and (2) Coonoor.
14. Calicut ...	...	(1) Calicut, (2) Tellicherry, (3) Cannanore, and (4) Mangalore.
15. Cuddapah	...	(1) Cuddapah and (2) Anantapur.
16. Bellary ...	...	(1) Bellary, (2) Adóni, and (3) Kurnool.

Rural Sanitary Branch.

36. To attend to towns and hamlets not included in the above list, it would be necessary to trust to an itinerating staff. This would constitute the rural sanitary staff, which would consist of vaccinators trained in sanitation supervised by Chief Sanitary Inspectors. This staff would be under the direct control of the District Health Officer, subject to supervision described in paragraph 70. They would replace the existing Local Fund Vaccination Department. In addition to vaccination this staff would aid and check registration, and be responsible for sanitary inspection and epidemic duties.

37. The rural sanitary staff and vaccination branch of the urban sanitary staff will correspond direct with the District Health Officer, who will forward all reports and returns through the District Medical and Sanitary Officer to the Sanitary Commissioner. The District Sanitary Officer will in each instance state what action has been taken by him in respect to matters within the cognizance of local authorities.

38. *If the above suggestions be adopted, the entire executive staff of the Sanitary department would be distributed and its cost be debited as follows :—*

Establishment.	Number.	Rate of pay.	Total cost.	How debitable.
I.—URBAN BRANCH.				
Sanitary Department.				
1. In towns having a population from 7,000 to 90,000.				
Chief Sanitary Inspectors ..	13	Rs. 75 to 100 with fixed batta Rs. 15 each.	Rs. 1,21,032 or 4·85 per cent. on total income for 1894–95.	Municipalities.
1st-class do. ..	35	Rs. 45 to 60 with fixed batta Rs. 7–8–0 each.		
2nd-class do. ..	104	Rs. 25 to 35 with fixed batta Rs. 7–8–0 each.		
1st-class Vaccinators ..	5	Rs. 60 each.		
2nd-class do. ..	11	,, 45 ,,		
3rd-class do. ..	10	,, 20 ,,		
Calf watchmen	16	,, 7 ,,		
2. In towns having a population from 7,000 to 22,000 not being Municipalities.			..	Local Fund Boards.
1st-class Sanitary Inspector ..	1	Rs. 45 to 60 with fixed batta Rs. 7–8–0.		
2nd-class Sanitary Inspectors.	40	Rs. 25 to 35 with fixed batta Rs. 7–8–0 each.		
Conservancy Overseers ..	55	Rs. 15 to 20 each.		
II.—RURAL BRANCH.				
Sanitary Department.				
1st-grade Assistant Superintendents	32	Rs. 100 each.	Rs. 4,23,116 or 4·28 per cent. on total income for 1894–95.	Local Fund Boards.
2nd-grade Assistant Superintendents	20	,, 75 ,,		
Peons	52	,, 7 ,,		
1st-class Vaccinators	87	,, 60 ,,		
2nd-class do.	136	,, 45 ,,		
3rd-class do.	257	,, 20 ,,		

Education of Members of the Urban and Rural Inspection Staffs.

39. The following are the educational qualifications considered necessary for the executive staff :—

(*a*) *Chief Sanitary Inspectors.*—These may either hold the L.M. and S. of the Madras University, or be qualified "Engineer Subordinates." If they hold a medical qualification, they will be required to undergo a course of Drawing, Sanitary Engineering, and practical and theoretical Hygiene extending over one year at the Madras University. If Engineering subordinates, they will be required to undergo during one year a course of Physiology, Chemistry, aspects of disease in the out-patient department of a hospital, the theory of Bacteriology, theoretical and practical Hygiene. Entrance to these courses should be by nomination by the Sanitary Commissioner, and should be paid for by the candidates.

(*b*) On passing a qualifying examination in these subjects, both classes of candidates would be required to undergo a four months' course of training in theoretical and practical vaccination and study of animal disease in the Vaccine Institute.

(*c*) *First-class Sanitary Inspectors*—may be qualified Civil Apothecaries, Hospital Assistants, Matriculates or Graduates of the Madras University, and persons holding a certificate of having passed an examination in Construction, Surveying and Drawing, after a course of training in the Engineering College. They should be required to undergo a course of six months' training in practical Hygiene at their own expense. After passing a qualifying examination in this subject of a lower type than for Chief Sanitary Inspectors, they should be required to attend a course of four months' study at the Vaccine Institute on the theory and practice of vaccination and on cattle diseases. Those candidates who are not qualified as hospital assistants or civil apothecaries would be required to undergo, during their training in hygiene, two months' attendance at the out-patient room of a hospital to familiarise them with skin and other diseases of the human being.

(*d*) *Second-class Sanitary Inspectors*—would be required to possess one or other of the educational qualifications demanded for the 1st class, and would be selected from those who pass the qualifying examination in the 2nd class.

(*e*) *Conservancy Overseers.*—These men would be required to possess educational qualifications not lower than provided for by their passing the Lower Secondary examination in the 1st class. After nomination by the Sanitary Commissioner, they should be required to attend a course of practical and theoretical hygiene at the Albert Technical Institute, Trichinopoly, which offers special facilities for such education. They should then be required to undergo an examination for certificates as "Conservancy Overseers."

40. To secure the education of the proposed sanitary staff, it would be essential that the arrangement proposed by me in paragraph 4 of my memorandum which formed an enclosure to my letter, No. 166, dated 28th January 1896, to the Surgeon-General with the Government of Madras on the subject of the Imperial Bacteriological Institute, be put in force; that is, an officer attached to the Sanitary Department as Bacteriologist should be lent for the purpose of teaching theoretical and practical Hygiene and Bacteriology. A fairly sufficiently well-provided laboratory already exists in the Medical College; but to teach practical sanitation, irrespective of ample scope for demonstration in the town of Madras of insanitary conditions, it should be arranged that a Museum of Hygiene, as proposed by me formerly, be provided (*vide* paragraph A under "General remarks" in my "Notes on the Sanitary Condition of Madras and Suggestions for its Improvement" embodied in G.O., No. 1528 M., dated 19th September 1891, page 30. Also my report as Special Sanitary Officer, Madras, 1882). This should be well stocked with models and sanitary apparatus, diagrams, and all matters tending to make the conception of practical sanitation easy. Whilst in England in 1889, I made enquiries of certain of the largest manufacturers of sanitary ware, and was informed that, provided Government would pay for the carriage of specimens, they would forward them *gratis*. This Museum of Hygiene would prove of the greatest advantage in encouraging a comprehension of sanitary matters amongst Local Fund and Municipal authorities and the public generally, if access were allowed free to the public. Specimens could be sent to municipal councils when advising them of certain measures and thus aid their coming to correct conclusions. A splendid building already exists in Madras for the accommodation of such a museum, namely, the Technical Institute.

41. Arrangements as to education at the Vaccine Institute have been described in the report on the re-organization of the Vaccination Department. No estimate under this head is, submitted, as, until Government approves of general principles, this is not thought necessary. It would, however, prove a small item, and if Government refused to undertake the cost, it could be recovered from Local Funds and Municipalities so far as it could not be covered by fees.

42. As to building, it is roughly estimated that if suitable private or public buildings are placed at disposal for which rent is provided in the estimate, a sum of Rs. 10,000 would be required to adapt them.

43. The data on which the calculations were based as to the cost of supply of preserved animal lymph by the Vaccine Institute have been since proved correct by the splendid success of the Mysore Vaccine Institute.

44. Facilities for teaching the other subjects required already exist in either the Engineering, Medical or Presidency College, Madras.

Supervision and Administration.

Sanitary Funds.

45. Each Municipality should be required to allot a minimum of 30 per cent., and each Local Fund authority of 15 per cent, under Grant III for sanitary purposes. Of the total allotment made from current income by Local Fund bodies and Municipalities under Grant I, not less than 25 per cent. should be for new, or repairs of, sanitary works.

46. Each Municipality and Local Fund authority shall hold in reserve such sum as the Local Government may, from time to time, direct for use during epidemics. The expenditure of this fund and of the amount allotted for sanitary works under Grant I shall be controlled by Local Sanitary Boards.

Local Sanitary Boards.

47. There shall be constituted in each district a body to be known as the Local Sanitary Board of the district in which it is appointed to act. The following shall be *ex-officio* members :—*President*—the Collector of the district; *Secretary and Member* —the District Sanitary Officer; *Members*—the Executive Engineer, Public Works Department, and the Local Fund Engineer. Additional members, not exceeding two in number, may be appointed by the district board from time to time. These members shall retain their seats upon the Local Sanitary Board until the completion of works or rejection of the schemes, with reference to the special knowledge of which their election shall have been decided by the district board. When a scheme to be undertaken by a municipality has been presented to a Local Sanitary Board for consideration, the Chairman of the municipality concerned shall be *ex-officio* an additional member, and the municipality shall also have the right to elect an additional member from amongst the councillors. Membership shall be relinquished on completion of the work or rejection of the scheme with reference to which the appointments were made.

48. Sanitary works shall be classified as major, minor and petty: major works shall include undertakings involving expenditure of and above Rs. 5,000; minor works shall include undertakings of and above Rs. 50 and up to Rs. 5,000; petty works shall include undertakings costing below the sum of Rs. 50.

49. District boards and municipalities shall refer plans and estimates for sanitary works, other than those classed as petty, for approval of the Local Sanitary Board of the district concerned before proceeding to execution.

50. Plans and estimates for all major works shall be undertaken under the supervision and with the advice of the Sanitary Engineer to Government subject to such rules as may be framed from time to time for the guidance of the Sanitary Board of Madras.

51. Minor sanitary works shall be undertaken by district boards and municipalities both as to preparation and execution, with the advice of the Local Sanitary Board, but where any single work is estimated to cost Rs. 500 or more, the plans and estimates prepared by the Local Sanitary Board shall, before execution of the works, be approved by the Madras Sanitary Board.

52. Copies of all resolutions passed by the Local Sanitary Board shall be forwarded for the information of the Madras Sanitary Board, through the Sanitary Commissioner, and where the works referred to are not of a nature requiring the formal approval of the Madras Sanitary Board, it shall nevertheless be allowable that the latter shall in its discretion call for plans and estimates and advise thereon as it may think fit. But it shall be understood that if within ten days of receipt of such resolutions (which shall be duly acknowledged), no request for plans and estimates has been made by that board, the Local Sanitary Board shall be entitled to carry out works without further interference.

53. Petty sanitary works shall be executed under the supervision of such agency as district boards, municipalities, taluk boards or panchayats may direct.

54. When a Local Fund Engineer undertakes, at the request of the Local Sanitary Board, the preparation of plans and estimates for a municipality in consultation with the District Sanitary Officer, he shall be entitled to a fee for his services at a rate per cent. on the estimates as may be fixed by Government.

55. All correspondence addressed to the Local Sanitary Board shall be forwarded to the Secretary, and all proceedings of that board shall be issued under the signature of that officer.

56. All correspondence affecting sanitary matters in areas under the charge of either district boards or municipalities shall be addressed by members of these bodies and by the local authorities concerned through the District Medical and Sanitary Officer.

57. The Sanitary Commissioner shall be *ex-officio* member of all Local Sanitary Boards and shall be kept by the Secretary fully informed of all proposals laid before the board. In the event of the Sanitary Commissioner objecting on sanitary grounds to any proposals made, he should serve notices to the Local Sanitary Board, which should desist from effecting such arrangements objected to until it has received either a personal or written explanation from that officer. If the Local Sanitary Board be of opinion that the objection be overruled, the matter may be referred by the Sanitary Commissioner at his discretion either to Government or to the Provincial Sanitary Board. The decision received from either of these authorities shall be considered final.

District Health Officers.

58. Had the arrangement which was in force under G.O., No. 391, Public, dated 22nd February 1883, and which continued up to 1895, and against the modifying of which I ventured to state my opinion to Government, now been in existence, no provision beyond the present staff would be requisite *for supervision.* In that order, however, Government, at the instance of the Surgeon-General with the Government of Madras, deprecated the amount of touring completed by the District Medical and Sanitary Officers, notwithstanding they had been duly provided with Assistant Surgeons to enable that end to be accomplished. In practice, as a result of the new order, this means that a mere scramble through the better parts of districts is now made in which the maximum attention is given to the inspection of dispensaries and a minimum to the sanitation of the towns in which they are located, and beyond these places no village is now inspected if not classed as a union. Such a thing as camping out in the neighbourhood of villages and ascertaining with any grade of care either the sanitary or medical requirements of the people by being in personal contact with them is, under such arrangements, impossible. The Surgeon-General with the Government of Madras, being in charge of Medical administration, very naturally has done his best to improve the medical work of his officers, and has been able to effect it: but it requires no demonstration to say this can only have been done at the expense of time that would otherwise have been available for sanitation. This is a delicate subject for me to handle as an officer of the Medical Department of subordinate rank to the Surgeon-General, and, therefore, I trust that in alluding to it, it may be distinctly understood that, whilst in the interest of sanitary advance I very strongly deprecate the course that has been taken, I fully sympathize with the determination to make medical work prosper, from which it has originated. Further, both Government and the Surgeon-General are fully aware of my opinion regarding this point, and I trust I do not exceed my duty in frankly drawing attention to the matter in this special communication where its discussion cannot be omitted.

59. To say that under this system the Assistant Surgeon will take the place of the District Medical Officer, and thus make up for the paucity of inspection, does not coincide with experience up to date. There has occurred a serious diminution of work fulfilled since the passing of the order, the sanitary inspection of villages during 1895 being less than one-half during 1894. Under these circumstances, I see no possibility of relying upon District Sanitary Officers, or the Assistant Surgeon now allowed them at head-quarters, ever being of utility for *systematic work as to sanitation*, and I maintain that spasmodic efforts would be practically useless.

60. Nothing more can henceforth be expected from the District Medical and Sanitary Officer than being a valuable adjunct in inspecting locally in cases where doubt has arisen as to the advice of other local Sanitary Officers, or in the emergency of unmanageable epidemics.

61. In any case, if the duties of the Sanitary and Vaccination Departments are to be welded together, it would be necessary to have far more constant supervision than could be given by either the Assistant Surgeon or the District Medical Officer of the district.

62. It might be logical to demand, in view of the present change of intention as to sanitary inspection, that the Assistant Surgeons be appointed solely for sanitary work, and the District Medical and Sanitary Officers should revert to their old position as Civil Surgeons. There has, however, grown up in districts such an enormous amount of medical administration in connection with the numerous hospitals and jails *that for medical purposes*, doubtless, the District Medical and Sanitary Officers really require the help of the present Assistant Surgeons, irrespective of the fact that at rare intervals he may leave his station on sanitary duty.

63. To these arguments, I would add a fact that must not be neglected in organizing the proposed department. It by no means follows that a District Medical and Sanitary Officer cares a straw for sanitation. Certain officers have a natural liking for the investigation which the work ensures, and regard sanitation as a pleasant and important part of their duty; but not a few regard it as a useless bore that prevents them devoting themselves to public and private medical practice.

64. It is therefore essential, if sanitary work is to be conducted *systematically*, that, allowing it to be impossible for financial reasons to increase the number of commissioned medical officers, there should be uncovenanted medical officers of a class sufficiently well educated in sanitation to demand that but rarely the local District Medical and Sanitary Officer's aid—beyond what he is able to give in the form of administration from his head-quarters—would be requisite.

65. In my scheme for the re-organization of the Vaccination Department, No. I and No. I (*a*), I demanded only one Superintendent of superior grade for each two districts. With, however, sanitary matters to attend to in addition to vaccination and registration, it would now be requisite to have an officer for each district, the average area in this Presidency being 6,437 square miles. There will now be no difficulty in raising the grade of education, in view of the rapid production in this Presidency. The pay originally suggested therefore will, I think, secure the required class of men, notwithstanding the increase of duties and qualifications. The pay, which would be debited to Provincial funds, would be as follows:—

	Rs.
For first 10 years for 21 men, at Rs. 150 per mensem ..	37,800 annually.
From 10 to 20 years for 21 men, at Rs. 225	56,700 ,,
After 20 years for 21 men, at Rs. 300	75,600 ,,

66. The type of men expected for this pay would be such as hold the M.B. and C.M. degree of the Madras University, or British qualifications, allied with the License in Sanitary Science of the Madras University.

67. The grade of sanitary education demanded in the syllabus for the examination for this health qualification in the Madras University fulfils all requirements (see Appendix B).

68. Of this class of men, therefore, there would be required twenty-one—being one per district, excluding Madras. They would be known as District Health Officers.

Sanitary Works Overseers.

69. To render the advice of these Medical Officers of Health effective, it would be necessary that each be provided with Engineering subordinates capable of drawing up plans and estimates of minor and petty works the accomplishment of which he might advise. Without this aid, it would be impossible for him to conduct his duties beyond mere reporting. Twenty-one of this class would be required—one for each district—on pay of Rs. 75 per mensem. The plans and estimates prepared by these men, under the direction of the District Health Officer, would be subject to the scrutiny of the Local Sanitary Boards, and if the amount estimated exceeded Rs. 500 the (Provincial) Sanitary Board would exercise scrutiny.

Duties of District Health Officers.

70. These officers would be gazetted Government servants, nominated by the Sanitary Commissioner—to whom they would be directly subordinate—and appointed by Government. Subject to such instructions as the Sanitary Commissioner may from time to time issue, these officers will assist the District Medical and Sanitary officer in supervising vaccination and sanitary inspection and registration* of the whole area under their charge, which will include all parts of their respective districts other than the head-quarters of a District Medical and Sanitary Officer or Civil Surgeon; but the Sanitary Commissioner, in notifying a request for information on any sanitary subject, might place the District Health Officer at the disposal of the District Medical and Sanitary Officer for duty at such head-quarters.

71. The District Health Officer should be *ex-officio* member of district and taluk boards and of all municipalities in the district to which he is attached, provided a municipality or head-quarters of a taluk were not the official residence of either a District Medical and Sanitary Officer or Civil Surgeon.

72. Their reports will be sent to the Sanitary Commissioner through the District Medical and Sanitary Officer, who will add such remarks as he may think necessary. The Sanitary Commissioner will then forward them, or such portions as he may think proper, to the Local Sanitary Board or local authorities for action, with such remarks as he may think fit.

73. On the occurrence of epidemic disease, the District Health Officer would report direct to the Local Sanitary Board, sending duplicates to the Sanitary Commissioner for information, and would personally direct operations in places other than the head-quarters of a District Medical and Sanitary Officer or Civil Surgeon.

The Position and Duties of District Medical and Sanitary Officers.

74. District Medical and Sanitary Officers and Civil Surgeons should be *ex-officio* members of municipalities and taluk boards of which the offices are at their head-quarters.

75. District Medical and Sanitary Officers should be *ex-officio* Vice-Presidents for sanitation and vaccination services in the district boards of their respective districts. These boards would retain a second Vice-President dealing with the general revenue, public works other than sanitary, &c.

76. For reasons given in paragraphs 59 and 60 of the foregoing, it is not contemplated that the District Medical and Sanitary Officer should be relied on to any great extent for systematic inspection work; but his position as *ex-officio* Vice-President of the District Board and Secretary and Member of the Local Sanitary Board will obtain for him exactly that position of strength and capability of advice and control of funds that is aimed at. Further, the arrangement secures a closer association of the District Medical and Sanitary Officer of the district with the Collector in his various functions than has been hitherto possible. This position is such as to prevent subordination of the District Medical and Sanitary Officer, whilst it gives the Chief official of the district power of knowing what is being done on the one hand, and affords the Sanitary Department on the other aid that, in the case of a willing official, would be of a substantial nature.

77. The District Medical and Sanitary Officer should, as at present, be expected to report on all sanitary and vaccination matters direct to the Sanitary Commissioner. He would be expected to conduct sufficient inspection of his district to keep himself in touch with the sanitary condition of the people, and, in case of exceptional unhealthiness or epidemics, would be expected to supplement and supervise the efforts of the District Health Officer by personal inspection and advice to local authorities and report to the Sanitary Commissioner.

