

R •
K 12.95 (E4)
2117M79
1485
019788

193

REPORT

ON THE

SYSTEM AND ADMINISTRATION

OF THE

INLAND CUSTOMS DEPARTMENT,

TOGETHER WITH

Proposals for the Reorganization on the same Principles

OF

THE SALT DEPARTMENT

IN THE

MADRAS PRESIDENCY.

MADRAS:

PRINTED BY E. KEYS, AT THE GOVERNMENT PRESS.

1880.

770
40-A

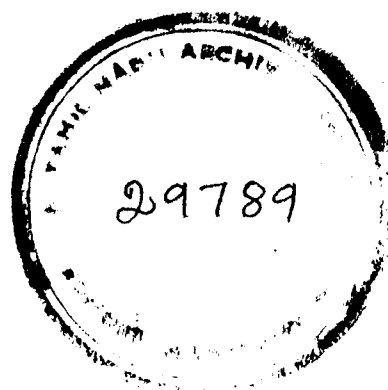
TABLE OF CONTENTS.

	Page.	Para.		Page.	Para.
Preliminary	1	1	adequate guarding of Salt Swamps and Salt-Earth Tracts along the Coast	18	65
The Salt Revenue of Bengal itself derived from the Duty on Imports.	"	2	The charge thereof to be entrusted to the Special Agency, who should also supervise the Salt Factories.	19	66
The Calcutta Preventive Service—its strength, system, and scale of pay.	"	3	Salt Superintendents the Officers now in charge of Factories—	19	67
Gain of Revenue by careful regulations	2	7	former proposals for the improvement of their position inadequate—	20	"
The management of the Bonded Stores	"	8	to be superseded by the new class of Inspectors—The recently sanctioned Preventive Inspectors also to be dispensed with	"	68
THE INLAND CUSTOMS DEPARTMENT OF THE NORTH-WEST PROVINCES AND OUDH—divided into two branches, the Salt Sources and the Internal Branch	3	9	The transfer from the Police to the Salt Department of the duty of guarding the Salt Factories and Stores	"	69
The Salt Sources—	"	10	recommended as conducive to efficiency	"	70
Establishments	"	11	Opinion of the Inspector-General of Police	21	"
Comparison with this Presidency misleading	"	12	More serviceable Subordinates may thus be obtained,	"	71
The Sultanpur Salt Works	4	12	and economy may be promoted by the employment of one class thereof only, instead of four	22	72
Establishment—	"	14	A class of Assistant Inspectors required	23	73
compared with the Negapatnam Factory—	"	15	The expense of the employment of an Inspector and an Assistant Inspector at each Factory prohibitive	"	74
how employed	"	16	Some Factories, therefore, to be grouped under single Inspectors.	"	75
Patrols	5	19	Other smaller Factories to be closed	24	76
Line of Guards	6	21	SUMMARY OF THE PRECEDING ESTABLISHMENT REQUIRED—	25	80
Scrapping, Storage, and Sales...	"	23	Inspectors and Assistant Inspectors;	25	81
The Internal Branch of the Inland Customs Department—	"	27	their grading and pay	26	82
Mr. Whitten's Memo. thereon—	7	"	Subordinates—	27	87
Its Duties and Organisation	"	28	Existing Establishments of Peons, other Menials, and Police Constables	"	88
The system adopted for the suppression of the manufacture of Earth-Salt	10	33	Difference from Police Budget	29	89
The Supervision of Crude Saltpetre Works;	11	37	Saving by closing of smaller Factories	"	90
of <i>Rassi</i> and <i>Sajji</i> (Carbonate of Soda) Works;	12	43	Remainder	"	91
of <i>Khari</i> (Sulphate of Soda) Works;	"	44	Future number required—at Factories—	30	93
of Saltpetre Refineries.	14	51	as Swamp Guards—	"	94
Mr. Ashton's Memorandum	15	56	on Preventive Duty in the Interior.	"	95
A DEPARTMENTAL PREVENTIVE AGENCY NECESSARY FOR THE PROTECTION OF THE SALT REVENUE IN THE INTERIOR OF THIS PRESIDENCY.	"	57			
Infractions of the Salt Laws exceedingly common throughout the Presidency	16	58			
Objections to a Special Agency stated and combated	17	59			
Liberal Salaries essential to efficiency	"	61			
The circumstances of the Madras Salt Department somewhat different from those of the Inland Customs Department	18	62			
Differences necessary, therefore, in the details of Administration	"	64			
Loss of Revenue from the inadequate					

R

X7295(E4) 211 Y M79

M80



REPORT

ON

THE INLAND CUSTOMS DEPARTMENT,

WITH PROPOSALS FOR THE REORGANIZATION

OF THE

MADRAS SALT DEPARTMENT.

ESTABLISHMENT REQUIRED—(Contd)—	Page.	Para.	Proposed alterations in Estab-	Page.	Para.
Subordinates—(Continued)			lishment of Gazetted Officers.	39	116
Proposed Preventive Circles			Assistant Commissioners ...	"	117
under Inspectors ...	31	95	and their Office Establish-		
Comparison with the Inter-			ments ...	41	119
nal Branch of the Inland			Personal Assistant to the Com-		
Customs Department ...	"	96	missioner ...	42	122
Inspectors' Office Peons ...	32	98	Deputy Commissioners ...	"	123
Total number of Peons ...	"	99	Central Office ...	43	126
Petty Officers ...	"	100	Comparison with the Inland		
Clerks and Shroffs ...	33	101	Customs Department ...	45	131
Sub Inspectors ...	"	102	Sundry additional contingent ex-		
TOTAL EXECUTIVE ESTABLISHMENT ...	"	103	penditure ...	46	137
COST THEREOF ...	34	104	House-rent and provision of		
Sub Inspectors ...	"	105	Free Quarters ...	"	138
Clerks and Shroffs ...	"	107	Provision of Tents ...	"	139
Petty Officers and Peons ...	35	108	Travelling Allowances ...	47	140
Total pay of Executive Officers ...	36	111	TOTAL COST OF ESTABLISHMENTS AND		
Clothing of the Petty Officers and			OF CONTINGENT EXPENDITURE DETER-		
Peons ...	37	112	MINED BY THEIR STRENGTH ...	"	141
Cruisers on the West Coast ...	"	114	Saltpetre Refinery Agents not		
TOTAL COST OF EXECUTIVE ESTAB-			provided for ...	48	142
LISHMENTS ...	38	115	General Remarks ...	"	144
			Conclusion ...	50	146

APPENDICES.

No.	Page.	No.	Page.
I. Statement of reasons for closing certain Factories ...	52	V. Memorandum showing the probable cost of supplying the Officers of the Madras Salt Department with Tents at the public expense ...	57
II. Memorandum explaining how the number of Assistant Inspectors required in the Madras Salt Department has been arrived at ...	53	VI. Memorandum showing the probable future expenditure in the Madras Salt Department under the Heads of Travelling Allowances, Batta to Establishments, and Carriage of Tents ...	"
III. Statement showing the proposed division of the Interior of the Madras Presidency into Preventive Circles under Inspectors of the Salt Department ...	"	VII. Statement showing approximately the distribution of the proposed Establishments of Factories and Depôts in the Madras Salt Department ...	58
IV. Memorandum showing the estimated annual cost of Clothing and Accountments for the Guard Peons of the Madras Salt Department ...	56		

ENCLOSURES.

* (Not printed.)

No. I. Rules framed under the Inland Customs Act by the Governor-General in Council.	districts of Purbagharh, Sultanpur, Aligarh, and Etah, with three Enclosures,
II. Inland Customs Book Circular No. III-E.	i. Map of the District of Etah.
III. Mr. Ashton's Memorandum on the distribution of the Preventive Force under his control in the Dis-	ii. " " " of Aligarh.
	iii. " " " Districts of Purbagharh and Sultanpur.

In the latter part of the year 1879, the Government of India, in communicating their sanction to the temporary employ, for the better protection of the Salt Revenue, of certain additional Police Forces in the Tanjore and Trichinopoly Districts, remarked* that experience in Northern India was greatly in favour of the entertainment, for such purposes, of a Special Preventive Agency under the direct control of the Officers of the Salt Department, and that they would be glad to hear of the establishment of such an Agency in this Presidency. At a later date, in reviewing the reports on certain losses of Salt which had occurred at Negapatam, they drew attention to the fact that under the system in force in Northern India such losses were unknown and were believed to be impossible; and expressed their opinion that, with the aid of Mr. Adam, who was then about to join (but has since left) the Salt Department, there should be no difficulty in attaining to the same immunity in Madras. I pointed out, in reply, that I should best be able to acquaint myself with the system on which the Salt Department was administered in Northern India if I were permitted to study the subject on the spot. Government were pleased to adopt this view and to direct me to proceed there for this purpose. This Report embodies the result of my inquiries, together with recommendations based on them for the more efficient administration of the Madras Salt Department.

2. In Bengal itself there is no separate Salt Department and no manufacture of Salt, save to a small extent in Orissa. With this exception, the Province depends on importation, principally from Liverpool, for its supply of Salt, the realization of the duty on which is in the hands of the Collector of Customs of the Port of Calcutta. The Preventive Establishment of the Port is employed indiscriminately on board of Salt Ships and of Ships laden with general cargoes. Its strength has been fixed, however, and its employment and remuneration are regulated with special reference to the temptations to which men are exposed, who are often charged with the supervision of the import of an article, the duty on which many times exceeds its intrinsic value, and to the precautions which experience has shown to be necessary to obviate the possibility of their succumbing to those temptations.

3. The Calcutta Preventive Service costs considerably over 3 lakhs of Rupees per annum, and consists of—

	Salary per mensem.
	RS.
1 Superintendent on Rupees 700 rising to ...	900
1 Inspector, 1st Grade, on ...	500
1 do. 2nd do. " ...	450
2 do. 3rd do. " ...	400
2 do. 4th do. " ...	350
6	
Average Salary, Rupees ...	408

					RS.
5	Preventive Officers, 1st Grade, on	...	...	...	300
5	do. 2nd do. "	...	...	...	275
10	do. 3rd do. "	...	...	...	250
10	do. 4th do. "	...	...	...	225
15	do. 5th do. "	...	...	...	200
15	do. 6th do. "	...	...	...	175
20	do. 7th do. "	...	...	...	150
30	do. 8th do. "	...	...	...	125
27	do. 9th do. "	...	...	...	100
137				Average Salary, Rupees	165

4. In addition to the above, when the Port is very full of shipping, extra temporary hands are engaged on Rupees 100 per mensem, paid by Government except in those cases in which the Customs Act allows a Ship to be charged with the cost of putting a Preventive Officer on board.

5. The working hours of the Preventive Officers are nine per diem—ordinarily from 8 A.M. to 5 P.M. Extra time is paid for (by the Ship) at one Rupee per hour. The total sum earned for extra time by the permanent Preventive Officers of the Port averages about Rupees 38,000 per annum or Rupees 23 per mensem per head. The average earnings, therefore, of a permanent Preventive Officer in the Port of Calcutta are Rupees 188 per mensem.

6. In the Office of the Superintendent a Register is maintained of the members of the permanent Preventive Staff, in which they are entered in three classes, not with reference to their grading for pay, but according to their reputation for activity and honesty. It is a strict rule that the senior Officer entrusted with the duty of supervising the unloading of every Salt Ship shall not only be on the permanent establishment but also one whose name appears in the first of these classes. Under his orders are one or more Junior Officers, whose duty it is to weigh the Salt over the Ship's side. During the day time, while hatches are open and discharging is in progress, there are never less than two Preventive Officers on board, the one of the First Class in charge, and one other; and they are constantly visited and their work supervised and checked by the Inspector in charge of the particular section of the river, as well as, from time to time, by the Superintendent himself. At night, or when discharging is not in progress, the hatches are kept sealed, but one Officer is nevertheless compelled to remain constantly on board until the cargo of Salt is completely cleared out.

7. It is only of late that these careful regulations, to which those of the Madras Ports where Dutiable Salt is landed are in sad contrast, have been rigorously enforced. Their effect may be judged of by the figures given in the margin* of the average percentage of wastage discovered in Salt cargoes cleared during the last ten years. Thus in 1879, the ascertained percentage of wastage was 1.35 less than in 1877. The quantity of Salt imported at Calcutta in 1879 having been 78,34,765 maunds according to the Ships' Manifests, this difference represents a gain to Government, in duty at Rupees 2-14-0 per maund, of Rupees 3,04,087 in a single year.

8. The arrangements for securing the Revenue at the Sulkea Salt Golahs (Bonded Stores) did not appear to me to be of so efficient a character as those for the discharge of Salt over the Ships' sides (whether for consumption on payment of duty, or into bond). There is a Superintendent, who has no other work to attend to, and who is paid Rupees 700 per mensem, and there are some permanent hands paid Rupees 100 per mensem, whose duty it is to check the weighments of Salt as the bags pass out. But the actual weighments are made by temporary hands, taken on as required. They are paid liberally (Rupees 5 per diem), but cannot, of course, be relied upon to the same extent as the permanent Officers of the well-paid Customs Preventive Service. It has, however, to be remembered that the weighments made on board the Ships are a

considerable check on those made at the Golahs, so that no great opportunity offers for loss of Revenue by fraud or carelessness there.

9. The Salt (or, as it is still officially styled, though the Customs Line has been abolished, the Inland Customs) Department of the North-West Provinces and Oudh comprises two branches—the Salt Sources and the Internal Branch. The former corresponds to the Salt Department of this Presidency, but in addition to the manufacture and sale of Salt is charged also with the guarding of the tracts of country from the saline deposits, or lakes, or brine springs in which the Salt is derived, and of the Salt Stores themselves. The latter has no parallel in Southern India. Its duties may be briefly stated to be—the prevention of the manufacture of Earth-Salt, either directly by the lixiviation of Salt-Earth, or indirectly from the refuse and under the cloak of the manufacture of Saltpetre and Sulphate of Soda.

The Salt Sources—Establishments.

10. The sanctioned strength of the establishments employed at the Salt Sources, i.e., in the manufacture and sale of Salt, is as follows:—

Locality.	Officer in charge.	Length of Line of Guards.	Number of Posts.	ESTABLISHMENT SUBORDINATE TO THE OFFICER IN CHARGE.								
				Inspectors.	Assistant Inspectors.	Sub Inspectors.	Clerks.	Kotegushs (or Upper Jemadars).	Jemadars.	Peons and Minials.	Treasurers.	Total.
Panjāb Mines ..	Assistant Commissioner	..	181	5	7	10	24	13	49	632	..	740
Mandi do. ..	Inspector	..	..	..	..	1	1	1	1	20	..	24
Delhi	Assistant Commissioner	..	53½	3	3	5	25	6	49	389	..	480
Sambhar	Do.	51	60	6	6	19	39	5	79	609	1	*764
Didwana	Do.	8	10	1	..	2	7	2	7	55	1	75
Pachbadra	Do.	14	26	1	1	5	11	6	33	171	1	229
Phalodi	Inspector	4	5	..	1	1	2	..	7	40	..	51

* Besides a Military Treasure Guard.

11. The nature of the saline deposits of Northern India, and the methods by which Edible Salt is thence derived, vary so widely from anything known in this Presidency, that no general comparison is possible between the establishments required there and here for the supervision of manufacture and for the guarding of the Salt-producing Tracts and of the Salt Stores. In the Panjāb, for instance, Salt is mined. At Sambhar it is gathered, in quantities limited only by the demand to be supplied and the amount of labour available, from the bed of a lake some twenty miles in length and ten in breadth, the whole of which, as the waters dry up in the hot weather, forms one vast Salt-Pan. The circumference of the lake and the length of the line of Guards exceeds fifty miles. The establishment employed consists of thirteen European Officers, nineteen Sub Inspectors (equivalent to our Salt Superintendents and Assistant Superintendents), forty Clerks and Shroffs, and nearly seven hundred Petty Officers and men. It would be a waste of time to draw a comparison between such an establishment and any single Madras Salt Factory. The comparison should be rather between the Sambhar Salt Source and Chingleput, the largest of our Madras Salt Districts. Even then it would be misleading. Supervision and control can never be so concentrated, manufacture can never be so cheap or so certain, in Salt Factories whose sole source of supply is the weak brine of the sea, and on a Coast continually liable to be swept by cyclones, as in a District exempt from violent and irregular atmospheric disturbances and in which man has but to gather the harvest which nature has provided. But a short account of one of the smaller Northern Salt Factories may be useful, as indicating the method of organization and working which, after many years of labour by Officers of exceptional ability, has there been approved as efficient.

12. The Sultanpur Salt Works form a part of the Delhi Division of the Inland Customs Department. They are situated about thirty miles from Delhi in an open, somewhat sandy, tract, entirely free from clay, but underlaid by a stratum full of brine springs. The pans, which are worked on the Excise System, and of which there are about ten to each well, have therefore to be made of concrete, and closely resemble those attached to the Modas of the Ceded Districts and Kurnool. The price of the Salt is naturally high, varying from about 12 to 14 annas per maund, according to quality.

13. The sub-soil brine stratum is not continuous but occurs in patches. That at Sultanpur itself is about a square mile in area, with a circumference of four-and-a-half miles, and is under the immediate charge of the Inspector of the Circle. It is worked by 65 separate Licensees, and produces about a lakh of maunds of Salt per annum. The whole Circle contains 144 separate Factories (sets of Salt Works) and produces about 2½ lakhs of maunds of Salt annually.

14. The establishment of the Circle was as under at the date of my visit :—

No.	Grade.	Monthly Cost.
		RS.
1	1st-Grade Inspector on Rs. 400	400
1	do. Assistant Inspector on Rs. 175	175
2	Sub Inspectors on Rs. 70 and 60	130
4	Clerks on Rs. 25 to 15	70
1	Kotegusht on Rs. 12	12
16	Jemadars on Rs. 10 and 8	144
102	Peons on Rs. 7 and 6	663
Total monthly cost		1,594
		12
,, annual ,,		19,128

15. This may reasonably be compared with the strength and cost of the establishment maintained until recently* at the Negapatam Salt Factory, the sales at which in 1879-80 exceeded two lakhs and eighty-seven thousand maunds. I give it below :—

No.	Grade.	Monthly Cost.
	Permanent.	RS.
1	Superintendent on Rs. 125	125
3	Assistant Superintendents on Rs. 25 to 15	60
5	Clerks and Shroffs on Rs. 20 to 10	75
25	Menials on Rs. 6 and 5	140
	Police Guard of 25 Petty Officers and men	204
Monthly cost		604
		12
Annual cost		7,248
Clothing, &c., of Police		437
Total annual cost		7,685
Temporary.		
2	Clerks for 6 months at Rs. 55 per mensem	330
Total annual cost under all heads		8,015

16. The Sub Inspectors, who correspond to our Salt Superintendents and Assistant Salt Superintendents, are employed on general duties under the Inspector and Assistant Inspector, but are not allowed to weigh out Salt. In the Inspector's own Office two Clerks only are employed. This small allowance is explained by the fact that payments on account

* A Preventive Establishment consisting of one Inspector, one Clerk, and two Peons was sanctioned in G.O., No. 627, dated June 7, 1880, the cost of which is Rs. 2,508 per annum.

of Duty are not made at Sultanpur, but in the Office of the Assistant Commissioner in Delhi—an arrangement which could not well be imitated in this Presidency, and which would, I should think, be productive of grave inconvenience to the Trade, were it not that the Sultanpur Salt is entirely consumed in Rohilkhand, and must pass through Delhi on its way there.

17. The Subordinate Establishment stationed at the Sultanpur Tract itself numbers 9 Petty Officers and fifty-four men, or one Petty Officer to every six men; and is employed as follows :—

1 Kotegusht	...	...	...	in the Inspector's "Orderly."
6 Peons	...	...	...	
4 Jemadars	...	...	...	on the Line of Guards.
36 Peons	...	...	...	{ on the supervision of scraping and storage.
3 Jemadars	...	...	...	
9 Peons	...	...	...	
1 Jemadar	...	...	...	do. do. weighment.
3 Peons	...	...	...	

18. By the Inspector's "Orderly" is meant the small body of men to whom no specific daily duties are assigned; from whose ranks he fills temporary vacancies among the Peons on guard duty, &c., due to sickness or the grant of casual leave; and whom he employs, both by day and night, as patrols to see that nothing is going wrong in the Pans, and that the Sentries on the Line of Guards are on the alert. The "Orderly" is thus, it will be seen, a very important feature of the guarding system of Northern India. Experience proves that it is most difficult to ensure vigilance among men employed on beat duty, when the only supervision to which they are subject is that of their own Petty Officers. The stimulus of frequent visits from patrolling parties, of whose movements both they and their immediate superiors are ignorant, is necessary to prevent them from going to sleep on their posts, as the Police now employed in this Presidency in guarding Platforms and Pans are frequently detected in doing. Great importance is therefore attached to the frequent performance of patrols, not only by the "Orderly", whose duties for the night are every evening specially assigned by the Inspector, but also by the Inspector himself and his Assistant. These Officers are all day long during the manufacturing season more or less hard at work in the sun, but are not on that account excused from the duty of patrolling at night. On the contrary, a regular system of patrolling is prescribed, exact compliance with which is required. It is as follows :—

Patrols.	19. For patrolling purposes the day is divided into four periods—
	I. During Daylight.
	II. From Sunset to 10 P.M.
	III. From 10 P.M. to 3 A.M.
	IV. From 3 A.M. to Sunrise.

The Daylight Period is, of course, chiefly occupied in the supervision of manufacture, storage and sales, and in the discharge of ordinary office work. But the Guards are also visited, especially in the early morning, when it is easiest to detect the footprints of any intruders who may have passed the Line during the preceding night. Inspectors are also required to make eighteen, and Assistant Inspectors twenty-one, night patrols monthly, one-third of which must in each case be in each of the three night Periods.

20. With such a system a Guard Peon cannot often go to sleep on his post without the certainty of early detection. I have issued similar rules for the performance of patrols by Preventive Inspectors and Salt Superintendents in the Madras Salt Department, with the modification that, in consideration of the more enervating nature of the climate of this Presidency than that of the North-West Provinces, I have for the present limited the requirement of night patrols to fifteen per mensem.

21. Around the works a space has been cleared forty-five feet wide, ten feet of which are occupied by a hedge, while the remaining thirty-five feet are left for use as a road. Along this road runs the Line of Guards. The Guard Posts are half a mile apart. At each Post there are four men. There is one Petty Officer to every two Posts. Half the men are on duty at a time, day and night, the tour of duty being six hours in all cases. Each man has, therefore, while on guard, a quarter of a mile of Line to watch—a fair enough length of beat considering that the Line is also protected by a hedge, at present of dry thorns, but soon, it is hoped, to be replaced by a live hedge, which has already been planted. The difficulty of guarding is enhanced by the fact that within the area of the Factory are considerable tracts of cultivable land, the labourers in which must be allowed passage in and out, though, of course, only at the established points of entrance and exit. But depredations during the day-time are never likely to be of much moment, while the difficulty of determining who among the Guards is responsible for the entrance at night of any marauder whose footprints may be found in the morning, is met by a very simple, though ingenious, device which I shall endeavour to bring into use here as soon as I can get patrolling paths formed round the several Factories. The road, or patrolling path, is kept clear of grass and weeds so that footprints are readily discernible on it, and the first duty of a Peon going on guard at sunset is to drag along one side of it for the whole length of his beat a broad brushwood hurdle. The man who relieves him at midnight does the same, but on the opposite side of the path. If, then, any one passes the Line during the night, his footprints must be seen on the marks left by the dragging of the hurdle, and according to whether they appear on one line of hurdle marks, or on two, the Officer knows whether to hold responsible for his passage the man who was on duty before, or after, midnight.