78. At his head-quarters, the District Sanitary Officer would himself direct the working of the sanitary staff.

79. The District Medical and Sanitary Officer should have magisterial powers of a class enabling him to deal with cases of nuisance and of disobedience to compulsory vaccination in local fund areas.

* Note.—In villages not supplied with Conservancy Overseers, the Karnam would, for this purpose only, be subject to the discipline of the Health Officer.

The Position and Duties of the Sanitary Commissioner.

80. The Government of India suggests for consideration that Sanitary Commissioners should be younger men than at present on less pay, and should be subordinate to the Surgeon-General under Local Governments; but in the case of Local Administration that the two functions should be combined. As regards the less pay, I understand that this implies, not that the actual ultimate emoluments should be decreased, but that they should be acquired by an increase of the period of probation. This idea of probation is, I think, already sufficiently secured by employing Deputy Sanitary Commissioners.

81. It is not difficult to ascertain from the Government of India's Resolution that it is of opinion that subordination is necessary with regard to a tendency to spend six months on the Hills by Sanitary Commissioners. I do not think this description fits in with the popular opinion of the work fulfilled by the Sanitary Commissioner's office in this Presidency. I believe that all concerned would be heartily glad if the Sanitary Commissioner did betake himself to the Hills for six months on end, that peace on matters sanitary might reign. Nineteen days consumed in meetings of the Sanitary Board, and in inspection connected therewith, was all that I saw last year of the Hills. In any case, if Sanitary Commissioners were inclined to be idle, it cannot be supposed that they would be a bit less likely to regard the orders of the Surgeon-General than those of Government under whom they now directly serve.

82. As to reduction of pay, it will be remembered that the pay of the Sanitary Commissioner was at first placed at Rs. 3,000, and has gradually dwindled to Rs. 1,200 to Rs. 1,800 reached by instalments. The pay at the present time cannot, for the first three or four years, equal that obtained by a District Medical Officer of the rank of Surgeon-Lieutenant-Colonel in charge of a first-class station, having a very moderate private practice. If the pay were further reduced and the office were placed in subordination to the Surgeon-General, *no inducement* to make sanitation a speciality would exist. The hard life of constant travel, exposure and bad food would not compare favourably, in most medical men's mind, with the life of a District Medical Officer in a good first-class station with the prospect of solid emoluments from private practice.

83. The Government of India further calculates that, by making the Sanitary Commissioner subordinate to the Surgeon-General, better aid from District Medical Officers would be secured by its being possible to enforce discipline amongst District Medical and Sanitary Officers in regard to directions issued by the Sanitary Commissioner. There is, of course, a certain amount of truth in this; but it would assume that the Surgeon-General would be as anxious to press on sanitation as he would medical work. When the work of a large Presidency is concerned, I do not think the two things can run together. The duty required of the Surgeon-General and Sanitary Commissioner, respectively, is more than enough for the whole energies of one man. Further, he who believes in sanitation as a speciality regards it as of much more importance than medical work, and he who believes in medicine takes the opposite view. The Surgeon-General would probably not care to possess an officer as a subordinate whose sole idea was that medical officers should be investigating sanitary matters entailing absence from head-quarters! Moreover, if "doctors differ", still more do sanitarians—not as to principles, but as to methods of carrying these principles out in practice. The result would be that the Surgeon-General and the Sanitary Commissioner would constantly differ in opinion. In practice, this would result in an unconditional surrender to the views of the senior officer as a matter of discipline. The Surgeon-General would therefore be the Sanitary Commissioner, and would be saddled with the work of both the Medical and Sanitary Departments—thus securing a mediocre result in both. The proposition is at variance with the advice of the Royal Commission which gave birth to Sanitary Commissioners. One of the most distinct memories of my Netley training under Professor Parkes is the strong opinion he used to enunciate—and he, I believe, was a member of the Commission and spoke from enormous experience—that the absence of freedom which had trammelled sanitarians, as a result of being in subordination and unable to state their views so as to be heard by Government direct, was the cause of the fearful disasters in the Crimea

as to health matters. To secure men who will make sanitation a speciality, and can be put into a position of independence where they can, *without fear of giving offence to seniors and risking a breach of the unwritten laws of discipline, state their views to Government direct, is the ideal of a public sanitary adviser.* To wrest this independence from the Sanitary Commissioner would be fatal to advance.

84. If now it be found that a mistake has been made in reducing the former rank of Sanitary Commissioner (Deputy Surgeon-General), having regard to the seniority of some District Medical and Sanitary Officers, this can be easily retrieved, without additional expenditure, by giving the Sanitary Commissioner the *local* rank of Surgeon-Colonel, as has, I believe, been actually proposed with reference to the scheme for separating the Civil from the Military Branch.

85. But I consider that if the whole of the Sanitary Commissioners in India and Burmah, the proposed Bacteriologists and Chemical Analysts were united so as to form a single sanitary service under the Sanitary Commissioner with the Government of India, the grade of subordination suggested would be secured, and the professional capabilities of the service would have a better scope. Local Governments may feel at times that "even the youngest" Sanitary Commissioner may err, and may consequently regard what he considers absolute necessities as mere refinements founded upon mythical theories. Now under these circumstances, it is advisable that both the adviser and those advised should have some one to whom to appeal for a second opinion, and it is obvious that that appeal should not be to men who have not made sanitation a speciality. If, therefore, the service were united in one body under the Sanitary Commissioner with the Government of India, it would be possible, on a Local Government or a Provincial Sanitary Board rejecting statements that the Sanitary Commissioner thought well founded for that officer to forward the papers concerned to the Sanitary Commissioner with the Government of India, who would lay them before any three Sanitary Commissioners for record of opinion. Further, it would be possible for the members of this service to consult one another on debateable points, meet together as committees for formulating proposals applicable to larger parts of the country than single presidencies, and to obtain the opinions of the Chemical Analysts and Bacteriologists, not only of one presidency but of others if they so elect. Practically, therefore, the Sanitary Commissioner with the Government of India would thus be provided with a Sanitary Board, and this would fit in with similar proposals made by Dr. W. J. Simpson at the Indian Medical Congress, and which that body approved of.

Assistants for the Sanitary Commissioner.

86. This scheme has been based on the assumption that it is hopeless, for financial reasons, to ask for another Deputy Sanitary Commissioner; but it is, of course, presumed that the one existing will retain his function of Inspector of Vaccination under the Sanitary Commissioner. It is also assumed that an officer conducting both bacteriological and chemical work in connection with sanitation will be at disposal of the Sanitary Commissioner (*vide* my letter to Government, No. 253, dated 11th February 1896).

Sanitary Work Staff attached to the Sanitary Commissioner.

87. In conformity with the arrangement by which District Medical Officers of Health would be accompanied on their tours by engineering subordinates capable of drawing up plans and estimates on the spot for improvements of petty works as required, it would be necessary to attach one engineering subordinate and one draftsman to the Sanitary Commissioner. The late President, Sanitary Board, Colonel Pennycuick, stated officially that he was prepared to support this proposal as desirable. Without this help throughout the department, all measures suggested will fill reams of paper, *and go no further.* With this provision, it will be possible to arrange for the execution of improvements rapidly and conveniently to all concerned. It is a part of my scheme that I am sure will be considered by some superfluous; yet, I have no hesitation in saying that without this arrangement the whole organization will be of no utility except in the prevention of epidemics. It must be distinctly understood that the object of this staff is merely to give intelligible expression to proposals for minor and petty works, and that the drawing up of major schemes would be left in the hands

of the Sanitary Board, Madras, and that, further, these proposals will be subjected to engineering criticism both by the Local Sanitary Board and the Provincial Sanitary Board. To give an illustration of what I mean: the Medical Officer of Health may find that the surface water of certain areas requires cutting off from a drinking-water tank, or that a well is improperly constructed, that certain sewage should be launched upon a particular area, and the like. Now, under present circumstances, such recommendations would be placed before the local body concerned, without it being possible to enlighten them in the slightest degree as to cost. The consequence is often that perfectly feasible, inexpensive and highly important sanitary proposals are thrown out by local bodies in good faith—but in utter ignorance—by recording their opinion that "no funds are available for so expensive an undertaking"—a resolution probably founded on the casual remark of a single member that it would "cost a lot of money". Hence then, I maintain that the only possible way of dragging sanitation from the rut of mere reporting into which it has fallen and placing it on the road of progress is that no request for an improvement of a nature that could be classed as a minor or petty work should go before local authorities without a definite statement as to its proposed cost. I speak of the advantages of this system from practical experience; having worked as District Sanitary Officer provided by the District Board (with the consent of Government) with a sanitary works overseer attached to my office.

Increase of Sanitary Commissioner's Office Staff.

88. The duties demanded would undoubtedly greatly increase the work of the Sanitary Commissioner's office, more especially in regard to registration and vaccination. To meet these extra demands, it would be impossible to conduct matters with the present staff, which is now much below requirements. The estimate under Provincial funds, therefore, includes provision for three additional clerks, one attender and one peon.

Conditions under which Inspections are fulfilled.

89. Neither tents, nor tent allowance nor lascars are allowed by Government; yet there are many places where it is impossible to obtain any form of accommodation during inspection. I consider one of the most important functions of this office is the inspection of festivals; but in several localities where festivals are held, no accommodation exists other than native chattrams. Even if caste natives would allow these places to be inhabited by Europeans, I need hardly say, in consideration of the filthy and unventilated condition in which they are found, that their use would be dangerous and that nothing short of a very strong sense of devotion to duty would ever permit me to reside in them. The argument applies still more forcibly to the Deputy Sanitary Commissioner, whose duties, being largely inspection of vaccination, require his proceeding to the remotest villages. I have, therefore, to suggest that provision of tents and lascars for both officers is essential. Equally, the raising of the daily allowance from Rs. 6 to that permitted to other Inspecting officers, viz., Rs. 7–8–0 per day, should be permitted. In the North-West Provinces and Central Provinces the Sanitary Commissioners are allowed Rs. 7–8–0 *plus* tentage, khalassies and transport animals. There is no good reason why the travelling expenses of a Madras Inspecting officer should be less than in these places; especially as a native gentleman, who has the advantage of knowing the ruling prices better than a European, is allowed Rs. 7–8–0 per day—namely, the Inspector-General of Registration. As a matter of fact, both the Deputy Sanitary Commissioner and myself are always out of pocket on every tour taken. The wear and tear of clothing, camp materials, boxes and packages and incidental expenses, *in the case of an officer constantly travelling, demand liberal treatment.*

The Position of the Military Service in connection with the reorganized Sanitary Department.

90. The demand that a further separation of the Civil and Military branches should be made in regard to sanitation is, I think, most erroneous. The chief reason why the sanitation of cantonments has become such a reproach to India is that this separation actually took place in 1869, and that since then no material advance has been made in contrast with results obtained in the civil population where the agitation for sanitary improvements put on foot by the Army Sanitary Commission in 1864 has been maintained more effectually, if not more sedulously, on account of the independent position of the (Civil) Sanitary Commissioner. The care of cantonments and barracks has been left since that date in the hands of medical officers who, in plain English, have been unable to press their sanitary opinions upon General Officers Commanding, beyond a certain point, by reason of the distinctly conservative tendency of "military" discipline. Moreover, it is inadvisable that isolated populations represented by cantonments should be supervised as to sanitation by men who have no knowledge of the conditions and causes of diseases existing beyond the confines of the extremely limited areas under their immediate ken. No better example can be given of this than the fact that the Military authorities have allowed to grow up around the Seven Wells water-works in Madras thickly-inhabited streets, graveyards, sewage farms and leaky sewers, and, in Bangalore, to receive in the drinking-water reservoir the storm water overflow of a main sewer, without a word of effective remonstrance. In my opinion, the military medical officer appointed from time to time for sanitary duties in cantonments should conduct these in communication with the Sanitary Commissioner, and cantonments should be subject to the inspection of the Sanitary Commissioner.

Finance.

Pensions.

91. The organization sketched in the foregoing implies the possession of a body of men paid by local authorities entirely, with the exception of Health Officers of districts and their establishments and the staff for the Vaccine Institute, which would be debitable to Provincial funds. The latter class would be entitled to pension; but the former would be expected, as a condition of their engagement, to subscribe to a provident fund as already arranged for in connection with servants of local bodies. In regard to claims for pension by District Health Officers, it must be remembered that this scheme relieves Government of the cost of future pension of Deputy Inspectors of Vaccination, of whom there are fifty-four at present, against twenty-one Health Officers now suggested.

Discipline.

92. I have elected to consider the question of discipline side by side with finance as, having regard to the fact that the whole of the subordinate staff for the contemplated Department will be paid by Municipalities and Local Fund bodies, their right of control must be considered. To simply provide a sufficient staff and hand over its administration without guidance to local bodies, will not meet requirements. Results will vary according to the degree of faith each local body has in sanitary measures. Experience shows that where certificated Sanitary Inspectors are at present stationed, with certain notable exceptions, their advice falls on ears that hear not. Again, reports of sanitary evils in towns where municipal councils are elected are apt to be put aside, if it be thought offence may be given to any powerful citizen. Under these circumstances, the Sanitary Inspector, who will not be conveniently blind, runs the risk of being worried till he resigns, or has his pay reduced at next budget. To excogitate some measure, therefore, that will prevent the rights of local bodies being ignored, and yet secure supervision of the special professional character required and due protection of the interests and status of responsible subordinates, is most desirable. The only way I can see to meet the difficulty is that Government should assume the position of a contractor who, on the receipt of a certain percentage (to be fixed from time to time) of the total income of local bodies, would guarantee to supply the requisite staff of vaccinators and sanitary inspectors. This is no new principle, as Government up to date has made recoveries by fixed percentages for printing charges, for cutlers' establishment in the Medical Stores, and for travelling allowance of District Medical and Sanitary Officers under "Sanitary Inspections"—all of which money is spent without any effective control by local authorities. In the present case, the percentage required to be contributed by each local authority and

which would form part of the total grant for sanitation of 30 per cent. and 15 per cent. of the total income for Municipalities and Local Fund Boards, respectively, is shown in the Appendix. If it be felt that special legislation is required in this matter, I think it certainly should be sought for; as, unless this principle of having a department controlled throughout by skilled supervision be yielded, very little result in comparison with the expenditure will follow.

93. If the above suggestions be conceded, discipline could be subserved after the manner now followed as regards Deputy Inspectors of Vaccination who, although paid by District Boards, are subject as Government servants to the discipline of the Sanitary Commissioner. Thus, members of the urban and rural sanitary branches would be placed at the disposal of local authorities by the Sanitary Commissioner, with whom would rest all appointments, transfers, promotions, degradations, dismissals and other punishments. Local authorities would have the right of suspending these subordinates pending enquiry into their conduct, and of suspending as a punishment for a period not exceeding fourteen days, or fining to the extent of an equivalent amount of pay, on stating the grounds therefor to the Sanitary Commissioner, who would have the right of representing the matter to Government, should he not concur. All punishment of sanitary subordinates by local authorities would be conducted under this rule, in consultation with the District Medical and Sanitary Officer.

Cost of Staff.

94. It has been customary for Government in their reviews of budgets to regulate the number and pay of sanitary inspectors in relation to the number of scavengers and sweepers under their orders, and further to maintain that one sanitary inspector of efficient training per town would be sufficient—of a class but little superior to maistries. In the face of this opinion, I have ventured to propose a staff framed on a very different basis. In defence of my proposals, I would point out that the question of the number of monthly-paid menial staff ought to have nothing to do with settling the number of the supervising staff beyond peons. Thus to every twelve members of the menial staff one peon at least is required to see that they work correctly. But, in my opinion, the number of sanitary inspectors should be settled on the basis of the population whose sanitary safety is to be supervised. The supervising of menial staffs by urban sanitary inspectors would be an important part of their total duties, but it certainly would be far from embracing the whole. The object of the resolution of the Government of India is the entertainment of men of sufficient skill to maintain an intelligent supervision of all sanitary matters coming within the function of an executive officer, and nothing short of well-educated men can be expected to accomplish this. To say that a town should rely upon the possession of one skilled man would be to render abortive his best efforts, and thus practically waste even the small expenditure made.

95. It is consequently more than possible the scheme I have sketched may seem absolutely unreasonable as to expenditure. Yet, if sanitation is to be given the place that it should occupy in the country, it seems to me that the demand for funds is exceedingly moderate. Neither on Local nor Municipal funds can the total demand of 4·28 per cent. and 4·85 per cent., respectively, be regarded as heavy, especially in view of the fact that this provides for, not only sanitary supervision, but also for the total cost of vaccination under all heads. As to Provincial funds also the grant required of Rs. 88,116 at the outset, advancing to a maximum of Rs. 1,38,528 at the end of twenty years, seems to me moderate enough for the important ends to be obtained.

96. As to how the funds can, however, be met without disturbing existing conditions best, I think it is right to look to the unrestrainedly liberal manner in which money has been given to the Educational Department. I quite understand there is but one, and it may be a small, loaf that Government has at disposal, but I believe that education has been allowed the "lion's share" and sanitation the crumbs. The huge staff of inspectors, assistant inspectors, sub-assistant inspectors and the like with which this department is supplied might be reduced without affecting the efficiency of education in this Presidency. The work fulfilled by this staff is ascertaining that education is conducted on certain specific lines, and that consequently

schools are entitled to grants. This might have been the only method feasible before the advantages of education were well recognized by the people; but no one can doubt that its advantages are now eagerly sought after and regarded by the people as a safe monetary investment, as witness the price secured in the matrimonial market for educated men. This being so, is it not sufficient that it should be known that such and such an examination exists to ensure that schoolmasters will train their scholars to the desired standard, without having staffs of inspectors so numerous that every little detail in school discipline must be reported on according to standard form? If encouragement is required, why should it take the form of grants to the schoolmaster? It would suffice that the encouragement be given to the pupil, and that money or aid should be given in the form of scholarships open to competition. I am quite aware that it is held, sanitation advances only in the footsteps of education. Practical experience makes me hold that its results, however, are far less marked in this direction than is usually believed, and that such advance as might be reasonably expected has been impeded by the neglect to educate woman. Moreover, the argument applies chiefly to personal hygiene and not to so great an extent to *the hygiene of communities where mechanical contrivances, skilled supervision and the enforcement of law largely supply the lack of volition on the part of those benefited.*

97. The country is notoriously overstocked with highly educated natives. There has been in the past an error as to rate of production. What is now required is the encouragement of primary education and of female and technical education, and the cutting down of expenditure on behalf of higher education, leaving the people to buy this commodity at a greater private expense than at present. I do not believe for a moment that such a policy would deter persons acquiring higher education to any appreciable extent. I repeat the advantages of higher education as an investment are thoroughly well known by the class that ask for it, and there can be no doubt as to their ability to pay for it fully instead of in part as at present. Places in this Presidency can be quoted where private enterprise that would efficiently supply the want is being stifled by Government or Municipal aid given to public or quasi-public educational institutions.