22. This system of guarding—that is, of beats supplemented by patrols at irregular intervals—seems to me to leave nothing to be desired. But it can only be worked successfully if its direction is in the hands of an Officer from whom greater foresight and intelligence can be expected, than from an ordinary Head Constable, such as are those now in Police charge of almost all Madras Salt Factories. I do not, therefore, think that it can be introduced in its entirety into this Presidency so long as the Police are responsible for their guarding.

23. Twelve Petty Officers and men are employed among the Salt-pans in the supervision of scraping and storage. With the manufacture they have no need to interfere, neither the Works nor the Salt being the property of Government, but of the Licensees. But all Salt has to be scraped, heaped, and sealed in their presence, which is also required whenever samples are taken for exhibition to intending purchasers, and when weighments are made.

24. Scraping is only allowed on written order obtained from the Inspector's Office. The outturn of each scraping is separately stored after estimation by a Jemadar, and separately entered in the accounts. The stores, or heaps as we call them here, are formed here and there about the works, at the pleasure of the manufacturers, as is also the case in Bombay. The Madras system of storage in a single locality, or at most in two or three localities for each Factory, is, in my opinion, for many reasons far preferable. The heaps are not covered during the hot weather. When the rains begin the unsold Salt is either buried, or is covered with earth as is the practice in our Southern Districts.

25. The weighment of Salt sold is the affair of the owner and purchaser. All consignments are, however, checked by the Inspector before they are allowed to pass out. A Jemadar and three Peons are detailed to assist in this duty.

26. The outlying tracts are under the immediate charge of the Assistant Inspector and are similarly guarded and worked.

27. I do not describe the Sultanpur system of manufacture or its results on the quality of Salt produced, because the question under consideration is, not the best way to make good Salt, but the arrangements which are necessary in order that no Salt made shall pass into consumption without the payment of Duty, and that all Duty paid

The Internal Branch of the Inland Customs Department—

shall be actually credited to Government. Until quite recently, before the abolition of the Inland Customs Line was rendered feasible by the acquisition of the Rajputana Salt Sources by the British Government, and by the wise policy of the equalization, as far as possible, of the Salt Duties throughout British India, the perfection of such arrangements was far the most important of the duties of the Officers of the Inland Customs Department. The Line itself was guarded upon substantially the same system as the Sultanpur and other Salt Tracts, though held, at different points, in varying strength according to local conditions. But the Department prided itself, I think, less on the success with which the smuggler, of Sugar from the one side, of Salt from the other, was held in check along a line of over 2,000 miles in length, than on the organization which, without oppression to the people, without undue cost to Government, and without pushing its interference with the Industry to the point of crushing it, has so brought the Manufactures of Saltpetre and Sulphate of Soda under regulation as to prevent their being used as a cloak for the eduction of alimentary Salt; and has reduced to a minimum that loss of Revenue which can never wholly be obviated in a country the fiscal exigencies of which compel the imposition of a heavy duty on a necessary of life, and in most parts of which Nature has placed, ready to the hand of the dishonest among a poor population, both the temptation to defraud their more honest fellows, and the easy means of doing so. The Preventive, or Internal, Branch of the Inland Customs Department has never directly paid its expenses, and probably never will do so; but no doubt exists in the minds of those who are acquainted with the subject that it far more than does so indirectly, and that its maintenance is indispensable to the prosperity of the Salt Revenue. I will describe its organization and system of working. I do not think that I can do so more effectively than by here inserting an almost literal transcript from a Memorandum prepared by Mr. Whitten, Deputy Commissioner of Inland Customs, for the information of the Board of Revenue, Lower Provinces, at the time when the transfer, since carried out, of the supervision of the Behar Saltpetre Factories to the Inland Customs Department was under consideration. It is as follows:—

28. The Internal Branch, as the Preventive Establishment of the Inland Customs Department is called, is maintained in the North-West Provinces and Oudh for the prevention of the illicit manufacture of Salt direct from Salt-Earth, and for the regulation and supervision of the licensed manufacture of other saline substances, viz.:—Refined Saltpetre; Crude Saltpetre; *Khāri* (Sulphate of Soda); and *Rassi* and *Sajji* (impure forms of Carbonate of Soda). It is administered, under the Commissioner of Inland Customs, by an Assistant Commissioner, whose Head-quarters and Office are at Agra.

[29. The present Establishment of Assistant Commissioners of Inland Customs is six, on salaries of Rupees 500, rising to Rupees 800, by annual increments of Rupees 50, per mensem, beginning from the termination of the fifth year from first appointment. This, however, is only a temporary arrangement designed to meet the excessive slowness of promotion, and consequent injury of prospects, which must otherwise be the lot of Officers of this Class, from the recent extensive reductions which the abolition of the Inland Customs Line has rendered necessary. Future incumbents will be graded as in the margin, and promotion to higher salaries will depend on the occurrence of vacancies. In either case, Assistant Commissioners are, and will be, in receipt of house-rent when not provided with suitable quarters at the public expense, and of travelling allowance, when on circuit, at the rate of Rs. 5 per diem. Tents are also provided and carried for them at the cost of Government.]

30. The Office of the Internal Branch Assistant Commissioner comprises four English Clerks on Rs. 100, 50, 40, and 30; one Vernacular Clerk on Rs. 75, one on 25, one on 20, two on 15; a Daftri (Muchi) on Rs. 8; a Sweeper on Rs. 4; and four Peons. The travelling allowance of Minor Officers is three-tenths

One on	..	..	Rs. 800
Do.	..	..	700
Two on	..	..	600
Do.	..	..	500

of salary. As a rule, one Clerk and the Peons only are taken on circuit, the remainder of the establishment being left at Head-quarters under an Inspector who is called in to conduct the routine duties.—H. W. B.]

31. The Provinces over which the operations of the Internal Branch extend are divided into sixteen Circles, each under the charge of an Inspector of Customs with a suitable establishment. The size of the Circles and the strength of the Establishment posted in them are regulated by the number and extent of the Saline Tracts, and the number of licensed works on each. [Particulars concerning these Circles are furnished in the following statement extracted from the Inland Customs List of October, 1879, the last I have. The sanctioned strength and cost are, of course, somewhat higher, and amount to 1,391 Officers and men, and Rupees 2,15,232 per annum, respectively.—H. W. B.]

Circle.	NAMES AND AREA OF REVENUE DISTRICT IN EACH CIRCLE.		Total Area of Circle in Square Miles.	NUMBER OF LICENSED WORKS, 1878-79.						STRENGTH OF ESTABLISHMENTS.						Realiza- tions for the Year 1878-79.	Annual Cost.
	Name.	Area in Square Miles.		Saltpetre, Refined.	Saltpetre, Crude.	Khari.	Sajji.	Kasli.	Circle Office.		Interior.						
									Clerks.	Peons.	Sub In- spectors.	Mushtrifs.	Kotegushis.	Jemadars.	Peons.		
Agra ..	Agra ..	1,873	11	97	..	..	..	1	8	4	9	3	5	65	RS. 3,160	RS. 12,678	
Aligarh ..	Muttra ..	1,612	24	613	73	..	..	3	8	3	30	6	6	66	21,459	16,983	
Meerut ..	Etah ..	1,493	1	198	..	..	..	1	8	2	3	4	3	32	700	10,111	
Budaun ..	Baladshahr ..	1,908	1	261	59	..	..	1	8	2	4	3	4	36	1,228	9,438	
Etawah ..	Meerut ..	2,361	8	740	7	..	62	2	8	3	12	3	4	39	5,483	11,134	
Farukhabad ..	Muzaffarnagar ..	2,227	23	361	10	..	13	3	8	3	40	4	4	40	39,802	15,394	
Cawnpore ..	Budoun ..	2,372	21	356	100	..	22	3	8	5	30	6	8	71	12,555	16,603	
Fatehpur ..	Pilibhit ..	2,460	4	362	75	..	..	2	8	2	10	5	6	48	4,198	13,624	
Allahabad ..	Mainpuri ..	1,882	5	230	75	..	5	2	8	2	8	4	6	51	7,624	12,618	
Jaunpur ..	Etawah ..	1,631	..	60	62	118	..	2	8	3	6	4	5	61	1,100	13,271	
Ghazipur ..	Farukhabad ..	2,328	6	666	25	481	..	3	8	2	19	4	7	56	4,935	14,148	
Gorakhpur ..	Shahjahanpur ..	2,366	4	596	..	..	..	1	8	1	6	2	3	20	2,672	9,631	
Lucknow ..	Cawnpore ..	2,288	1	114	..	..	74	2	8	3	4	4	4	50	885	13,750	
Rae Bareli ..	Hazirpur ..	2,545	7	27	..	..	78	2	8	3	11	4	6	50	6,278	13,627	
Sultanpur ..	Jalaun ..	1,608	..	..	..	..	..	..	8	5	..	8	8	70	78	14,992	
Fyzabad ..	Fatehpur ..	1,680	4	217	18	..	..	1	8	3	8	4	5	40	3,449	9,965	
	Banda ..	3,030	120	4,898	504	602	254	31	128	46	200	68	84	797	1,14,596	2,07,897	
	Mirzapur ..	2,764															
	Benares ..	1,552															
	Jaunpur ..	1,995															
	Ghazipur ..	2,222															
	Azamgarh ..	2,545															
	Gorakhpur ..	4,585															
	Basfi ..	2,915															
	Lucknow ..	1,392															
	Hardoi ..	2,292															
	Sitapur ..	2,215															
	Khari ..	2,907															
	Unao ..	1,547															
	Rae Bareli ..	1,741															
	Partabgarh ..	1,708															
	Sultanpur ..	1,800															
	Fyzabad ..	1,645															
	Gonda ..	2,683															
	Bahraich ..	3,500															
	Bara Banki ..	1,735															
	Total ..	..															

32. The Law under which the Inland Customs Department is administered is contained in Act VIII of 1875, of which Chapter III refers specially to the Internal Branch. For giving effect to Act VIII of 1875 are the Inland Customs Rules of 1876, issued by the Governor-General in Council, which have the force of law, and of which Chapter III has special reference to the duties and powers of the Internal Branch in connection with the licensed manufacture of saline substances. A copy of these Rules is enclosed (No. I). Subsidiary to them are the Rules and Circulars made and issued by the Commissioner of Inland Customs under the authority conferred in Chapter VI thereof. These Subsidiary Rules and Circulars are to be found in the Customs Manual, Edition of 1866, so far as they have not been modified or altered since its publication, and in Commissioner of Customs' Book Circular III-E of 1876. [The Customs Manual is nearly, or quite, obsolete. A copy of the Book Circular forms Enclosure No. II to this Report.—H. W. B.]

33. Richly saliferous as is the soil of the North-West Provinces and Oudh, the chief duty of the Internal Branch Establishment is to keep in check, as far as possible, the illicit manufacture of Salt direct from Salt-Earth. In some places, as in the Meerut, Aligarh, Jaunpur, Rae Bareilly, Hardoi, Partabgarh, Unao, and Sultanpur Districts, the tracts of Salt-Earth are many square miles in area. Elsewhere the soil yielding Chloride of Sodium is found in patches interspersed with soils containing other Salts, or in the sides and beds of ravines and water-courses. But there is no District in the North-West Provinces and Oudh where facilities for direct illicit manufacture do not exist; and even now [after twenty years of work—H. W. B.] it needs but the opportunity of the laxity or negligence of the Superior Officers, or the inexperience of men newly appointed to this branch of the Service, for illicit manufacture, now almost suppressed, again to assume formidable proportions.

34. The system in force for the prevention of Salt manufacture direct from Salt-Earth is as follows:—

An accurate Register is maintained in every Circle Office of the Salt-producing lands in each District, by reference to which the Inspector's own movements in camp are guided, as well as the allocation of his subordinates. Wherever large tracts of Salt-Earth exist, there is in force what is called the Choki System, that is, on each tract a patrolling party is located, whose duty it is to keep up a constant supervision over the tract; to prevent, as far as possible, the removal of the Salt soil; to report cases in which, notwithstanding their vigilance, soil has been removed by illicit manufacturers; and to track out and lay information against them. [Huts are provided for these parties to live in during the hot weather. In the rains, the men are withdrawn and are allowed to go on leave, as a rule without pay, but on half or full pay if they have been doing good work during the preceding season.—H. W. B.] On their rounds, the Inspector and Sub Inspectors closely examine the Salt-Earth tracts, and if unreported removals of the soil are found, the party posted to the tract is called sharply to account and if necessary punished. These stationary parties are also frequently visited by the Pergana Gushts (or Patrols), the special duty of which it is to inspect and report on the smaller and less important Salt tracts. Pergana Gushts usually consist of a Kotegusht or Jemadar and four Peons. They frequently visit the smaller Salt-Earth tracts and enter their state at the time of inspection in the diary which each Patrolling Officer submits to the Inspector of the Circle. If traces of illicit manufacture of Salt are met with, the illicit manufacturers are tracked out and information is laid against them before the Magistracy. If no report is made by the Pergana Gusht, and if independent information of illicit manufacture of Salt in the Pergana is obtained by the Inspector or the Sub Inspectors, and search made thereupon and seizures effected, the Petty Officer and Peons through whose neglect the illicit manufacture was allowed to occur are brought to account, and if necessary punished. It must, of course, sometimes happen that the Pergana Gusht is not to blame, as, for instance, if the Pergana is large and the Salt deposits widely scattered, and to these and other extenuating circumstances discriminating attention is always paid by the Inspector.

35. Independently of the Departmental Preventive Agency, informers against illicit manufacturers are encouraged to give information, the incentive in their

case, and in fact in the case of all informers, whether members of the Force or not, being that they receive as rewards one half of the sale-proceeds of the captured and confiscated materials and articles as well as one quarter of the fines inflicted by Magistrates on the persons convicted. The remaining moiety of the sale-proceeds and another quarter of the fines are the perquisites of the captors.

36. Where Officers and men both know their duty, and do it, illicit manufacture is now generally confined to the scraping of Salt-Earth in small quantities and to its lixiviation by the low-caste residents of villages near the Salt lands—the process going no further; but an occasional seizure here and there of a few maunds of Salt and of implements for manufacture on a large scale shows that the propensity to break the Law still exists, and that unceasing vigilance is needed to guard the Revenue from loss.

37. Of the licensed Saline Manufactures, which it is the duty of the Internal Branch Establishment to regulate and supervise, the most widely diffused, and most important in out turn and number of Works, is the manufacture of Crude Saltpetre, which in the year 1879-80 gave employment to 7,319

Year.	Exports of Saltpetre from Calcutta.	Price per Cwt.	Number of Crude Saltpetre Works licensed in the North-West Provinces and Oudh.
	cwts.	£ s. d.	
1869-70	490,116	0 16 1½	6,361
1870-71	482,940	0 18 3	7,095
1871-72	432,210	0 18 4½	8,320
1872-73	518,982	1 0 7½	13,457
1873-74	415,197	1 0 7½	13,863
1874-75	553,330	0 18 1½	7,374
1875-76	415,080	0 16 9½	6,670
1876-77	466,218	0 16 4½	5,633
1877-78	391,373	0 13 0	4,571
1878-79	349,934	0 17 3	4,898
1879-80	463,110	0 18 7½	7,319

Works in the North-West Provinces and Oudh. In past years, when the demand for refined Saltpetre was brisk in the home market and prices were more remunerative than they are now, as many as 13,863 Crude Saltpetre Works have been licensed in those Provinces.

38. The system in connection with these Works is as follows:—

Registers are maintained in each Circle Office of the localities which have been, or which may safely be, licensed for Crude Saltpetre Manufacture, reference to which is made on receipt of applications for licenses. Should the locality be one satisfactory information regarding which is on record, a license is at once granted on payment of a fee of two Rupees. If, however, it is a new or doubtful one, it is as soon as practicable examined by the Inspector or by one of his Sub Inspectors; and, if necessary, the soil is subjected to analysis. [I have obtained from the Commissioner of Inland Customs a selection of nearly 100, from among over 2,000, entries in his Register, of the results obtained from the chemical examination of the soils from which it was proposed to manufacture Saltpetre, and of the orders passed thereon. Speaking generally, I find that the practice is to refuse the grant of licenses whenever the proportion of Salt to Saltpetre in the soil is found to exceed one-third.—H. W. B.] If it is found suitable for manufacture, a license is then granted and the village recorded in the Register. If unsuitable, the application is refused and the refusal recorded. Refusals can be appealed against as far as to the Commissioner of Inland Customs. The conditions precedent to the issue of any license are three in number—

- The soil in the vicinity of the place of manufacture must not contain a large percentage of Chloride of Sodium.
- The soil from which the substance licensed to be manufactured is to be educed must not contain such percentage.
- The Works must be so situated that they can be easily supervised by the Inland Customs Officers.

39. In the North-West Provinces and Oudh there is not a Crude Saltpetre Work—even the very safest of them—which is not capable of producing alimentary

Salt, and all this class of licensed works requires the most unceasing supervision, while it is at the same time most necessary to ascertain by occasional visits that *unlicensed* works have not been set up in villages for which, owing to the non-fulfilment of the above three conditions, licenses have been refused. Not a year passes without some such works being seized, and it is needless to say that they are really Salt works thinly disguised, for if the locality had been suitable for *bona fide* Crude Saltpetre manufacture, licenses would have been granted for them.

40. The supervision of Crude Saltpetre Works is carried out by the Gushts or patrolling parties, before mentioned, who are in turn controlled and kept in check by the Inspector of the Circle, and his Sub Inspectors, who during the working season of the year, extending from October to the setting in of the rains, are required to be constantly on the move. [Inspectors are only allowed to halt for three days in the month at Head-quarters. Sub Inspectors are only allowed to halt for a day or two occasionally. Otherwise, both classes of Officers are required to march every day (except Sundays) unless for special reason to the contrary.—H. W. B.]

41. Each Head of a patrolling party is furnished by the Inspector of the Circle with a list of the licensed works in his Range, and in his weekly diaries he is required to enter the number of Works he has visited, while on the back of the license of each Work he inspects he is required to enter the date and hour of his visit. These endorsements the Inspector and his Sub Inspectors verify by inquiry and by comparison with the diaries, when themselves going their rounds.

42. With all their vigilance the Officers of the Inland Customs Department are unable entirely to prevent the extraction of Salt from the Saltpetre boilers, in the course of a process which offers great facilities for malpractices; but by licensing only safe localities, by the frequency and uncertainty of the visits of patrolling parties, by prohibiting night-working, and by insisting on the destruction of "tor" * whenever it is met with, they at least reduce the danger to the Revenue to a minimum.

43. The next substances for the manufacture of which licenses are issued of *Rassi* and *Sajji* (Carbonate of Soda) Works; are *Sajji* and *Rassi* (impure forms of Carbonate of Soda). For each *Rassi* and *Sajji* license a fee of two Rupees is charged, as in the case of Crude Saltpetre. During the year 1879-80, 697 licenses for *Sajji* and *Rassi* manufacture were issued. The Works producing these substances are massed together on the extensive efflorescent plains of the Etawah, Jaunpur, Unao, and Ghazipur Districts, and are therefore easily supervised. They are also but little dangerous to the Salt Revenue, owing to the usually low percentage of Common Salt contained in the earths used. Still, much caution has to be exercised in the first instance in selecting a suitable locality for the Works, and seizures of illicitly separated Salt are not infrequent. All works of this class are inspected as frequently as possible, the licenses examined, and the same check exercised over the visits of subordinate patrolling parties as in the case of Crude Saltpetre Works.

44. Next in turn comes *Khâri* or Sulphate of Soda, for licenses for the manufacture of which a fee of Rs. 10 each is charged.

45. No subject has claimed more attention from the Inland Customs Department than that of *Khâri* manufacture. So fraught with danger to the Salt Revenue is it, that many years ago it was the subject of official remark that a year of active *Khâri* manufacture was a bad one for the Salt Revenue and *vice versa*. But in those days *Khâri* licenses were given by the hundred almost without discrimination, and certainly with no system for regulating the manufacture beyond the occasional visits of subordinate patrolling parties. Since then wisdom has been gained by experience, and feeling its way cautiously step by step, the Inland

* "Tor" or mother liquor is the brine remaining in the vats after crystallization of Saltpetre. By boiling it down separately pure alimentary Salt is produced. It should always be thrown away by the manufacturer after he has taken the Saltpetre out of it. The discovery of it set apart in a Crude Factory is a sure indication of the dishonest designs of the owner of the Work.

Customs Department seems now to have arrived at a system which allows of this really indispensable product being manufactured with small danger to the Salt Revenue. The product is indispensable, because with Salt too highly taxed to be used for the purpose, *Khâri* is in the North of India absolutely necessary for hide-curing, and in a lesser degree as a cathartic for cattle and sheep. [It is also exported to this Presidency under the name of Patna Salt for use for hide-curing.—H. W. B.]

46. In 1879-80 there were 1,732 licenses granted for the manufacture of *Khâri* in the North-West Provinces and Oudh. [In a favourable season the out turn from this number of Factories should, I believe, exceed 5 lakhs of maunds.—H. W. B.]

47. Vast areas exist in the two Provinces in which soil containing Sulphate of Soda, and therefore capable of producing *Khâri*, is found, but unfortunately in most cases the soil is also highly impregnated with Chloride of Sodium, by reason of which the substance produced contains so much Common Salt as to fit it by colour and appearance for adulterating taxed Salt. As it only costs one-fourth of the price of taxed Salt the temptation to use it for this purpose is most serious, while, of course, the loss to the State by this adulteration is very great. It is also the case that, by the simple process of separation at one stage of the manufacture, large quantities of perfectly pure large-grained alimentary Salt can be obtained, which, sold by itself, is a quite marketable Salt and very much resembles the produce of the Government Salt Works at Noh and Sultanpur in the Gurgaon and Rohtuk Districts of the Punjab.

48. Manufacture of *Khâri* on all such tracts as these had therefore to be prohibited, and other tracts indicated to intending manufacturers, where such *Khâri* as would cause little or no danger to the State Revenue could be produced. It is on these tracts that *Khâri* manufacture is now allowed, and the system is this:—

49. In January every year, that is, long before the manufacturing season opens, it is decided by the Commissioner of Inland Customs what *Khâri* tracts shall be licensed during the forthcoming season and what number of licenses shall be granted for each tract. [If no malpractices are believed to have obtained in a tract in the past year, it is allowed to be worked again. If otherwise, manufacture is stopped for so long as the Commissioner pleases.—H. W. B.] Applicants are then informed, and the licenses issued; and preparations are made for collecting kunker and lime and other materials for the pans and filters, and the wells are cleared out and got ready. [The pans are like the *Moda* pans of the Ceded Districts and Kurnool. They have to be re-faced every year or they become porous and leak, owing to the destruction of the chunam facing by the action of the Salts.—H. W. B.] The works of each tract are all grouped into one cluster, and the sites of all the works on every cluster are laid out by the Inspectors, in double the pans parallel rows, divided by a patrolling path running from end to end. The pans all face inwards towards the pathway; the wells, filters, reservoirs, pits, &c., being behind so that a sentry posted at each end of the works in the central pathway has the whole of the pans of the cluster under observation; and that the Officer by a merely passing up the pathway can see the state of the substance in the pans at a glance. The pans and all other parts of the works are made of a uniform size, so as to ensure uniformity of working; the floors of the pans are kept on the same level and partitions within the pans are prohibited. None but earth capable of producing red *Khâri* is permitted to be used. [This is because the grain of *Khâri* is so exactly like the grain of Salt that white *Khâri* can be used to adulterate alimentary Salt, as above mentioned.—H. W. B.]

50. The manufacture of *Khâri* usually begins about the first week of April and continues until the setting in of the rains. When the manufacturers are ready to begin operations they inform the Inspector of the Circle, who stations a party of his men as Guards on the works and puts a Sub Inspector in charge of the cluster, himself arranging to spend at least ten days in every month in minutely supervising the manufacture. On a day fixed, the filters of all the works are charged together, and thenceforward the process goes on with undeviating regularity and complete uniformity. The filling of all the pans occurs simultaneously, and the evaporation

of the brine is uniform. Throughout the process of evaporation, the brine is kept in a state of agitation by a constant switching with twigs so as to prevent the overset of the pans by a film of Salt and to ensure the mechanical admixture of the Chloride of Sodium with the Sulphate of Soda. This is necessary because the two Salts, owing to their varying solubility in different temperatures, have a tendency to crystallize separately. [Under the treatment described, however, the crystallization of the *Khâri* is prevented, so that it falls more as powder than in crystals. This powder imbeds the crystals of Chloride of Sodium and when desiccation takes place a hard cake is formed, which has to be cut out, and in which, if fractured, the Salt (Sodium Chloride) crystals can be discerned.—H. W. B.] When the *Khâri* is cut out it is examined by the Inspector or Sub Inspector, and if passed, that is, if it is of the proper color and degree of purity, it is weighed and pitted by the owner for sale. If the crop is white in color and contains much Salt it is pounded up and mixed with other red *Khâri* and thus rendered harmless. But if white *Khâri* is again produced in any pan, the Licensee has to change his soils on pain of losing his license. On this system a crop of *Khâri* is obtained every four or five days during the working season. The yield of each work is between 300 and 400 maunds, which sells at from twelve annas to one Rupee a maund. Experienced Officers of the Internal Branch of the Inland Customs Department speak highly of the system. The Salt Traders no longer complain of the *Khâri* Works of the North-West Provinces and Oudh injuring their trade, while the substance manufactured is all that is wanted for those industrial purposes for which Sulphate of Soda is required. The supply at present hardly equals the legitimate demand, but will, it is hoped, be considerably increased as the system above described is developed and extended.

51. The regulation and supervision of Saltpetre Refineries is the last subject of which Mr. Whitten's Memorandum treats.

52. There are two systems in force in connection with the refinement of Saltpetre and the eduction of alimentary Salt in Refineries. One is the "Mushriff" system, the other the contract or composition system, under both of which the fee charged for a license is Rs. 50.

53. On receipt of an application for a license to refine Saltpetre and educe Salt under the Mushriff system, the Inspector of the Circle first satisfies himself that the applicant has a sufficient stock of Crude Saltpetre in store to begin operations with. [This is because some guaranty is required that operations will be conducted on a scale to justify the employment of a Mushriff (or Refinery Agent). A stock of 200 maunds is required to begin with, as a minimum.—H. W. B.] It is also ascertained that the Refinery premises are in proper order and repair. A license is then granted, and a Mushriff, whose salary is from 10 to 15 Rupees a month, is appointed. He has charge of the godown in which the educed Salt is stored, and is responsible for the proper working of the Refinery, and for the due protection of the Government interests. He registers all the Crude Saltpetre purchased by the refiner, the quantity of Crude Saltpetre made from the nitrous earth in the premises, the quantity of Crude Saltpetre dissolved daily, of alimentary Salt educed, and of Refined Saltpetre made and sold, and the prices realized. He submits weekly returns to the Inspector of the Circle and maintains a regular Log, like that of a Ship, of the Refinery operations, which is open to inspection at any time by the Inspector and his patrolling subordinates. Necessarily a great deal depends on the integrity of Mushriffs employed in Refineries, whose temptations are very considerable; but by the free use of checks on them, by occasional analysis of the Crude Saltpetre that is being worked up and of the refined Saltpetre that is produced, by observing the percentages of refined Saltpetre and of Salt in the crude substance dissolved, and by the Inspector and Sub Inspectors occasionally going to a Refinery and taking the work of the Mushriff quite into their own hands for a day or two and comparing results, as few opportunities as possible are left for collusion between the Refiners and the Mushriffs to the prejudice of Government.

54. The Contract System is worked differently. No Excise Agent or Mushriff is appointed, but a composition for the Salt duty is made between the Inspector

of the Circle and the Refiner, on the basis of the quantity of Crude Saltpetre the Refiner intends to pass through the boilers and the quantity that the Refinery earth will itself produce. Theoretically these are advantages in this system compared with the other, as involving the least possible interference with the Industry, and as saving to Government the pay of the Mushriffs; but there are practical difficulties surrounding it, which lead the most experienced Officers of the Internal Branch of the Inland Customs Department to prefer the Mushriff system. One chief difficulty is the almost impossibility of obtaining data on which to determine the fair amount of duty which should be paid, owing to the greatly fluctuating quality of the Crude Saltpetre the Refiner may purchase. If every Refiner had one set only of manufacturers from whom alone he could purchase crude material, the difficulty would be lessened; but, as it is, he can buy from any one he likes and the fluctuations in the quality of his material are therefore immense. An almost equally great difficulty is the impossibility of fixing the Refiner to the quantity of Crude Saltpetre he will work up. There is no Government Agent on the spot, and while engaging to dissolve, say, 1,000 maunds of crude material, he may really purchase and pass through his boilers four times that quantity. Thus it is only in the Eastern Districts of the North-West Provinces that the Contract or Composition System prevails. In the more saliferous upper Districts and in Oudh, where the Saltpetre made in crude works may contain from 5 to 30 or even 40 per cent. of Common Salt, it has always been held impossible to work Refineries under the Composition System. Neither would the Department, on the one hand, accept for Government the risk of loss, if their estimate of the produce of Salt fell far short, as it might well do, of the actual yield; nor, on the other hand, do Refiners care to venture on a speculation, which, if they bargain fairly with the Department, may result in a loss, owing to the unequal character of the produce of the Crude Saltpetre Works in Upper India.

55. In the year 1877-78 there were 116 refineries working under the Mushriff system and six working under Contract. In the Refineries working under the Mushriffs the percentage of Salt educed from the Crude Saltpetre put through the boilers was 14.39; in the Refineries working under Composition the percentage as recorded was 8.27 only. [Since then no Refineries have been worked under the Contract System, the owners of those previously so licensed having refused to agree to pay the sum demanded as Composition, and having elected, instead, to place their works under the Mushriff System.—H. W. B.]

56. In addition to Mr. Whitten's Memorandum I have obtained through him a Memorandum prepared by Mr. Ashton, the Assistant Commissioner of Inland Customs in charge of the Internal Branch, which treats in detail of the distribution of the Force under his orders in four illustrative Districts of the North-West Provinces. I enclose a copy (No. III) and three maps in original. I request that the latter may be returned, as I shall no doubt have occasion from time to time to refer to them.

57. There cannot, I think, be two opinions as to the value of Mr. Whitten's Memorandum. When I went to the North-West Provinces, I was of opinion that there was no reason why the ordinary Police should not deal effectively with the Salt-Earth question, and I remained of that opinion for some time after I had had the opportunity of conferring with Officers who were, by practical experience, persuaded to the contrary. But the perusal of this able paper entirely changed my views. Given that, in the interest of the Revenue, it is desirable and necessary to suppress the use of Earth-Salt, and to prevent the eduction of alimentary Salt under the cloak of the manufacture of Saltpetre, &c., it is clear, I think, that these ends cannot be so effectively attained through the agency of the ordinary Police as through that of a Special Establishment, trained to these special duties, with no others to distract their attention, and, which is perhaps as important a consideration as any other, entirely at the disposal of the Superior Officers of this Department. That I ever thought otherwise is but a proof how little I knew, before I visited the North-West Provinces, of the standard of efficiency to be aimed at. Since my return, I have ascertained from the Inspector-General of Police that he concurs with me as to the inability of his Officers to deal with these questions so

A Departmental Preventive Agency necessary for the protection of the Salt Revenue in the Interior of this Presidency.

thoroughly as a Departmental Agency can do. They have neither the time to enable them, first to trace out and map all the dangerous localities in the enormous tracts of country which in this Presidency are constituted into Districts; nor, if they knew them all, to inspect them systematically. If they could find time to do so, they could not have the special knowledge of the ways in which the Salt Revenue is defrauded, which can only be gained by men who give the subject their whole attention, nor have they the requisite technical knowledge (which is not to be gained in a day, or in a month, or in a year) of the substances the manufacture of which is dangerous to the Revenue. So far as I have gone, I have failed to gain evidence of any such manufacture but that of Saltpetre—itsself a matter of great importance and in some parts of the country as dangerous to the Revenue as in any part of the North-West Provinces. But I believe the reason for this failure to be the ignorance of the Agency now at my disposal, rather than the non-existence of the Industries in question. I have been trying, for instance, to find out what substances are used in this Presidency for the curing of hides. The universal answer to all inquiries was, at first, Common Salt. I have succeeded however in discovering by analysis that the substance used in three Districts is not Salt at all, but Sulphate of Soda. In two cases out of the three I can account for it satisfactorily. It is imported from Calcutta under the name of Patna Salt. In the third case, I have not as yet been able to ascertain whence it comes, nor who makes it; but I have no doubt that in time I shall find, both that Sulphate of Soda is made in the Presidency somewhere, and that it is made from soils which yield also Chloride of Sodium as abundantly as any in the North-West Provinces. It is the same with regard to the manufacture of Carbonate of Soda. I feel quite sure that it is made in the Presidency, for it is required, and in no small quantity, for the manufacture of Country Soap, an article to be found in every bazaar; and that, if it is made at all, it is made from earth which, like that in the North-West Provinces from which *Rassi* and *Sajji* are obtained, always contains a small, and often a very large, admixture of alimentary Salt. But up to the present time I have been unable to obtain any trustworthy information on the subject, it being an unfortunate fact that, with very rare exceptions, my Officers are entirely ignorant of the chemistry of the substances with which they have to deal, and confound them all under the common vernacular name of “Uppu.”

58. So long as the Police is the only Agency in any way available in the Interior for dealing with such subjects, want of leisure, want of interest, want of knowledge, the distraction of other and more important duties, must prevent their dealing with them effectively; and the Revenue must continue to be defrauded to an extent which I hesitate to estimate, but which is unquestionably enormous. I will not cumber this Report with details regarding the prevalence of infractions of the Salt Laws in the several Districts. They are on record in reports so numerous that I fear their very frequency has weakened their effect. Suffice it to say that from Ganjam in the North (the Collector of which reported two years ago that it was absurd to suppose that there was any trade in Earth-Salt, but where we have since found large illicit Salt Factories and whole villages engaged in the manufacture) all round the Coast to South Canara, there is not a Maritime District in the Presidency in which large masses of the population do not live either on Swamp Salt or on Earth-Salt; nor in which if, in any one of hundreds of villages, every house could be searched simultaneously, contraband Salt of some sort would not be found in three out of every four. In almost every part of the Interior things are much the same. The state of the Ceded Districts and Kurnool is well known. In Trichinopoly less than two years ago it was officially reported that three-fourths of the population lived on Earth-Salt alone. Only a few days ago, a large illicit Salt Factory with masonry pans was discovered close to the town of Madura. Every one of the hundreds of Crude Saltpetre Works which exist in Salem and Coimbatore affords an opportunity, which is openly taken advantage of, for the manufacture of large quantities of excellent alimentary Salt, on not a grain of which is any Duty paid to Government. North Arcot is the only District in which I have not positive evidence that the Salt Revenue is largely defrauded, but as I have no Agency for its examination my negative information is not of great value.

Infractions of the Salt Laws exceedingly common throughout the Presidency.

59. Under any circumstances, of course, the services of the Police will be generally available for the enforcement of the Salt, as well as of other, Laws; and there is much to be said in favour of so strengthening the Force as to enable it adequately to protect the Salt Revenue. If it could do so without interruption to its other duties, and without the serious political danger of being rendered so unpopular as gravely to affect its general efficiency, by its constant interference with what in many parts of the country the people must consider almost their vested right to defraud the Revenue, it would be another matter. The Salt Department would gain without payment the services of a strong organization for the enlistment, training, clothing, and supervision of the additional forces which it may be found necessary to employ on this special duty. But the Police cannot undertake it; it has neither the time nor the knowledge requisite. The saving of the expenditure which must be incurred to provide this Department with an organization strong enough for the enlistment, working, and discipline of its own Preventive Agency, will be dearly purchased by the sacrifice of efficiency inseparable from the employment of the Police as the sole protectors of its interests in the Interior, and certain to result from the entertainment of a Special Establishment which it is unable to keep under strict control. In either case action would be spasmodic and uncertain; the people would be left in their present state of doubt as to how far the Government have really determined that the use of Earth-Salt shall be put down; and the Revenue would continue stagnant. In the latter, the establishment of a separate Departmental Agency could not fail to be an abundant source of oppression and corruption.

60. It may, indeed, be thought that, under any organization, the establishment throughout the Interior of the Presidency of a Special Departmental Agency for the protection of the Salt Revenue may in this way be more injurious to the people in their individual, than beneficial to the State in its corporate, capacity. But, so far as I can judge from the inquiries I was able to make in the North-West Provinces, such an apprehension would not be well founded. I neglected no opportunity which presented itself for learning the opinions of Officers unconnected with the Salt Department as to the relations with the people of the subordinates of the Internal Branch of the Inland Customs Department (mostly, of course, Peons on Rs. 6 and 7 per mensem). I could hear no complaints, the fact seeming to be that the Police and Taluk subordinates are so jealous of the Customs Peons, and so eager to catch them tripping, that the latter would have no choice but to be reasonably honest even if they were not most strictly supervised by their own Officers. The Customs Inspectors are an exceedingly hard-worked class of men. But they are, as I can testify by my own observation, also a very superior class of men. They are well paid, and are treated with confidence and with every consideration compatible with the exaction from them of a daily tale of work of great severity. The result is that they respect themselves and are proud of the Service to which they belong, and deem it a personal discredit to fail in the exact performance of their duties. Under supervision so conscientious and painstaking there is not much scope for malpractices.

61. While assuming, therefore, that the description I have endeavoured to give of the duties of a Salt Preventive Establishment, as Liberal salaries essential to efficiency, understood in the North-West Provinces, will convince the Board and Government, as my inquiries have convinced me, that an organization separate from that of the Police is absolutely necessary to their adequate discharge, I shall hereinafter also assume that, if the creation of such an organization is determined on in this Presidency, the salaries allotted to its members will be on the same scale as those enjoyed by the Officers of the Department of Inland Customs. This one condition is essential to success. Both for Natives and for Europeans, the North-West Provinces are certainly cheaper to live in than the Madras Presidency. Food is cheaper, horses are cheaper, house-rent is cheaper; clothes and the means of education for a man's children are no dearer. Whatever salaries, therefore, are necessary there to secure the services of a body of men such as I have described are necessary here also. Without them, I am sure that it will always be impossible for me to bring the Madras Salt Department to that state of efficiency which has been reached in the North-West Provinces, and for the Salt

Revenue of this Presidency to attain to those proportions which it should assume as soon as Earth-Salt ceases to be in common use in almost every part of the country. With them, with the aid of adequate legislation, and with the assistance of the Board and Government in enforcing a strict discipline and a high standard of duty among the large numbers of men of whom the Madras Salt Department must ultimately consist, success should not be doubtful. The cost will be heavy, but I do not doubt that it will be many times repaid.

62. Before I proceed, however, to submit definite proposals for the organization of a Departmental Salt Preventive Force in this Presidency, it is necessary that I should draw attention to a radical difference in the conditions which here prevail as compared with those which obtain in the North-West Provinces—a difference which, while leaving principles unaffected, renders it impossible to apply them without modifications in practice.

63. In the North of India the Salt Sources are, speaking generally, widely separated from the tracts of country in which the Revenue is likely to suffer either by the direct manufacture of Earth-Salt, or by its eduction in the process of the refining of Saltpetre or of the other products in union with which it is found. The most important of them are, in fact, situated either in the Panjāb or in Native Rajputana, at a great distance from the Districts in which the Revenue is thus endangered and in which alone the services of the Internal Branch of the Inland Customs Department are needed. Entirely separate staffs of Officers and men can be, therefore, and are, employed on the manufacture, storage, and sale of Salt and the guarding of the Salt Sources and Salt Stores, on the one hand, and on the protection of the Revenue in the Interior, on the other. The Officers and men who discharge these separate duties belong equally to the general body of the Inland Customs Department, and are transferred from the Salt Sources to the Internal Branch, and *vice versa*, as the Commissioner considers that their services may best be utilized. In either case their salaries are the same. But, as a general rule, the most experienced and judicious among the Officers, and the most trustworthy among the men, are selected for employment in the Internal Branch, the duties of which not only require greater knowledge, and call for the exercise of greater intelligence, for their proper discharge, but are of such a nature that supervision by superior authority is much more difficult than is the case at a Salt Source. On whichever description of duty they may be employed, therefore, Officers and men are enabled to give their whole minds to one subject. At the Salt Sources there is no illicit manufacture of Earth-Salt to be discovered and suppressed, no Saltpetre or other licensed Works to be inspected. In the Interior, these latter duties alone demand attention.

64. In this Presidency, no such separation of duties will be possible, except at the price, either of a heavy loss of Revenue, or of a great waste of available resources. If it is determined to establish a Salt Preventive Agency in the Interior only, the vast Salt Swamps and Salt-Earth tracts which extend for hundreds of miles along the Coast will continue unprotected, save, as at present, by Police Guards imperfectly supervised by Officers who have neither the time to devote to their frequent inspection nor the interest in the subject, as the business of their lives, which alone can lead men thoroughly to devote themselves to a most irksome duty. Or if the swamps and other dangerous localities along the Coast are to be guarded by a Departmental Agency—as they must be, in my opinion, if the guarding is to be thoroughly efficient—it will be most wasteful not to utilize the highly-paid Officers in charge of it on the inspection and control of the Factories, also, which lie within their Circles.

65. The first alternative is one which I cannot for a moment suppose will commend itself. To adopt it would be to abandon to comparative inefficiency the guarding of the localities most dangerous to the Revenue, while at the same time embarking on a heavy expenditure for its thorough protection in the Interior, where, on the whole, the risks to which it is exposed assume much smaller proportions. Up to a very recent period the loss of Revenue due to

the pilfering of spontaneous Salt from the swamps along the Coast (which the High Court appears now to regard as lawful) has failed to receive the attention it deserved. A few small Guards were put on, here and there; but most of the swamps remained unprotected. Their very existence was in some cases unknown, for many Salt Deputy Collectors seem to have thought that their duties began and ended in the supervision of their Salt Factories and of the sales of Salt, and systematic personal inspections of the Coast line were very rare. Latterly, some improvement has been made. Guards have been established, for instance, over the Kona Swamps near Masulipatam, the annual average theft of Salt from which has been estimated at half a lakh of maunds; and over the great Vedarniem Swamp in the Tanjore District, the people in the neighbourhood of which, though ostensibly solely dependent on the cultivation of some of the poorest land in the whole country, are generally well-to-do. But these are but isolated, though the most important, instances. I do not exaggerate when I say that there are hundreds of swamps along the Coast, every one of which requires more or less guarding for the protection of the Revenue; while in some places, especially in South Canara and Malabar, one may walk for miles along backwaters fringed by low-lying lands, on every yard of which, during the hot weather, there is a richly saliferous efflorescence half an inch or more in thickness. These two Districts are exceptionally well provided with additional Police Forces for the protection of the Salt Revenue. The men are sufficient in number, and the Superintendents of Police take an interest in their working for which I am under great obligations to them. But even there, though the Salt Police is under separate Inspectors paid from Imperial Funds, neither is supervision adequate nor, in my opinion, is the method of working altogether suitable. More superior Officers are wanted and a less mechanical system of patrol. In other Districts, the Swamp Guards are, with rare exceptions, under the orders of the Police Inspectors of the Taluks in which the swamps may happen to be situated, not one of whom would be at liberty, even if he wished, to do otherwise than immediately abandon his inspection of a Salt Swamp should he hear of a murder, or even of a serious burglary, in his Division. Visits from the Superior Officers of Police are necessarily rare. I am far from wishing to blame any one for a failure which is inherent in the system, but the reports which I receive from my Officers forbid me to pronounce the guarding of Salt Swamps by the Police as efficient as it might be made under Departmental management.

66. It follows then, that, to secure the best return for the money expended, the guarding of the continuous saliferous tracts along the Coast must be conducted on the same system, under as thorough supervision, and with the same precautions against abuses, as that of the scattered patches of Salt-Earth in the interior. Mr. Ashton's description, in short, of the system on which the Partabgarh Salt Tracts are watched should be a guide to the method to be adopted. As, however, all along the Coast, it is necessary for these reasons to employ Agents of the same class as the Inland Customs Inspectors of the North-West Provinces, it will be an obvious waste of money if their services are not also utilised for the supervision of the Salt Factories which will lie in the very midst of their Circles, each one of which is for well known reasons a source of the greatest danger to the Revenue, and which are now in the charge of subordinates generally far too low-paid for either intelligence or honesty to be expected of them.

67. The necessity of improving the position of the Officers in charge of Salt Factories has long been admitted. Five years ago a scheme having this object was submitted by the Board of Revenue to Government, but was allowed to lie over pending the Report of the Salt Commission. The total increase proposed to the salaries of Salt Superintendents and Assistant Superintendents was Rs. 66,000 per annum, and would have raised the average salary of Officers of the former class to Rs. 110 (South Canara and Malabar excluded) and of the latter to nearly Rs. 32 per mensem. The present average rates of pay are—of Superintendents Rs. 69½, and of Assistant Superintendents Rs. 19½, per mensem. There can be no doubt that this would

have been a most beneficial reform, though it did not go far enough. It would have left matters in a state still far from satisfactory. The former proposals for the improvement of their position inadequate—average annual Revenue for which a Salt Superintendent is responsible somewhat exceeds 2½ lakhs of Rupees. No public Company or private Firm would dream for a moment of entrusting operations of such magnitude, and of such a nature that fraud is very easy to commit and exceedingly difficult to detect, to a servant paid Rs. 1,320 per annum. Self-interest would prevent them. They would unquestionably prefer to pay their servants well enough to put them beyond the risk of temptation, counting it better to face a certain expenditure, the amount of which was within their control, than to risk an uncertain loss, the amount of which they could never know. It should be the same with Government. In the North-West Provinces it is so. The Officers of the Inland Customs Department are there paid on a scale commensurate with their responsibilities; and fraud among them is rare indeed. There the tradition of the Service is honesty, as here, unfortunately, it is the reverse.

68. If, however, my proposal is approved—that is, to place the Officers charged with the guarding of the saliferous tracts along the Coast (whom I would call Inspectors, as in the North-West Provinces) in charge also of the Salt Factories within their Circles—there will be no need to increase the pay of the Salt Superintendents in order, by improving their position, the better to secure the Revenue for which they are responsible, since the Inspectors themselves, *nomine mutando*, will be the Salt Superintendents of the future. It will not then be necessary, even in the largest Factories, to employ Officers of the recently sanctioned class of Preventive Inspectors on the sole duty of supervising the sale of Salt. The Inspectors themselves will be fit to be trusted to perform this, as well as other duties, without further check than their own self-respect and their fear of ruining good prospects in the Public Service will supply. The services of the Officers now employed as Salt Superintendents will, however, still be required. The best of them should be promoted; the less intelligent and trustworthy may continue in employ, though under another designation. Their case and that of the Assistant Superintendents will be further treated of below.

69. Granting, then, that Inspectors—that is to say, Officers of the same social class and official position as the Inspectors of the Inland Customs Department—are placed in charge of the Salt Factories as well as of the Salt Swamps and Earth-Salt Tracts along the Coast, the question will arise, Why should they not also be placed in charge of the guarding of the Salt-Pans and Salt Stores themselves? I am of opinion that it will greatly conduce to efficiency, in the first place, and to economy, in the second, that they should be. It will conduce to efficiency, because, for the supervision of the men by Head Constables and Sub Inspectors, on salaries of Rs. 25 or 30 per mensem at the most, will be substituted the immediate control of the Guards by Officers of a class altogether superior in education, intelligence, and position in life. It will conduce to economy because I shall be able to replace the present subordinate staff of Peons, Weighmen, Vettis, and Constables, entertained for separate duties and available only for the discharge of the particular duties indicated by their designations, by a single homogeneous body of men, enlisted for general service in the Department, and capable of being put to whatever employment their Officers may at the moment think most advisable.