98. The following figures bear out the opinion, not only that education obtains, when compared with sanitation, disproportionately solid aid from Provincial funds, but is not content without making large demands upon the other remaining sources of income, namely, Municipal and Local funds. In several district boards in this Presidency very much more is spent on education than on sanitation. The contrast afforded by these figures can only be appreciated by remembering that the funds for district boards and municipalities represent the total spent for all expenses connected with the night-soil and rubbish conservancy of towns, the protection of water-supply and expenditure on epidemics for populations of 38,287,854 and 2,259,155 (the estimated rural and municipal populations of the Presidency) or 2·5 pies and As. 3–5 per head, respectively, against a total of As. 1–2 per head for education. Further, it is worth remembering that, whilst Government has erected handsome buildings in the Presidency town at a cost of Rs. 13,34,355 for law and general education, and has equipped special laboratories for teaching these subjects besides numerous buildings in the mofussil, nothing of the character has been done for the *direct* benefit of sanitation:—

Years.	Total receipts.			Expenditure on Sanitation.						Expenditure on Education.			
	Provincial funds.	Local funds.	Total.	Provincial funds.		Local funds.	Municipal funds.	Total.	Total.	Provincial funds.	Local funds.	Municipal funds.	Total.
				Excluding grant to local bodies.	Including grant to local bodies.								
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1885-86	2,52,45,592	60,56,463	16,72,763	3,28,74,818	61,480	63,480	2,46,651	3,87,709	6,97,840	11,15,403	7,00,797	2,11,173	20,27,373
1886-87	2,48,04,806	60,97,527	16,29,784	3,25,31,617	43,480	55,481	2,51,529	3,82,628	6,89,638	11,02,513	6,45,776	2,22,580	19,70,869
1887-88	2,70,73,069	62,69,161	16,81,567	3,50,23,787	48,197	53,197	3,17,566	3,93,499	7,64,262	10,86,919	7,34,061	2,26,901	20,47,881
1888-89	2,79,80,945	63,23,146	17,94,001	3,60,98,092	43,182	85,182	3,74,284	4,07,975	8,67,441	10,14,852	7,06,882	2,38,288	19,60,022
1889-90	2,91,08,052	68,04,128	18,01,987	3,77,14,167	44,865	67,865	4,84,616	4,21,976	9,74,457	10,96,700	8,05,356	2,34,506	21,35,561
1890-91	2,87,17,998	72,97,792	18,26,380	3,78,42,170	66,358	1,06,858	4,06,014	4,14,016	9,26,888	12,67,573	9,41,253	2,55,754	24,64,580
1891-92	3,12,47,865	71,97,668	23,01,028	4,07,46,561	76,426	3,36,451	5,29,091	4,36,214	13,00,756	13,21,637	10,56,192	2,82,616	26,60,445
1892-93	3,14,16,445	82,56,806	25,86,385	4,22,88,636	82,538	3,11,025	4,82,499	4,72,220	12,96,744	14,06,363	10,45,970	3,00,892	27,53,215
1893-94	3,15,96,996	81,46,401	26,14,984	4,23,57,380	86,562	3,51,712	4,62,908	4,69,698	12,84,318	14,31,907	11,15,794	3,06,006	28,53,707
1894-95	3,22,51,413	81,65,175	26,98,776	4,31,15,364	82,847	4,24,381	4,75,148	4,78,883	13,78,412	14,57,153	11,43,293	3,11,129	29,11,575

Years.	Percentage of expenditure on Sanitation to total Receipts.					Percentage of expenditure on Education to total Receipts.				Remarks.
	Provincial.		Local fund.	Municipal fund.	Total.	Provincial.	Local fund.	Municipal fund.	Total.	
	Excluding grants to local bodies.	Including grants to local bodies.								
1885-86	* 0·2	0·3	4·1	24·6	2·1	4·4	11·6	13·4	6·2	* Cost of the Sanitary Department, *i.e.*, Sanitary Commissioner's pay and allowances, Deputy Sanitary Commissioner's pay and allowances, Sanitary Engineer's pay and allowances, Assistant Sanitary Engineer's pay and allowances, and their office establishment charges.
1886-87	0·2	0·2	4·1	23·5	2·1	4·4	10·6	13·7	6·1	
1887-88	0·2	0·2	5·1	23·4	2·2	4·0	11·7	13·5	5·8	
1888-89	0·2	0·3	5·9	22·7	2·4	3·6	11·2	13·3	5·4	
1889-90	0·2	0·2	7·1	23·4	2·6	3·7	11·8	13·0	5·7	
1890-91	0·2	0·4	5·6	22·7	2·5	4·4	12·9	14·0	6·5	
1891-92	0·2	1·1	7·4	14·5	3·2	4·2	14·7	12·3	6·5	
1892-93	0·3	1·0	5·8	18·3	3·1	4·5	12·6	11·6	6·5	
1893-94	0·3	1·1	5·7	18·0	3·0	4·5	13·7	11·7	6·7	
1894-95	0·3	1·3	5·8	17·7	3·2	4·5	14·0	11·5	6·8	

99. The staff in detail and the cost contemplated under the entire scheme are shown as to urban and rural sanitation and vaccination in towns other than municipalities in Table No. 1, urban sanitation and vaccination in municipalities in Table No. 2, and "Provincial charges" for sanitation and vaccination in Table No. 3 of the Appendix.

100. It seems to me therefore that, if Government find it difficult to allot funds from any other source for the improvements suggested, it could, without harm to the country, be obtained by decreasing the enormous Provincial grant to education and demanding measures of reform securing more adequate expenditure from Local Funds and Municipalities under sanitation.

Suggestions not forming essential parts of the Scheme.

A Local Government Board.

101. It would facilitate all matters connected with sanitation and the interests generally of the Municipal and Local Fund areas if, instead of the numerous offices concerned being scattered, they were united to form a single body under a Civilian President, with no other duty to attend to than Local Government administration. Thus, the Surgeon-General, Civil Medical Department, the Sanitary Commissioner, the Sanitary Engineer, the future of the Local Fund Engineering Department, the Director of Public Instruction, and the existing Local and Municipal Departments of Government, might be brought in closer relation with each other.

102. Scriptory and printing work would be vastly diminished and local matters would go forward on a steady pre-determined policy, instead of being subject to frequently conflicting interests and demands of officers and the very *varying* grade of interest taken by the local bodies concerned.

Menial Conservancy Staff.

103. If the inspectorial staff be strengthened, so also it would be necessary to strengthen at once the conservancy staff of villages. That it will be possible for some time to reach the enormous number of villages in this Presidency by a regular system of conservancy may well be doubted. But it should be regarded as an essential point that where inhabitants are gathered together thickly upon one site, there should conservancy be in force. This scheme throughout has taken cognizance of the fact that

in the density of populations upon sites exists an important factor for evil, and, consequently, it arranges that all populations above 7,000 on one site should be considered as demanding urgent attention. Now to provide one sweeper and two toties—the former at Rs. 5 and the latter at Rs. 6 each (a liberal estimate)—per 1,000 of population in all towns above 7,000 inhabitants not being municipalities, it would be necessary to provide Rs. 1,89,672. It was contemplated under old village regulations, which the existing Act also imitates, to maintain village menials capable of looking to the conservancy of villages.* A diversion of funds would therefore be legitimate. Government lately found in connection with this fund an opening balance of Rs. 13,40,000 and an excess of 6 lakhs over the revised estimate. Thereupon it reduced the demand from nine pies per rupee to eight pies. Now, if this reduction were cancelled, there could at once be provided a complete conservancy staff for all villages not being municipalities having a population on one site of over 7,000, and provide a balance which would form a solid contribution to the total demand made from Provincial funds. By making this arrangement a considerable amount of local funds now spent in certain of the villages would be set free, which could be spent on villages of large populations not upon single sites.

* Section 5 of Act IV of 1893 includes "vetties and toties."

Compulsory Vaccination.

104. In all municipalities compulsory vaccination is in force. But this is not so in rural areas. The result is the adoption of a sham system of voluntary vaccination conducted under *persuasion* by the Revenue authorities. The extension of compulsory vaccination throughout the Presidency except in the hill tracts would be followed by no dissent whatsoever by the people. They submit to it now under a system infinitely worse than legal compulsion. The only difficulty that would stand in the way is the provision of Magistrates, and now that Stationary Magistrates exist, this certainly ought to be diminished. A suitable magistracy for this purpose and for minor sanitary delinquencies could easily be found in the proposed District Health Officer, the District Medical and Sanitary Officer, Honorary Magistrates and Panchayats under the grouping of villages required for village service. The present system is most unsuitable, and gives rise to discontent and disparagement of authority of Revenue authorities, who are put to shame by seeing their orders as to vaccination quietly ignored by "up to date" villagers.

20*th March* 1896. (Signed) W. G. KING, D.P.H., Surgn.-Lieut.-Col.,
Sanitary Commissioner for Madras.

APPENDIX A.

STATEMENT No. I.—Urban and Rural Sanitation and Vaccination (in Towns other than Municipalities).

Local Fund District.	Towns.	Population. From 7,000 to 10,000.	Population. From 10,000 to 15,000.	Population. From 15,000 to 22,000.	Vaccination Staff. Assistant Superintendents. First Grade on Rs. 100.	Vaccination Staff. Assistant Superintendents. Second Grade on Rs. 75.	Vaccination Staff. Peons on Rs. 7.	Vaccination Staff. Vaccinators. First Class on Rs. 60.	Vaccination Staff. Vaccinators. Second Class on Rs. 45.	Vaccination Staff. Vaccinators. Third Class on Rs. 20.	Sanitary Staff. Sanitary Inspectors. First Class on Rs. 45 to 60, with fixed batta at Rs. 7½.	Sanitary Staff. Sanitary Inspectors. Second Class on Rs. 25 to 35, with fixed batta at Rs. 7½.	Sanitary Staff. Conservancy Overseers on Rs. 15 to 20.	Expenditure under all heads. Vaccination.	Expenditure under all heads. Sanitation when the establishment is fully developed after six years.	Total expenditure.	Total income for 1894–95.	Ratio per cent. of the proposed expenditure to total income.	Ex penditure how debitable.
														Rs.	Rs.	Rs.	Rs.		Respective District Boards.
Ganjám	Tekkali	1											1	:	240	:	:	:	
	Total District	1	:	:	3	:	3	3	5	11	:	:	1	16,813	240	17,053	3,22,832	5·28	
Vizagapatam.	Bobbili	:	1	:	:	:	:	:	:	:	1	:	:	:	510	:	:	:	
	Sálúru	:	1	:	:	:	:	:	:	:	1	:	:	:	510	:	:	:	
	Palkonda	:	1	:	:	:	:	:	:	:	1	:	:	:	510	:	:	:	
	Párvatipuram	:	1	:	:	:	:	:	:	:	1	:	:	:	510	:	:	:	
	Total District	:	4	:	2	2	4	4	6	12	4	4	:	20,069	2,040	22,129	4,05,129	5·46	
Godávari	Pithápuram	:	1	:	:	:	:	:	:	:	1	:	1	:	510	:	:	:	
	Peddápuram	:	1	:	:	:	:	:	:	:	1	:	1	:	510	:	:	:	
	Samarlakottah	:	1	:	:	:	:	:	:	:	1	:	1	:	510	:	:	:	
	Dowlaishweram	:	1	:	:	:	:	:	:	:	1	:	1	:	240	:	:	:	
	Amalápuram	:	1	:	:	:	:	:	:	:	1	:	1	:	240	:	:	:	
	Pálakollu	1	:	:	:	:	:	:	:	:	:	:	1	:	240	:	:	:	
	Tuni	1	:	:	:	:	:	:	:	:	:	:	1	:	240	:	:	:	
	Mandapetta	1	:	:	:	:	:	:	:	:	:	:	1	:	240	:	:	:	
	Narsapur	1	:	:	:	:	:	:	:	:	:	:	1	:	240	:	:	:	
	Aohili	1	:	:	:	:	:	:	:	:	:	:	1	:	240	:	:	:	
	Achantu	1	:	:	:	:	:	:	:	:	:	:	1	:	240	:	:	:	
	Total District	7	4	:	2	1	3	5	8	14	4	4	7	22,302	3,720	26,022	11,71,866	2·22	

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Statement No . I.—Urban and Rural Sanitation and Vaccination (in Towns other than Municipalities)—*cont.*

Local Fund District.	Towns.	Population.			Vaccination Staff.						Sanitary Staff.			Expenditure under all heads.					
					Assistant Superintendents.			Vaccinators.			Sanitary Inspectors.								
		From Rs. 7,000 to 10,000.	From 10,000 to 15,000.	From 15,000 to 22,000.	First Grade on Rs. 100.	Second Grade on Rs. 75.	Peons on Rs 7.	First Class on Rs. 60.	Second Class on Rs. 45.	Third Class on Rs. 20.	First Class on Rs. 45 to 60, with fixed batta at Rs. 7½.	Second Class on Rs. 25 to 35, with fixed batta at Rs. 7½.	Conservancy Overseers on Rs. 15 to 20.	Vaccinations.	Sanitation when the establishment is fully developed after six years.	Total expenditure.	Total income for 1894-95.	Ratio per cent. of the proposed expenditure to total income.	Expenditure how debitable.
														Rs.	Rs.	Rs.	Rs.		
Kistna ..	Chirala	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	Respective District Boards.
	Jaggayyapetta	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Nuzvid	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District ..	2	1	..	2	1	3	5	8	15	..	1	2	22,659	990	23,649	7,00,330	3·37	
Nellore ..	Venkatagiri	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Addanki	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Kandukur	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District ..	3	..	..	1	2	3	4	7	12	..	..	3	19,196	720	19,916	3,69,916	5·39	
Cuddapah ..	None	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Total District ..	..	..	..	2	1	3	3	5	9	..	..	..	15,545	..	15,545	2,65,226	5·85	
Kurnool ..	Nandyal	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Total District ..	..	1	..	2	..	2	2	3	7	..	1	..	10,869	510	11,379	2,28,949	4·97	
Bellary ..	Hospet	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Kampli	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Rayadrug	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Yemmiganúru	1	..	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Harpanahalli	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
													1	..	240	..	..	..	
	Total District ..	2	3	..	1	1	2	3	4	8	..	3	2	12,666	2,010	14,676	2,80,542	5·23	

Statement No. I.—Urban and Rural Sanitation and Vaccination (in Towns other than Municipalities)—*cont.*

Local Fund District.	Towns.	Population.			Vaccination Staff.						Sanitary Staff.			Expenditure under all heads.					
					Assistant Superintendents.			Vaccinators.			Sanitary Inspectors.								
		From 7,000 to 10,000.	From 10,000 to 15,000.	From 15,000 to 22,000.	First Grade on Rs. 100.	Second Grade on Rs. 75.	Peons on Rs. 7.	First Class on Rs. 60.	Second Class on Rs. 45.	Third Class on Rs. 20.	First Class on Rs. 45 to 60, with fixed batta at Rs. 7½.	Second Class on Rs. 25 to 35, with fixed batta at Rs. 7½.	Conservancy Overseers on Rs. 15 to 20.	Vaccination.	Sanitation when the establishment is fully developed after six years.	Total expenditure.	Total income for 1894-95.	Ratio per cent. of the proposed expenditure to total income.	Expenditure how debitable.
														Rs.	Rs.	Rs.	Rs.		
Anantapur ..	Tadpatri	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	Respective District Boards.
	Uravakonda	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Hindupur	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District ..	2	1	..	1	1	2	2	3	5	..	1	2	9,595	990	10,585	1,66,688	6·31	
Chingleput.	St. Thomas' Mount	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Tiruvattuyur	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Chingleput	Below 7,000—special staff.						..	..	..	..	1	..	..	510	..	..	..	
	Total District ..	1	1	..	2	..	2	3	5	9	..	2	1	14,126	1,260	15,386	3,18,421	4·83	
North Arcot.	Kálahasti	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Arcot	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Ambúr	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Chittoor	1	Special staff.					..	..	..	..	1	..	..	510	..	..	..	
	Polur	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District ..	2	3	..	2	1	3	6	10	18	..	4	1	26,498	2,280	28,778	4,72,599	6·09	
South Arcot.	Porto Novo	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Tiruvannamálai	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Tindivanam	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Panruti	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Vriddhachalam	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Villupuram	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District ..	4	2	..	1	1	2	6	9	18	..	2	4	24,053	1,980	26,033	5,17,353	5·03	

Statement No. I.—Urban and Rural Sanitation and Vaccination (in Towns other than Municipalities)—*cont.*

Local Fund District.	Towns.	Population.			Vaccination Staff.						Sanitary Staff.			Expenditure under all heads.		Total expenditure.	Total income for 1894-95.	Ratio per cent. of the proposed expenditure to total income.	Expenditure how debitable.
					Assistant Superintendents.			Vaccinators.			Sanitary Inspectors.								
		From 7,000 to 10,000.	From 10,000 to 15,000.	From 15,000 to 22,000.	First Grade on Rs. 100.	Second Grade on Rs. 75.	Peons on Rs. 7.	First Class on Rs. 60.	Second Class on Rs. 45.	Third Class on Rs. 20.	First Class on Rs. 45 to 60, with fixed batta at Rs. 7½.	Second Class on Rs. 25 to 35, with fixed batta at Rs. 7½.	Conservancy Overseers on Rs. 15 to 20.	Vaccination.	Sanitation when the establishment is fully developed after six years.				
														Rs.	Rs.	Rs.	Rs.		
Trichinopoly.	Udaiyárpálaiyam	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Turaiyúr	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	2	..	..	1	..	1	3	5	11	..	..	2	13,315	480	13,795	3,15,092	4·38	Respective District Boards.
Tanjore	Poraiyur	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Védáranniyam	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Tiruválur	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Adirámpatnam	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Muttupet	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Vallam	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Tiruvádi	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Kodavasal	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Aiyampet	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Valangiman	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	6	4	..	2	..	2	4	7	13	..	4	6	18,476	3,480	21,956	11,22,633	1·95	
Madura	Ramnad	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Aruppukóttai	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Kílakarai	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Paramagudi	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Dévikóttai	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Sivaganga	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Uttamapálaiyam	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Tirumangalam	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	4	4	..	2	1	3	8	12	21	..	4	4	31,477	3,000	34,477	6,32,117	5·45	

Statement No. I.—Urban and Rural Sanitation and Vaccination (in Towns other than Municipalities)—*cont.*

Local Fund District.	Towns.	Population.			Vaccination staff.						Sanitary Staff.			Expenditure under all heads.		Total expenditure.	Total income for 1894-95.	Ratio per cent. of the proposed expenditure to total income.	Expenditure how debitable.
					Assistant Superintendents.			Vaccinators.			Sanitary Inspectors.								
		From 7,000 to 10,000.	From 10,000 to 15,000.	From 15,000 to 22,000.	First Grade on Rs. 100.	Second Grade on Rs. 75.	Peons on Rs. 7.	First Class on Rs. 60.	Second Class on Rs. 45.	Third Class on Rs. 20.	First Class on Rs. 45 to 60, with fixed batta at Rs. 7½.	Second Class on Rs. 25 to 35, with fixed batta at Rs. 7½.	Conservancy Overseers on Rs. 15 to 20.	Vaccination.	Sanitation when the establishment is fully developed after six years.				
														Rs.	Rs.	Rs.	Rs.		
Tinnevelly	Kulasékarapatnam	..	..	1	..	..	..	..	..	..	1	1	..	..	1,320	..	..	..	
	Virudupatti	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Viravauallur	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Rajapalayam	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Tenkási	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Sivakási	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Káyalpatnam	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Kalladakurchi	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Ambásamudram	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Kila Viraraghavapuram	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Pettai	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Sérmádévi	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Sivagiri	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Sankaranayinárkóyil	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Tiruchendór	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Kadayanallur	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Surandai	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Varatirayiruppu	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Srívaikuntam	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	11	7	1	1	2	3	5	7	13	1	8	11	20,664	7,530	28,194	6,12,863	4·60	Respective District Boards.
Salem	Sendamangalam	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Rásipuram	..	1	..	..	..	..	..	..	..	..	1	..	..	510	..	..	..	
	Kistnagiri	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Atur	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Tiruchengódu	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	3	2	..	1	2	3	6	9	18	..	2	3	25,268	1,740	27,008	4,85,465	5·56	

Statement No. I.—Urban and Rural Sanitation and Vaccination (in Towns other than Municipalities)—*cont.*

Local Fund District.	Towns.	Population.			Vaccination Staff.						Sanitary Staff.			Expenditure under all heads.		Total expenditure.	Total income for 1894-95.	Ratio per cent. of the proposed expenditure to total income.	Expenditure how debitable.
					Assistant Superintendents.			Vaccinators.			Sanitary Inspectors.								
		From 7,000 to 10,000.	From 10,000 to 15,000.	From 15,000 to 22,000.	First Grade on Rs. 100.	Second Grade on Rs. 75.	Peons on Rs. 7.	First Class on Rs. 60.	Second Class on Rs. 45.	Third Class on Rs. 20.	First Class on Rs. 45 to 60, with fixed batta at Rs. 7½.	Second Class on Rs. 25 to 35 with fixed batta at Rs. 7½.	Conservancy Overseers on Rs. 15 to 20.	Vaccination.	Sanitation when the establishment is fully developed after six years.				
Coimbatore.	Udamalpet	1	..	..	..	..	..	..	..	..	..	..	1	..	Rs. 240	Rs. ..	Rs. ..	..	Respective District Boards.
	Kollegal	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Dhárápuram	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Bhaváni	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	4	..	..	2	1	3	6	9	15	..	..	4	24,717	960	25,677	4,44,645	5·77	
Nilgiris	None	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Total District	..	..	..	..	..	..	1	1	..	..	..	..	1,405	..	1,405	1,65,706	·85	
South Canara.	Udipi	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	1	..	..	1	1	2	2	3	8	..	..	1	11,012	240	11,252	3,45,979	3·25	
Malabar	Ponnáni	1	..	..	..	..	..	..	..	..	..	..	1	..	240	..	..	..	
	Total District	1	..	..	1	2	3	7	10	19	..	..	1	27,961	240	28,201	5,39,909	5·22	
	Grand Total	56	37	1	32	20	52	87	136	257	1	40	55	3,88,706	34,410	4,23,116	98,84,250	4·28	

Statement No. II.—Urban Sanitation and Vaccination—Municipalities.

Names of groups of towns.	Towns.	Population.								Vaccination staff.				Sanitary staff.			Expenditure under all heads.			Total income for 1894	Ratio per cent. to total income.		Proposed expenditure how debitable.
										Vaccinators.													
		Below 7,000.	From 7,000 to 10,000.	From 10,000 to 15,000.	From 15,000 to 22,000.	From 22,000 to 30,000.	From 30,000 to 43,000.	From 43,000 to 60,000.	From 60,000 to 90,000	First class on Rs. 60.	Second class on Rs. 45.	Third class on Rs. 20.	Call watchmen on Rs. 7.	Chief Sanitary Inspectors on Rs. 75 to 100, with fixed batta Rs. 15.	Sanitary Inspectors. First class from Rs. 45 to 60, with fixed batta Rs. 7½.	Sanitary Inspectors. Second class from Rs. 25 to 35, with fixed batta Rs. 7½.	Vaccination.	Sanitation when the establishment is fully developed after six years.	Total.		Of the proposed expend.	Of the present expenditure.	
1. Berhampur	Berhampur	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	Rs. 450	Rs. 1,320	Rs. 1,770	Rs. 31,308	5·65	2·78	Respective Municipalities.
	Parlákimedi	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	280	510	790	13,721	5·76	3·72	
	Chicacole	..	..	..	1	..	..	..	..	..	1	..	1	..	1	1	300	1,320	1,620	24,918	6·50	2·33	
2. Vizagapatam.	Vizianagram	..	..	1	..	..	1	..	..	..	..	..	..	..	1	2	469	1,830	2,299	32,032	7·18	..	
	Bimlipatam	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	171	510	681	13,194	5·16	6·50	
	Vizagapatam	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	471	2,340	2,811	57,746	4·87	3·65	
	Anakápalle	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	269	810	1,079	15,273	7·06	3·47	
3. Rajahmundry	Cocanada	..	..	..	..	..	1	..	..	..	1	1	1	..	1	3	529	2,340	2,869	46,471	6·17	3·18	
	Rajahmundry	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	371	1,830	2,201	43,475	5·06	3·26	
	Masulipatam	..	..	..	..	..	1	..	..	..	1	..	1	..	1	3	501	2,340	2,841	52,904	5·37	..	
4. Masulipatam.	Guntúr	..	..	..	1	1	..	..	..	..	..	..	..	..	1	2	315	1,830	2,145	50,967	4·28	2·72	
	Bezwada	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	340	1,830	2,170	46,845	4·63	3·45	
	Ellore	..	..	..	1	..	..	..	..	..	1	1	1	..	1	2	376	1,830	2,206	35,994	6·13	2·73	
5. Nellore	Nellore	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	532	1,830	2,362	45,220	5·22	2·26	
	Ongole	..	..	1	..	..	..	..	..	..	1	..	1	..	..	1	245	510	755	13,020	5·80	3·73	
	Tirupati	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	175	1,320	1,495	23,146	6·46	2·82	
	Vellore	..	..	..	..	..	..	1	..	..	..	1	..	..	..	3	561	2,910	3,471	73,789	4·70	3·05	
	Wallajahpet	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	167	510	677	14,251	4·75	4·79	
6. Vellore	Gudiyáttam	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	230	510	740	14,522	5·09	4·50	
	Vániyambádi	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	224	1,320	1,544	19,405	7·96	3·50	
	Tiruppattúr	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	215	1,320	1,535	20,086	7·64	2·59	
	Conjeeveram	..	..	..	..	..	1	..	..	..	..	..	..	..	1	3	462	2,340	2,802	45,667	6·14	3·43	
	Cuddalore	..	..	..	..	..	..	1	..	1	..	1	1	..	..	3	452	2,910	3,362	56,259	5·96	3·86	
7. Cuddalore	Chidambaram	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	185	1,320	1,505	26,428	5·69	2·55	
	Mannárgudi	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	235	1,320	1,555	28,611	5·43	2·24	
	Máyavaram	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2	273	1,830	2,103	41,385	5·08	2·22	
	Negapatam	..	..	..	..	1	..	..	..	..	..	..	..	..	1	3	574	2,910	3,484	83,659	4·16	2·76	
	Tanjore	..	..	..	..	..	1	..	..	1	..	1	1	..	..	3	398	2,910	3,308	1,17,340	2·82	1·99	
8. Tanjore	Kumbakónam	..	..	..	..	..	1	..	..	..	..	..	1	..	..	3	424	2,910	3,334	98,753	3·37	3·40	
	Trichinopoly	..	..	..	..	..	..	1	..	..	..	..	1	..	1	4	592	3,420	4,012	1,23,181	3·25	2·15	
	Srírangam	..	..	..	1	..	..	..	1	1	..	1	1	..	1	1	202	1,320	1,522	28,350	5·37	3·62	

Statement No. II.—Urban Sanitation and Vaccination—Municipalities—*cont.*

Names of groups of towns.	Towns.	Population.								Vaccination staff.				Sanitary staff.			Expenditure under all heads.			Total income for 1894-95.	Ratio per cent. to total income.		Proposed expenditure how debitable.
										Vaccinators.													
		Below 7,000.	From 7,000 to 10,000.	From 10,000 to 15,000.	From 15,000 to 22,000.	From 22,000 to 30,000.	From 30,000 to 43,000.	From 43,000 to 60,000.	From 60,000 to 90,000.	First class on Rs. 60.	Second class on Rs. 45.	Third class on Rs. 20.	Calf watchmen on Rs. 7.	Chief Sanitary Inspectors on Rs. 75 to 100, with fixed batta Rs. 15.	Sanitary Inspectors. First class from Rs. 45 to 60 with fixed batta Rs. 7½.	Sanitary Inspectors. Second class from Rs. 25 to 35, with fixed batta Rs. 7½.	Vaccination.	Sanitation when the establishment is fully developed after six years.	Total.		Of the proposed expenditure.	Of the present expenditure.	
																	Rs.	Rs.	Rs.	Rs			
9. Salem ..	Salem	..	..	..	..	..	..	..	1	..	..	..	..	1	..	4	904	3,420	4,324	86,588	4·99	2·60	Respective Municipalities.
	Erode	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	199	510	709	19,872	3·56	2·52	
	Karúr	..	..	1	..	..	..	..	1	..	1	1	1	..	..	1	178	510	688	17,149	4·01	3·76	
10. Madura ..	Madura	..	..	..	..	..	..	..	..	..	..	..	..	1	..	4	1,014	3,420	4,434	1,36,800	3·24	2·16	
	Dindigul	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	303	1,320	1,623	34,100	4·76	2·52	
	Palni	..	..	..	1	..	..	..	..	1	..	1	1	..	1	1	192	1,320	1,512	11,892	12·71	3·53	
	Periyakulam ..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	190	1,320	1,510	13,920	10·85	3·38	
11. Tinnevelly.	Tinnevelly	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	303	1,830	2,133	38,987	5·47	3·30	
	Palamcottah ..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	235	1,320	1,555	27,018	5·07	3·19	
	Tuticorin	..	..	..	..	1	..	..	..	..	1	..	1	..	1	2	358	1,830	2,188	44,721	4·89	2·35	
	Srívilliputtúr ..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	235	810	1,045	16,600	6·29	2·47	
12. Coimbatore.	Coimbatore	..	..	..	..	..	1	..	..	..	..	..	..	1	..	3	681	2,910	3,591	44,298	8·10	2·94	
	Cochin	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	237	1,320	1,557	22,245	6·99	2·56	
	Palghat	..	..	..	..	1	..	..	..	..	1	1	1	..	1	3	563	2,340	2,903	65,563	4·43	1·56	
*13. Nilgiris ..	Ootacamund ..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	678	1,890	2,568	93,628	2·74	2·63	
	Coonoor	1	..	..	..	..	..	..	..	..	1	..	1	1	..	1	289	1,890	2,179	44,257	4·92	3·28	
14. Calicut ..	Calicut	..	..	..	..	..	..	..	1	..	..	..	..	1	..	3	872	2,910	3,782	61,529	6·14	4·26	
	Tellicherry ..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	314	1,830	2,144	44,702	4·79	3·62	
	Cannanore	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	266	1,830	2,096	28,733	7·29	4·73	
15. Cuddapah ..	Mangalore	..	..	..	..	..	1	..	..	..	..	..	..	..	1	3	518	2,340	2,858	45,726	6·25	5·49	
	Cuddapah	..	..	..	1	..	..	..	..	..	1	1	1	..	1	1	519	1,320	1,839	55,884	3·29	1·47	
	Anantapur	1	..	..	..	..	..	1	..	..	..	..	..	..	1	1	290	510	800	13,448	5·95	3·94	
16. Bellary ..	Bellary	..	..	..	..	1	..	..	..	..	..	..	..	1	..	3	657	2,910	3,567	1,13,904	3·13	3·45	
	Adóni	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	392	1,830	2,222	39,972	5·56	1·73	
	Kurnool	..	..	..	..	1	..	..	..	..	1	1	1	..	1	2	327	1,830	2,157	34,862	6·19	2·78	
	Total Municipalities.	2	1	5	18	12	7	7	4	5	11	10	16	13	35	104	21,702	99,330	1,21,032	24,94,318	4·85	2·93	

* Special sanitary staff for this group.

Statement No. III.—Provincial Charge—Sanitation and Vaccination.

Annual cost of the scheme at different periods calculated from the time of its introduction.	Charges for the maintenance of a Vaccine Institute.	Extra establishment for the present office of the Sanitary Commissioner, viz., one Engineer subordinate on Rs. 100 to Rs. 150 by annual increment of Rs. 10, one draughtsman on Rs. 45, three clerks on Rs. 60, 45 and 20, one attender on Rs. 10 and a peon on Rs. 7.	Superintending agency.							Grand Total.
			Twenty-one Health officers from Rs. 150 to Rs. 300.	Twenty-one Sanitary works overseers at Rs. 75.	Twenty-one clerks on Rs. 20.	Twenty-one peons on Rs. 7.	Forty-two kalasees at 2 for each overseer on Rs. 7.	Contingencies at Rs. 20 for each Health officer.	Total.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
From 1st year to the end of 7th year	12,252	3,792	37,800	18,900	5,040	1,764	3,528	5,040	72,072	88,116
Do. 8th do. 10th do.	14,352	4,044	37,800	18,900	5,040	1,764	3,528	5,040	72,072	90,468
Do. 11th do. 14th do.	18,852	4,044	56,700	18,900	5,040	1,764	3,528	5,040	90,972	1,13,868
Do. 15th do. 20th do.	20,112	4,044	56,700	18,900	5,040	1,764	3,528	5,040	90,972	1,15,128
Do. 21st and upwards	24,612	4,044	75,600	18,900	5,040	1,764	3,528	5,040	1,09,872	1,38,528

APPENDIX B.

Examination for the Degree of Licentiate in Sanitary Science—Madras University.

Candidates for the degree of Licentiate in Sanitary Science must have passed the examination for the degree of M.B. and C.M., or L.M.S. of this or some other recognised University, or must be Medical Practitioners registered under the law existing in Great Britain.

The examination for the degree of L.S.Sc. shall be held in Madras once a year, commencing on the second Monday in July.

Applications for admission to this examination, in the form hereinafter prescribed, must reach the Registrar not later than the 1st of May preceding.

No candidate shall be registered unless he has previously paid a fee of forty rupees. Candidates failing to pass one examination may be admitted to subsequent examinations on payment of a like fee of forty rupees on each occasion.

Candidates must produce certificates for having attended the following courses :—

General Pathology—One course of not less than forty lectures.
Hygiene—One course of not less than forty lectures.
Analytical Chemistry—A practical course of not less than six months.
Sanitary Engineering—One course.

These certificates shall be transmitted to the Registrar at least fourteen days before the date of examination.

I.—Chemistry.

The elements of inorganic and organic chemistry. In the practical examination each candidate shall be required to perform not less than two analyses; this examination shall include qualitative analyses of air, detection of gaseous emanations and other impurities in the atmosphere; analyses of water for domestic use, and of the nature and amount of its mineral and organic constituents; detection—chemical and microscopical—of adulteration in articles of food and drink.

II.—Experimental Physics.

Properties of matter; hydraulics and hydrostatics in reference to water-supply, drainage and sewerage; pneumatics in relation to warming, cooling and ventilation of houses; light and heat in relation to sanitation; meteorology and methods of making meteorological observations.

III.—Sanitary Law.

The laws regarding Public Health enacted in Great Britain and in India; the Famine and Jail Codes; the Military Regulations; and the duties of Health Officers and of Port Surgeons.

IV.—Vital Statistics.

Statistical methods and data in reference to India, more especially to the Madras Presidency.

V.—General Pathology, including Bacteriology.

The history of epidemic and endemic diseases, their geographical distribution and relations to climatic and geological conditions. The methods used in bacteriological investigations.

VI.—Hygiene.

The causation and prevention of disease; conditions of healthy nourishment, lodgment, and activity; the hygiene of public and private buildings and of particular occupations; quarantine; hospitals for infectious diseases; conveyance of the sick; vaccination; prostitution; diseases of animals and vegetables in their relation to the health of man; famine diseases; poisons in manufactures in commercial and domestic use.

VII.—Sanitation and Sanitary Engineering.

Collection, removal, and disposal of town refuse and excreta; conservancy of parcharies, slaughter-houses, markets, cattle yards and dairies, public washing places, tanks, and river beds; removal and disposal of the dead; general principles of the construction of buildings, of sewerage, drainage, and water-supply works, and of ventilation and lighting.

VIII.—Drawing and Mensuration.

Candidates will be expected to understand plans, sections, and estimates of public and private buildings, mines, water and sewerage works; to draw rough figured plans from existing works; and to have a knowledge of engineering terms. Mensuration of planes and simple solids.

The examination for the degree of L.S.Sc. shall be conducted in the order of time and subjects set forth in the following table, and the number of marks assigned to each subject shall be as therein specified :—

Days.	Hours.	Subjects.	Marks.	Remarks.
Monday	10—1 2—5	Experimental Physics	50 50	Written examinations.
Tuesday	10—1 2—5	Sanitary Law	50 50	Do.
Wednesday	10—1 2—5	General Pathology	75 100	Do.
Thursday	10—1 2—5	Sanitation and Sanitary Engineering. Drawing and Mensuration ..	100 50	Written examination. Practical do.
Friday and Saturday ..	10—5	Chemistry	100	Do.
Monday	10—1	General Pathology	75	Do.
		Special report on the sanitary condition of some actual locality.	150	A written report to be submitted not later than the third Wednesday in July.
		Total ..	850	

The candidates shall be arranged in alphabetical order in two classes—

The first consisting of those who have obtained not less than seventy-five per cent. of the aggregate number of marks;

The second consisting of those who have obtained not less than fifty per cent. of the aggregate number of marks.

Candidates failing to obtain one-third of the marks in each subject, or one-half of the aggregate number of marks, shall not pass.

Form of Statement to be submitted by the Examiners.

Register number.	Name of candidate.	Number of marks obtained.										Whether passed or not passed.	If passed, in what class ranked.	Remarks.
		Physics.	Chemistry.	Sanitary Law.	Vital Statistics.	General Pathology.	Hygiene.	Sanitation and Sanitary Engineering.	Drawing and Mensuration.	Special Report.	Total.			
..	..	50.	150	50	50	150	100	100	50	150	850	..	..	..

From Officiating Under Secretary to the Government of India, dated Calcutta, the 10th December 1896, No. 533.

Order—No. 435, Public, dated 17th April 1897.

The papers read above contain proposals for the reorganization of the Sanitary department and the opinions of the Surgeon-General and the Sanitary Commissioner on the subject. The Government, while agreeing with much that has been said by these officers finds it impossible, for financial and other reasons, to give its assent to any such broad scheme of reorganization as is suggested by the Sanitary Commissioner. Alterations and additions to the Sanitary department of this Presidency can only be effected gradually as money becomes available and local experience suggests improved methods. Under these circumstances, it is useless to review in detail the proposals put forward by the Sanitary Commissioner.

2. The enquiries made have, however, disclosed certain means of improving the existing arrangements without incurring additional expenditure. The Sanitary Commissioner points out that something might be done by enlisting as Deputy Inspectors of Vaccination trained Sanitary Inspectors. This is an improvement which it is within the powers of the Sanitary Commissioner himself to carry out and no orders of Government on the subject are required. Similarly the Government approves of the proposal of the Surgeon-General to draw closer the connection between himself and the Sanitary Commissioner by arranging for the submission to him, and the issue as departmental standing orders, of all instructions which the Sanitary Commissioner gives to District Medical and Sanitary Officers, and by authorizing the Surgeon-General to issue instructions to the Sanitary Commissioner, and through him to his subordinates, on the subject of inspecting medical institutions. The necessary arrangements for carrying out these suggestions should be made by the officers concerned. Any greater degree of subordination of the Sanitary Commissioner to the Surgeon-General is, the Government considers, inadvisable.

3. The following letter will be despatched to the Government of India.

[Here enter letter No. 436, Public, dated 17th April 1897.]

(True Extract.)

Chief Secretary.

To the Surgeon-General.
" Sanitary Commissioner.
" Local and Municipal Department.

Md Shaik Karim.

Government {1897} of Madras.

PUBLIC.

Recd.	1897.	*Enclosures*
Regd.		*Spare copies*

Letter, No. 436, 17th April 1897.

APRIL.

Reorganization of the Sanitary Department.

Submitting remarks with reference to the proposals of the Government of India for the —.

PUBLIC DEPARTMENT.

Letter—from

The CHIEF SECRETARY to the GOVERNMENT of FORT ST. GEORGE,

To

The SECRETARY to the GOVERNMENT of INDIA, Home Department.

Sir,

I am directed to reply to the resolution of the Government of India, No. 11, Sanitary—313–326, dated 26th October 1895, forwarded under Mr. Thornton's endorsement, and to say that, after a careful consideration of the subject to which it refers, His Excellency the Governor in Council is strongly of opinion that, while the theoretical value of the improvements and advances in sanitation which are outlined in the resolution is undeniable, the greatly-increased expenditure which carrying them out would involve and the very strong discontent which giving effect to some of them would create, form two very cogent grounds for considering the introduction of them, for some considerable time at any rate, practically impossible.