70. It is incontestible that better supervision always ensures better work, especially among the lower class of Natives of this country, who cannot, as a rule, be trusted to perform a continuous routine of duty unless under the immediate eye and constant, strict, and personal control of a superior. Police Constables are no exception to this rule. Those on Salt duty are hard-worked during the manufacturing season, and will shirk if they can. The Head Constables who command them are but of a slightly better class, and the visits of Police Inspectors and other superior Officers are far too infrequent to produce any practical effect on the guarding of the Salt-Pans. So long as the only other supervision possible is that of Salt Superintendents—on the average, as might be expected from their pay, an inferior class of men—the guarding of the

Salt Factories and Pans by the Police will no doubt be more efficient than any that could be substituted for it. I could not, indeed, undertake it on that condition. The men who are now Salt Superintendents are, generally, incompetent to the discharge even of their present duties, and are altogether incapable of maintaining discipline among their subordinates as it must be maintained among bodies of men employed as Guards. If they had the mental energy and resolution and had been trained to command by first learning to obey, they would for the most part be physically unequal to the proper personal performance of the patrols necessary to ensure the vigilance of the Sentries. But with the Guards, as well as the other Factory servants, under Inspectors of the class proposed, no difficulties of this kind should be met with, and a distinct increase of efficiency should result. Opinion of the Inspector General of Police. The Inspector General of Police, when writing in March last to the Board of Revenue on this subject, seems to have anticipated the conclusions at which I have arrived. He said—

“Having to work the Salt guarding has always been a great disadvantage to the general Police Force. The duties are very distasteful, and the necessity of providing a large number of Salt Guards operates injuriously on the class of recruits. There are other ways in which the Force suffers. But as long as the Salt Department was worked piecemeal, so to say, in each District, with a weak staff in each and no general supervision, I have no doubt that the Salt guarding was much better done for Government by the Police than it could have been done in any other way. Now, however, times are changing, and I begin to see from the applications which have recently reached me from the Salt Commissioner that the system of repressing illicit Salt manufacture is assuming such magnitude as will greatly increase the difficulty and inconvenience of dealing with it merely as one of the many duties of the Police. The strong repression which seems to be contemplated both in the Ceded Districts and elsewhere will also tend to make the Police very unpopular amongst the people, a result which is, of course, injurious to general efficiency and undesirable in all ways. At the same time the organization of the Salt Department is being greatly strengthened with a Commissioner and Deputy Commissioners and a strong subordinate staff in each District subject to central supervision; a separate establishment of Salt Guards under its own Departmental Officers will at any rate be much more likely to succeed than it was formerly, and as the system is said to answer well in other Provinces I trust the experiment may be tried.”

71. A further advantage, and one of some moment, which may be expected to result from the transfer to the Salt Department of the responsibility for the guarding of the Factories and Pans, is that a class of men may then be enlisted more suited to the particular work than ordinary Police Constables. The duties of the Mofussil Police are such as to require of the Members of the Force some qualifications, and to subject them to certain conditions, unnecessary in the case of Salt Guards. A Constable cannot conveniently be enlisted for Salt duty only. He must comply with the general regulations for enlistment, and must, therefore, not only be of a certain stature and of a sound constitution, but must also be able to read and write. He should be possessed, too, if he is to succeed in his calling, of considerable natural intelligence. Neither reading and writing, nor much natural capacity, are necessary, however, to an ordinary Salt Guard, whose special duty it is to keep awake for so many hours of a night and to see that during that time no one passes across a given line. He will be a more useful servant with, than without, these advantages, but strength of body and a willingness and ability to stand exposure and hard work are of much more real use in his vocation in life, than a good education and an acute mind. A Constable may at any time be called on to aid in the suppression of civic disorders or to assist at the reception of the Governor or other high functionary. He is charged at one time with the regulation of crowds assembled at fairs, festivals, or funerals; at another, he is in attendance as an Orderly in the Court of the Sessions Judge. He must, therefore, be carefully and somewhat smartly dressed. He must be well set-up and be taught a certain amount of drill, and must have an acquaintance with the routine of the proceedings of the Courts. Salt Guards must have some sort of uniform by which they may be known among the people, and a certain proportion of them must be sufficiently trained to the use of arms to enable them to protect the Treasure which it will be their duty to guard at the Factories and at times to escort to the nearest

Civil Treasury; but there is no necessity to require of them a knowledge of drill, which for some reason is a distasteful task to people of their class, nor to include trousers among the articles of their uniform clothing, which, though it may seem absurd, the lower orders in the South of India have so great an objection to wearing that the necessity for so doing is said to be a considerable obstacle to the easy recruiting of the Police. It is possible, in fact, without any relaxation of necessary discipline, to bring the way of life of a Salt Guard more into accord with the habits and customs of the people than that of a Police Constable, and thus to widen the area of selection and the quality of the article obtained, without extra payment for it.

72. But the transfer to this Department of the duty of guarding the Factories and Pans will do more than promote efficiency. It will also, and economy may be promoted by the employment of one class thereof only, instead of four, I feel sure, tend to economy, and will enable me in the end to provide for the discharge of all necessary duties by a smaller total number of men than is now practicable. There are now in every Salt Factory in this Presidency four distinct classes of subordinates—

Peons, to carry messages, take the letters to the Post, and attend on the Superintendent and his Assistants during their inspection of manufacture, the sealing of unstored heaps, and the conduct of sales;

Weighmen, to work the scales at sales;

Vettis, to perform the petty repairs to platforms, the covering of heaps, &c., which are constantly necessary; and

Constables, to guard the Treasury, the Salt Stores, and the Pans.

This is a most wasteful division of labour. The Superintendent may want to send a message a couple of hundred yards. He cannot order a Constable to go, though half a dozen may be on the spot doing nothing. They owe him no obedience, and often, I fear, pay him but little respect. The Vettis may be otherwise employed, but no Peon or Weighman can be ordered to take spade or pickaxe and make a petty repair. They were not enlisted for such work and would resign rather than do it. Vettis, even, whom I found in many cases employed as Peons, while outside labour was taken on at the expense of Government to do their work, have resigned in some numbers rather than discharge the duties they were engaged for and which their very name imports. It is quite otherwise in the North-West Provinces. The men are there engaged to work as they may be ordered to work. They are at least as efficient as Guards as any we have here, and in every other respect they are much more so. They make the hedges round the works, and at Sambhar they have formed large plantations of the trees which supply the stakes from which the divisions, or bunds, in the Lake are constructed. If there were Platform ditches and Irrigation canals to clean and deepen, I have no doubt they would clean and deepen them, so far as their numbers rendered it possible to dispense with labour specially engaged. They build their own guard-houses. The Madras Police do not. If a man wants a house to lodge his family in, he is not provided by Government with a brick and chunam house, almost good enough to be called a semi-detached villa, at a cost of Rs. 300 or 400; but he builds himself a hut of mud and thatch like that in which, in his own village, his father and his brothers and sisters live, and are in their own way healthy and happy. He is, in short, a much more generally useful man than either the Madras Salt Subordinate or the Madras Police Constable. But the Madras Salt Peon may be made the same; and there can be no reasonable doubt that when all the subordinates stationed at a Factory are equally available for each and every sort of duty, fewer men than at present will be able to discharge them all. It is not possible for me now to give an accurate estimate of the reduction in the total number of subordinates which may in time thus be effected. I shall not be able to do so until the Factories are fenced, guarded, and generally worked somewhat on

the same system as that of the North-West Provinces; but I have no doubt at all that it should be considerable. Take the Nowpada Factory, for instance—I have never examined the ground with the object of seeing how many men I could guard and work it with, but, so far as I can judge from a knowledge of its circumference and of the number of its platforms, one hundred and ten men with sixteen Petty Officers would be a suitable Force. One hundred and twenty-nine men and twelve Petty Officers is the Force now employed, exclusive of any allowance for the "Orderly" required for patrols, &c.

73. If, however, Inspectors are to be responsible for the guarding of the Saliferous Tracts in the neighbourhood of their Factories as well as for the guarding of the Factories and Pans and for maintaining a proper check on the sales of Salt, it is evident that they must neglect either one or the other class of duties unless provided with trustworthy Assistants. As in the North-West Provinces, therefore, a class of Assistant Inspectors will be required. They would receive, of course, smaller salaries because younger and less experienced; but being of the same social position as the Inspectors, and having good prospects before them, they should be equally trustworthy. They would furnish thoroughly trained recruits for appointment as Inspectors and eventually as Assistant Commissioners; and their employment would in the meantime make it certain that no Factory need ever be left without the presence of a responsible Officer to watch the interests of Government, during the absence of the Inspector on circuit through his Circle. The one would always be on hand to supervise the Swamps of the neighbourhood; the other would always be at hand to supervise the working of the Factory, to compel the vigilance of the Guards and to check the sales of Salt, all weighments of which should be personally directed, and tested by the Inspector or his Assistant. This is the rule in the North-West Provinces, and should be made the rule here.

74. If economy were no object, and if extreme efficiency could not be bought at too dear a price, it would no doubt be best that there should be an Inspector and an Assistant Inspector to every Factory. Financial considerations forbid this, however. The cost would be too great. But I think that, for all practical purposes, the Revenue can be properly protected without incurring it. With this object, I recommend—

First, that, wherever the Salt Factories are close enough together, two, three, or four of them (each under its own Assistant Inspector) be grouped under the charge of one Inspector;

Secondly, that the less important Salt Factories be closed.

75. A glance at the Map of the Coast line of the Presidency which accompanied the Report of the Salt Commission will show how easily in many cases the grouping I propose can be effected. I calculate that an Inspector should be able efficiently to supervise a range stretching thirty or forty miles along the Coast and extending from fifteen to twenty miles inland, including the Factories situated within that area. A larger charge may no doubt at times be assigned to an active Officer; but considering that roads are few and far between along most parts of the Coast, that travelling is therefore difficult, and that for the next few years the discharge of the otherwise ordinary duties of guarding, &c., will be a somewhat severe task to Officers and men, both entirely new to it, I think that too much should not be expected at first, and that, until things are in good working order, small charges should be the rule. In time they may be enlarged as experience shows to be feasible. It will never, of course, be possible to assign to the Inspectors of Factories so important as any of those in the Ganjam District, as Negapatam or as Penugudur, charges more extensive than those of the Factories themselves, together with the neighbouring Coast and Inland Tracts. But such Factories as Konada and Bimlipatam, Karasa and

Balacheruvu, Levingepuram and Arasadi, which lie within twelve or fifteen miles of one another, may without difficulty be grouped under the charge of one such Officer, and a considerable saving be thus effected.

76. A further saving, both of direct pecuniary importance and of value as lessening the labours of the superior Officers of the Department, and as reducing the number of points at which the Revenue is endangered, will be effected by the abolition of a considerable number of the smaller Factories. There are at present fifty-nine Salt Factories and Depôts in the Presidency, at many of which the demand for Salt is so small that it is impossible to carry on manufacture every year, as it does not pay the manufacturers to make annually no more than the small quantity of Salt required for a year's consumption. Salt is made, therefore, every second, third, or fourth year only. In the interval the complete establishments have to be maintained, for public servants cannot be summarily discharged because full work cannot be found for them at the moment; and the manufacturers are often so impoverished by the impossibility of the regular prosecution of an industry which is at best precarious, that it not infrequently happens that when Salt is wanted they are unable to re-commence work without assistance. The maintenance, also, of these small Factories reacts injuriously on the larger ones, where the demand for Salt is always considerable. With Salt, as with most other articles, it is the fact that the larger the manufactories the more economical is the manufacture. The sales of the smaller Factories may not be great. For the past three years they have been under two and three quarter lakhs of maunds, on the average, at the eleven which I desire to close. But, so far as they go, they prevent me from working the larger Factories up to their full capacity and therefore to the best possible advantage.

77. The existence of the Salt Monopoly imposes on Government a moral obligation to maintain Salt Depôts in such numbers and in such positions as fully to meet the convenience of the consumers. I have not lost sight of it in the selection of Factories to be closed. An examination of the following statement will show that most of them have altogether been deprived of their former importance by the diversion of Trade due to the opening of Railways, and now supply but a petty local demand at a cost to the Community quite out of proportion to its amount:—

Factories.	Average Sales of the last three Years.	ESTIMATED ANNUAL EXPENDITURE ON					Total Estimated Annual Expenditure
		Establishment.	Police Guards.	Works.	Purchase of Salt.	Sundries.	
	MDRS.	RS.	RS.	RS.	RS.	RS.	RS.
Kuppili	31,778	2,388	2,840	2,000	2,625	250	10,103
Pentacotta	4,305	1,428	2,194	1,000	338	50	5,010
Kanuparti	70,941	2,664	1,982	2,500	5,938	750	13,834
Tummalapenta	10,276	1,044	1,197	250	950	150	3,591
Gogulapalli	13,786	1,296	1,576	250	1,188	200	4,510
Manambadi	12,710	1,368	1,026	700	1,400	450	4,944
Arasanagiri	25,561	1,608	1,587	200	2,391	300	6,086
Vairavanadhapatam	24,598	1,728	1,550	200	2,438	200	6,116
Attankarai	25,500	2,400	1,186	500	2,532	200	6,818
Mutturagunathapatnam	18,155	1,728	2,680	1,400	1,575	300	7,983
Kuttanguli	27,212	1,548	948	700	2,656	200	6,052
Total ..	264,822	19,200	18,766	9,700	24,331	3,050	75,047

78. The total annual saving that will be effected by the closing of these Factories amounts, therefore, to more than Rs. 50,000, exclusive of the cost of the manufacture of Salt, which can be better made at other Factories in the immediate neighbourhood without any additional expenditure on Establishments or Guards or on any other object.

79. It would be out of place here to enter on a detailed statement of the circumstances which have led me to select these particular Factories, as the which

it will be best to close, or of the reasons which have brought me to the conclusion that the measure may be carried out with no practical inconvenience to any appreciable number of the people in their neighbourhood. But it may be convenient if I briefly indicate them. They will be found in Appendix No. I.

80. To summarise what I have written above—I trust that I have succeeded in substantiating the following propositions:—

First, that the establishment of a Departmental Agency organized on the model of that of Northern India, and as well paid, is necessary to the protection of the Salt Revenue in the Interior, and in the Swamps and Salt-Earth Tracts along the Coast;

Secondly, that, when such an establishment of Officers is entertained, it will be a waste of available resources not to place under their supervision the Factories around which their work will lie; and

Thirdly, that, to effect this latter end without undue expense, it will be necessary to abolish some of the less important Factories, and as far as possible to group the remainder, by twos and threes, under the charge of single Inspectors.

I now proceed to consider what staff will be required to carry out these proposals.

81. The subjoined statement shows the number of Inspectors and Assistant Inspectors which, on the principles above laid down, I consider necessary to the efficient administration of the Madras Salt Department:—

Circles.	Inspectors.	Assistant Inspectors.	Circles.	Inspectors.	Assistant Inspectors.
For the charge of the Coast Line and of the Salt Factories.					
Chilka Lake and Ganjam Factory.	1	2	Vadasamanjeri and Covelong.	1	...
Surla	1	1	Cheyur and Merkanam to Pondicherry Frontier ...	1	2
Noupada	1	1	Rest of South Arcot along Coast including Gundalam...	1	1
Calingapatam	1	1	Neidavasal and Tranquebar ...	1	1
Konada and Bimlipatam ...	1	2	Negapatam	1	...
Karasa and Balacheruvu ...	1	1	Vedarniem including the Swamp and the Tiruturai-pundi Taluk ...	1	1
enugudururu	1	1	Adirampatnam, Thambikka-nallavankottai and Kattumavadi Factories and Pattukota Taluk ...	1	3
ogaltur	1	1	Vattanam	1	1
andiraka and Manginapudi ...	1	2	Morekolam	1	1
izampatam	1	1	Arasadi, Levingepuram, and Vaippar	1	3
hinna Ganjam	1	3	Kayalpattam	1	1
'adarti	1	1	South Canara, North, with Excise Factories.	1	1
'akala	1	1	Do. South	1	...
skapalle	1	1	Malabar, North	1	...
istnapatam and Dugardapatnam Factories and the Northern part of the Pulicat Lake...	1	2	Do. South	1	...
Pulicat Lake (Southern part) and Tada and Sunnapugunta Factories	1	1	West Coast Cruisers ...	...	4
Five Chingleput Northern Factories including a Sale Depôt to be opened at Attiput in lieu of Sunnapugunta ...	1	2	Total ...	31	42
Madras Salt Depôt	1	...			

X7295(E4)-2111029

m80

Circles.	Inspectors.	Assistant Inspectors.	Circles.	Inspectors.	Assistant Inspectors.
<i>For the suppression of Earth-Salt Manufacture and for the regulation of Saltpetre, &c., Works in the Interior.</i>			Coimbatore	1	...
Interior Kistna	1	...	Salem and West of South Arcot	1	...
Interior Nellore and Cumbum and Márkápúr Taluks of Kurnool	1	...	North Arcot and Interior Chingleput	1	...
Interior Tanjore	1	...	Cuddapah and Bellary	4	...
Trichinopoly	1	...	Kurnool (Principal Division).	1	...
Interior Madura	1	...	Total	13	...
			Grand Total	44	42

N.B.—The names of the Factories and Depôts at which sales will be conducted are entered in italics. In all cases but those of Madras and Negapatam the charge of a Factory, or group of Factories, will include the supervision of the Swamps and Salt-Earth Tracts along the Coast for half the distance to the neighbouring Factories on either side, as well as that of the Interior for a breadth of fifteen to twenty miles.

82. In the North-West Provinces and Oudh there were until recently thirty-eight Inspectors and twenty-three Assistant Inspectors, graded and paid as follows:—

No.	Grade.	Pay.
<i>Inspectors.</i>		
6	First	400
8	Second	350
12	Third	300
12	Fourth	250 or Rs. 200 while probationary.
38		
<i>Assistant Inspectors.</i>		
11	First	175
12	Second	150
23		

83. The above number of Inspectors has been increased by five since the beginning of the year, in consequence of the assumption by the Inland Customs Department of the supervision of Behar; but I have no information as to how the additional Inspectors have been graded. Speaking generally, however, it may be said that the numbers of Inspectors required in this Presidency and in the North of India are equal. I recommend the following grading and rates of pay to the favourable consideration of Government:—

No.	Grade.	Pay.
<i>Inspectors of the Madras Salt Department.</i>		
6	First	400
10	Second	350
12	Third	300
16	Fourth	250 or Rs. 200 while probationary.
44		

84. Assistant Inspectors will be employed solely at Factories, as in the North they are employed only at the Mines and Salt Sources, with the exception that one additional will be attached to the Ganjam Factory for the charge of the Chilka Lake and that four will be required to command Cruisers on the West Coast. Their number will be much in excess of those employed in the Inland Customs

Department. But this is unavoidable. It is necessary to the safety of the Revenue that one Officer of at least this position in the Service be constantly present at every Factory and Sale Depôt. These will still number forty-eight, even if my proposals to close eleven Factories are approved, against the seven or eight only which, in the North of India, are from natural conditions found sufficient to supply the whole country. The number of Assistant Inspectors required would indeed be fifty-two, but for the circumstances explained in Appendix No. II. The grading and rates of pay I respectfully recommend are—

Assistant Inspectors of the Madras Salt Department.

No.	Grade.	Pay
21	First	175
21	Second	150

85. The total cost, therefore, of the employment of an adequate complement of Inspectors and Assistant Inspectors will be as follows:—

No.		Per Mensem.	Per Annum.
<i>Inspectors.</i>			
6	First Grade on Rs. 400	2,400	28,800
10	Second " " " 350	3,500	42,000
12	Third " " " 300	3,600	43,200
16	Fourth " " " 250	4,000	48,000
44			
<i>Assistant Inspectors.</i>			
21	First Grade on Rs. 175	3,675	44,100
21	Second " " " 150	3,150	37,800
42			
Total		20,325	2,43,900

86. It will also be necessary, as in the North-West Provinces, to provide all Officers of these classes, who are stationed at places where there are no houses for them to hire, with accommodation at the public expense. Tents must also be provided and carried for them, and they must be paid Travelling Allowance when absent from their Head-Quarters on duty. I calculate that in time Quarters must be built for some seventy Officers, the average cost of which will be about Rs. 4,000. The total sum required, therefore, for this purpose will be about Rs. 2,80,000. The expenditure will, of course, be spread over several years. Three per cent. on it may be taken as the subsequent annual charge for Repairs, in addition to which it will probably be necessary to make some allowance for house-rent to those Officers who are stationed at such places as Negapatam and Tuticorin, where, though houses can be hired, they are scarce and dear. On the whole, the charge for Quarters for Inspectors and Assistant Inspectors may be taken at Rs. 12,000 per annum. The question of the provision and carriage of Tents is dealt with below (paragraph 139) for the whole Department. The Travelling Allowance of Inspectors and Assistant Inspectors should, I think, be three Rupees per diem, as in the North-West Provinces, except along the Coast, where, in consideration of the smaller size of Officers' Circles, and of their consequent ability to move about without a large quantity of personal baggage and stores, I would fix the rate at two Rupees.

87. The necessary strength of the Subordinate Staff has now to be considered. It will be convenient to begin with the lowest class and thence to work upwards.

Existing establishment of Peons, other Menials, and Police Constables.

88. Exclusive of Petty Officers, the sanctioned strength of the existing Permanent and Temporary Staff of Peons, &c., is as under:—

Districts.	Factories.					Swamp Guards.			Preventive Guards.			Grand Total.					Remarks.		
	Revenue Peons.	Weighmen.	Vettis.	Boatmen.	Guard Constables.	Total.	Revenue Peons.	Police Constables.	Total.	Revenue Peons.	Police Constables.	Total.	Weighmen.	Vettis.	Boatmen.	Constables.		Total.	
Ganjam	29	36	31	2	273	371	...	4	4	...	...	...	29	36	31	2	277	375	* Sanctioned with reference to G.O., April 18, 1879, No. 8,342, Revenue Department. See also Government of India letters printed with G.Os., September 11, and November 8, 1879, Miscellaneous No. 3,124, and No. 2,165, Revenue Department, respectively.
Vizagapatam	24	22	28	1	173	248	...	90	90	...	...	...	24	22	28	1	263	338	
Godavari	13	12	15	...	139	179	...	...	...	10	...	10	23	12	15	...	139	189	
Kistna	22	16	44	...	143	225	...	45	45	...	...	...	22	16	44	...	188	270	
Nellore	28	20	49	2	242	341	...	30	42	...	...	...	40	20	49	2	272	383	
Chingleput	60	9	117	...	404	590	...	12	12	...	...	...	60	9	117	...	416	602	
South Arcot	13	12	30	...	106	161	...	...	...	...	*75	75	13	12	30	...	181	236	
Tanjore	29	26	50	...	168	273	...	45	45	...	*75	75	29	26	50	...	288	393	
Madura	11	10	26	...	86	133	...	...	...	...	*75	75	11	10	26	...	161	208	
Tinnevelly	18	22	30	...	73	143	...	...	...	...	...	...	18	22	30	...	73	143	
South Canara	7	7	10	...	150	174	...	...	...	...	*150	150	7	7	10	...	300	324	
Malabar	†2	...	...	...	†2	†4	...	...	...	...	*125	125	2	...	...	...	127	129	† Employed at a Fish-curing yard.
Trichinopoly	...	...	...	...	...	...	...	...	...	...	*10	10	...	...	...	10	10		
Total	256	192	430	5	1,959	2,842	12	226	238	10	510	520	278	192	430	5	2,695	3,600	

89. The number of Police Constables above shown does not correspond with Difference from Police Budget. that given in the Inspector General's Budget for the current year (2,631). This is because, on the one hand, I have omitted from my calculations the Bonded Warehouse and Port Guards in the South Canara and Malabar Districts (75 men), with which I have no concern since the final orders of Government that the charge of the West Coast Sea Customs is not to be transferred to me as recommended by the Collectors and the Board of Revenue; and because I have added, on the other, the following additional Special Guards which have been sanctioned since the Budget was submitted :—

Authority.	District.	No. of Men.
Government Orders—		
No. Date.		
1,926, September 24, 1879	Ganjam ...	4
404, April 5, 1880	Vizagapatam ...	27
445, " 12, "	Kistna ...	62
585, May 25, "	Nellore ...	30
293, March 6, "	Chingleput ...	16
429, April 9, "		
578, May 22, "		
Total ...		139

90. From the above there must, however, be made the following deductions on account of the Factories which I propose to close :—

Districts.	Revenue Peons.	Weighmen.	Vettis.	Guard Constables.	Total.
Vizagapatam	7	6	8	51	72
Nellore	7	5	13	41	66
South Arcot	2	2	3	10	17
Tanjore	2	2	4	12	20
Madura	6	6	16	47	75
Tinnevely	2	2	4	8	16
Total ...	26	23	48	169	266

91. The establishment that will remain will be as under—

Remainder.					
Employed at Factories—					
Revenue Peons	...	...	...	...	230
Weighmen	...	...	...	...	169
Vettis	...	...	...	...	382
Boatmen	...	...	...	...	5
Guard Constables	...	...	...	...	1,790
					2,576
Swamp Guards—					
Revenue Peons	...	...	...	...	12
Police Constables	...	...	...	...	226
					238
On Preventive Duty—					
Revenue Peons	...	...	...	...	10
Police Constables	...	...	...	...	510
					520
Total ...					3,334

92. Under the proposed organization of the Department, considerable additions will be necessary to this Force, under all the above heads.