In paragraph 11 of the resolution under reply, the Government of India expresses the opinion that it should be possible to effect the changes and additions advocated without increasing the cost of the Sanitary department. In this view, His Excellency the Governor in Council regrets his inability to concur. The proposals made involve (1) the creation of a large number of new posts, and (2) the substitution of trained for untrained men in offices already existing. On the other hand, the only reduction in expenditure suggested is in the abolition of the appointment of Deputy Sanitary Commissioner which, as will appear below, does not commend itself to this Government. At best the sum saved by this reduction of establishment would not cover more than a fraction of the cost of introducing men of the grade of Assistant Surgeon or Hospital Assistant in the various municipalities and local divisions as Health Officers, and of appointing a highly trained and expensive agency to carry out the work at present performed at a small cost by Deputy Inspectors of Vaccination. It is evident, therefore, that considerable extra expenditure would be inevitable. It is impossible, under existing conditions, to provide the additional outlay from Provincial funds, nor can Local funds bear the charge without new and increased taxation which would be most unpopular. So far from there being any prospect of increasing in the immediate future the outlay on medical and sanitary objects in rural tracts, the conclusion has been forced on this Government that so much has hitherto been spent on these objects, and on primary education, that the roads, which should be the first and main charge on local funds, have been gradually neglected and are now almost universally in such a seriously deteriorated condition as to require much expenditure to bring them into proper order. Whatever money may, from time to time, become available for sanitation and similar purposes must, in the opinion of His Excellency the Governor in Council, be devoted first to the improvement and provision of water-supply—a need the pressing nature of which cannot be questioned—and he is therefore most unwilling at present to expend on establishments highly trained in the theory of sanitary supervision funds which are required for many practical schemes for the amelioration of the conditions under which the people of this Presidency at present live.

2. In addition, however, to taking exception on financial grounds, His Excellency the Governor in Cou·il is most strongly of opinion that the present scheme for the extension of sanitary easures to rural tracts would, if carried out, cause very great discontent. It has been the policy of this Government to proceed cautiously with the introduction nitary measures, beginning with the municipalities, where the people are more enl. ned and where the subordinate agency is under supervision. To attempt to ver aterially extend active sanitary operations in the manner and direction proposed by the Government of India would have for its first effect the harassing, by an establishment which it would be very far from easy to control, of the rural population who are strongly opposed to changes and who must be brought very gradually and carefully to accept them. Moreover, as pointed out above, the cost of these measures could only be met from local funds by the imposition of additional taxation, and any steps in that direction would in all probability give rise to serious discontent. On general grounds therefore this Government is inclined to regard any large scheme of extension of sanitary measures such as that now put forward by the Government of India as not only impracticable but inadvisable so far as this Presidency is concerned.

3. Turning to the details of the resolution I am directed to state, with regard to the second paragraph, that with the principle of total separation of the civil and military sanitation agencies His Excellency the Governor in Council is not in accord. The care of cantonments and barracks is too often left in the hands of medical officers who have no knowledge of the conditions and causes of diseases existing beyond the extremely limited areas under their control and who, moreover, are unable, through the necessary restrictions of military discipline, to press their opinions as sanitarians. The cantonments in Madras are, however, few and unimportant. Beyond agreeing therefore that the military authorities should have, whenever they require it, the assistance or advice of the Sanitary Commissioner, His Excellency the Governor in Council does not consider it necessary to discuss further this general question.

4. The views of the Government of India set forth in paragraph 3 are in many ways inapplicable to this Presidency. The Medical and Sanitary departments are in Madras very closely associated. The District Surgeon is also the District Sanitary Officer, and as such receives and carries out the instructions of the Sanitary Commissioner. He is the adviser of municipalities and local boards on matters of every day sanitation, on which he is quite competent to speak. It is perhaps true of Madras as of other provinces that the discovery of local defects by the Sanitary department does not always lead to their removal, though they are invariably brought to the notice of the local bodies concerned. Any delay in remedying them must be attributed not to any failure on the part of the Sanitary Inspecting Officers but to the impossibility, arising from limited resources, of keeping pace with the suggestions made.

5. While differing from the Government of India in regard to the benefits to be expected from the extension of an organized and highly trained sanitary agency to rural areas, this Government has anticipated the proposals made in paragraph 4 of the resolution. There has existed for some time past an admirable system of training in matters relating to public health, worked out from the experience gained in the universities of Great Britain but suited to the requirements of this country. In connection with this course a diploma in sanitary science is granted by the local university. There is now before Government a proposal to encourage medical men desiring to enter Government service to add this subject to their other qualifications. To provide for the lower qualification in hygiene a course of training for Sanitary Inspectors was, after careful consideration, instituted in 1894 and Government has no reason to be dissatisfied with it. It has been suggested that some improvements might be effected by the employment as Deputy Inspectors of Vaccination of trained Sanitary Inspectors, and this matter will have due attention. The questions of detail as to the employment on extra pay of Sanitary Officers with medical qualifications need not, under the circumstances which have been already set out, be discussed by this Government. The difficulties pointed out in my letter, Mis. No. 283, dated 17th February 1896, have, in no way, diminished.

6. With regard to the scheme outlined in paragraph 6, I am to say that this Government has already,* to a more modest extent, accepted the principle there involved as far as it relates to municipalities. Trained Sanitary Inspectors are in future to be appointed on a scale calculated in accordance with population. The other local bodies have already the services of the District Medical and Sanitary Officer and his subordinates at their disposal. On the subject of sanitary committees His Excellency the Governor in Council regrets that he is unable to concur in the opinion of the Government of India. In practice it is not so much advice regarding the expenditure of money on sanitation that is required as the willingness to follow it, which is of but slow development. Meanwhile, the appointment of committees in small municipalities would, it is to be feared, render organizations at present not too simple still more cumbrous, and prove practically an hindrance to business.

* G.O., No. 4 M., dated 4th January 1897.

7. The duties and responsibilities of the District Medical and Sanitary Officers in this Presidency are already clearly defined. No such steps as are suggested in paragraph 7 of the resolution are therefore required. The scheme put forward in the latter part of that paragraph for relieving District Surgeons of a portion of their sanitary and medical duties is already in force in 21 out of the 22 districts in this Presidency. I am, however, to point out that if Assistant Surgeons undertake tours in rural tracts, they cannot also carry out the work of Health Officers of the head-quarter municipalities. In practice this Government has found it wiser and more economical to allow District Surgeons to delegate to their assistants part of their touring and inspection duties, which to a large extent are concerned with sanitary matters, they attending themselves to the more important work at head-quarters.

G.O., No. 57, Public, dated 24th January 1895.

8. With reference to paragraph 8 of the resolution, His Excellency the Governor in Council has no cause whatever to complain of the existing arrangements, but every reason to be satisfied with the Sanitary Commissioner's discharge of his duties both as regards touring and in other respects. No time is spent by that officer on the hills except in the ordinary course of inspection, and prolonged halts by him at head-quarters are rare. Under these circumstances, this Government cannot regard the posting a more junior officer to the appointment as in any way advisable. If the opinion of the Sanitary Commissioner is to carry weight he must have a wide local knowledge of the Presidency, and large general experience, qualifications which can only be found in an officer of some standing. No alterations in the initial pay or in the rules as to the tenure of the appointment appear to be desirable, and His Excellency the Governor in Council would most strongly deprecate any being made.

9. On the question of the proposed subordination of the Sanitary Commissioner to the Surgeon-General, both those officers have expressed the opinion, in which this Government concurs, that such subordination would not be an advantage. The Surgeon-General points out that the professional and mental qualifications required for the two offices are quite distinct. To subordinate the sanitary expert to an officer for whose duties a large general experience is the essential qualification would probably cramp the specialist's work; the amalgamation of the office establishments and the distribution of the work of local inspection would have a similar effect. A larger local area might, it is true, be annually inspected, but it must be remembered that in only half that area would special and minute attention be paid to sanitation. The Surgeon-General cannot be expected to enter into sanitary details in the same way as the Sanitary Commissioner naturally would. Travelling over an increased area would lead therefore to no satisfactory results from a sanitary point of view.

10. The proposal to abolish the office of Deputy Sanitary Commissioner is one to which His Excellency the Governor in Council is strongly opposed. In this Presidency there is ample work for that officer. The area to be supervised is too large to allow of the Sanitary Commissioner's giving his personal attention to every quarter of it, and a responsible assistant is therefore absolutely requisite.

11. In conclusion, I am to say that this Government is not at present prepared to put forward any formulated proposals for the reorganization of the Sanitary department. As pointed out above, His Excellency the Governor in Council is constrained to consider such large measures as those now suggested impracticable and inadvisable so far as this Presidency is concerned. The subject is one which receives a considerable share of the attention of this Government, and the resolution of the Government of India would tend to show that Madras is at any rate not behind other provinces in this respect. I am therefore to urge the advisability of leaving the provincial sanitary establishment to be added to and improved gradually in the light of local experience rather than of insisting on its reorganization under conditions hardly applicable to this Presidency.

(True Extract.)

J. F. PRICE,
Chief Secretary.

Exd. Shaik Karim.

1

Local & Municipal DEPARTMENT.

From Major W. G. King M.B
SURGEON ~~LIEUT-COL. I. A. LAING, C.~~
Sanitary Commissioner for Madras,

To THE Chief Secretary
to Government
Local & municipal Dept

No. 2773 S

Dated 16
Despatched 18 } December 1893.
Received

ENCLOSURES. Nil

Subject.

Submitting his proposals for a reorganization of the Vaccination Department.

[960—8-12-93.]

OFFICE OF SANITARY COMMISSIONER,

No. 2773/S — Camp Tanjore, 15 December 1893.

From

W. G. King M.B. C.M. D.P.H.

SURGEON-MAJOR ~~J. A. LAING.~~

ag SANITARY COMMISSIONER FOR MADRAS,

To

THE Chief Secretary to Government Local & Municipal Deptt.

Enclosure. nil

SIR,

With reference to G.O. No. 1148 L dated 25th May 1893, Local and Municipal para 6, I have the honor to request that Government will be pleased to afford me sufficient financial data upon which to base the scheme desired. I have in my report embodied in G.O. No. 1066 L dated 9th May 1892, in the endeavour to meet the difficulty of absence of information as to the wishes of Government on this point, submitted various schemes and their modifications with the hope, whilst groping in the dark, to find some mean between an efficient scheme and the wishes of Government as to economy. The result was a complicated mass of statements that caused great trouble in preparation but

13 S.G.—500 9-3-95.

but which failed apparently on the question of cost to satisfy Government.

The statements referred to were based on the supposition that Government would not consider it safe to accept any scheme, that did not show the maximum cost possible due to lapse of time influencing the death rate, promotion, and pay of the staff employed.

2. In the original statement submitted, the pay of the proposed Director of vaccination was not shown. This being a detail, it was considered more fitting that Government itself should settle it; to prevent confusion, however, the pay suggested has been now entered. The cost debitable to Local Funds would have represented 4.5 per cent of the total Local Fund income and 0.7 per cent of Municipal Funds, against 2.1 and 0.9 per cent respectively for the year 1892-93, under the present very imperfect system. The details are shown below

Expenditure proposed. 20

		Estimated number of cases to be vaccinated under scheme when fully worked up to population by Col.	Proposed grant under scheme No. 1A.	Ratio per cent upon total income of the proposed fund.	Estimated Cost per Case.	Remarks.
					As. P.	
Local Funds and Municipal Funds.	Local Fund Boards	1,365,480	388,706	4.5	0-4-7	
	Municipal	123 251	27531	0.7	0-3-7	
Provincial funds:-						
i Grant in aid to local and municipal funds.			94865			
ii Director of vaccination			16800			
Ganjam and Vizagapatam Agency and Hill Tracts.		44003	17,810		0-6-6	
Bangalore Cantonment		3347	847		0-4-1	
Secunderabad do		6500	1659		0-4-1	

Expenditure under the present system. from actuals for 1892-93

		Actual Number vaccinated in 1892-93	Actual expenditure	Ratio per cent upon total income of actual expenditure	Actual Cost per Case.	Remarks.
Local funds and Municipal funds.	Local Fund Boards	96,991	1,79,298	2.1	0-3--	
	Municipal.	114,953	35,810	0.9	0.5--	
Provincial Funds:-						
i Inspector of vaccination			15,064			
Ganjam & Vizagapatam agency and Hill Tracts		23603	9564		0-6-6	
Bangalore Cantonment		701	352		0-8--	
Secunderabad - do -		5388	1226		0-3-8	

It was further estimated that in the first seven years during which the change in ~~organization~~ of the Department ~~of the Department~~ would be gradually introduced having regard to the securing of the required staff getting rid of the old &c, the expenditure would be as follows:-

	Estimated number of cases to be prevented under scheme — under scheme in full working order.	Proposed Grant under Scheme	Ratio Grant to total Expenditure of the Province	Estimated Cost	Remarks.
Local Fund and Municipal areas { Local Fund Boards.	1,38,240 *	245480	2·8	--2-10	* This figure includes a lakh of cases below ten years not hitherto reached — years.
Municipal.	1,23251	27,531	0.7	0-3-7	
Provincial funds:-					
i Grant in aid to local and municipal funds.		58,745			
ii Director of Vaccination		16800			
Ganjam & Vizagapatam Agency and Hill Tracts.	44,003	17810		0-6-6	
Bangalore Cantonment	3,347	847		0-4-1	
Secunderabad -do-	6500	1659		0-4-1	
Cost of special Education during six months before starting new Staff		† 32,040	0.3		† It was proposed that this should be covered from Local Boards and Municipalities by an additional anna per head of population engaged in municipal areas

1. The expenditure suggested seems reasonable in view of the importance in saving human life which must attach to a well organized vaccination Department as against one which, imperfect in its methods, cannot be efficient in securing protection and, consequently, must be wasteful of money expended upon it; there possibly being no sphere in which money can be more literally squandered than in sanitary efforts which in practice are incapable of making a full return for the money invested. But, I am aware I am not in a position to do more than regard this matter through the spectacles of the Sanitarian, and I, therefore, respectfully ask Government to place at my disposal - taking into consideration the figures above quoted which represents the maximum for a scheme, I believe on professional grounds to be - pound, - information as to the - limit of expenditure it would be prepared to incur, under the head

of

total grant from Provincial funds,
and percentage upon the income
of Local Boards and Municipali-
-ties respectively.

I have the honor to be
Sir
Your most obedt Servt

W. Hodge
Surgn Major
Dy Sanitary Commrs

Statement showing the Staff and Salary of the Vaccination Dept: of the Punjab with those of the Madras Presidency as they existed in 1892.

Province	Number of Districts	Number of Municipalities	Population according to the Census of 1891	Area in Square Miles	Average Population per Square Mile	Description of Staff employed	Number of native Superintendents 1st class	Number of native Superintendents 2nd class	Number of native Superintendents Total	Salary per month of each Superintendent 1st class Rs	Salary per month of each Superintendent 2nd class Rs	Number of Vaccinators 1st class	Number of Vaccinators 2nd class	Number of Vaccinators 3rd class	Number of Vaccinators Total	Salary per month of each Vaccinator 1st class Rs	Salary per month of each Vaccinator 2nd class Rs	Salary per month of each Vaccinator 3rd class Rs	Number of Persons other servants	Number of Vaccinations performed in 1892-93 Animal Lymph	Human Lymph	Total	Number of Successful Cases Animal Lymph	Human Lymph	Total	Percentage of Successful Cases	Expenditure Pay of establishment Rs	Travelling allowance Rs	Contingencies Rs	Total Cost Rs	Average cost of each successful case Rs. A. P.	Persons successfully
Punjab	31	148	20,562,324	110,463	186	District Staff, Local Fund, Municipal & Cantonment	24	9	33	40	30	41	70	173	284	15	12	10	15	693,370	55,776	749,146	-	-	630171	84·1	53,680	1,258	4,227	59,165	" — 1 — 6	7
						Special Staff	1	1	2	45	35	3	8	10	21	17	14	12	2	73,361	1,935	75,296	-	-	60,223	80·1	12839	3888	806	17,533	" — 4 — 8	3
Total (1 to 7)	31	148	20,562,324	110,463	186		25	10	35	[illegible]	[illegible]	[illegible]	78	183	305	-	[illegible]	[illegible]	17	766,731	[illegible]	[illegible]	2	-	690,394	83·7	66519	5141	5033	76693		
Madras	21	56	35830282	141605	261	District Staff, Municipal & Cantonments	34	*24	58	70	40	259	424	141	824	1562	1061	567	69	858242	252,816	1111058	-	-	1053240	94·8	162831	32758	44375	*239966	— 3 — 8	
Total (8 to 13)	21	56	35830282	141605	261		34	[illegible]	58	70	40	259	[illegible]	141	824	[illegible]	[illegible]	[illegible]	69	858242	[illegible]	1111058	-	-	1053240	94·8	162831	32758	[illegible]	[illegible]		

* One of these a pensioned Dy Superintendent was temporarily entertained in 1892-93 on Rs 100 per mensem.
* Includes the pay & allowances of Deputy Sanitary Commissioner.
@ 4 Assistant Dy Inspectors attached to the Madras Municipality.

Local & Municipal Department.

From W. G. King M. B., C. M.,
Surgeon Lieut.-Col. ~~J. A. LAING~~, D.P.H
Lg. Sanitary Commissioner for Madras,

To

The Chief Secretary
to Government
Local and Municipal
Departt.

No. 921
V

Dated 30th
Despatched 3?
Received } June / July 1894.

Enclosures. 1

Subject.

Forwarding statement showing the relative cost of establishment and work fulfilled by the Punjab & Madras Vaccination Departments for 1892–93

[960—8-12-92.]

No. 921
V

OFFICE OF SANITARY COMMISSIONER,
Camp Periyakulam
~~Fort St. George~~, 30th June 189

From

SURGEON LIEUT.-COL. W. G. KING, M.B., C.M., D.P.H.,
Ag. SANITARY COMMISSIONER FOR MADRAS,

To

THE Chief Secretary
to Government
Local and municipal Dep

Enclosure. /

SIR,

With reference to G.O. No. 11482
dated 25th May 1893, Local and
Municipal, I have the honor to
forward herewith a statement
showing the relative cost of estab-
lishment and work fulfilled, by
the Punjab and Madras Vaccina-
tion Departments.

2. It will be seen from the accom-
panying table in which these
facts are sufficiently set forth,
that labor of the class required
is evidently procurable at a
cheaper rate in the Punjab than
in Madras. The average number
of operations performed by the
Punjab establishment is greater
than that of Madras; but it is right
here to observe that in the Review
of the Annual Vaccination Report for 1892-9
by

—500 9-3-93.

the Lieutenant Governor of that Province, statements both as to number and rate of success, received with a certain amount of mistrust. Nor is there any reason to believe that the class of labour employed has secured the confidence of the medical profession, any more than the slightly better paid class of vaccinator entertained in Madras has done so; it being impossible that men possessed of the requisite knowledge and skill would accept the meagre salaries offered.

3. The cost per successful case in the Punjab for 1892-93 was annas 1-9 against annas 3-8 for Madras; but I find that even if the Madras establishment were paid at the same low rate as that of the Punjab, on account of the smaller average number of cases fulfilled by the Madras men, it would still be impossible to produce cases so cheaply as in the Punjab, as shown below—

Province	Number vaccinated during 1892-93. Human Lymph	Animal Lymph	Total	Number of Operations performed by Vaccinators	Expenditure during 1892-93. Pay of Establishment	Travelling allowance	Contingencies	Total Cost	Cost of each successful case
Punjab	57711	766731	824442	2703	66514	5146	5033	76698	a-1-9
Madras	252816	858242	1111058	1348	168087	4880	12149	185113	a-2-9

* Excluding operations performed by Medical subordinates.

In Madras during 1892-93, 96.6* per cent of the total operations were performed with animal lymph, whereas in the Punjab the percentage was 93.0. In the Madras Presidency, the ryots demand from Rs 2 to Rs 5 per calf in various localities, whereas in the Punjab as 4 to Rs 1 is deemed sufficient. Indeed, the loan of the animals is often given by ryots to the vaccination Department gratis for nothing. Here, it is evident that much more can be effected to oblige the "Sircar" than can be expected in Madras, where education is much more advanced, and I am disposed to regard the readiness with—

which the vaccinators can secure
the the large number of operations
pro credited to them also to the influ-
nnu -ence of the "Sereas," exercised
were through the District Authorities
of m with greater energy than in Buddoo.
to Leaving this out of the question,
cin however, it is evident that
lia the larger number of operations
ing performed by human lymph,
has which costs nothing, in the Punjab,
hos against the large number of
of operations performed in Buddoo
sik with lymph procured at a
sa 3. comparatively high cost on ac-
the -count of the heavy rate de-
l-g -manded for calves, must
but exert a very great influence
es 4. A marked feature of the Punjab
sa establishment has been the
on entertainment for many years
a of a "special staff," whose
b duties it has been to maintain
s the efficacy of the lymph. During
a each hot season operations on
Ca the plains were suspended, and
Pu during the recess efforts were

made

made by the Deputy Sanitary
Commissioner by judicious se-
-lection and cultivation to im-
-prove the stock of lymph, by d
time the next cold season's
work was due. The cool clim
of the hills and the working of
selected men under this sp
-cial staff, hitherto enabled
this to be done effectually. Im
-portation of lymph from Europe
each season was also arrange
for. On the same principle, sinc
the use of animal lymph has
been pushed by the Government of India
an Animal Vaccine Depôt has
been established, working six
months on the plains during
the cold weather and six months
during the hot weather
in the Hills, namely, at Amritsar and
Murree, respectively. From this
depôt, I understand it to be
the intention of the Punjab
Government to issue, during
the current year, animal lymph
mixed with a preservative.

I

I have the honour to be
Sir
Your most obt Servt

W. Hunter
Surgn Lieut-Col
& Sanitary Commissioner

4347

Public (1895) Department.

From

Surgn. Major-Genl. C. Sibthorpe, F.R.C.P.I.,
Surgeon-General with the
Government of Madras,
Madras,

CHIEF SECRETARIAT
21 DEC 1895
GOVERNMENT OF MADRAS

No. 672

Enclosures.

Dated 19th } December 1895.
Recd 21.12.
Reg. 31.12.95.
No.

Subject.

Remarking on the re-organisation of the Sanitary Service in India.

made

R 996. R 23/9/96
1000 : 9/12/96 S.C.

10 headings only

No. 555

LOCAL & MUNICIPAL DEPT
CURRENT No.....

From

R. Nathan, Esq.,

Offg. Under Secy. to the Govt. of India,

To

The Chief Secretary to the Government
of Madras.

Home Department.
(Sanitary)

Calcutta, the 10th December 1896.

Sir,

With reference to your letter No. 996, dated the 23rd September 1896, I am directed to enquire when the Government of India may expect to receive the reply of the Government of Madras on the subject of the proposed re-organization of the Sanitary Department.

I have the honour to be,
Sir,
Your most obedient Servant,

R. Nathan

Offg. Under Secretary to the Govt. of India.

End. No. 2666 d/18-12-96
Forwarded to the Local & Municipal dept for favour of intimation when a reply may be expected to End. No. 1877, d/18. Sep. 96.

17/12/96
Ag. Asst Secy.

FDB 17/12

Public. DEPARTMENT.

From

SURN.-LT.-COL. W. G. KING, M.B., C.M., D.P.H.

SANITARY COMMISSIONER FOR MADRAS,

To

THE Chief Secretary
to Government
Public (Sanitary) Department.

RECEIVED 23 MAR. 1896 REGISTRY No. 662

Dated 23d
Despatched 23d } March 1896.
Received

ENCLOSURES. /one/

Subject.

Submitting with reference to G.O. no 1000 Pub. dated 9. 12. 1895 a scheme for the reorganization of Vaccination and of the Sanitary Departments.

Pub. 29
900-28-10-96.

Public (1897) Department.

CURRENT No.

In G.O. Pub. dated 9-12-95

From The L & M Dept.

Order

No. 78

Dated 28-Jan 97

Received 28-1-97

Registered 28-1-97

Enclosures Rec'd 4344 795-a 3 & 3, 1212, 1086 & 96. with papers put up.

Spare copies

SUBJECT.

Returning, with the Note of the Honorable Member, in original, the papers ~~in connection with~~ relating to the reorganization of the proposed Sanitary Service for India.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

Public Department
G. Nos 4344 of '95,
and 1086 of 1896.

Loc... Dept.
D...

Official Memo. No. 187

Referred to the Local and Municipal Department for favour of remarks.

C. Nos. 2611 Z and 3449 Z of 1896

Fort St. George,
the 8th January 1897.

Secretary to Government.

No. 78

Returned to the Public Department with the notes of the Honourable Member in original.

J.D.B.
15/9/96

V.R.
25/1/97

Secretary to Government.

Ootacamund
18th Sept. 1896

TO BE RETURNED WITH REPLY.

To
The Local and Municipal Department with reference currents, and C No 383 of 96 with notes and C No 1212 of 96 to be returned with reply.

To
The Public Department with Cur. Nos. 2611 and 3449 Z of 1896, Notes of the Honourable member and file of papers put up (to be returned)

Rect. 28/1/97

[illegible] LOCAL AND MUNICIPAL DEPARTMENT

[illegible]OINT N.

From

The Public Department.

No. 1000

Dated 9" December 1895.

Received 13" ----------.

Enclosures

SUBJECT.

Communicating for favour of remarks Resolution of the Govt.of India inviting the attention of Local Govts.and Administrations to the discussion which took place upon the need of a Sanitary Service for India at the Indian Medical Congress held in Calcutta in December 1894.

LOCAL AND MUNICIPAL DEPARTMENT.

Again G.O., dated 189 . , No.

Current No. 3654 L of 1895, dated 9th December 1895 from the Public Department.

Current No. of 189 , dated from the

FOR ORDERS.

The points in the resolution of the Government of India requiring consideration in the Local and Municipal Department are:—

(1) Training in hygiene of candidates for employment in the Sanitary Department.

(2) Employment of Assistant Surgeons and Hospital assistants as Sanitary Inspectors, and the payment of some addition to their grade salaries as compensation for ~~the~~ loss of private practice

(3) Appointment of a Health Officer for each local body or group of local bodies.

(4) Requiring that candidates for certain other Municipal offices should possess some lower qualifications in hygien

(5) Appointm

(5) Appointment of Special Sanitary Committees with a medical officer as President to supervise the expenditure on Sanitation in large Municipalities.

2. The training of Sanitary Inspectors has lately been engaging the attention of this Government, and the Government of India may be referred to G. Os No. 1914 M., dated 10th December 1894, No. 1011 L, dated 13th June 1895, and No. 1658 M., dated 16th October 1895, on this subject.

3. The proposed employment of Assistant surgeons or Hospital assistants as Sanitary Inspectors and the appointment of Health officers are lastly not feasible as they will be very expensive. The Government of India may also be informed that the reorganisation of the Vaccination department is now under consideration and that one of the proposals made in connection with it, is that the L. M. S. degree or a similar medical qualification should be required of candidates for the appointment of Deputy Inspectors of vaccination who are also entrusted with the duty of checking vital statistics and of looking after village sanitation.

4. It does not appear to be desirable at present to insist upon the lower qualification in hygiene for any of the other Municipal offices, as for some* years to come, at any rate, the supply of qualified men would not equal the demand. It is not likely that men holding offices lower than that of Sanitary Inspectors will have any qualification in Hygiene. The G. of I. may be informed that the wording of the G. of I. relating to San. Inspectors in this reference, as to the wording is rather vague. Their training is dealt with in para 2 of this note supra.

5. The suggestion to appoint Sanitary Committees may be commended to the councils of Municipalities with a population of 50,000 and upwards. This seems a reasonable suggestion, and could easily be carried out, tho' it is feared that in any but the largest municipalities, the Committee would not be of much practical use, the work would be left to the President of it, if, as is suggested, the Civil Surgeon be appointed president, this work would thereby be considerably increased, which is not what is wanted.

The measures recommended by the G. of I. are somewhat

* Vide 10/1/96
17.1.96.

Reorganization of the Sanitary Service in India.

FOR ORDERS.

of beginning the house at the roof and building downwards.
The whole thing is I submit premature
A start has been made to improve the housing system but the progress made must be necessarily slow and I doubt very much indeed if before the new 1908 things will be sufficiently forward to allow the local bodies being compelled to appoint Health Officers.
I consider that it would be a very good plan to put Hospital Asst. who could also look after village sanitation in the place of the present Dist. Supts. of Vaccination who for the greater part are absolutely useless for this purpose would of itself require some time to complete as the supply of Medical Subordinate is not at present more than, if enough, to supply the demand if even that.
If this step was carried out the work of Dist. Supts. of Vaccination and Sanitary Officer (of the lower class) might be combined.
It is however a matter for question whether if all Sanitary Officers does has work in regard Vaccination not fully he can find time for anything else.
I do not think that he can but it may be held otherwise. If it is the Government money which now goes to pay Dist. Supts of Vaccination will be available for the improvement of

H.M

DEPARTMENT

C. No.

FOR ORDERS.

The Sanitary Dept.

For the appointment of Health Officers Local bodies we must have I take it something better than a Hospital Asst. to produce the article which should I presume not be below the grade of Asst. Surgeon will take some considerable time: there is nothing of the kind available at present - note there is a deficiency. Note back of the scheme will therefore have to wait until the material has been provided.
The Dist. Asst can be turned out more rapidly than the Asst Surgn.
The suggestion made in lieu of the Indian Officer has already been given effect to regarding as regards the concluding portion. India has however overlooked in that the fact that of the Asst. Surgns it is to do training which

will have up a very Considerable Portion of the year the Council before his duties as Health Officer of the Ld. G: Municipality efficiently -
I do not know what Rules the G of I had in view when speaking of requiring the Councils to entain Med. Officers should possess the lower Qualification we suggest. It would have been as well if they had specified the office. I presume that Municipal Officers & Municipal Engineers are those referred to.
I can think of no one else.
As regards Special Sanitary Committees they are all very well on paper but I doubt if in practice they will be of any use - also any Rule for some years to come. Take for example Bhowanipore and the last Outbreak of cholera there. What would have been the use of a Sanitary Committee of Councillors there - when though the Dist. Health a Sanitary Officer would at the head of it?
The other Boards touched upon by India are matters for consideration in the Public Depts in which they

FOR ORDERS.

H. E. THE GOVERNOR.

THE HON'BLE MR. H. W. BLISS, C.I.E.

THE HON'BLE MR. J. GROSE.

DEPARTMENT

C. No.

FOR ORDERS.

will be dealt with.
I am afraid that this note is rather a disjointed one but as whilst engaged with it I have been interrupted some twelve or fourteen times with matters to which I had to attend at once it has been impossible to write in a more connected way

20/1/76

Reorganisation of the Sanitary Service in India.

3654 L.

FOR ORDERS.

H. E. THE GOVERNOR.
THE HON'BLE MR. H. W. BLISS, C.I.E.
THE HON'BLE MR. J. GROSE.

Cs. No. 112

Transferred to the Public Department with notes in original.

28/1/96 W. W. Hillyer
ag. asstt. secretary

Fort St George
27th January 1896

Read 30/1/96

Public Dept
G No. 4344 of 1895.

Memo. No 676 dy 25/3/96.

The Surgeon General is requested to be so good as to furnish a copy of letter No 7/2-6 dy 9th November, 1887 quoted in para 10 of his letter No. 572 dy 19th December last regarding the Sanitary Service in India.

JDB.
for Cs.
24/3/96

To
The Surgeon General
despd 25/3/96

No. 269

OFFICE OF SURGEON-GENERAL
WITH THE GOVERNMENT OF MADRAS,
Mdras, 15th April 1896.

From

SURGEON-MAJOR-GENERAL C. SIBTHORPE, F.R.C.P.I.,
SURGEON-GENERAL WITH THE
GOVERNMENT OF MADRAS,

To

THE HON'BLE THE CHIEF SECRETARY TO GOVERNMENT,
Public DEPARTMENT.

SIR,

In compliance with your Memorandum No. 676 Public dated the 25th March 1896, I have the honor to forward herewith a copy of Surgeon-General Bidie's letter No. 52 dated the 4th November 1887 regarding the appointment of Sanitary Commissioner.

C Sibthorpe
Surgeon-Major-General
Surgeon-General
with the Government of Madras

(1896.) Public Department.

From

Surgn.-Major-General C. Sibthorpe, F.R.C.P.I.,

Surgeon-General with the

Government of Madras,

No. 269

Dated 1st April 1896.
Received

CHIEF SECRETARY
-2. APR. 1896
GOVERNMENT OF MADRAS
Subject

I am asked as desired forwarding a copy of Surgeon-Genl Sibthorpe's letter No. 2.4 dated 9th March 97 re appointment of Sanitary Commissioner

Munl. (189) Department.

CURRENT No. 3442

From The Public Deptt.

No. 2666

Dated 18/2

Received 18/2

Registered

Enclosures

Spare copies

SUBJECT.

Forwg. letter from the Govt of India enquiring when it may expect to receive the reply to the subject of the proposed reorganization of the sanitary Dept.

BACK P

G.O.	No.	Dep

FURTHER PAPERS.

G.O.	No.	Department.	Date.

LOCAL AND MUNICIPAL DEPARTMENT.

Current No. 2612 of 1896

From the Public Dept

FOR ORDERS.

In para.1 of ~~the~~ 16 resolution No.11 Sanitary-313-326, dated 26th October 1895, the Government of India drew the attention of Local Governments and Administrations to a discussion of the Indian Medical Congress held in Calcutta in December 1894, which was initiated upon a paper read by Dr.W.J.Simpson upon the need for a sanitary service for India, and in the subsequent paragraphs, it made certain observations and suggestions on the lines recommended in that paper in view to the reorganization of the sanitary department in India. This resolution was, in G.O.No.1000 Public d/ 9th December 1895, communicated to the Surgeon General and the Sanitary Commissioner for full report, and to this Department for remarks. The points in the resolution requiring consideration in this Department were then noted

and the paper was transferred to the Public Department with the remarks of the Hon'ble Member in original-Vide endorsement No.112 dated 29th January 1896,(Public,Current No. 385 of 1896). The Surgeon General and the Sanitary Commissioner also submitted their reports to that Department,-Vide Public Current Nos.4544 of 1895 and 1086 of 1896,- and these with the connected papers were again referred to this Department for remarks, with the current read above.

2. In his paper above referred to, Dr. Simpson suggested the following broad outlines of a scheme for the reorganization of the Sanitary Department in India:-

(1) Complete separation of the sanitation of the army and the military cantonments from that of the civil population.

(2) Special sanitary training of students in the medical and veterinary colleges & schools of India, and the offer of facilities to other classes of students for obtaining, when desired, special training in sanitary engineering and architecture in the engineering colleges and technical schools.

(3) Appointment of a Health officer in each Municipality or combination or group of Municipalities or local authorities after a certain date, his appointment, pay, leave, dismissal,&c.,being subject to the approval of the Sanitary Commissioner.

(4) Formation on every Municipal Board, of a small but special sanitary committee with a medical man, and, when possible, the Civil Surgeon, as President, and the annual provision of a certain sum of money

Pages 529-536 of the transactions of the First Indian Medical Congress put up.

Page 541 of the Transactions of the First Indian Medical Congress.

money to be placed at the committee's disposal for sanitary work only.

(5) Appointment of the Civil Surgeon on a proper remuneration with defined powers, as Chief Consultant Health Officer of the district, and of a special district Health Officer in those places in which he is not available, either owing to overwork or other cause.

(6) Placing of the local and district Health Officers in close relationship with the Sanitary Commissioner of the Province.

(7) Placing of the Provincial Sanitary Commissioners in touch with the Imperial Sanitary Office.

(8) Representation of health matters on the Imperial Council. On this the Congress said "The Public Health Section "of the Indian Medical Congress, having "heard the communication of Dr.Simpson "on the subject of the present organiza- "tion of the sanitary service in India "and the amendments and suggestions "which he has formulated for the exten- "sion and development of that service, "is convinced that the health & welfare "of the population, European and Native, "would be greatly advanced by the carry "ing out of those proposals,and would " be advanced in proportion to the ex- "tent to which they are carried out,and "it respectfully suggests that the Go- "vernment of India should give its ear- "nest attention to them with a view to "their practical adoption." It was with this view apparently that the Government of India made its observations &

suggestions for the reorganization of the Sanitary Department in India. These with the remarks made thereon by the Surgeon General and the Sanitary Commissioner are summarized in the following paragraphs.

3. The Government of India remarks that the sanitation of the army and the military cantonments has already been completely separated from that of the general civil population and that the cantonment committee is the local authority responsible for the sanitation of the cantonments in accordance with the regulations issued under the Cantonment act. Neither do the local civil authorities nor does the Sanitary Commissioner with the Government of India, interfere with the administration of sanitary matters within cantonments, though the latter acts as the adviser of the Government of India on sanitary points connected with the construction of barracks and hospitals for European and Native troops &c., and also exercises a general supervision over the compilation of the mortuary and health statistics of the army. Whatever action is taken on his advice, is the action of the Government of India and not that of the Sanitary Commissioner. The Government of India therefore sees no reason for reconsidering the existing arrangements in this respect, but would say in regard to the sanitation of the cantonments that, should the cantonment committees at any time seek the assistance or advice of the Sanitary Commissioner or the local Civil District & Medical Officers, it should be freely given to them. The Surgeon General concurs largely in these remarks, but the Sanitary Commissioner

Para.2 of Surgeon General's letter Cur.No.4344 Pub.of 189[illegible]

Para.90 of the Sanitary Commissioner's Memo.in Cur.No.1086 Pub.of 96.

Commissioner thinks that the demand that a further separation of the civil & military branches should be made in regard to sanitation, is most erroneous. The chief reason why the sanitation of cantonments has become such a reproach to India is that this separation actually took place in 1869, and that since then, no material advance has been made in the sanitation of cantonments in contrast with the results obtained as regards the civil population. The care of cantonments and barracks has been left in the hands of medical officers who have been unable to press their sanitary opinions upon General Officers Commanding, beyond a certain point, by reason of the distinctly conservative tendency of "military" discipline. Moreover it is inadvisable that the cantonment populations should be supervised as to sanitation by men who have no knowledge of the conditions and causes of diseases existing beyond the confines of the extremely limited areas under their control. The Sanitary Commissioner therefore thinks that the military medical officers appointed from time to time for sanitary duties in cantonments should conduct them in communication with the Sanitary Commissioner, and that the cantonments should be subject to the inspection of the latter. These suggestions of the Sanitary Commissioner do not appear to be worthy of consideration.

4.