93. It is true that, as I have before stated, the substitution of a single body of subordinates of this class for the existing four separate bodies will enable me to provide efficiently for the discharge of duties of all descriptions with a smaller total number of men than would otherwise be required. But, on the other hand, it must be remembered that in many Factories the sanctioned Force of Police is very inadequate to the proper guarding of the Pans and Platforms, especially in the Southern Districts, as observed by the Salt Commission. Provision has also to be made for the Inspectors' "Orderly," the duties of which I have already explained (paragraph 18). Ten men should, I think, be allowed for this purpose to each Inspector, or 270 in all; and, so far as I can judge, from fifty to sixty more men will be required additionally to strengthen the Guards at places where they are weak. The total Force of Peons required for the Factories is therefore 2,900 in round numbers—an increase of 324 (or nearly 13 per cent.) on the total Force now employed at those proposed to be retained.

94. Vizagapatam, South Canara, and Malabar are the only Districts in which the guarding of the Swamps and Salt-Earth Tracts along the Coast can be said to have been put on a footing of efficiency, so far as the number of men is concerned. The two latter Districts will, however, eventually be included in the charge of the Assistant Commissioner below proposed to be entertained for the supervision of the Preventive Force in the Interior. To prevent confusion, therefore, the Forces there employed are entered under the head of "Preventive," and not under that of "Swamp Guards," which designation is restricted to those Guards who are under the same Inspectors as the Salt Factories. The total Forces considered necessary for the proper guarding of the dangerous Tracts along the Coast are estimated as under, after careful consultation with the District Officers and others best acquainted with local circumstances:—

District.	Number of Men now employed.	Additional number of Men required.	Total number of Men required.
Ganjam	4	115	119
Vizagapatam	90	...	90
Godavari	...	70	70
Kistna	45	40	85
Nellore	42	70	112
Chingleput	12	12	24
South Arcot	...	55	55
Tanjore	45	100	145
Madura	...	75	75
Tinnevely	...	60	60
Total ...	238	597	835

This is a large increase, but the total Force will not exceed one man per 1·2 miles of a Coast nearly the whole of which is highly saliferous.

95. The Force now employed on Preventive Duty in the Interior numbers 520 men in all, besides Petty Officers, who are separately treated of. This includes the parties marginally noted* which have been sanctioned temporarily, pending the decision of the question whether a Departmental Preventive Agency should be created. The remainder are—ten temporary hands employed in the Godavari District† and the abovementioned Coast Guard and Preventive Force on the West Coast. Throughout the remainder of the Presidency the Salt Revenue is entirely unprotected by any one whose attention is specially directed to it. The proposed division of the country into

on Preventive Duty in the Interior.

Men.
* South Arcot .. 75
Tanjore .. 75
Madura .. 75
Trichinopoly .. 10
Total .. 235

† G.O., March 2, 1880, No. 264, Revenue Department.

Proposed Preventive Circles under Inspectors.

Circles under Inspectors must be considered in some detail. It is fully set out in Appendix No. III of which the following is an abstract:—

Circles.	Revenue Districts.	Area.	Number of Saltpetre Works known to exist.	Number of Men.	Remarks.
		SQR. MILES.			
Guntur	Kistna	3,653	97	50	* There is not much Salt-Earth in this Circle, but the Mysore Frontier requires careful watching, to prevent the introduction of Earth-Salt.
Cumbum	Kurnool	4,107	10	70	
Kurnool	Nellore	5,918	..	80	† This is a small Circle but in parts it abounds with Salt-Earth. The Pudukota Frontier has also to be guarded for the same reason as above.
Bellary	Kurnool	5,171	4	75	
Anantapur	Do.	5,375	..	75	‡ The Kundapur Circle will include the charge of the South Canara Excise Factories. The number of men proposed to be employed in the South Canara and Malabar Circles is large in proportion to their area. These two districts stretch, however, for 275 miles along a Coast, at almost every point of which smuggling is possible, and nearly the whole of which and of the shores of its numerous extensive inlets may be said to be one sheet of saline efflorescence all the hot weather. Some of the men will also have to be spared for the Coast Guard Cruisers.
Cuddapah	Do.	4,620	11	70	
Madanapalle*	Cuddapah	5,171	..	60	‡ The Kundapur Circle will include the charge of the South Canara Excise Factories. The number of men proposed to be employed in the South Canara and Malabar Circles is large in proportion to their area. These two districts stretch, however, for 275 miles along a Coast, at almost every point of which smuggling is possible, and nearly the whole of which and of the shores of its numerous extensive inlets may be said to be one sheet of saline efflorescence all the hot weather. Some of the men will also have to be spared for the Coast Guard Cruisers.
Vellore	North Arcot	6,453	1	50	
Salem	Do.	9,253	10	60	‡ The Kundapur Circle will include the charge of the South Canara Excise Factories. The number of men proposed to be employed in the South Canara and Malabar Circles is large in proportion to their area. These two districts stretch, however, for 275 miles along a Coast, at almost every point of which smuggling is possible, and nearly the whole of which and of the shores of its numerous extensive inlets may be said to be one sheet of saline efflorescence all the hot weather. Some of the men will also have to be spared for the Coast Guard Cruisers.
Coimbatore	Chingleput	6,804	768	70	
Trichinopoly	Salem	5,523	197	60	‡ The Kundapur Circle will include the charge of the South Canara Excise Factories. The number of men proposed to be employed in the South Canara and Malabar Circles is large in proportion to their area. These two districts stretch, however, for 275 miles along a Coast, at almost every point of which smuggling is possible, and nearly the whole of which and of the shores of its numerous extensive inlets may be said to be one sheet of saline efflorescence all the hot weather. Some of the men will also have to be spared for the Coast Guard Cruisers.
Tanjore†	Coimbatore	1,812	16	50	
Madura	Trichinopoly	6,745	42	50	‡ The Kundapur Circle will include the charge of the South Canara Excise Factories. The number of men proposed to be employed in the South Canara and Malabar Circles is large in proportion to their area. These two districts stretch, however, for 275 miles along a Coast, at almost every point of which smuggling is possible, and nearly the whole of which and of the shores of its numerous extensive inlets may be said to be one sheet of saline efflorescence all the hot weather. Some of the men will also have to be spared for the Coast Guard Cruisers.
Kundapur†	Madura	1,417	..	60	
Mangalore†	South Canara	2,976	..	90	‡ The Kundapur Circle will include the charge of the South Canara Excise Factories. The number of men proposed to be employed in the South Canara and Malabar Circles is large in proportion to their area. These two districts stretch, however, for 275 miles along a Coast, at almost every point of which smuggling is possible, and nearly the whole of which and of the shores of its numerous extensive inlets may be said to be one sheet of saline efflorescence all the hot weather. Some of the men will also have to be spared for the Coast Guard Cruisers.
Tellicherry†	Do.	1,658	..	50	
Calicut†	Malabar	3,423	..	75	‡ The Kundapur Circle will include the charge of the South Canara Excise Factories. The number of men proposed to be employed in the South Canara and Malabar Circles is large in proportion to their area. These two districts stretch, however, for 275 miles along a Coast, at almost every point of which smuggling is possible, and nearly the whole of which and of the shores of its numerous extensive inlets may be said to be one sheet of saline efflorescence all the hot weather. Some of the men will also have to be spared for the Coast Guard Cruisers.
Total ..	Do.	80,079	1,156	1,095	

Comparison with the Internal Branch of the Inland Customs Department.

96. The proposed Circles are therefore seventeen in number, and compare as under with those of the North-West Provinces and Oudh:—

	No.	Average Area.	Average number of Saltpetre Works.	Average number of Men.
		SQR. MILES.		
Madras Presidency	17	4,710	68	64
North-West Provinces and Oudh	16	5,761	457	50

97. From this comparison it would at first sight appear that my proposals must be in excess of requirements. It must, however, be remembered that we have here to deal with a state of things to which that in the North of India is not parallel. There, for at least half a generation, the manufacture of Earth-Salt has been forbidden, and a clear and comprehensive Law has been enforced by an adequate Special Agency. Here it has, in parts of the country, been permitted until but a few months ago; and it has been everywhere fostered by the indifference of Authorities, by imperfect and confused Legislation, and by contradictory rulings of the High Court, until the people generally only half believe in the resolution of Government to suppress it, and Experts even are doubtful how far it is legal to go towards it. There, the whole country has been carefully examined and every patch of saliferous soil is known and its exact position recorded. Here, this work has yet to be done and must take many years in the doing. The number, even, of Saltpetre Works is not accurately known. I believe, also, that the Internal Branch of the Inland Customs Department was at first numerically much stronger than at present. As time has gone on, and as the Law has been better understood and more readily obeyed by the people, reductions have been found

possible. No doubt it will be the same in Madras. But it would, in my opinion, be a great mistake to expect too much at once. I believe we shall at first require the full Force for which I have estimated. If, when taking up Districts, and as I gain that personal experience of the subject which I now lack, I find I can do with less, the Government may rely upon me to employ not a man more than is actually necessary. In the meantime, the Force I propose may be usefully compared with that recently entertained in Behar, on its being brought under the control of the Inland Customs Department. The latter numbers 716 men (Petty Officers included) for an area of 23,726 square miles, divided into 5 Circles. While, therefore, the average area of each Behar Circle is 4,745 square miles (almost exactly that of the proposed Madras Circles), the number of men (one-sixth of the total being allowed for Petty Officers) is out of all proportion greater (119 against 64). It is no doubt the case that in the North of India, especially in Behar, the number of licit Saline Works to be inspected is very many times larger than in this Presidency; but the truth is that we do not as yet accurately know the full number of such Works in our Districts, nor are we likely to do so for some time after the Special Agency shall have been at work. Area must also be taken into account. On the West Coast the number of men proposed is known by actual experience to be no greater than is necessary. For the remainder of the Presidency the estimate of one man to every 87 square miles appears to me moderate.

98. Eight Peons will also be required, as in the North-West Provinces, to accompany each Inspector in charge of an Interior Circle when on tour, except in the case of Kundapur, where it is considered that four Peons will suffice, as the Circle is very small and as the Inspector will from time to time be able to employ the Peons of the Excise Factories' Establishment on ordinary office duties.

99. The total number, therefore, of men which I think necessary for all purposes is as under:—

For the guarding of Factories and Pans, and the supervision of manufacture and sales	2,900
For the guarding of the Swamps and Salt-Earth Tracts along the Coast	835
For Preventive Duties in the Interior	1,095
Circle Inspectors' Peons (16 × 8 + 4)	132
Total	4,962

100. The number of Petty Officers (Duffadars and Head Constables) now employed is 270 to 2,842 men at the Factories, 18 to 238 in the Swamp Guards, and 65* to 520 in the Force employed on Preventive Duty in the Interior—Total 353 Petty Officers to 3,600 men, or one to ten. This, however, is a somewhat delusive result, seeing that to 905 Revenue Peons, Weighmen, &c., there are no Petty Officers (save at the Madras Salt Depot, where two Duffadars are employed)—an omission which materially detracts from the usefulness of this class of servants. They must, therefore, be left out of account for the present, and the proportion of Petty Officers to men among the Salt Police only be considered. It is—

In the Factory Guards	268 to	1,959, or 1 to	7·3
„ the Swamp	18 „	226 „	1 „ 12·5
„ the Preventive	65 „	510 „	1 „ 7·8

Both in the Swamp and Preventive Guards, that is, where the men are much further removed from the chance of a superior suddenly arriving to inspect them, the proportion of Petty Officers to men is less than at the Factories, where they are more under observation. This disproportion cannot be approved. In the case of the Swamp Guards it is so marked as of itself to account for the comparative inefficiency of which I have spoken. At the Sultanpur Salt Works there are 8 Petty Officers to 54 men or rather more than 1 to 7; at Sambhar the proportion is

* Exclusive of twenty-three Head Constables recently sanctioned in G.O., No. 625, dated June 7, 1880, Revenue Department, to strengthen the Bellary District Police so as to enable it better to deal with offences against the Salt Laws.

almost exactly the same (84 to 582). Swamp Guards require more, rather than less, supervision than those employed at Factories; Preventive Peons more than either. In the Internal Branch of the Inland Customs Department there are 153 Petty Officers to 804 Peons (Inspector's Office Peons excluded), or 1 to 5·2. The proportions I propose to adopt are—

For the Factory Guards...	1 Petty Officer to 7 men.
„ Swamp „	1 „ „ 6 „
„ Interior Preventive Force	1 „ „ 5 „

The total number of Petty Officers which will be required will therefore be—

For the Factory Guards...	415
„ Swamp „	139
„ Interior Preventive Force	219
Total...	773*

101. The next class of the Subordinate Establishment of the Factories is that of the Clerks and Shroffs. Their present numbers are as under:—

Monthly Pay Rs....	50	35	30	25	20	15	10	Total	2,720
Number*	1	2	3	5	36	85	39	Total	171

Twenty of these belong to Factories proposed to be closed. The grouping of a considerable number of the remaining Factories will render possible some reductions under this head. One hundred and twenty-six Clerks and Shroffs will suffice, I estimate, for the Factories. Thirty-four will be required for the offices of Inspectors of Circles in the Interior. The total number of Clerks and Shroffs will therefore be 160.

102. Above the Clerks, under present arrangements, are the Salt Superintendents and Assistant Superintendents, to whose case I have before adverted (paragraph 68). The existing number of Officers of this class is 159 (including the Shell-pit Superintendent employed at the Pulicat Lake), paid as follows:—

Monthly pay Rs. ..	200	125	100	85	70	60	50	40	35	30	25	20	15	Total..	6,120
Number ..	1	3	7	4	14	6	24	3	3	3	6	45	40	Total..	159

Nineteen of these appointments will be abolished with the Factories to which they belong. Seeing, however, that the senior and more trustworthy and deserving among the Salt Superintendents will be promoted to be Assistant Inspectors, and that 54 Officers (three to each Circle, with three spare) will be required, as in the North of India, to assist the Inspectors in charge of the Preventive Force in the Interior, there will be no difficulty in providing for the Officers who will be thus displaced. This would give 194 as the number of Officers of this class to be ultimately employed, but that in some Factories there are now more than are required. I shall thus be enabled to reduce the number by four, to 190. I propose that the future designation of these Officers be Sub Inspectors, as in the Inland Customs Department.

103. If the above proposals are accepted, the total strength of the Department subordinate to Gazetted Officers, and exclusive of their Office Establishments, will be—

44 Inspectors.	4,962 Peons.
42 Assistant Inspectors.	
190 Sub Inspectors.	6,171
160 Clerks and Shroffs.	
773 Petty Officers.	

* Including some recent additions to the Establishment, which are still classed as Temporary.

104. The question of the Pay of the Superior Executive Officers has been disposed of. I now come to that of their Subordinates.

105. The class of Officers who are now called Salt Superintendents and Assistant Superintendents and whom I propose in future to designate Sub Inspectors are now paid at rates varying from Rupees 200 (in one instance only) to Rupees 15 per mensem. All the year round their work is sufficient to employ their whole time. During the hot weather it involves constant exposure and is very trying. It is not, I think, reasonable to expect to get a respectable class of men for work of the sort for salaries so low as Rupees 15 per mensem. I consider Rupees 30 may fairly be fixed as a minimum. On the other hand, such salaries as Rupees 200, 125, 100, and 85 are higher than it will be necessary to pay to secure men perfectly fit to render good service, so long as they are under the constant and immediate control of a superior, and have no independent charge. I propose to fix Rupees 70 as the highest rate of pay of Officers of this class, and to divide the whole body into five grades as under :—

No.	Grade.	Proportion to whole Number.	Rate of Pay.	Per Mensem.	Per Annum.
15	First ...	One-twelfth ...	Rs. 70	Rs. 1,050	Rs. 12,600
24	Second ...	One-eighth ...	60	1,440	17,280
36	Third ...	Three-sixteenths ...	50	1,800	21,600
47	Fourth ...	One-quarter ...	40	1,880	22,560
68	Fifth ...	Remainder ...	30	2,040	24,480
190	Total ...	...	...	8,210	98,520

106. These rates of pay are those in force in the North of India, and appear to me reasonable and moderate. I trust they will be approved. In introducing them there will at first be a slight difficulty. Most of the men of this class who now draw higher rates of pay than Rupees 70 are fit for promotion to the second grade of Assistant Inspectors, but some few are, from age, imperfect education, and other causes, unequal to the higher responsibilities which will devolve on Assistant Inspectors under the new organization. It will be necessary, therefore, to class them as First Grade Sub Inspectors, and to grant them as a Personal Allowance the difference between their present and future rates of pay. There will be no difficulty in arranging for this without exceeding the total grant for Establishments. These men are all senior and the Personal Allowances granted them will disappear in a few years, as they retire on pensions.

107. The salaries of the Clerks and Shroffs retained in Factories will be unchanged. I propose that there shall be two grades of Clerks in the offices of Inspectors in charge of Preventive Circles in the Interior. Men of the necessary qualifications can be secured for Rupees 20 to 25 per mensem, but, as they will be constantly on the move, it will be necessary to grant them batta if they receive salaries so low. It will be far simpler, I think, to pay them a little more and to save the amount of work in the Account Department of my office, and in the office of the Accountant General, which the grant of batta will entail. I would, therefore, fix their pay at Rupees 30 and 25, on the distinct understanding that no Travelling Allowance will be granted, save for rapid marches (which will be rare) by road or rail, or on transfer from one Circle to another. On such occasions they would draw the authorized rates of mileage applicable to Uncovenanted Officers of their standing generally. If these proposals are approved, the establishment of Clerks and Shroffs under Executive Officers will stand as follows :—

Monthly Pay Rs.	...	50	35	30	25	20	15	10	Total Rs. ...
Number	...	1	2	19	21	35	57	25	160

It will be easy to absorb the few Officers who will become supernumerary by the reductions in this class in filling up the appointments in the Sub Inspector's class, in the number of which there is an increase.

108. The rates of pay now drawn by the classes of subordinates whose place Petty Officers and Peons will be taken by the new body are as under :—

Salt Department.			
Peons	...	...	Rs. 7 and 6
Weighmen and Boatmen	...	...	„ 8 „ 6
Vettis	...	...	„ 5
Police.			
Head Constables	...	...	Rs. 25, 20, 15, and 12
Men	...	...	„ 8, 7, and 6½
Kotegushts	...	...	Rs. 15, and 12
Jemadars	...	...	„ 10, 9, and 8
Peons	...	...	„ 7 and 6

In the North of India the grading and rates of pay are—

In each case the men of a class are equally divided among the grades, that is, half the Kotegushts, one-third of the Jemadars, and half the Peons are of each of the grades above shown. There are 110 Kotegushts to 355 Jemadars, or nearly one to three. I propose to maintain the same proportion. The designation Kotegusht would be unmeaning here. I would call the Petty Officers Jemadars and Duffadars. As the pay of the Police Constables now employed on Salt Duty rises to Rupees 8, I think that of the Salt Peons, who will take their place, must do the same, or there will be a difficulty about recruiting. It will not then be necessary to have three grades in the lower class of Petty Officers. Two will suffice. Nor is it, I think, necessary to divide the Peons equally among the three grades proposed for the class. One-tenth might be in the first, three-tenths in the second, and six-tenths in the third grade. This will bring their average pay to exactly the same amount as in the Inland Customs Department, that is to say, six-and-a-half Rupees per mensem. Upon these principles I propose the following classification and grading of the Petty Officers and Peons :—

Class.	Grade.	Number.	Rate of Pay.	Cost.	
				Per Mensem.	Per Annum.
Jemadars	First...	91	Rs. 15	Rs. 1,365	Rs. 16,380
	Second ...	92	12	1,104	13,248
	Total...	183	...	2,469	29,628
Duffadars	First...	295	10	2,950	35,400
	Second ...	295	9	2,655	31,860
	Total...	590	...	5,605	67,260
Total of Petty Officers...		773	...	8,074	96,888
Peons	First...	496	8	3,968	47,616
	Second ...	1,490	7	10,430	1,25,160
	Third ...	2,976	6	17,856	2,14,272
Total of Peons...		4,962	...	32,254	3,87,048
Grand Total...		5,735	...	40,328	4,83,936

109. In distributing the above Force among the several Districts I shall take care to post the better paid in larger proportions to the more expensive than to the cheaper parts of the country. The duties of a large portion of these men will entail constant movement about the country, so that if batta is allowed to them they will draw it almost continuously. This would not only be very expensive,

but would also be most inconvenient on account of the great amount of work the preparation of the bills and the keeping of the accounts will cause; and it is also unnecessary considering the general improvement in the condition of these classes of servants which the present scheme will effect. I propose, therefore, to adopt the rule of the Police Department and to allow no Batta or Travelling Allowance, save under the special circumstances of a forced march, or of a journey on duty by rail, or of transfer from one Circle to another.