I agree with the Govt's view in this matter. Whether maybe the case elsewhere, we need not trouble to suggest any alteration in existing arrangements. But what Dr K. says is perfectly true & should therefore seem to be dealt with

GHH

The military cantonts in this Pr are few & there is no reason to believe them to be foci of disease spreading to & affecting the general population. There is no reason therefore why this Govt need take up the question or interfere with the existing cantont. admn in sanitary matters under existing military supervision. It will be enough if, as the G.O.C. indicate the Cant. authorities may always go to the advice of the S.C. or the Dist. Officer. 27/11

4. The Government of India thinks that the work of the Sanitary Department among the general civil population is defective in that it is too much separated from the Civil Medical Department, which is responsible for the distribution of medical relief. The sanitary and vaccination department is engaged on preventive, and the medical department on curative measures, but these two departments have not in the past, been associated together in such a manner as most efficiently to further their aim, namely, the improvement of the health and conditions of life of the civil population. The sanitary department consists in the larger provinces, of a Sanitary Commissioner aided by one or more deputies who are officers of the Indian Medical Service, with a subordinate staff of inspectors etc, who have received no special education in sanitary matters, and in the smaller provinces, the duties of this officer are combined with those of the Inspector-General of Civil Hospitals and there are no deputies. Thus the executive branch of this department does not furnish the proper machinery for carrying on local sanitary work, and the duties of the superior officers have, beyond inspections which lead to the discovery of local sanitary defects, but not always to their removal, been mainly limited to the collection of vital statistics and the control of vaccination. The Government of India acknowledges the good results which have been attained in the encouragement of vaccination, but thinks that the improvement secured in the registration of vital statistics and in sanitation, has not been, hitherto, at all commensurate with the expenditure on this department. The Government of India therefore thinks that if any tangible improvement is to be effected in sanitary work, particularly in rural areas, the quality of the supervising agency must be improved and that it is essential in order to make this agency efficient, to require that it should be specially trained in Hygiene, though it will not be necessary to require that a very high standard of qualification in sanitary knowledge should be attained by the subordinate members of the Department. The Government of India understands that in some provinces an attempt is made to give lectures on the principles of sanitation; but the present arrangements are in its opinion incomplete and unsatisfactory. It therefore enquires about the present state of instruction in this subject and the arrangements which should be made to improve and extend it. The Government of India favours the idea of instituting a system of granting special diplomas in Public Health and is anxious that the course of teaching which should be prescribed and the examinations which should be instituted for superior and inferior qualifications for the grant of diplomas, should be considered by local Governments. The

Government

Government of India further says that it has under consideration the question of establishing an Imperial Laboratory, and that if the proposal is carried into effect, it will probably be found possible to arrange for a certain number of the students in Hygiene attending a course of Bacteriology at this laboratory.

The Surgeon General, in supporting these remarks of the Government of India, states that as regards the lower qualifications required from sanitary inspectors, the Government has fully dealt with the matter in G.O.No.1914 M., dated 10th December 1894, and that he has suggested in para.9 of his letter No.568 dated 17th December 1895, recorded in G.O.No.283 M. dated 17th February 1896, that medical men of the hospital assistant's class, who showed a predilection for sanitary work, should be permitted to qualify as sanitary inspectors. With reference to the institution of a system of granting special diplomas in Public Health, the Surgeon General reports that in this presidency, an admirable system of training, worked out from the experience gained in the universities in Great Britain and suited to the requirements of this country, was adopted by the local University some 7 years ago- vide page 107 of the University Calendar for 1895-96,-and that in para.4 of his letter recorded in G.O.No.615 Educational dated 18th August 1894, he pointed out that it was desirable that the locally educated medical men should be encouraged by Government to study for this special degree,

Paras.5 of the Surgeon General's letter.

...der disposal in the Public Department-Vide proof copy put up.

...No.714 Pub.d/8"July 96.

of the Sanitary Commission-

degree, that with such qualifications they would be fitted to take up the duties of medical officers of health and that Government should therefore for the next ten years guarantee employment to these men. As however these proposals were not favourably considered by Government (G.O.No.697 Public d/ 19th September 1894) the Surgeon General says that he has recommended in para.16 of his letter No.541 dated 13" October 1894, that every third vacancy in the grade of Assistant Surgeon should be reserved for these men, as the mere notification of the fact that preference would be given to them would not be sufficient to encourage them to study sanitary science, and pointed out that the accurate study of this science by trained native medical men was most desirable, for they would help to educate the native public in the facts regarding sanitary science. The Surgeon General also states that a single laboratory for the whole of India would not at all meet the requirements of the Madras Presidency, and that the question of establishing one in Southern India was fully dealt with by him in the correspondence recorded in G.O. No.662 Public dated 3rd August 1895.

The Sanitary Commissioner states that as the demands of registration, vaccination and sanitation must be met by a staff which shall have common duties, scheme No.1(a) in his report on the reorganization of the vaccination

department, with slight modification, will best meet the requirements of this presidency. This scheme contemplated the use of preserved animal lymph to be cultivated at a special vaccine institute, which was to serve as a training school for vaccinators, who would there, besides theoretical and practical vaccination, be taught hygiene, Physiology, the clinical aspect of certain human diseases and cattle diseases. These vaccinators were to be placed under assistant superintendents and these again under Superintendents of vaccination in charge of every two Districts. To this staff the Sanitary Commissioner would add some sanitary inspectors and conservancy overseers so that the combined staff may fulfil the functions of supervising registration, vaccination and sanitation. The duties required of this special staff are described in paras.26,27,36 and 37 of his Memorandum. Dr.King proposes that the vaccinators on joining the vaccine institute for training should have passed the matriculation examination; that the chief sanitary inspectors may either hold the L.M.S. degree of the Madras University or be qualified engineering subordinates, and on passing a qualifying examination in the subjects specified, will be required to undergo a four months'course of training in theoretical and practic l vaccination, and study of animal disease in the vaccine institute; that first class sanitary inspectors may be qualified civil apothecaries, hospital assistants, matriculates or graduates of the Madras University &

wide Current No.3978 L. of 1903 & 1851 L. of 1904, with the M.M. Proof copy of the note for orders put up.

persons holding a certificate of having passed an examination in construction, surveying and drawing, after a course of training in the Engineering College, that they should be required to undergo a course of six months' training in practical hygiene at their own expense and that after passing a qualifying examination in this subject of a lower type than for chief sanitary inspectors, they should be required to attend a course of four months'study at the vaccine institute on the theory and practice of vaccination and on cattle diseases; that second class sanitary inspectors should be required to possess one or other of the educational qualifications demanded for the first class and be selected from those who pass the qualifying examination in the second class; and that conservancy overseers should be required to have passed the Lower Secondary examination in the first class and after nomination by the Sanitary Commissioner, to attend a course of practical and theoretical hygiene at the Albert Technical Institute, Trichinopoly, which offers special facilities for such education, & to undergo an examination for certificates as "Conservancy Overseers". With a view to secure the education of the proposed sanitary staff, Dr.King recommends that an officer attached to the sanitary department as Bacteriologist, should be lent for the purpose of teaching theoretical and practical hygiene and Bacteriolo

Paras.65& 66 of the Sani

tary Commisioner's Memo

Paid for by the Dr. Commissioner: but too costly
– see para 6 supra

Bacteriology. He also states that each district should have a separate Health Officer who should hold the M.B. & C.M. Degree of the Madras University or British qualifications allied with the Licence in sanitary science of the Madras University, already alluded to by the Surgeon General.

As recommended by the Surgeon General, the Government has already laid down in G.O.No. 1914 M.d/10th December 1894, a scheme for the training of sanitary inspectors, and there is no reason at present to modify it. In this connection please see the notes and orders in G.O.Nos.285& 284 M.d/17th February 1896. In para.11 of G.O.No.476 Rev.d/21"September 1896, the Government said that it was not prepared at present to consider the Sanitary Commissioner's proposal to appoint special sanitary inspectors for large villages for registering vital statistics and attending to vaccination and sanitation as it would involve strengthing the vaccination sanitary staff at great expense and in G.O.No. M. d/4th January 1897, the Government observed that the proposals made by the Sanitary Commissioner for the employment of trained sanitary inspectors in local areas should be left out of consideration at any rate for the present& recommended the appointment of only men who have passed the Intermediate test in Hygiene as Sanitary Inspectors on Rs.20 & upwards and the employment of at least one trained Sanitary Inspector in every Municipality, of two such men in Municipalities with a population of more than 30,000 inhabitants and of three such men in Municipalities with a population exceeding 50,000 inhabitants. System of special diplomas to licenciates in sanitary science are already granted in this Presidency, and the recommendation made by the Surgeon General that every third vacancy in the grade of Assistant Surgeon may be reserved for persons passing this degree, is now under consideration in the Public Deptt., as are also the replies received from the Sanitary Commissioner and the Surgeon General to G.O.No. 714 Public dated 8th July 1896, regarding the establishment of a bacteriological laboratory in Southern India.

This is as far as Govt consider it proper to proceed for the present having regard to the financial means of local

5.

Medical & sanitary objects (including vaccination) in general. On the contrary, I should be disposed to see more attention given to these objects & in particular I should like to see that the Local Boards, where the field is a large one, have a medical officer specially appointed & responsible for the work in their districts. Would be as well, I think, to make this understood at once. I would also say that Govt are glad to assist L.B.s as they do in the provinces (vide Public Letter to Govt of India No 905 dt/ Dec 19, 1896, last para)

I fully concur with the above Govt.

5. The Government of India now proposes to substitute for the present inefficient machinery of the sanitary department an agency specially trained in the manner referred to in the preceding paragraph, but states that the change can only be brought into effect gradually with due regard to financial considerations and to the claims of the existing incumbents. Subject to these considerations, the duty of inspecting and checking the work of the vaccinators and of looking after village sanitation, should in the opinion of the Government of India be gradually transferred to men who have gone through a course of hygiene and hold sanitary qualifications. The question however for consideration, is whether these men should be required to go through a full medical course or to obtain a medical qualification, and the Government of India thinks that it would be advantageous to select them from the general body of Assistant Surgeons and Hospital Assistants who have gone through a special course of hygiene and that in this case it would be necessary to give them some addition to their grade pay, which might perhaps be fixed at 15 percent, as otherwise the better qualified men will not desire employment in the sanitary department, where they will lose the opportunity of private practice.

The Surgeon General states that in addition

addition of 15 per cent to the grade pay of these men, suggested by the Government of India, would not adequately remunerate them for giving up private practice, which should be compulsory, and he therefore considers that it should be at least 25 per cent of their grade pay. It is however submitted that the proposal to employ Assistant Surgeons or Hospital Assistants as sanitary inspectors is hardly feasible owing to the supply being much short of the demand, and the Government of India may be referred to para 3 of the letter in G.O.No.234 M., dated 17th February 1896. In this connection please see also the notes on Current No.3654 of 1895.

6. The Government of India is in favour of the suggestion that each municipality or group of municipalities or local bodies, should be required after a certain date, before the beginning of the year 1900, to appoint a Health officer to superintend vaccination, sanitation and the collection of vital statistics.

The Surgeon General states that the sanitary department now consists of a Sanitary Commissioner, a deputy Sanitary Commissioner, and 53 Deputy inspectors of vaccination working in the 22 districts of the presidency and that the district medical and sanitary officers, Civil Surgeons and the assistants to the former have a certain amount of supervision

Para 5 of the Surgeon General's letter.

under disposal in the
public Department. Proof
copies of the letters put up.

Para 7 of Surgeon General's letter.

supervision over the work of the Deputy Inspectors of vaccination. In paragraph 15 of his letter No.541 dated 13th October 1894, he has proposed that nine Assistant Surgeons should be appointed as resident medical officers of hospitals containing above 100 beds and in paragraph 12 of his letter No. 36 dated 15th January 1895, he has proposed that all other hospitals should be placed in subcharge of lower grade Assistant Surgeons. Dr. Sibthorpe says that if these proposals are accepted, it would enable Government to utilize the present 21 assistants to the District medical and Sanitary officers as Health officers under them and to require from all future candidates, that they should hold a degree in sanitary science. If Health officers were appointed to all large municipalities, it would then be possible to place the whole of the sanitary department, including vaccination in both urban and rural areas, under the district medical and sanitary officers and Civil Surgeons. The Surgeon General also states that trained sanitary inspectors should gradually take the place of deputy inspectors of vaccination as vacancies occur, their number (53) being considerably reduced in order to pay higher rates to trained men and that the appointment of Assistant Surgeons holding the degree in sanitary science to all large municipalities, would be a distinct step in

advance

advance and would tend to the working of these institutions much more efficient.

The Sanitary Commissioner recommends the appointment of 21 men as district Health Officers, who should be required to hold the L.M. and S. degree of the Madras University or British qualifications, allied with the licence in sanitary science of the Madras University and to attend solely to the supervision of vaccination, sanitation and the collection of vital statistics. The details of the duties expected from these officers are given in paras 70 - 73 of his memorandum.

The suggestion of the Government of India, though a desirable one, cannot be adopted, in its entirety, for want of funds, but the Surgeon General's suggestion to utilize the 21 Assistant Surgeons as district Health officers may be adopted if the proposals referred to by him are approved in the Public Department. Under para 5 and 10 of G.O. No.391 Public, dated 22nd February 1883, one half of the cost of the establishment of Assistant Surgeons in addition to the mileage and halting allowances drawn by district medical and sanitary officers while travelling on duty in their districts, is at present debited to Local and Municipal funds.

7. The Government of India suggests that candidates for certain municipal offices should be required to possess the lower qualification in hygiene.

It

Paras 65-66 of the Memo.

The Surgeon General's suggestion is for the present the most practicable.

For the present there is no urgency for this scheme

Should be adopted when the Sanitary Commissioner is touring the Karnatic

Approved

Key refer to Law Dept & Health Officer

Rc Go. 4 Jan 1897 No 417.

Para 6

Para 8 of the Surgeon General's letter.

It is not known what particular posts the Government of India had in view when making this suggestion and it would have been well if these had been specified. It does not appear to be desirable at present to insist upon the lower qualification in hygiene for any of the municipal offices other than those of sanitary Inspectors, as for some years to come, at any rate, the supply of qualified men would not equal the demand.

8. The Government of India recommends the appointment of special Sanitary Committees with a medical officer (the Civil Surgeon if possible), as President, to supervise the expenditure on sanitation in large municipalities, as under present circumstances, though funds are in most cases readily provided by the councils concerned for sanitary work, they are not always expended to the best advantage.

The Surgeon General states that the appointment of such committees would be a distinct step in advance and would tend to spread sanitary education and make the members take more interest in questions of sanitation. He says that the district Medical and Sanitary officer or Civil Surgeon should certainly be a member of such Committees and should as a rule sit as President and that the sanitary portions of the Local Fund and Municipal budgets should be prepared by these Committees.

Th

The Sanitary Commissioner does not touch upon this suggestion of the Government of India, but proposes the establishment of local sanitary boards for each district, vide paras 47-57 of his memorandum.

It is doubtful whether the appointment of these committees will be of much practical use, at any rate for some years to come, and whether the members concerned would take active interest, for, as suggested by the Government of India if the Civil Surgeon be appointed as President of the Sanitary Committee, everything would be left to him and his work would thereby be considerably increased, which is not what is wanted.

9. The Government of India is of opinion that the District Medical and Sanitary officer or the Civil Surgeon should be the head of the district organization in vaccination and sanitary as well as medical matters, but that in nearly all provinces he has now been entrusted with the work of supervising vaccine operations only. He is also the sanitary officer of his district, though his duties in regard to rural sanitation have not in all cases been properly defined. The Government of India directs that in the Provinces where this matter has not as yet been clearly defined, steps should be at once taken to declare his authority and enforce his responsibility in such matters. As his duties cannot be efficiently performed unless frequent opportunity is taken of visiting the interior of the district, the Government of India says that it will be necessary that he should be provided with an Assistant Surgeon as his personal Assistant, either to relieve him from time to time of his head-quarter duties or to visit the interior on his behalf and under his instructions.

Except the Civil Surgeon or Dist. Boards & Municipal Apothecary or Municipal Councils the other members ordinarily have no ... of scientific sanitation. Reward committee (in Native States) supposed to bring the sanitary defects of towns ... In the larger cities & the HQrs of districts the Civil Surgeon is a member of the Council, & it wd. ... enough if he is appt. ... member of every Committee for Sanitary purp... In other Natives. there is no difficulty. The med. officer of hospital and being a ... of the City. is frequently ... member of the Council: but there is no reason why he ... not assist the Local Com... with his advice if he happens to have qualified in hygiene. In practice, advice is not given at present, but willingness to follow it will come in time. Meanwhile, ... appointment of Civil Surgeon as ... is available in most Districts.

Para. 9 of the Surgeon General's letter.

This should be pointed out to the G. of India.

GJF 7/M

The Surgeon General states that these proposals of the Government of India have been anticipated in this Presidency by the appointment of an Assistant to the District Medical and Sanitary officer in 21 of the districts vide G.O.No.391 Public, dated 23rd February 1883. The difficulties in working this system however are set out in the correspondence printed in G.O. No. 57 Public, dated 24th January 1895. Owing chiefly to the large areas of districts, too much of the District Medical and Sanitary officer's time was taken up in making extended tours which resulted in the important duties at the head-quarters being neglected. These officers were therefore permitted in the Government order above quoted to depute their Assistants to visit such of the larger hospitals and dispensaries as require to be inspected more frequently than once a year. The Government also considered it would be sufficient if all the municipalities and Unions in a District are visited and reported upon either by these officers or their Assistants. Dr. Sibthorpe suggests that ... Assistant to the District Medi-

Medical and Sanitary officer were relieved of his medical work and properly trained in sanitary science, he would be able to do more sanitary and inspect the minor dispensaries, and that the District Medical and Sanitary officer would have more time for supervision and for his professional work at head-quarters.

The Sanitary Commissioner however proceeds on different lines and his views on the position and duties of the District Medical and Sanitary officers are contained in paras 58-64 and 74-79, of his memorandum. He considers it highly desirable that the rural parts should be frequently inspected by these officers - a duty which they have been relieved by the Government ord r above referred to. He therefore suggests the employment of additional Uncovenanted Medical officers as Health officers.

It does not appear to be necessary to take any further action in this matter at any rate for the present.

10. In its resolution No.10/533-44 dated 29" September 1887, the Government of India observed that Sanitary Commissioners had not invariably shown themselves active in performance of their duties and that they were in some cases permitted to spend time on the hills, which should be employed on inspection duty in the plains, and requested Local Governments to impress upon these officers the imperative necessity of exercising vigour and activity in the discharge

discharge of their duties, particularly in the work of inspection, leaving the Local Governments to consider whether the work of these officers might not be more efficiently discharged if younger officers were selected for the appointments. The Government of India now thinks that these officers are still kept too much at the head-quarters and that they do not spend sufficient time in moving about on tour through their charges. It is therefore of opinion that as a rule these officers should be engaged in touring during the greater part of the year and that in order to secure this, it is desirable that junior officers with special qualifications should in future be posted to these appointments. In view of the appointment of such officers, it is considered desirable to reduce the initial pay to Rs 1,000. The Local Governments are requested to express their opinion on this point as well as on the question whether any alteration is required in the rule laid down in the resolution of that Government dated 7" June 1888 No.4--540--51 that the tenure of the appointment of Sanitary Commissioner should be fixed at seven years, subject to the condition that an extension not exceeding 3 years may be granted on the recommendation of the Local Government.

Para 10 of the Surgeon General's letter.

The Surgeon General strongly depr-
-cates junior officers being selected
for the appointment of Sanitary Commis-
-sioner

Commissioner, who should be always an officer of extensive Indian experience and wide knowledge, preferably an officer holding a special qualification in sanitary science, who had considerable experience as a District Medical and Sanitary officer. If the appointment of Deputy Sanitary Commissioner is to be continued, he might be a more junior officer, but his advice then will not be worth much or carry weight unless he has acquired actual experience of the wants of the people and the possibilities of meeting them. Dr. Sibthorpe says that in this Presidency both the present and the late Sanitary Commissioners have spent a great deal of their time on inspection duty and that it is most desirable that both these officers should have some rest, especially during the hot weather.

The Sanitary Commissioner does not accept the proposals of the Government of India. He states that the Sanitary Commissioners in this Presidency do a great deal of inspection work and cannot afford to spend much of their time on the hills and that their initial salary need not be reduced, as the idea of probation which is implied in the proposal of the Government of India is already sufficiently secured by employing Deputy Sanitary Commissioners.

It is submitted that the views of the Surgeon General and the Sanitary Commissioner may be endorsed by Government.

This G. of I. has no reason whatever to complain of the existing arrangements & he is satisfied with the way in which the Sanitary Commissioners discharge their duties both as regards touring & their returns — He does not go to the Hills unless required there & he does not think that is required, but on the contrary is most useful. If he is to carry weight & have a wide local knowledge of the Presidency & large general experience, in other words, he must be a Deputy Sanitary Commissioner

I do not think the G. of I. dept. has any reason to complain of the thoroughness of the inspection or of the time devoted to them

S.H.

Paras 80-82 of the P.C.'s Minute

This is for the Public Dept

S.H.

Paras 2 and 11 of the Surgeon General's letter.

I do not think we need again meddling in the I. & M. dept. by the suggested amalgamation — rather the contrary.

S.H.

There will be numerous more work

12

of India's

11. The Government of opinion that the sanitary Commissioner should be subordinated to the Head of the Medical Department ie the Surgeon General and that the amalgamation of the office establishments of these two officers would probably lead to greater efficiency as well as economy while the work of the local inspection might be so distributed between the two superior officers as to bring a larger area annually under inspection.

The Surgeon General states that the superintendence of the administration of medical institutions for medical relief and the study necessary to advise the Government on such points as are referred to him are quite enough, combined with the annual inspections, to occupy his attention, and that it requires quite a different training and class of mind to fit him for such duties from those required to make an efficient Sanitary Commissioner, who should also have had medical training but should essentially have devoted himself to much broader questions of the prevention of disease and the promotion of health and contentment amongst large populations. Dr. Sibthorpe therefore considers that it would not be advisable to place the Sanitary Commissioner more under the Surgeon General, than he is at present, as it very likely cramp him in his work. In his opinion all requirements would be met if the Sanitary Commissioner directed to submit all orders he

to insts to District Medical and Sanitary Officers, Civil Surgeons, and th[e] subordination to the Surgeon General for approval and publication as departmental standing orders, and that he should also have the power of issuing such instructions to the Sanitary Commissioner or through him to his deputies, on the subject of inspecting medical institutions as he may think it necessary.

The Sanitary Commissioner also strongly deprecates the proposals of the Government of India and states that if he should be subordinated to any body it should be to the Sanitary Commissioner with the Government of India, and not to the Surgeon General. He thinks that if all the Sanitary Commissioners in India and Burma and the proposed Bacteriologists and chemical analysts were united so as to form a single sanitary service under the Sanitary Commissioner with the Government of India the grade of subordination suggested by it would be secured and the professional capabilities of the service would have better scope.

It is submitted that the views of the Surgeon General may be endorsed.

12. The Government of India says that under the arrangements now proposed for future administration of the Sanitary Department the necessity will no longer exist for retaining the Deputy Sanitary Commissioners who will certainly not be required for the supervision of

93-

V[illegible] 3[illegible] of his memorandum.

H.C. wd recommend
BS
Yes to Contd[illegible] again
ASH

Yes for the Pub: Dept to come to the final decision - as remark on preceding page
ASH

13

of vaccination operations, but that it might possibly be desirable to continue in the larger provinces one such officer whose main function would be to enquire into special outbreaks of disease and their causes or continued unhealthiness of any particular tract of country. The Government of India thinks that any saving which could be effected in the cost of Deputy Sanitary Commissioners would be available for the improvement of the District Sanitary staff and that the duties now made over to Deputy Sanitary Commissioners' of securing a proper supply of pure and efficient lymph for vaccination operations can be otherwise provided for.

Para 10 of the Surgeon General's letter.

The Surgeon General states that it would be a mistake to do away with the appointment of Deputy Sanitary Commissioner in this Presidency, but on the other hand it would be better

BS
H.C. ASH

We do very well as we are & don't want another officer - the fact we can't afford one, nor, if we could, would to [illegible] with third money tracy out further inferior

to provide a second one so that all the municipalities and Unions might be inspected annually in their Sanitary and Medical aspects, as under para 4 of G.O. No. 57 Public, dated 24th January 1895, it is now the duty of the Sanitary Commissioner and his Deputy to inspect all medical institutions in the towns they visit and report on their administration, copies of the reports being sent to him or to the local authorities for the necessary action.

The Sanitary Commissioner says that it is hopeless on financial grounds to ask for another Deputy Sanitary Commissioner, but presumes that the existing one will retain his function of Inspector of vaccination under him and that an officer conducting both Bacteriological and Chemical work in connection with fumigation will also be at his disposal.

In para 6 of G.O.No.61 L.d/12th January 1891, the Government said that the controlling agency of the Vaccina-

and that it would be prepared to recommend the addition of three Inspectors of vaccination to the present establishment. The papers regarding the reorganization of the Vaccination Department are now with the Hon'ble Member.

13. The Government of India concludes by saying that as far as it is able to judge, it should be possible to effect the changes advocated by it in the organization of the Sanitary Department without increasing the cost of it, but that if this is not feasible, the question of how far local funds could be called upon to contribute towards any increase of expenditure involved in reorganizing it should be carefully considered.

At present Local and Municipal Funds contribute for the following purposes:-

(1) The Controlling and Account establishments at the Presidency town.

(2) Training of Hospital Assistants at

at the Madras Medical College.

(3) Nobody of the cost of Assistant Surgeons in addition to the travelling allowances of District Medical and Sanitary officers.

(4) Medical Reserve staff.

Local bodies cannot it is submitted bear any additional charges which may be rendered necessary by the adoption of the proposals formulated by the Government of India.

14. The other matters dealt with by the Sanitary Commissioner in his memorandum being outside the proposals of the Government of India need not, it is submitted, be considered here.

2/11/97 H.M.

I have noted on the margin of the above such remarks as seem to be called for in this dept.

The papers regarding the Organization of the Vacc. dept are with the Hon. M. The decision

2 par not
C.J.X. C. Lang 2/11

Excellent. G.H.H

learn to walk before we attempt to run. All these schemes are part of the great inevitable problem of governing an Oriental nation and they can be postponed for at least a generation. If they are pressed now, the only result must be that the means of carrying them out must be formed by neglecting other work which is far more calculated to be for the [illegible] welfare of the people generally, which is recognized and performed by them as beneficial

26/11/97

I concur with all my heart with the Hon. Minutes of the Govt. of India will not take heed to warnings of this kind, they will have ask for British rule, popular hatred which [illegible] might turn another Mutiny, starting into a rebellion of the people.

The extravagance of the Govt. of India is only surpassed by their love of theoretical improvement and advancement. "If" says the Shoemaker "India had two hundred millions "a year, the Government would stretch its dominion to "the Arctic Ocean, talking the while about the "most trade "in ice", which ought to have a railway to itself", - would "double the Army, would quadruple the number of "the Officials, and would order the whole population to "be carefully instructed in Edwin Chadwick's views of "sanitation and Pitman's system of shorthand."

Whatever money we can devote to Sanitation should

Public DEPARTMENT. 1

Papers to be read in proceedings :—

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

Current No. 4344 of 1895, dated 19/12, from the Surgeon General
" " ~~383~~ of 1896 " 29/1 " the L + Dr septe
" " 1086 " 1896, " 23/3, " the Sanitary Commissioner
" " 1212 " 1896, " 1/4, " the Surgeon General
" " 4216 " 1896, " 14/2, " Sory of State, Home septe
" " 355 " 1897, " 28/1, " the L. + Dr. Deptt

ORDER. No. 435 dt 17-4-97

The papers read above contain proposals for the reorganization of the Sanitary Department and the opinions of the Surgeon-General and the Sanitary Commissioner on the subject. The Govt. has been while agreeing with much that ~~he said~~ said by these Officers in the matter finds it impossible, for financial and other reasons, to give its assent to any such broad scheme of reorganization as is suggested by the Sanitary Commissioner. Alterations and additions to the Sanitary Department in this Presidency can only be ~~made~~ effected gradually as money becomes available and local experience suggests improved methods. Under the circumstances it is useless to review in detail ~~Dr. King's~~ the proposals put forward by the Sanitary Comm^r.

~~It is observed however that~~ However the enquiries made have disclosed certain means of improving the existing arrangements without incurring additional ~~in~~ expenditure. The Sanitary Commissioner

J.H 4.4.97

15/4/97

J.P 15/4/97

Note for Cl.
Submitted that as the proposals of Mr Dan's Comm^r have been rejected for want of funds no more detailed G.O need issue.

points out that something might be done by enlisting as Deputy Inspectors of Vaccination trained Sanitary Inspectors. This is an improvement which is within the powers of the Sanitary Commissioner himself to carry out and no orders of Govt. on the subject are required. Similarly the Govt. approves of the proposal of the Surgeon-General to draw closer the connection between himself and the Sanitary Commissioner by arranging for the submission to him, and the issue as departmental standing orders, of all instructions which the Sanitary Commissioner gives to District Medical and Sanitary Officers, and by authorising the Surgeon-General to issue instructions to the Sanitary Commissioner, and through him to his subordinates, on the subject of inspecting Medical institutions. The necessary arrangements for carrying out these suggestions should be made by the officers concerned. Any greater degree of subordination of the Sanitary Commissioner to the Surgeon-General is, the Govt. considers, inadvisable.

3. The following letter will be despatched to the Govt. of India.

20/3/97

28/3/97

the Surgeon. Genl.
Sanitary Comr.
& Secy. Dept.

2/5/97

R 9/4/97

H. E. The Governor.

(Draft of a letter to the Govt of India)

Appd. Nt. & Lt Secretary.
8.4.97

13/4/97

JG
15/4/97

The great increased expenditure which carrying them out would involve and the very strong discontent which enforcing them would create from two very cogent grounds for considering the introduction of them for some considerable time at any rate, practically impossible.

N° 436.

126

LETTER:-

To

The Secretary to the Government of India,

Home Department.

SIR,

I am directed to reply to the resolution of the Govt. of India, No. 11-Sanitary--313-326, dated 26. Oct. 1895, forwarded under Mr. Thornton's endorsement, and to say that after a careful consideration of the subject, H.E. the Governor in Council is strongly of opinion that, while it would be ill to deny the theoretical value of the improvements and advances in sanitation which are outlined in the resolution, there are two main obstacles to the practical application of the scheme which are at present insuperable, namely the increase upon future involved and the very unpopular nature of some of the proposals. In para. 11 of the resolution under reply the Govt. of India expresses the opinion that it should be possible to effect the changes and additions advocated without increasing the cost of the Sanitary Dept. In this His Excellency H.E. the G in C regrets his inability to concur. to say that this Govt. is quite unable to concur in this opinion. The proposals made involve (1) the creation of a large number of new posts and (2) the

substitution of trained for untrained men in offices already existing. On the other hand the only reduction in [illegible] ture staff [illegible] in the abolition of the appointment of Dy. Sanitary Commissioner which, as stated below, could not command its full cost. At best the saving would not cover more than a fraction of the cost of introducing men of the grade of Assistant Surgeon or Hospital Assts. in the various municipalities and local divisions as health officers, and of appointing a highly trained non-official agency to carry out the work at present performed at a small cost by Deputy Inspectors of Vaccination. It is evident therefore that extra expenditure would be inevitable. It is impossible under existing conditions that the cost should be provided from Provincial funds, neither can Local Funds bear the charge without an increase which would be most unpopular. So far from there being any prospect of increasing in the immediate future the outlay on medical and sanitary objects in rural tracts the conclusion has been forced on this Government that so much has hitherto been spent on these objects and on primary education that the roads, which should be the first charge on local funds, have been gradually neglected and require much expenditure to bring them into proper order. Whatever money may from time to time become available for sanitation and similar purposes

12

must in the opinion of H.E. the Governor in Council be devoted first to the improvement of water supply. It is therefore unwilling at present to expend on establishments highly trained in this theory of sanitary supervision which are required for many practical schemes for the amelioration of the conditions under which the people of this Presidency at present live.

2. In addition, however to financial objections this Govt. is strongly of opinion that the present scheme for the extension of sanitary measures to rural tracts would, if carried out, likely to cause great discontent among the people. It has so far been the policy of this Govt. to proceed cautiously with the introduction of sanitary measures, beginning with the municipalities where the people are more enlightened and where the subordinate agency is under supervision. To extend active sanitary operations, as proposed, by an establishment which would be a very far from easy to control necessarily be to harass the people who are strongly opposed to any change and who must be brought gradually to accept while the agency by which these measures will be entrusted will be far from easy to control. Moreover, as above pointed out the cost of these measures could only be met from local funds by the imposition of additional taxation, and any steps in that direction

would in all probability have effect to

probability of various discontent. In general grounds therefore I am to say that this Govt. is inclined to consider with regard to any large scheme of extension of sanitary measures that now put forward by the Govt. of India not only impracticable but inadvisable as far as this Presidency is concerned.

3. As regards [illegible] turning to the details of the resolution I am directed to state, with regard to the second paragraph, that the cantonments in Madras are so few and unimportant that beyond agreeing with the Govt of India that the military authorities should have the assistance and advice of the Sanitary Commissioner with the Govt. does not consider its if concerned with the principle of total separation of the civil and military sanitation agencies in this Govt. is not in accord. The care of cantonments and barracks is too often left in the hands of medical officers who have no knowledge of the conditions and causes of diseases existing beyond the extremely limited areas under their control and who, moreover, are unable, through the necessary restrictions of military discipline, to press their sanitary opinions, [illegible]

The cantonments in Madras are however few & unimportant. Beyond agreeing therefore that the military authorities should have, whenever they require it, the assistance or advice of the Sanitary Commissioner Govt. of India do not consider it necessary to elaborate discussion of general principles.

4. The views of the Govt. of India set forth in para. 3 are in many ways inapplicable to this Presidency. The medical and sanitary depts. are in Madras very closely associated. The Dt. Surgeon also the District [illegible]

[illegible] the [illegible] dept. [illegible] [illegible] (page 110)

14 U

and as such receives and carries out the instructions of the Sanitary Commissioner. He is the adviser of municipalities and Local Boards on matters of every day sanitation, on which he is quite competent to speak. It is perhaps true of Madras, as of other Provinces, that the discovery of local defects by the Sanitary Dept. does not always lead to their removal. Such defects are however invariably brought to the notice of the local bodies concerned. Any delay in remedying them must be attributed not to any failure on the part of the Sanitary Inspecting officers but to the impossibility, arising from limited resources of keeping the [illegible] suggestions made

5. While differing as already shown from the Govt. of India in regard to the benefits to be expected from the extension of an organized and highly trained sanitary agency to rural areas, this Govt. has anticipated the proposals made in para 4 of the resolution. There has existed for some time past in the local University an admirable system of training in matters relating to public health, worked out from the experience gained in the Universities of Great Britain but suited to the requirements of this country. In connection with this course a Diploma in Sanitary Science is granted by the local University. There is now before Govt.

a

a proposal to encourage medical men
desiring to enter Govt.Service to add
this subject to their other qualifica-
-tions. To provide for the lower quali-
-fication in Hygiene a course of train-
-ing for Sanitary Inspectors was, after
careful consideration instituted in
1894 and Govt.has no reason to be dis-
-satisfied with it. It has been suggest
-ed that some improvements might be
effected by the
of Dy.Inspectors of Vaccination of
trained sanitary Inspectors and this matter
accordingly be taken. The questions of
detail as to the employment on extra
pay of sanitary officers with medical
qualifications need not under the
circumstances already set out be
discussed by this Govt. difficulties pointed out in my letter no 283 misc d. 17-2-96 have in no way diminished

6. With reward to the scheme out-
-lined in para 6 I am to say that this
Govt.has already, in a more modest
accepted the principle therein involved
as far as it relates to municipalities.
Trained Sanitary Inspectors are in
future to be appointed on a scale cal-
-culated in accordance with population.
The other local bodies have already the
services assistance of the District Medical and
Sanitary Officer and his subordinates
at their disposal./ On the subject of
Sanitary Committees H.E.the Governor-in-
Council regrets that he cannot concur
in the opinion of the Govt.of India.In
practice it is not so much advice regarding the
expenditure of money on sanitation that

M

G.O. no 4. M. d. 4-1-97. K

gradually. Meanwhile the appointment
of Committees in small municipalities
would, it is to be feared, render
more cumbrous organizations at
present not too simple, and prove
practically an hindrance to busi-
-ness.

7. The duties and responsibilities
of the District Medical and Sanitary
Officers in this Presidency are
already clearly defined. No such
steps are therefore required as are
suggested in para 7 of the resolu-
-tion. The scheme put forward in the
latter part of that para for reliev-
-ing the District Surgeons of a
portion of their sanitary and medi-
-cal duties is already in force in
21 out of the 22 districts in this
Presidency. I am however to point
out that if Assistant Surgeons under
take tours in rural tracts they
cannot also carry out the work of
Health Officers of the headquarter
municipalities. In practice this
Govt.has found it wiser and more
economical to allow District
Surgeons to delegate to their
Assistants part of their touring and
inspection duties, which to a large
extent are concerned with sanitary
matters, thereby attending themselves to the more
important work at head quarters.

G.O no 57 Pub. d. 24-1-95 N

8. With reference to para 8 of the
resolution, H.E. the Governor-in-
Council has no cause whatever to
complain of the existing arrange-
- ments,

arrangements, and every reason to be satisfied with the Sanitary Commissioner's discharge of his duties both as regards touring and in other respects. No time is spent by that officer on the hills except in the ordinary course of inspection and prolonged halts at headquarters are rare. Under the circumstances this Govt. is unable to agree with the Govt. of India as to the advisability of posting a more junior officer to the appointment. If the opinion of the Sanitary Commissioner is to carry weight he must have a wide local knowledge of the Presidency, and large general experience, qualifications which can only be found in an officer of some standing. No alterations in the initial pay or in the rules as to the tenure of the appointment appear to be desirable.

X. On the question of the proposed subordination of the Sanitary Commissioner to the Surgeon-General, both these officers have expressed the opinion in which this Govt. concurs, that such subordination would not be an advantage. The Surgeon-General points out that the professional and mental qualifications required for the two offices are quite distinct. To subordinate the sanitary expert to an officer for whose duties a large general experience is the essential qualification would probably cramp the specialist's work: the amalgamation of the office establishments and the distribution of the work of

of local inspection would have a similar effect. A larger local area might, it is true, be annually inspected, but it must be remembered that in only half that area would special and minute attention be paid to sanitation. The Surgeon-General cannot be expected to enter into sanitary details in the same way as the Sanitary Commissioner naturally would. Travelling over an increased area would lead therefore to no satisfactory results from a sanitary point of view.

XI. The proposal to abolish the office of Dy. Sanitary Commissioner is one which H.E. the Governor-in-Council strongly disapproves. In this Presidency there is ample work for that officer. The area to be supervised is too large to allow the Sanitary Commissioner himself to give his personal attention to every quarter and a responsible Assistant is therefore absolutely requisite.

XII. In conclusion I am to say that this Govt. is not at present prepared to put forward any formulated proposals for the reorganization of the Sanitary Dept. As pointed out above, H.E. the Governor-in-Council is constrained to consider such large measures as those now suggested impracticable and inadvisable so far as this Presidency is concerned. The subject is one which receives a considerable share of the attention of Govt, and the

resolution

resolution of the Govt. of India would tend to show that Madras is at any rate behind other provinces in this respect. I am therefore to urge the advisability of leaving the Provincial Sanitary Establishment to be added to and improved gradually in the light of local experience rather than of insisting on its reorganization under conditions hardly applicable to this Presidency.

(from orders)

24/97.

30/3/97.

9-2-06
19-12-07
20-5-14 B III
23-4-08 B III
9-2-16 B III
4-7-16.
18-3-20 B III