110. It would tend greatly, no doubt, to the efficiency of the guarding if the whole of the Force employed on it could be a permanent one. But financial reasons render this hardly possible. The number of Temporary Constables now employed at Factories is 901 out of a total number of 1,959. The proportion is large, and the custom unfortunately is to employ them principally in guarding the Pans during the Manufacturing Season, that is, just in the very situations in which they are the least under observation. If, however, the number of Temporary Guards is not so large as to necessitate the entrusting to them of charges in which the Permanent Guards cannot be associated with them; and if care is taken whenever possible to employ them in those situations in which temptation is smallest and supervision most strict, their employment is not altogether to be condemned. More will probably be saved by it in pay, than will be lost by it from dishonesty or inefficiency. Under the existing system it is hardly possible in many cases for the Temporary Police to be employed otherwise than by themselves in places of responsibility, for the Pans could not be entirely guarded without them, nor are the Permanent Guards as a rule sufficiently numerous for some of them to be posted in their company to every Beat. But under the new organization of the Department this difficulty will to a great extent disappear. I do not think that it will ever be safe or right to employ Temporary Peons on the responsible and independent duties of the Preventive Force in the Interior; but at the Factories many, if not all, of the duties which are now discharged by Revenue Peons, Weighmen, and Vettis may without difficulty be entrusted to them during the Manufacturing Season. The Permanent Peons, whose places they would fill, would then be at liberty for Guard Duty. Temporary Peons can also to a certain limited extent be employed without danger in the guarding of Swamps. I am of opinion, therefore, that, while for economy's sake the employment of Temporary Peons is advisable, it can in future be so regulated as to be productive of little danger to the Revenue, if not carried too far. The limit of numbers which I would fix is 1,200 of the Third Grade. The average time for which the services of these Temporary hands are necessary during each Manufacturing Season may be taken at six months, so that the saving by this arrangement should be $(1,200 \times 6 \times 6)$ Rupees 43,200 annually. On the other hand, I think that some steps should be taken to mitigate as far as possible the evils which, under any circumstances, must attach to the employment of Temporary hands. With this view, I shall make it a rule that well-conducted Temporary Peons are to have the first claim to vacancies on the Permanent Establishment; but something more than this is, I think, required to induce them to attach themselves to the Department, and to regard its interests as their own. I propose, therefore,

First, that Temporary Peons subsequently confirmed on the Permanent Establishment be allowed to count for Pension whatever time they may have been actually on duty as Temporary Peons; and

Second, that Temporary Peons shall receive a retainer at the rate of one Rupee per mensem for the time they are not actually employed, provided they return to duty on the next occasion of their services being required, and serve for not less than three months to satisfaction.

The former proposal will entail a Pensionary liability too small to be worth calculating. The latter will cost Rupees 7,200 per annum, on the average. The net saving, therefore, by the employment of the number stated of Temporary Peons will be Rupees 36,000 (43,200 — 7,200) annually, and the total pay of Petty Officers and Peons will thus be reduced to Rupees 4,47,936.

111. The total pay of the Executive Officers of the Department and of the Ministerial Servants under their orders will thus amount to a little over eight-and-a-quarter lakhs of Rupees per annum, as under:—

Total Pay of Executive Officers.

	Rs.
Inspectors	1,62,000
Assistant Inspectors	81,900
Sub Inspectors	98,520
Clerks and Shroffs	36,240
Petty Officers	96,888
Peons	3,51,048
Total	8,26,596

112. The Petty Officers and Peons of the Inland Customs Department wear uniform, but are not furnished with it at the expense of the State. The circumstances, however, of the classes from which they are drawn, and of those from which their fellows in the Madras Salt Department will be recruited, are different. In the North of India, Natives of all classes are accustomed to wear coats of some sort—in the cold weather, very serviceable ones of quilted cotton. It is, therefore, easy for a Peon to get himself coats, and when getting them to get them of a prescribed colour and pattern. All, therefore, that it has been necessary for the Commissioner of Inland Customs to do, in order to put the Force under him into uniform, has been to insist on all the men making their clothes of the same material and pattern. A quilted blue cotton coat has been selected, to which is added a waist-belt with sword frog. In this Presidency, Natives not in personal attendance on Europeans and not in the Public Service may be said never to wear coats of any kind. If, therefore, the Salt Department Peons are left to provide their own clothes, it will be simply impossible for them to do so. They could not get them made, for want of Tailors, except in the neighbourhood of Towns frequented by Europeans, and then only at a cost which would fall heavily on their slender means. They must be in uniform, both that they may be able to assert their authority among those with whom they have to deal, and that they may be without difficulty identified by their Numbers if attempting any malpractices. It follows then that they must be provided with uniform at the cost of Government. I propose to supply coats only. Turbans they all wear already, and the requirement that they shall get them all of the same material and shall tie them in the same way will cost them nothing. They must also be supplied with distinguishing Numbers and Letters, with Belts and Batons and with such Arms as those of them who are employed on Treasure Guards or Escort Duty may require. The Petty Officers should, I think, be furnished with Swords. The annual cost of clothing, &c., will amount to about Rupees 46,000, including a provision (at a considerably lower rate than is given in the Police Budget) for such contingent charges as the renewal and repair of arms, ammunition, medicines, and carriage of clothing. The estimated expenditure under this head is about Rupees 4,000 per annum lower than the present provision in the Police Budget, though the number of Petty Officers and men is increased from 3,164 to 5,735. Details of the calculation are given in Appendix No. IV and are based (as to the items last mentioned) on the supposition that the stock of arms, &c., actually on hand at the Salt Factories at the time when the guarding may be transferred from the Police to the Salt Department will be made over in good condition, free of charge. As this Department has already paid for them, this is no more than reasonable.

	Madras.	North-West Provinces.
	Rs.	Rs.
1st-Class Constables..	8	7*
2nd do. ..	7	6*
3rd do. ..	6½	5*
* Less 4 Annas per mensem for clothing and Superannuation Fund.		

113. The Madras Salt Peons will thus have an advantage of about Rupees 5 per annum over those of the Inland Customs Department. This will certainly not do more than redress the balance of the additional cost of living in this Presidency—a fact which is notorious with regard to Europeans, and which is virtually admitted for the lower orders of Natives by the difference in the scale of pay of ordinary Police Constables. It is certain, at all events, that an efficient body of men cannot here be got together for less.

114. One other subject remains to be dealt with before I conclude this part of my Report, namely, the proposed employment of four Cruisers on the West Coast. This was before proposed by

the Salt Commission in their separate Report on the Salt Administration of South Canara and Malabar, and the proposal has been concurred in by all Officers who have studied the subject on the spot. In my judgment the measure is an absolutely necessary one. As matters now are, a Smuggler can anchor anywhere along the Coast and can stay there as long as she pleases without any Government Officer being able to interfere with her, or even to ascertain whence she comes or whither she goes. The circumstances and necessities of the case have been, however, so fully stated before that it is needless to recapitulate them. It is evident that the security of the Revenue will be greatly increased by the constant presence of a sufficient number of Cruisers off the West Coast. Their Commanders (Assistant Inspectors) should be vested with powers under Act XVI of 1879, which, indeed, must be almost a nullity without some such arrangements for enforcing it as are here proposed. The Salt Commission suggested that the Cruisers to be employed should be Boats of about fifteen tons, but I think that this size would be altogether insufficient. I know from personal experience that so small a craft is anything but comfortable to live in even in the British Channel, and I should fear that a lengthened residence on board of one in the hot weather of the West Coast would be almost certainly prejudicial to health. I doubt if the Cruisers should be of less than fifty tons burden. To build a vessel of that size and to fit her out plainly but substantially should certainly not cost more than £15 a ton, or, say, Rupees 8,000. The annual charge for depreciation and repairs should not exceed 25 per cent. at the very outside, or Rupees 2,000 per annum. The cost of the wages of the Crew should be approximately as follows :—

							RS.
1	Tindal on Rupees 16, for twelve months	...	...	...	...	...	192
1	Second Tindal on Rupees 14, for eight months	...	...	...	...	...	112
4	Lascars on Rupees 10, for twelve months	...	...	...	...	...	480
12	" " " " eight "	...	...	...	...	...	960
						Total ...	1,744

The employment, therefore, of one Cruiser is unlikely to cost more than four, or of four more than sixteen thousand Rupees per annum, exclusive of the pay of the Assistant Inspectors in command, which has been elsewhere provided for.

115. The requirements of all branches of the proposed Executive Service of the Department having now been stated, it may be convenient to bring into one view the figures arrived at. They are as follows :—

Total cost of Executive Es- tablishments.	
--	--

	Annual Cost.
	RS.
44 Inspectors	1,62,000
42 Assistant Inspectors	81,900
190 Sub Inspectors	98,520
160 Clerks and Shroffs	36,240.
773 Petty Officers	96,888
4,962 Peons	3,87,048
Total ...	8,62,596
Deduct on account of 1,200 Third-Grade Peons being employed for six months only each year	36,000
Balance ...	8,26,596
Add annual cost of clothing of Petty Officers and Peons	46,000
Add annual cost of maintenance of Cruisers on the West Coast	16,000
Grand Total of Executive Establishments ...	8,88,596

116. I desire also to submit for approval certain alterations in the sanctioned establishment of Gazetted Officers and of their office servants. The Gazetted Officers of the Department are now as under :—

- 1 Commissioner on Rupees 2,000 rising to Rupees 2,500.
2 Deputy Commissioners on Rupees 1,200 rising to Rupees 1,400.
1 Personal Assistant to the Commissioner on Rupees 500.
12 Assistant Commissioners—

						Per Mensem.	Per Annum.
						RS.	RS.
1	First Class on Rupees	600	...	...	...	600	7,200
3	Second " " "	500	...	...	...	1,500	18,000
3	Third " " "	350	...	...	...	1,050	12,600
5	Fourth " " "	250	...	...	...	1,250	15,000
Personal allowance drawn by the Chingleput Assistant Commissioner						150	1,800
						Total ...	54,600

117. It is evident, however, that when the Factories and Depôts are placed under the immediate charge of Inspectors, a class of Officers Assistant Commissioners. in every way superior to the present Salt Superintendents, inspection and supervision by Assistant Commissioners need not be either so frequent or so minute. The number of Assistant Commissioners may, therefore, be reduced without risk of loss of efficiency. On the other hand, the importance of the position of Assistant Commissioners will be much enhanced by the increase in the number of men among whom they will have to maintain discipline, by their additional responsibilities in respect to the guarding of the Factories and Pans, and by the general improvement in the status of the Officers under their orders. It will more than ever be necessary, to use the words of the Salt Commission, which have already received the approval of the highest Authority, "to secure a class of Officers thoroughly trustworthy, of sound physique, and of a character fitted to command respect and enforce discipline among their subordinates." To attain this an increase of pay is, as the Salt Commission foresaw, an absolute necessity. There is no reason why the scale of pay to be fixed should be less here than in the North of India. Really good men, fit for a charge on the average nearly or quite equal to that of a District Superintendent of Police, cannot be got for less. The number of Assistant Commissioners, therefore, and the rates of pay which I would propose are—

				Per Mensem.	Per Annum.
				RS.	RS.
1	First Class on Rupees	800	...	800	9,600
2	Second " "	700	...	1,400	16,800
2	Third " "	600	...	1,200	14,400
2	Fourth " "	500	...	1,000	12,000
7				Total ...	52,800

This will allow of one Assistant Commissioner being placed in special charge of the Preventive Force in the majority of the Districts of the Interior, while the twelve Maritime Districts, now under twelve Assistant Commissioners, and the rest of the Interior should be distributed into Divisions among the remaining six. The arrangement of charges which I would propose is shown in the following statement :—

Divisions.	Head Quarters.	Revenue Districts.	Circles.	Sales and Imports in 1879-80.	INTERIOR PREVENTIVE FORCE.										Grand Total.													
					FACTORY ESTABLISHMENTS AND SWAMP GUARDS.																							
				MAUNDS.	Inspectors.	Assistant Inspectors.	Sub Inspectors.	Clerks and Shroffs.	Jemadars.	Duffadars.	Peons.	Inspectors.	Assistant Inspectors.	Sub Inspectors.	Clerks and Shroffs.	Office Peons.	Jemadars.	Duffadars.	Peons.	TOTAL.								
Northern	Chitacole	Ganjam and Vizagapatam	6	1,011,994	6	9	23	27	19	103	819	..	..	..	..	..	..	..	..	..	1,006	1,006						
Rajahmundry.	Rajahmundry.	Godavari and Kistna except Chinna Ganjam and neighbourhood	5	603,540	4	5	14	14	13	65	525	1	..	2	2	8	4	6	50	5	5	16	16	8	17	71	575	713
Nellore	Nellore	Chinna Ganjam, Cumbum, and Markapur Taluks of Kurnool, Nellore District and Pulicat Lake	4	485,803	3	6	14	14	11	46	380	1	..	4	3	8	5	9	70	4	6	18	17	8	10	55	450	574
Chingleput	Madras	Coast of Chingleput District except Cheyér	4	1,611,746	4	3	35	24	18	85	709	..	..	..	..	..	..	..	..	4	3	35	24	..	18	85	709	878
Negapatam	Negapatam	Cheyér, Coast of South Arcot, Tanjore, and Trinchnopoly	8	1,164,182	6	8	30	28	21	87	725	2	..	5	3	16	9	13	110	8	8	35	31	16	30	100	835	1,063
Southern	Tuticorin	Madura and Tinnevely	5	757,512	4	6	16	15	13	47	398	1	..	4	2	8	5	5	50	5	6	20	17	8	18	52	448	574
Central	Salem	South Canara, Malabar, Coimbatore, Salem, remainder of South Arcot, North Arcot, Interior Chingleput, Cuddapah, Kurnool, and Bellary	12	873,019	..	1	4	4	3	23	179	12	4	39	24	92	62	101	815	12	5	43	28	92	65	124	994	1,363
		Total..	..	6,407,796	27	38	136	126	98	456	3,735	17	4	54	34	132	85	134	1,095	44	42	190	160	132	183	590	4,830	6,171

118. In this re-arrangement of charges it has been impossible to avoid some irregularity in the number and revenue of the Circles assigned to each Assistant Commissioner, owing to the fact that area and facility of access are elements essential to the determination of the size of the range which an Officer can be expected properly to supervise. A reduction of Rupees 1,800 per annum will be effected in the item of salaries, but this will be more than counterbalanced by the allowance of house-rent and by the grant of the increased rates of Travelling Allowance necessitated by the altered position and enlarged Divisions of the Officers, and required to place them on the same footing as the Assistant Commissioners of Inland Customs. House-rent may be taken at Rupees 50 per mensem, except for the Chingleput Assistant Commissioner, whose Head Quarters will be Madras, and who should receive Rupees 100 per mensem. The annual total under this head will, therefore, be Rupees 4,800. Travelling Allowance should be five Rupees per diem. The provision of Tents is treated of below (paragraph 139).

119. No additional expense need be incurred in order to the provision of Assistant Commissioners with suitable Office Establishments. Those at present sanctioned are shown in the following table and cost Rupees 18,036 per annum :—

Districts.	Clerks on Rupees					Attend-ers on Rupees 8.	Peons on Rupees		Masal-chies on Rupees 6.	Smiths on Rupees 30 and 25.	Total Cost per Mensem.	Total Cost per Annum.	Remarks.
	70.	50.	45.	20.	15.		8.	7.					
Ganjam ..	..	..	1	1	1	1	..	3	1	1	145	1,740	The Office Establishments of the South Canara and Malabar Assistant Commissioners are employed partly on Sea Customs, and partly on Salt, duties, those Officers being in charge of both Departments in their respective Districts.
Chingleput ..	1	..	..	1	1	1	3	..	1	1	168	2,016	
Tanjore ..	..	..	1	1	*1	1	..	3	1	1	145	1,740	
South Canara.	..	1	..	1	2	1	..	3	1	..	135	1,620	
All other Districts, each.	..	..	1	1	..	1	..	3	1	1	130	1,560	

The cost of the Malabar Office Establishment being debited wholly to Customs, it is not included in this statement. In both Districts some provision will have to be made for the charge of Sea Customs, but I submit no proposals as Government have decided that the charge thereof is not to be amalgamated with that of the Salt Department, and as I am not aware of their intention regarding it.

120. Even now, when the charge of an Assistant Commissioner of Salt Revenue extends over a single Revenue District only, the establishment ordinarily allowed is found to be insufficient to the satisfactory performance of the duties required of it. It will be still more so, when charges are on the average nearly doubled in size, and much more than doubled in respect of the number of subordinates employed. I think therefore that the Establishments of Assistant Commissioners should be as shown below. It would be necessary to make them much stronger—and more in correspondence with that allowed to the Assistant Commissioner in charge of the Internal Branch of the Inland Customs Department—but that I propose to maintain the present system, by which the tabulation of nearly all the accounts of the Department is conducted in the Central Office in Madras.

Office Establishment to be allowed to Assistant Commissioners of Salt Revenue.

		Per Mensem.	Per Annum.
	RS.	RS.	RS.
1 Clerk	on Rupees 70	70	840
1 "	" " 30	30	360
1 "	" " 20	20	240
1 "	" " 15	15	180
1 Duffadar	" " 10	10	120
1 Mookhi	" " 8	8	96
2 Peons	" " 8 each	16	192
2 "	" " 7	14	168
1 Masalchi	" " 6	6	72
Total of one Office...		189	2,268
		7	7
Total of seven Offices...		1,323	15,876

* Temporary.

121. The total cost of the Offices of seven Assistant Commissioners will therefore be Rupees 2,160 per annum less than that of those which now exist. This result is attained by the omission of any provision for the Mechanics, one of whom is now employed in each District except South Canara to keep the weighing machines in good order. The entertainment of these Artisans was originally sanctioned at the time when the machines principally employed were the old Platform Machines in which the load of Salt on the Platform was counterbalanced by weights about fifty times less heavy, by means of a complicated system of levers. These machines could only be kept in good repair and proper adjustment by skilled labour. Their place has now been taken by machines with simple levers, all the wearing parts of which can be easily detached and sent for repair to Madras or some other place where good workmen are procurable. I think therefore that the Mechanics need no longer be employed.

122. No change is at present proposed to be made in the position or pay of the Personal Assistant to the Commissioner.

123. Two Deputy Commissioners are now allowed, and for several years to come will no doubt be required. But I think that this number can eventually be reduced to one. In any case it will be preferable that the Deputy Commissioners should cease to have separate offices. They should form a part of the Central Office, with special charge of those branches of the general work of the Department which it may be found expedient to assign to them, as is the case in the Inland Customs Department. Their services will also be available for inspection in whatever direction the Commissioner may at the time consider necessary. This arrangement will save all, or nearly all, the correspondence which now takes place between me and the Deputy Commissioners, and which takes up a good deal of my time and of theirs. Being in the same office, they will either communicate with me verbally; or, if we are not in the same place, by means of Office Memoranda, which, while equally available as Records, involve much less labour than formal letters. Separate Registers of letters received and despatched, and of Estimates and Rewards sanctioned, will cease to be necessary, and work will be saved in many other ways. To carry out this system it will be necessary that an additional Clerk on Rupees 50 and an Attender on Rupees 10 shall be allowed in the Central Office to accompany each Deputy Commissioner on circuit. Four Peons will, however, suffice for each of these Officers, instead of a Duffadar and six. The rest of their establishments may be abolished.

124. The saving that will thus be effected will be as follows:—

	Per Mensem. RS.	Per Annum. RS.
1 Deputy Commissioner on Rupees 1,200 rising to Rupees 1,400	*1,400	*16,800
Establishment of two Deputy Commissioners at Rupees 161† per mensem	322	3,864
	1,722	20,664
Deduct cost of one Clerk on Rupees 50, one Attender on Rupees 10, two Peons on Rupees 8, and two Peons on Rupees 7, required for the Deputy Commissioner to be retained	90	1,080
	1,632	19,584

125. I do not anticipate that this reduction can be carried out until considerable progress has been made in the reorganization of the Department on the principles and system above laid down. Meanwhile, the additional cost of the salary and Office Establishment of the second Deputy Commissioner can be met from savings, as is pointed out below (paragraph 144).

* Maximum salary.

† Present sanctioned scale.

Central Office. 126. Considerable additions must be made to the Central Office of the Salt Department. The Ministerial Establishment now allowed is as under:—

- 12 Accountants on the following salaries.—Rupees 150 rising to Rupees 200, 70, 50, 45, 40 (two), 35 (two), 30 (two), and 25 (two).
- 8 English Clerks on Rupees 100 rising to Rupees 150, Rupees 50, and Rupees 40, respectively.
- 1 Indexer and Registrar on Rupees 35.
- 1 Despatcher on Rupees 25.
- 2 English Writers on Rupees 40 and 20.
- 1 Record-keeper on Rupees 50.
- 1 Assistant do. on Rupees 25.
- 1 Cash (and Store) Keeper on Rupees 80.
- 1 Moochi (Daffri) on Rupees 10.
- 3 Attenders on Rupees 10 each.
- 1 Pressman on Rupees 15.
- 1 Ballman on Rupees 7.

127. After more than two years' experience, I have been forced to the conclusion that this establishment is barely sufficient. It will certainly be inadequate if the reorganization of the Department which I now propose is carried into effect. In forming this opinion I have not failed to make allowance for the fact that it is necessarily difficult to get work properly done in a new office, every servant in which has had to be trained to his own particular duties, and in which a system and forms of account have had to be devised to meet circumstances previously non-existent; nor, I hope, has my judgment been influenced by the recollection of the days I have devoted to work of a sort which it would have been far more economical that my subordinates should have done for me. Times are easier now, than they were, with every one in the office; but holidays are still almost unknown. The customary holiday on the last Saturday in the month can scarcely ever be allowed. It is not uncommonly necessary, during times of pressure, for the establishment to attend on Sundays. The prescribed office hours are from 11 A.M. to 5-30 P.M. It is very rarely that my office servants leave before half-past six. If the Department remained on its present footing it would be possible, I think, for my present office to keep pace with the work, which will naturally be more easily disposed of as time goes on. But with the establishment of the Department four-and-a-half times more numerous, and with the area of its operations at least doubled, an increase in the strength of the Central Office will be admitted to be necessary.

128. In the Account Department a great want is felt of trained and experienced Accountants for the conduct of the classification of the Cash and Stock Accounts, and for the audit of Travelling Bills, of expenditure upon Works and of other Contingent charges; and of an Accountant of some position to whom should be confided the compilation of the periodical accounts which are rendered to the Board and Government, and to the Government of India, as well as of those on which the Budget and the Administration Report are based and of the miscellaneous statistical information which is constantly required for the preparation of reports upon various subjects. In the Correspondence Department a Clerk is needed capable of preparing ordinary drafts, so that the Head Clerk may be at liberty to attend to matters of importance.

129. The final responsibility for the audit of the expenditure of the Salt Department is with the Accountant General, and I have no desire that it should be otherwise. But there is a great deal of expenditure, &c., which the Accountant General cannot audit. He cannot, for instance, ascertain whether all appointments have been made in accordance with the Uncovenanted Civil Service Examination Rules, or whether leave granted to subordinates has been earned. He has no materials for the determination of such questions, and does not attempt it. They are, indeed, under the present system, expressly excluded from his cognizance, and left for disposal by Heads of Departments and Offices. He has no means of checking any item in any Contingent Bill, unless, which is quite the exception, it exceeds Rupees 100, for no vouchers are forwarded to him for any smaller sum.

He has not the knowledge, if he had the means or the establishment, by which to check the thousand and one petty items of expenditure in such a Department as this, on the manufacture of Salt, the storing and covering of it, the labour employed at sales, the purchase of tools and implements, and the execution of Works. He can check Travelling Bills by the Rules, by the Route Book, and by Railway Fare Tables; but he is powerless to exercise the far more important check which consists in the decision of the question, whether the journey made was in the public interest or not. Taken by themselves, each of the items I have mentioned is of comparatively little moment: taken together, they amount to a sum so large that the economical expenditure of it is one of the most important duties of the Commissioner of Salt Revenue. There is, in fact, an annual expenditure of some ten lakhs of Rupees which can only be efficiently audited by the Head of the Department. Economy demands that he shall have the means of doing it.

130. Men of the stamp required for the duties of compilation and audit cannot be got for the salaries now allowed. I propose, therefore, to add to the Account Department of my office two Accountants on Rupees 100, between whom to apportion the Divisions for this purpose. For the compilation of the Periodical Returns for submission to the Board and Government, for the preparation of those which accompany the Budget and the Administration Report, and for general statistical duties, I propose an additional Accountant on Rupees 85. The duties are of importance and require a clear head. A suitable person is not likely to be obtained for less. For the Correspondence Department I propose a drafting Clerk on Rupees 75. A Clerk on Rupees 15 and two Store Lascars on Rupees 7 each will also be required to assist the Cash (and Store) Keeper, whose duties will be greatly increased, under the new system, by the necessity of keeping a certain quantity of spare clothing and accoutrements on hand, for supply to the Circles as required. The subjoined statement exhibits the establishment of the Central Office, as at present and as proposed:—

Designation.	PRESENT.				PROPOSED.				Remarks.
	Number.	Rates of Pay.	Cost		Number.	Rates of Pay.	Cost		
			Per Mensem.	Per Annum.			Per Mensem.	Per Annum.	
Head Accountant.	1	Rs. 150 rising to 200.	Rs. *200	Rs. *2,400	1	Rs. 150 rising to 200.	Rs. *200	Rs. *2,400	* Maxima.
Accountants ..	11	{ 70, 50, 45, 40 (two), 35 (two), 30 (two), and 25 (two). }	425	5,100	14	{ +100 (two), +85, 70, 50, 45, 40 (two), 35 (two), 30 (two), and 25 (two). }	710	8,520	+ Newly proposed.
Head Clerk ..	1	100 rising to 150.	*150	*1,800	1	100 rising to 150.	*150	*1,800	
Clerks	2	50 and 40	90	1,080	4	+75, +50 (two), and 40.	215	2,580	‡ One to attend the Deputy Commissioner on circuit.
Indexer and Registrar .. .	1	35	35	420	1	35	35	420	
Despatcher .. .	1	25	25	300	1	25	25	300	
English Writers ..	2	40 and 20 ..	60	720	2	40 and 20 ..	60	720	
Record-keeper ..	1	50	50	600	1	50	50	600	
Assistant do. ..	1	25	25	300	1	25	25	300	
Cash (and Store) Keeper .. .	1	80	80	960	1	80	80	960	
Store Clerk .. .	..		..	..	1	15	15	180	
Do. Lascars .. .	..		..	..	2	7	14	168	
Moochi	1	10	10	120	1	10	10	120	
Attenders .. .	3	10	30	360	4	10	40	480	§ Do. do. do.
Jemadar	1	15	15	180	1	15	15	180	
Pressman	1	15	15	180	1	15	15	180	
Duffadar	1	10	10	120	1	10	10	120	
Peons	6	8	48	576	8	8	64	768	Two do. do.
Do.	6	7	42	504	8	7	56	672	
Ballman	1	7	7	84	1	7	7	84	
Masalchi	1	6	6	72	1	6	6	72	
Sweeper	1	5	5	60	1	5	5	60	
Total ..	44	..	*1,328	*15,936	57	..	1,807	21,684	

131. Before deciding on the necessity of this considerable increase, the Board and Government may wish to have before them a statement of the Office Establishment of the Commissioner of Inland Customs. It consists of eight Clerks on salaries of Rupees 200, 150, 125, 100, 70, 60, 50, and 25, and costs Rupees 780 per mensem or Rupees 9,360 per annum. The difference is, however, more than accounted for by the different systems on which the work of Account-keeping is distributed, here and there, between the Central and the Local Offices.

132. Here the system is that unclassified Cash Accounts are rendered direct by the Factories, and classified Contingent and Stock Accounts by the Assistant Commissioners to the Central Office, where they are compiled for submission to the Accountant General or the Board, as the case may be. While, therefore, the Central Office must be a strong one, the Office Establishments of the Assistant Commissioners and of the Factories may be comparatively weak. The duty of scrutinizing the Contingent Accounts must always be entrusted to Assistant Commissioners, in the first instance, because they contain a multitude of petty items of expenditure, the propriety of which can only be determined by an Officer possessed of a more minute local knowledge than can be attained by any one in the Central Office; and this duty is facilitated by the prior conduct of classification. No change is proposed, or is indeed possible, in this respect; but arrangements are under consideration for the transfer to the Central Office of the entire work of the classification and compilation of the Stock Accounts.

133. In the Inland Customs Department the system is quite different. The accounts of all kinds are classified in the offices of the Assistant Commissioners in charge of Divisions, &c., and are submitted direct by them to the Comptroller General, upon whom is thrown the labour of compilation. The local offices need, therefore, to be strong, while the Central Office of the Department may be numerically weak.

134. Which of these two systems is the best, is a question which may fairly be debated. I prefer the Madras one, as placing me in possession of all essential statistical facts relating to the administration of the Department at a much earlier date than I could obtain them through the Accountant General; and as enabling me to exercise a more immediate control over contingent expenditure, which, from the nature of the case, is much larger here than in Northern India. It is true that the accounts compiled in my office are subject to modification after audit by the Accountant General, but this is not a practical disadvantage of any moment. Now that the system has got into working order, corrections of my figures and classification are comparatively few, and should in time become very rare.

135. I believe also that the Madras System is the more economical. The Clerical and Account Establishments of the Inland Customs Department and of the (reorganized) Madras Salt Department compare as follows:—

Inland Customs Department.

Office.	Clerks and Accountants on Rupees														Total Clerks and Accountants.	Salt passed into consumption in 1879-80.	Total sanctioned Strength of Establishment.
	200.	150.	125.	100.	80.	75.	70.	60.	50.	40.	30.	25.	20.	15.			
Central Office ..	1	1	1	1	..	..	1	1	1	..	..	1	..	..	8	..	27
Mandi Mines ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	130,622	25
Punjab Mines and Indus Line Division ..	..	..	..	2	1	..	1	1	1	..	1	6	12	18	43	1,502,881	1,317
Delhi Division ..	..	..	..	2	..	..	1	..	..	1	..	4	6	11	25	730,466	481
Sambhar Lake Division ..	1	..	1	2	1	..	1	1	2	2	1	3	8	16	39	3,351,402	769

Office.	Clerks and Accountants on Rupees														Total Clerks and Accountants.	Salt passed into consumption in 1879-80.	Total sanctioned Strength of Establishment.
	200.	150.	125.	100.	80.	75.	70.	60.	50.	40.	30.	25.	20.	15.			
Didwana Division.	..	..	..	..	1	..	..	..	1	..	..	1	2	2	7	Mds. 247,885	78
Pachbadra „	..	..	..	..	1	..	..	1	..	..	..	2	3	4	11	352,530	233
Phalodi „	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1,828	54
Internal Branch Division ..	..	..	..	1	..	1	..	..	1	1	1	5	12	20	42	36,625	1,391
Total ..	2	1	2	8	4	1	4	4	6	4	3	22	44	73	178	6,354,239	4,375
Monthly pay, Rs..	400	150	250	800	320	75	280	240	300	160	90	550	880	1,095	5,590	..	..

Madras Salt Department.

Office.	* Clerks and Accountants on Rupees														Total Clerks and Accountants.	Salt passed into consumption in 1879-80.	Total proposed Strength of Establishment.
	+200	+150	100.	85.	75.	70.	50.	45.	40.	35.	30.	25.	20.	15.			
Central Office ..	1	1	2	1	1	1	4	1	4	3	2	4	1	1	27	MDS.	60
Northern Division ..	..	..	..	..	..	1	..	..	..	..	1	..	9	11	22	..	..
Rajahmundry "	..	..	..	..	..	1	..	..	..	..	2	1	6	5	15	1,011,994	1,018
Nellore "	..	..	..	..	..	1	..	..	..	..	2	1	7	3	15	603,540	725
Chingleput "	..	..	..	..	..	1	..	..	..	..	2	1	6	3	14	485,803	586
Negapatam "	..	..	..	..	..	1	1	..	..	..	2	3	1	5	10	23	1,511,746
Southern "	..	..	..	..	..	1	..	..	..	..	3	3	8	11	26	1,164,182	890
Central "	..	..	..	..	..	1	..	..	..	..	2	2	4	6	15	757,512	1,075
											13	12	3	2	31	873,019	586
Total ..	1	1	2	1	1	8	5	1	4	5	28	24	43	49	173	6,407,796	1,375
Monthly pay, Rs..	200	150	200	85	75	560	250	45	160	175	840	600	880	735	4,935	..	..

* Cashkeeper and Shroffs excluded.

+ Maxima rising from Rupees 150 and 100, respectively.

136. The circumstances of this Department, with its numerous, comparatively small, and scattered Factories and Sale Depôts, are such as to lead to the anticipation that a larger Clerical Staff must be required than in the Inland Customs Department, where the number of such Establishments is far smaller. I require, of course, a much larger number of Shroffs, whom I have therefore excluded from the above comparison; and the fact that the total number of Clerks and Accountants which I consider necessary, is below the number employed in the Inland Customs Department, is, I think, fair ground for argument that my estimate is moderate and the system of accounting an economical one. It is, also, I believe efficient, though of this the Accountant General is a better judge than I am, as he has means of comparison with the other Departments whose accounts he audits.

137. There remains for consideration the probable expenditure under the heads of House-rent, &c., before the total cost of the proposed Reorganization of the establishments can be arrived at, or can be compared with the present sanctioned expenditure on the same objects.

138. The annual expenditure under the heads of House-rent and Provision of free Quarters for Assistant Commissioners, Inspectors, and Assistant Inspectors will be approximately as follows:—

	Per Annum.
Repair of the Quarters to be provided for Inspectors and Assistant Inspectors (interest on capital outlay excluded), and grant of House-rent to those Officers in special cases (paragraph 86) ..	12,000
House-rent of Assistant Commissioners (paragraph 118) ..	4,800
Total ..	16,800

139. The average annual cost of the provision of Tents for all the Officers of the Department whose duties require them to proceed on circuit in their charges will be about Rupees 7,500, on the

supposition that good Tents, properly taken care of, will last for seven years. Details of the calculation are given in Appendix No. V. The provision of Tents for Officers is new in this Presidency. It is necessary, however, in order that the Officers of the Salt Department may be on an equal footing with those of the Inland Customs Department, as well as for the sake of their health, which is a matter of considerable importance. The majority of the Officers of the Department will otherwise certainly be unable to provide themselves with really good shelter in the hot weather, during the whole of which they must be on circuit; and ill-health and consequent loss of efficiency cannot but result. It is more economical, also, to provide Tents, than to grant Officers an allowance to do so for themselves. Under the arrangements now proposed the Deputy Commissioners should cease to draw Fixed Tentage, when a saving of Rupees 2,100 per annum, or more than a quarter of the total estimated annual expenditure on Tents, will be effected.

140. The probable future expenditure under the Heads of Travelling Allowances, Batta to Establishments, and Carriage of Tents will be Rupees 40,000 per annum, or Rupees 16,000 in excess of the allotment sanctioned in the current year's Budget. Details of the calculation are given in Appendix No. VI.

141. The total probable future cost of the Establishment of the Department, together with the amount of those contingent charges which depend on the number of persons employed and on the rates of their allowances, can now be stated. They stand as follows, in comparison with present sanctioned charges under the same Heads:—

Head of Charge.	PRESENT.		PROPOSED.		INCREASE.		DECREASE.		Remarks.
	No.	Annual Cost.	No.	Annual Cost.	No.	Annual Cost.	No.	Annual Cost.	
<i>Establishments.</i>		RS.		RS.		RS.		RS.	
Commissioner ..	1	*30,000	1	*30,000	..	..	..	..	* Maxima.
Deputy Commissioners ..	2	*33,600	1	*16,800	..	..	1	*16,800	
Personal Assistant to Commissioner ..	1	6,000	1	6,000	..	..	..	..	
Commissioner's Office Establishment ..	44	*15,936	57	*21,684	13	*5,748	..	..	
Deputy Commissioner's Establishment ..	24	3,864	..	..	..	..	24	3,864	
Assistant Commissioners ..	12	54,600	7	52,800	..	..	5	1,800	
Offices of Assistant Commissioners ..	92	18,036	77	15,876	..	..	15	2,160	
<i>Factory, Guarding and Preventive Establishments.</i>									
Police—									
Inspectors .. 10	..	..	..	..	..	..	..	..	
Sub Inspectors .. 9	3,183	2,61,514	..	..	..	..	3,183	2,61,514	
Petty Officers and men .. 3,164	..	..	44	1,62,000	44	1,62,000	..	..	
Inspectors ..	..	..	42	81,900	42	81,900	..	..	
Assistant Inspectors ..	..	..	190	98,520	190	98,520	..	..	
Sub Inspectors ..	..	..	..	..	..	..	..	..	
Salt Superintendents and Assistant Superintendents ..	159	73,440	..	..	..	..	159	73,440	
Clerks and Shroffs ..	171	32,640	160	36,240	..	3,600	11	..	
Petty Officers ..	2	264	773	96,888	771	96,624	..	..	
Temporary Preventive Inspectors ..	7	14,700	..	..	..	..	7	14,700	
Peons and other menials ..	905	61,776	4,962	3,51,048	4,057	2,89,272	..	..	† Of whom 1,200 Temporary for six months only per annum.
* Cruisers on the West Coast ..	..	..	..	16,000	..	16,000	..	..	† Estimate includes cost of maintenance of vessels.
Sundry Petty Temporary Establishments, about ..	..	10,000	..	5,000	..	..	..	5,000	
Total of Establishments ..	4,603	6,16,370	6,315	9,90,766	6,117	7,63,664	3,405	3,79,278	

Head of Charge.	PRESENT.		PROPOSED.		INCREASE.		DECREASE.		Remarks.
	No.	Annual Cost.	No.	Annual Cost.	No.	Annual Cost.	No.	Annual Cost.	
<i>Contingent Charges.</i>		RS.		RS.		RS.		RS.	
Clothing, &c., of Peons ..	..	50,264	..	46,000	..	..	..	4,264	
House-rent and Repair of Quarters ..	..	..	..	16,800	..	16,800	..	..	
Purchase and Repair of Tents ..	..	..	..	7,500	..	7,500	..	..	
Travelling Allowance and Carriage of Tents ..	..	24,000	..	40,000	..	16,000	..	..	
Total of Contingent Charges ..	..	74,264	..	1,10,300	..	40,300	..	4,264	
Grand Total of Establishments and personal Contingent Charges ..	4,603	6,90,634	6,315	11,01,056	5,117	7,93,964	3,405	3,83,542	
Net Increase ..	..	..	..	..	1,712	4,10,422	..	..	

142. It will be remarked that I have made no provision for the employment of Agents at Saltpetre Refineries. This is because I am at present quite unable to estimate how many will ultimately be required. So far as I know, the refining of Saltpetre is now generally carried on in the same Works as the manufacture of the crude article; but refining cannot in future be allowed in Crude Works. The danger to the revenue and the expense of supervision would be far too great. It will be necessary to adopt the system of the Inland Customs Department; to charge similar fees for Refinery Licenses; and to station an Agent at each Refinery to guard the interests of Government by preventing the removal of untaxed Salt. It is impossible at present to foresee the extent to which these essential restrictions will operate in leading to a separation of the distinct businesses of the manufacture of Crude Saltpetre and of the process of refining it, which are now carried on together. But it may safely be estimated that the number of Refinery Agents who will be required will be no more than can be paid from savings from the salaries sanctioned for the establishments of the Department generally, such as always accrue from the absence of Officers on leave and other similar causes.

143. The total additional cost to the State, therefore, of the proposals now submitted may be taken at four lakhs of Rupees per annum in round numbers, exclusive of Pensionary Liabilities, for the calculation of which but scanty data are available. They can hardly, however, exceed 10 per cent. on the additional sum proposed to be disbursed as salaries, or (say) about Rupees 36,500 per annum.

144. In considering the financial possibility of sanctioning this large increase of expenditure, it should be borne in mind that a considerable time must elapse before the whole of it can be needed or the proposals which give rise to it be brought into full effect. The new Establishments cannot be created in a day. The lower ranks may to some extent be filled by transfer from the Salt Police, but it will certainly take three or four years to complete their numbers with satisfactory recruits and to obtain the services of a sufficient number of men fitted by physique and education for the appointments of Inspector and Assistant Inspector. In the meantime, the savings from the sanctioned scale of salaries will be large. Even when the Establishments are recruited to their full strength, it does not at all follow that they must simultaneously be brought up to their full ultimate cost. On the contrary, I should certainly propose that, as a rule, all persons newly appointed to any class of Officers or Subordinates be appointed at first to the lowest grade of that class, and be retained in it until they have approved themselves worthy of promotion. Instead, that is to say, of the four grades into which the general body of the Inspectors will be divided consisting from the beginning of six, eight, twelve, and sixteen Officers, respectively, there would probably at first be no Inspectors of the first grade, three or four only of the second, six or seven of the third, and over thirty of the fourth. It would be the same with the Assistant Inspectors. Eight or ten, instead of

twenty-one, might be of the first grade, to begin with, and the remainder of the second. A similar saving may for some time be effected in the pay of the Sub Inspectors, Petty Officers, and Peons. It is impossible to foretell the number of years which will pass before promotion, thus gradually earned, brings up the Establishment to the full rates of pay which are submitted for approval; but it is not likely that this result will be attained for four or five years at least. It will be necessary, in fact, to take care that it shall not be, for provision must be made from savings to be thus effected for the salary of the second Deputy Commissioner, whose services, as already stated, must be retained for some years to come. Savings of this sort will at first be very much more than sufficient for this purpose. Before they cease to be so, I trust that the necessity for the employment of a second Officer of this class will have disappeared.

145. It is the rule that schemes for the alteration of Establishments shall be embodied in Proposition Statements. I venture, however, not to follow it. Proposition Statements will, I think, be more appropriately submitted at a later period, if the general scheme now proposed is fortunate enough to meet with the approval of Government. The method to be adopted in carrying it out must then be considered. This will not be an easy task, nor one that can be accomplished without considerable delay and much negotiation with the Officers of the Police Department, from whom charge of the Guarding will have to be taken over. If the Salt Police could be handed over to me in a body, with their Petty Officers, the difficulties of the transfer of the Guarding would be greatly lessened. But they cannot be. They have been enlisted under a special Act for special duties; and their services cannot be transferred to another Department without their consent. Many of them will, no doubt, readily agree to join the Salt Department. Others will refuse. In no District, then, will it be possible for me to assume the entire charge of the Guarding of the Salt Factories, until sufficient vacancies have occurred in the general body of the District Police to allow of the absorption of the men who refuse to consent to the transfer of their services. The course, therefore, which I should propose to adopt, if these proposals are sanctioned in principle, would be to take over from the Police the charge of the Guarding in one District at a time. Suppose, for example, I began with Ganjam—I should proceed to the District, and, after arranging with the local Officers of Police for the transfer of the services of those of their men who might be willing to join me, should assume charge of the Guarding of the Factories one by one, as the Police were gradually withdrawn. While in the District, I should decide what Force I considered necessary for the efficient guarding and working of each Factory, and should then submit Proposition Statements accordingly. Even then the preparation of Proposition Statements will be a matter of some difficulty. They pre-suppose the allotment to particular posts of Officers on specified rates of pay, and, if made out for separate Factories, are suited only to the system which now obtains in the Salt Department, under which salaries are assigned to places, rather than to persons. To a certain extent this system has its advantages when the Administrative Unit is a small one. In a given District, that is, it may be necessary to assign a given salary to the Tahsildar of This or to the Magistrate of That. The salaries of appointments are fixed according to the importance of the charge, and promotion is not robbed of its charms by the consequent necessity of moving to a great distance from family and friends. Changes within a District are also not open to the objection that they may involve transfer to a part of the country of the vernacular language of which the Officer moved on promotion may very probably be quite ignorant. In the Salt Department, however, the inconvenience caused by the attachment of salaries to places, instead of to persons, is very great. A vacancy occurs, and I find myself unable to promote the senior deserving Officer drawing the next lowest rate of pay, because he does not know the language of the District in which the vacancy has occurred, or because he cannot at the time be spared from the post he occupies and is doing good work in, or because I feel that to give him a step of ten, twenty, or thirty Rupees a month, coupled with the necessity of transferring his home for two or three hundred miles, will be rather to punish, than to reward, an Officer of merit. It is, of course, necessary that the more important charges shall be assigned to the more experienced Officers. But this end can be attained with

sufficient efficacy for all practical purposes without tying the hands of the Head of the Department by the assignment of salaries to places, to an extent greater than that which custom will in time prescribe. It may eventually be possible to assign to each *Division* a definite number of Officers of each grade of each class, as is done in the North-West Provinces, but to do so at once with respect to Inspectors, Assistant and Sub Inspectors, or to make at any time any such assignment to Circles, would be to place a most formidable impediment in the way of the satisfactory reorganization of the Department. With regard to Petty Officers and Peons, there will not be the same difficulty. It will be comparatively easy to fix the proper proportion of each grade to be allowed to each Factory, but it should be understood that this distribution is not to be regarded as immutable, but will be subject to revision at the discretion of the Assistant Commissioner. It will otherwise be impossible to promote a deserving Peon or Petty Officer without removing him from the locality in which he has done good work, the people and the dangerous tracts of which he knows, and in which he is therefore best able to render good service to the State. For these reasons, satisfactory Proposition Statements cannot well be prepared, save for Divisions for the Inferior, and for the whole Presidency for the Superior, Officers. Appendix No. VII shows, however, the approximate distribution I propose of Officers and servants among the Factories, so far as numbers go. It has not appeared worth while, as yet, to go into the question of grades, even for the Petty Officers and Peons.

146. It is not without a deep sense of responsibility that I propose so large a permanent addition to the burdens of the State as the entire reorganization of the Salt Department must involve. My conviction of its necessity has been of gradual growth, and has been arrived at unwillingly. It is directly opposed to the opinions I entertained and expressed, until personal inquiry on the spot convinced me of the excellence of the system of the Inland Customs Department and of the complete adaptability of its principles to the circumstances of this Presidency. I have already drawn attention to some necessary differences in the methods of applying them: others will no doubt be found desirable when the actual work of reorganization is taken in hand. But of the soundness of those principles I have no doubt. I am sure that it is only by the establishment of a really well-paid Departmental Preventive Agency that the Salt Revenue can be adequately protected; and that the measure, though apparently costly, will in the end prove to be one of the truest economy. I greatly regret that I cannot prove this, as a mathematical proposition is demonstrated. But when it is remembered that in the Ceded Districts and Kurnool alone the consumption of licit Salt in 1879-80 was less than the requirements of the population by an amount the duty* on which would more than cover the whole additional expenditure which I propose; that Salt-Earth is common in almost every other Inland District; and that a tract of country along the Coast, nearly thirteen hundred miles in length by from five to fifteen miles in width, is throughout highly saliferous and in many places spontaneously produces every hot weather many square miles of perfectly pure Salt; it is, I think, impossible to doubt that the cost of reorganizing the Department on the principles and at the strength I propose must be many times repaid in increase of Revenue. But the reorganization of the Department cannot alone effect this. Its action must be fortified by adequate Legislation and be aided by an intelligent administration of the Law. Both are now wanting. It is for Government to consider when and on what principles the one shall be undertaken, and how the other can be ensured.

*147. In conclusion, I desire to mention how greatly I am indebted to Mr. Maclean, the Collector of Customs at Calcutta, to Mr. Halsey, the Officiating Commissioner, and to Mr. Whitten, the Deputy Commissioner, of Inland Customs, for the trouble they took to explain to me the systems of their Departments, to give me a thorough insight into their working, and to facilitate my movements.

OOTACAMUND,
August 23, 1880.

H. W. BLISS,
Commissioner of Salt Revenue.

APPENDICES.

* The population being 3,183,072 (i.e., the number ascertained in 1871, less 20 per cent. for loss by Famine), the consumption at 12 lb. per head should have been 464,198 Maunds. The actual consumption was 297,965 Maunds—difference Maunds 166,243, Duty Rupees 4,15,807½.

APPENDIX No. I.

STATEMENT of Reasons for closing certain Factories.

Factory.	Reasons for closing.
Kuppili ...	A small Factory, very expensive to work on account of its great liability to inundations, and almost inaccessible from the badness of the cart track which leads to it. Its customers principally come from the North of the Vizagapatam District, and can without difficulty go to Calingapatam (Womeravilly), nineteen miles further North, where ample supplies are always available.
Pentacotta ...	Was never more than an experimental Factory, its highest sales in any one year having been 8,000 Maunds only. Is subject to inundations. The site is badly chosen, the Pans being infested with a sort of worm so that it is difficult to make them water-tight, and being scattered, which makes guarding difficult and expensive. It has no inland trade to speak of, the principal supplies, even of the neighbourhood, coming from Cocanada through the adjacent weekly market at Tuni, a place of some importance.
Kanuparti ...	The sales at Kanuparti and at the neighbouring Factories of Chinna Ganjam, Pádarti, and Pákala, all of which lie within a distance of twenty-nine miles, were very heavy before the opening of the Railway to Hyderabad, and averaged about six-and-a-quarter lakhs of Maunds per annum, an amount which they are quite capable of supplying. Since then, sales have much decreased, as the Salt supply of the Nizam's Dominions is now to a great extent drawn from Bombay instead of from the East Coast. During the past three years they have averaged only 322,089 Maunds per annum, a decrease of about three lakhs. I propose, therefore, to close at least one of these Factories and have selected Kanuparti, as if it is kept up considerable expense must be incurred in making a road to it. The other three Factories of this group are supplied with roads already. Kanuparti is eight miles only from Chinna Ganjam on the one side and from Pádarti on the other, so that no appreciable inconvenience can be caused by its closing to the surrounding population.
Tummalapenta. } Gogulapalli. }	These two small Factories are situated on either side of the much more important Factory of Iskapalle, from which they are respectively distant eleven and four miles. There are made roads to neither of them. Iskapalle can supply the demand hitherto met from them with perfect ease.
Mānambādi ...	This is a small experimental Factory close to Porto Novo. It is not required now that that town and neighbourhood are in communication by rail with the Gundalam (Cuddalore) Factory, for the increase of which a scheme is under preparation.
Arasanagiri. } Vairavanātha- } patnam. } Attankarai. } Muturaguna- } thapatnam. }	The first of these Factories is about nine miles North of the much more important Factory of Vattanam. The second and third are on the East, and the fourth on the South, Coast of the Madura District. They formerly supplied the interior of the Madura District and parts of the Tanjore District and of the Pudukóta Territory, but have been robbed of their importance by the opening of the Railway from Tuticorin to Madura and Trichinopoly, which has diverted the Trade. Before then, their sales averaged 215,000 Maunds per annum. Since then, they have fallen to an average of 94,000 Maunds, and would have been much lower but for an accidental circumstance which caused a large increase in the Arasanagiri sales in 1879-80. There will remain the Vattanam and Morekolum Factories to supply the Madura District, which they should easily be able to do, especially as the latter can be increased, if necessary, without expense or difficulty.
Kuttanguli ...	This small Factory supplies a limited population in the extreme Southern corner of the Tinnevely District. Manufacture there is most uncertain from climatic reasons. It is badly situated and constantly subject to inundations.

APPENDIX No. II.

MEMORANDUM explaining how the Number of Assistant Inspectors required in the Madras Salt Department has been arrived at.

The number required is—

For forty-eight Salt Factories and Depôts, at one Assistant Inspector each ...	48
„ four West Coast Cruisers ...	4
„ the Chilka Lake ...	1
	53

Deduct—

On account of its being proposed to have no sales at Sunnapugunta Salt Factory, which should only be maintained to supply a Reserve to Madras ...	1
On account of there being no sales in any of the Chingleput Northern Factories, except at Attipat, where it is proposed to open a Sale Depôt in lieu of Sunnapugunta, nor at Vadasanmanjeri or Covelong ...	5
On account of no Assistant Inspectors being provided for the Madras Depôt nor for the Negapatam Factory, neither of which will have any tract of country to be patrolled attached to them ...	2
On account of its being proposed to hold sales at one only at a time of each of the Factories in the following groups :—	
Neidavasal } * ...	1
Tranquebar } ...	
Harnad ...	
Angali } † ...	2
Vaderhobli } ...	
	11

Total number proposed ... 42

* These two Factories are twelve miles apart. It will be no hardship to any one if they are opened for sales in alternate months only.

† These three South Canara Excise Factories are within four miles of one another. If the sale hours are fixed a different times of day, one Officer provided with a good boat can look after them all.

APPENDIX No. III.

STATEMENT showing the proposed Division of the Interior of the Madras Presidency into Preventive Circles under Inspectors of the Salt Department.

Circle.	NAME AND AREA OF REVENUE TALUKS IN EACH CIRCLE.			Deduct Area of Coast Circles.	Net Area of each Circle.	Number of Saltpetre Manufactories now known of.	STRENGTH OF ESTABLISHMENT.					
							Circle Office.		Interior.			
	Name.	District.	Area.				Clerks.	Peons.	Sub Inspectors.	Jemadars.	Duffadars.	Peons.
1	2	3	4	5	6	7	8	9	10	11	12	13
Guntūr ..	Guntūr ..	Kistna ..	500	..	..	1	..	..	..	..	..	..
	Sattenapalle ..		621	..	..	60	..	..	..	..	..	..
	Palnád ..		1,095	..	..	27	..	..	..	..	..	..
	Vinukonda ..		561	..	..	9	..	..	..	..	..	..
	Narsaraopet ..		682	..	..	..	..	..	..	..	..	..
	Bápatla ..		694	..	..	..	..	..	..	..	..	..
			4,153	500	3,653	97	2	8	2	4	6	50
Cumbum ..	Márkápur ..	Kurnool ..	1,039	..	..	..	..	..	..	..	..	..
	Cumbum ..		885	..	..	..	..	..	..	..	..	..
	Darsi ..	Nellore ..	488	..	..	1	..	..	..	..	..	..
	Podile ..		405	..	..	9	..	..	..	..	..	..
	Kanigiri ..		695	..	..	..	..	..	..	..	..	..
	Part of Udayagiri ..		595	..	..	..	..	..	..	..	..	..
			4,107	..	4,107	10	3	8	4	5	9	70

Circle.	NAME AND AREA OF REVENUE TALUKS IN EACH CIRCLE.			Deduct Area of Coast Circles.	Net Area of each Circle.	Number of Saltpetre Manufactories now known of.	STRENGTH OF ESTABLISHMENT.					
	Name.	District.	Area.				Circle Office.		Interior.			
							Clerks.	Peons.	Sub In- spectors.	Jemadars.	Duffadars.	Peons.
1	2	3	4	5	6	7	8	9	10	11	12	13
Kurnool.	Nandikotkur ..	Kurnool.	1,186	..	..	..	..	..	..	..	..	..
	Rámallakót ..		836	..	..	..	..	..	..	..	..	
	Pattikonda ..		1,190	..	..	..	..	..	..	..	..	
	Nandyál ..		777	..	..	..	..	..	..	..	..	
	Koilkuntla ..		637	..	..	..	..	..	..	..	..	
	Sirvel ..	Bellary.	487	..	..	..	..	..	..	..	..	..
Adóni ..	805		..	..	..	..	..	..	..	..		
			5,918	..	5,918	..	3	8	4	6	10	80
Bellary.	Alur ..	Bellary.	677	..	..	..	..	..	..	..	..	..
	Bellary ..		985	..	..	4	..	..	..	..	..	
	Hospet ..		540	..	..	..	..	..	..	..	..	
	Huvinahadgalli ..		623	..	..	..	..	..	..	..	..	
	Harpanahalli ..		592	..	..	..	..	..	..	..	..	
	Kúdligi ..		864	..	..	..	..	..	..	..	..	
	Ráyadrug ..		890	..	..	..	..	..	..	..	..	
			5,171	..	5,171	4	2	8	4	6	9	75
Anantapur.	Anantapur ..	Bellary.	789	..	..	..	..	..	..	..	..	..
	Gooty ..		1,014	..	..	..	..	..	..	..	..	
	Dharmavaram ..		1,226	..	..	..	..	..	..	..	..	
	Penukonda ..		654	..	..	..	..	..	..	..	..	
	Madakasira ..		439	..	..	..	..	..	..	..	..	
	Ilindapur ..		481	..	..	..	..	..	..	..	..	
Tadpatri ..	772	..	..	..	..	..	..	..	..	..		
			5,375	..	5,375	..	2	8	4	6	9	75
Cuddapah.	Badvel ..	Cudda- pah.	704	..	..	..	..	..	..	..	..	..
	Proddutur ..		343	..	..	..	..	..	..	..	..	
	Jammalamadugu ..		670	..	..	..	..	..	..	..	..	
	Pulivendla ..		579	..	..	..	..	..	..	..	..	
	Cuddapah ..		1,207	..	..	..	..	..	..	..	..	
	Sidhout ..		508	..	..	8	..	..	..	..	..	
	Pullampet ..		609	..	..	3	..	..	..	..	..	
			4,620	..	4,620	11	3	8	4	6	8	70
Madana- palle.	Ráyachóti ..	North Arcot.	649	..	..	..	..	..	..	..	..	..
	Kadiri ..		1,442	..	..	..	..	..	..	..	..	
	Madanapalle ..		631	..	..	..	..	..	..	..	..	
	Váyalpád ..		708	..	..	..	..	..	..	..	..	
	Chandragiri ..		553	..	..	..	..	..	..	..	..	
	Punganúr ..		524	..	..	..	..	..	..	..	..	
	Palmanér ..		664	..	..	..	..	..	..	..	..	
			5,171	..	5,171	..	2	8	3	4	8	60
Vellore.	Kálahastrí ..	North Arcot.	602	..	..	..	..	..	..	..	..	..
	Chittoor ..		965	..	..	..	..	..				

Circle.	NAME AND AREA OF REVENUE TALUKS IN EACH CIRCLE.			Deduct Area of Circles.	Net Area of each Circle.	Number of Saltpetre Manufactories now known of.	STRENGTH OF ESTABLISHMENT.					
	Name.	District.	Area.				Circle Office.		Interior.			
							Clerks.	Peons.	Sub In- spectors.	Jemadars.	Duffadars.	Peons.
1	2	3	4	5	6	7	8	9	10	11	12	13
Salem ..	Tirupatūr ..	Salem ..	805	..	..	..	..	..	..	..	..	..
	Krishnagiri ..		658	..	..	..	..	..	..	..	..	..
	Hosūr ..		1,169	..	..	..	..	..	..	..	..	..
	Dharmapuri ..		998	..	..	1	..	..	..	..	..	..
	Uttankarai ..		808	..	..	2	..	..	..	..	..	..
	Atūr ..	South Arcot.	798	..	..	4	..	..	..	..	..	..
	Salem ..		993	..	..	..	..	..	..	..	..	..
	Tiruvannāmalai ..		990	..	..	..	..	..	..	..	..	..
	Tindivanam ..		810	810	..	..	..	..	..	..	..	..
	Villupuram ..		611	250	1	..	..	..	..	..	..	..
	Tirukoilūr ..		500	..	..	..	..	..	..	..	..	..
	Kallakurchi ..		607	..	1	..	..	..	..	..	..	..
	Vidhāchālam ..		566	..	..	..	..	..	..	..	..	..
	Cuddalore ..		459	459	1	..	..	..	..	..	..	..
Chidambaram ..	393		393	..	..	..	..	..	..	..	..	
		11,165	1,912	9,253	10	1	8	4	5	7	60	
Coimbatore ..	Kollegāl ..	Coimbatore.	738	..	..	..	..	..	..	..	..	..
	Satyamangalam ..		966	..	..	72	..	..	..	..	..	..
	Bhāvāni ..		582	..	..	20	..	..	..	..	..	..
	Perundurai (Erode) ..		695	..	..	335	..	..	..	..	..	..
	Palladam ..		741	..	..	46	..	..	..	..	..	..
	Coimbatore ..	Madura	625	..	..	136	..	..	..	..	..	..
	Dhārapuram ..		775	..	..	66	..	..	..	..	..	..
	Pollāchi ..		423	..	..	17	..	..	..	..	..	..
	Udamalpet ..		365	..	..	41	..	..	..	..	..	..
	Palni ..		989	..	..	35	..	..	..	..	..	..
			6,804	..	6,804	768	3	8	4	6	8	70
Trichinopoly.	Tiruchengōd ..	Salem ..	632	..	..	8	..	..	..	..	..	..
	Nāmakāl ..		743	..	..	1	..	..	..	..	..	..
	Karūr ..	Coimbatore.	564	..	..	30	..	..	..	..	..	..
	Musiri ..		931	..	..	34	..	..	..	..	..	..
	Perambalur ..	Trichinopoly.	690	..	..	..	..	..	..	..	..	..
	Udayarpālāiyam ..		777	..	..	..	..	..	..	..	..	..
	Trichinopoly ..		519	..	..	75	..	..	..	..	..	..
	Kulitalai ..		667	..	..	49	..	..	..	..	..	..
		5,623	..	5,623	197	2	8	3	5	7	60	
Interior Tanjore.	Shiyālī ..	Tanjore.	170	170	..	..	..	..	..	..	..	..
	Māyavaram ..		276	276	..	..	..	..	..	..	..	..
	Nannilam ..		294	..	..	..	..	..	..	..	..	..
	Kumbakōzam ..		341	..	..							

APPENDIX No. III—(Continued).

STATEMENT showing the proposed Division of the Interior of the Madras Presidency into Preventive Circles under Inspectors of the Salt Department—(Continued).

Circle.	NAME AND AREA OF REVENUE TALUKS IN EACH CIRCLE.				Deduct Area of Coast Circles.	Net Area of each Circle.	Number of Saltpetre Manufactories now known of.	STRENGTH OF ESTABLISHMENT.					
	Name.	District.	Area.	Circle Office.				Interior.					
				Clerks.				Peons.	Sub In- spectors.	Jemadars.	Duffadars.	Peons.	
1	2	3	4	5	6	7	8	9	10	11	12	13	
Coonda- poor.	Udipi ..	South Canara.	892	..	..	..	..	..	..	..	..	..	
	Coondapoor ..		525	..	..	..	..	..	..	..	..	..	
Mangalore.	Mangalore Uppinangadi Kásaragód ..		1,417	..	1,417	..	1	4	2	4	8	60	
			865	..	..	..	..	..	..	..	..	..	
			1,047	..	..	..	..	..	..	..	..	..	
			1,064	..	..	..	..	..	..	..	..	..	
Tellicherry	Chirakal .. Kóttayam .. Kurumbranád ..		2,976	..	2,976	..	2	8	2	6	12	90	
			671	..	..	..	..	..	..	..	..	..	
			460	..	..	..	..	..	..	..	..	..	
			527	..	..	..	..	..	..	..	..	..	
Calicut.	Malabar.		1,658	..	1,658	..	2	8	2	4	6	50	
			360	..	..	..	..	..	..	..	..	..	
			3	..	..	..	..	..	..	..	..	..	
			681	..	..	..	..	..	..	..	..	..	
			450	..	..	..	..	..	..	..	..	..	
			997	..	..	..	..	..	..	..	..	..	
Grand Total.	86,554	64,75	80,079	1,156	34	132	54	85	134	1,003			

APPENDIX No. IV.

MEMORANDUM showing the Estimated Annual Cost of Clothing and Accoutrements for the Guard Peons of the Madras Salt Department.

	RS.	A.	P.
2 Coats each for 4,585 Permanent Petty Officers and men at Rupees 1½ each	13,605	0	0
1 Coat each for 1,200 Temporary men at Rupees 1½ each	1,800	0	0
2 Double Silver Chevrons each for 183 Jemadars at 10 Annas each... ..	228	12	0
2 Single Silver Chevrons each for 590 Duffadars at 5 Annas each	368	12	0
2 Red Cloth Chevrons each for 496 First Class Peons at 10 Pies each. ..	51	10	8
Renewal of 5,735 waist-belts with bayonet frogs at one-tenth annually, or 574 belts at 1 Rupee	574	0	0
Renewal of 5,735 clasps to waist-belts at one-twentieth annually, or 287 at Rs. 2-14-0 each... ..	825	2	0
Renewal of distinguishing Letters for 5,552 Duffadars and men at one-fifteenth annually, or 370 Letters at 1 Anna, 5 Pies each	32	12	2
Renewal of 5,552 sets of distinguishing Figures at one-fifteenth annually, or 370 sets of Figures at 2 Annas, 2 Pies each	50	1	8
Renewal and repair of Arms, Ammunition, Medicines, and carriage of Clothing at 3 Rupees per head (for 5,735 Petty Officers and men). ..	17,205	0	0
1 Inverness Cape per man for 4,585 Permanent Petty Officers and men, at one-fourth annually, or 1,184 at Rupees 9 each	10,206	0	0
1 Inverness Cape per man for 1,200 Temporary men, at one-eighth annually, or 150 at Rupees 9 each	1,350	0	0
Total	46,297	2	6

APPENDIX No. V.

MEMORANDUM showing the probable Cost of supplying the Officers of the Madras Salt Department with Tents at the Public Expense.

The Tents proposed to be supplied are as follows :—

	Probable Cost. RS.	Total. RS.		Probable Cost. RS.	Total. RS.
For the use of the Commissioner—			Brought forward ...		9,273
1 16-foot single pole ...	776		For the use of thirty-seven		
1 14-foot Swiss cottage...	530		Inspectors, each (Madras		
1 14-foot hill ...	464		Depôt, Madras Northern		
1 servants' ...	95		Factories, Negapatam, and		
1 necessary ...	32		West Coast [4] omitted)—		
		1,897	1 14-foot hill ...	464	
For the use of the Deputy			1 10-foot sleeping pal ...	215	
Commissioner—			1 servants' ...	95	
2 14-foot hill ...	928		1 necessary ...	32	
1 12-foot sleeping pal ...	273			806	
1 servants' ...	95			37	
1 necessary ...	32				
		1,328			
For the use of seven Assistant				29,822	29,822
Commissioners, each—			Total cost ...	7,39,095	
1 14-foot hill ...	464				
1 12-foot sleeping pal ...	273		Average annual cost on the suppo-		
1 servants' ...	95		sition that Tents will last on the		
1 necessary ...	32		average seven years each ...	5,585	
	864		Add for repairs, per annum ...	1,915	
	7				
	6,048	6,048	Total annual cost ...	7,500	
Carried over ...		9,273			

APPENDIX No. VI.

MEMORANDUM showing the probable future Expenditure in the Madras Salt Department under the Heads of Travelling Allowances, Batta to Establishments, and Carriage of Tents.

Travelling Allowance.	RS.	Carriage of Tents at Rupees 24 per Cart per Mensem.	RS.	RS.
Commissioner (fixed at Rupees 250 per mensem) ...	3,000	Brought forward ...		29,410
Deputy Commissioner for six months at Rupees 6 per diem (Rupees 6 x 30 x 6) ...	1,080	Commissioner, 4 Carts for six months ...	576	
Assistant Commissioners at Rupees 5 per diem for six months each (Rupees 5 x 6 x 30 x 7) ...	6,300	Deputy Commissioner, 3 Carts for six months ...	432	
17 Interior Inspectors at Rupees 3 per diem for six months each (Rupees 3 x 6 x 30 x 17) ...	9,180	7 Assistant Commissioners, 2 Carts each, for six months... 2,016		
25 Coast Inspectors (omitting Madras and Negapatam) at Rupees 2 per diem for five months each (Rupees 2 x 5 x 30 x 25) ...	7,500	17 Interior Inspectors, 1 Cart each, for six months ... 2,448		
Batta to Establishments.		25 Coast Inspectors, 1 Cart each, for five months ... 3,000		
In attendance on Commissioner ...	500	Rail and Steamer fares (say) ...		8,472
In attendance on Deputy Commissioner ...	350			2,118
In attendance on Assistant Commissioners ...	1,500			40,000
	2,350			
Carried over ...	29,410			

APPENDIX No. VII.

STATEMENT showing Approximately the Distribution of the Proposed Establishments of Factories and Depôts in the Madras Salt Departments.

Divisions.	Factories.	Area of Pans in Acres.	Sales in 1879-80.	Inspection.	Assistant Inspectors.	Sub Inspectors.	Clerks and Shroffs.	PETTY OFFICERS.		Peons.
								Jama-dars.	Duffa-dars.	
1	2	3	4	5	6	7	8	9	10	11
Northern ..	Ganjam	367-72	240,424	1	2	4	4	2	14	110
	Surla	672-75	140,968	1	1	2	3	1	9	70
	Naupada	991-00	390,577	1	1	5	6	2	18	140
	Calingapatam	308-00	112,684	1	1	4	4	1	11	84
	Konada	76-95	30,555	1	1	2	2	1	4	38
	Bimlipatam	73-28	48,297	1	1	2	2	1	5	42
	Karasa	141-34	41,034	1	1	2	3	2	7	63
	Balacheruvu	116-62	54,065	1	1	2	3	2	7	63
	Total	..	..	6	9	23	27	12	75	610
Rajahmundry.	Penugudur	576-23	213,167	1	1	3	4	2	16	126
	Mogaltur	141-35	106,331	1	1	2	2	1	8	63
	Pandura	..	77,799	1	1	3	2	2	7	63
	Manginapudi	497-41	142,433	1	1	3	3	1	8	63
	Nizampatam	156-69	63,810	1	1	3	3	2	8	70
	Total	..	..	4	5	14	14	8	47	385
Nellore ..	Chinna Ganjam	303-04	106,369	1	3	3	3	2	6	56
	Pardart	219-89	70,608	1	1	3	3	1	6	49
	Pakala	162-63	104,313	1	1	2	2	1	6	49
	Isakapalle	68-60	36,867	1	1	2	2	1	6	42
	Kistnapatam	74-48	56,282	1	2	2	2	1	4	49
	Dugarsapatnam	9-47	15,833	1	1	2	2	1	4	35
	Total	..	..	3	6	14	14	7	33	280
Chingleput ..	Tada	125-96	57,688	1	1	3	2	1	6	49
	Sunnappugunta	39-62	14,989	1	..	2	..	1	4	35
	Kattur	412-087	..	1	..	3	1	1	5	42
	Vayalur	423-72	..	1	2	4	1	2	10	84
	Pulativak	694-41	..	1	..	4	1	2	6	49
	Attiput	751-78	..	1	..	7	2	2	8	63
	Vallur	1,014-42	..	1	..	5	2	2	11	84
	Madras Depôt	..	1,425,042	1	..	2	14	2	10	84
	Vadasammanjeri	133-339	..	1	..	2	..	1	4	35
	Covelong	543-748	13,641	1	..	3	1	2	14	149
	Total	..	..	4	3	35	24	16	74	605
Negapatam.	Cheyur	154-519	33,009	1	1	2	2	1	..	9
	Merkanam	604-71	371,246	1	1	4	5	3	..	95
	Gundalam	74-52	70,242	1	1	4	2	1	..	63
	Neidavasal	52-72	99,861	1	1	2	2	1	..	..
	Tranquebar	66-21	45,083	1	..	2	1	1	..	..
	Negapatam	193-58	287,676	1	..	5	5	2	8	..
	Vedarniem	218-16	20,311	1	1	4	3	2	9	..
	Thambikkennallavan-kottai	81-00	56,900	1	3	2	2	1	5	42
	Adirampatnam	97-44	49,826	1	..	3	3	1	5	..
	Kattumavadi	24-78	54,227	1	..	2	2	1	2	21
	Total	..	..	6	8	30	28	14	61	525
Southern ..	Vattanam	30-42	38,293	1	1	2	3	2	4	42
	Morekolum	23-93	19,812	1	1	2	2	1	3	28
	Vaippar	38-5	50,050	1	1	2	2	1	4	35
	Arasadi	52-0	..	1	1	2	5	1	2	21
	Levingepuram	259-6	357,312	1	1	6	3	1	6	91
	Kayalpatnam	60-0	183,333	1	1	2	3	1	6	46
	Total	..	..	4	6	16	15	8	30	263
Central ..	South Canara Excise Factories	231	20,688	..	1	4	3	3	23	177
	Calicut Fish-curing Yard	..	449	..	..	..	1	..	..	2
	Total	..	..	..	1	4	4	3	23	179
Grand Total ..		..	..	..	..	136	126	68	347	2,900

R

X7295 (E4) . 211 Y M79

M80

