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MADRAS RECORD OFFICE

Government of Madras

Public works

DEPARTMENT

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301-303		
Dated	15. 7. 1874	195.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
15th July 1874.*

No. 301. Read the following memorandum from Colonel B. E. BACON, in charge of Public Works Department, Calcutta; (Irrigation,) to Colonel G. W. WALKER, R.E., Secretary to the Government of Madras, Public Works Department, (Irrigation Branch,) dated Fort William, 16th October 1873, No. 012 I. :—

In compliance with instructions received from the Public Works Department at Simla, the undersigned has the honour to forward* twenty copies each, of Parts II. to VI. of the Tour Notes on the Upper Godavery Navigation Works, by Colonel Rundall, R.E., Inspector-General of Irrigation Works.
(Signed) B. E. BACON, Colonel,
In charge P. W. Dept., Calcutta.

No. 302. ORDER THEREON, 15th July 1874, No. 1,908.

IRRIGATION, No. 29.

ORDERED that Part II. of the Notes by Colonel Rundall, Inspector-General of Irrigation, containing his observations on the Godavery Delta, which was visited by him at the end of 1872, together with the remarks by the Chief Engineer for Irrigation, be communicated to the District Engineer, Godavery.

2. Ordered also that a copy of the Notes with the remarks of the Chief Engineer for Irrigation, and a copy of No. 1,906, dated 15th July 1874. the Proceedings of this Government containing the memorandum of inspection of the latter officer, be transmitted for the information of the Government of India.

(True Extract.)

(Signed) J. MULLINS, Lieut.-Colonel, R.E.,
Joint Secretary to Government.

No. 303. (DOCKET No. 1,909, dated 15th July 1874.)
Copy of the above forwarded to the Government of India.
(True Extract.)

Lieut.-Colonel, R.E.,
Joint Secretary to Government.

Exd. S. T. Austin.
Spare Copies

1795/73.

PART II.
Godavery Delta Works.

In the Godavery Delta, besides the Head-works, I inspected the following canals :—

	Miles.
The Junction from Samulcotta to Coconada	8
The Samulcotta Canal	26
" Ellore "	46
" Nursapoor "	44
" Gunnarum "	34
" Coconada "	32
	190

The Anicut was in excellent order, as likewise were all the head-works, with the exception of the undersluice aprons, which require to be strengthened. I would suggest the addition of another retaining wall to these structures with a view to prevent the excessive action which takes place on the rough stone apron. The river bed, both immediately above and below the weirs, appears to me to have been greatly improved, and to be much less obstructed with irregular sand-banks than it used to be. During the floods of last year a heavy scour took place in the Dowlaishwaram Branch, which will require to be carefully watched so as to prevent any parallel current being formed along the south end of the weir. In the other branches the depth of the upper pool was more uniform. Surveys have been taken for several years now, which show the annual changes in the river above the weir. These are very instructive, and enable the Engineers at once to detect and guard against any important or dangerous action. The volume of water passing down the river on the 6th January was 12,896 cubic feet per second. The total capital outlay on the weir, 4,000 yards long, and its attendant head-works, has been Rs. 12,27,403. The repairs during the last five years have averaged Rs. 25,250, or a little over 2 per cent.

Of the canals, the Junction and Samulcotta were in very good order; but from the latter not having been closed for clearance for several years, shoals have formed at its head and in a few other places. It is proposed to clear it out during the present season.

This proposed to place the outer aprons on a lower level and thus reduce wear & tear.

The construction of several branches was approved in 1871 and ought to have been carried out long since.

On the Coconada Canal, the new first-class locks and other improvements sanctioned by the Government of India in 1870 are approaching completion. The manner in which the new waste weirs had been constructed is, in my opinion, objectionable. Some of the Madras Officers have of late years introduced the construction of cisterns instead of the previously customary level flooring on which to receive the overfall; but the cisterns have been made by raising a wall at the end of the apron, instead of depressing the floor to below the level of the canal bed. The consequence is, that a second overfall is created, which acts injuriously on the rough stone-apron beyond, and the cistern-wall itself, from being placed too close to the main wall of the weir, has been swept away. In localities where dressed-stone is procurable and inexpensive, the cistern-formation, which is quite right when inferior material alone is available, appears to me unnecessary. The object is to provide a cushion of water to receive the overfall; but as a very small depth on the apron answers the purpose of a cushion, and that depth is obtained when less than a foot passes over the crest, so long as that depth only is passing, very little force is exerted. When that depth is exceeded, the cushion of water also rapidly deepens. The tow-paths and embankments in the upper portion of this canal yet require to be put in order.

The Ellore Canal, the high-level line in the Western Delta, is the only one in the Godavery District in an unsatisfactory state. The present District Engineer, Colonel Fischer, is well aware of this, but from its being the most important line of navigation, it is very difficult to close it without seriously interfering with trade requirements. During the past year, the Canal Districts were visited with extraordinary rains, as much as 8 inches having it is said, on one occasion fallen in five hours, and having been both preceded and followed by heavy rain. The Ellore Canal in consequence suffered considerably in both the Godavery and Kistna sections, more particularly in the latter. The syphons got choked and did not carry off the drainage, and hence the banks of the canal were severely breached. It will be necessary, therefore, to provide additional escapes. It is intended, I was told by Colonel Fischer, to take this canal in hand this season. Much of

Some of the weirs are not of a good design as they might be, and considerable improvements have been introduced in the more recent designs - It is better and easier to construct the cushion floor below canal bed level, and to make the foundations of the walls and cushion on the same level. By this arrangement, without any additional expense, an additional depth of 2 or 3 feet of water is provided to receive the overfall, and that this is an advantage has been demonstrated by the effect of butting up a rupture dam where many affairs have been injured.

The Canal has been closed and improved and additional means of escape for flood water have been provided.

Great improvements have been effected as regards the eradication of weeds and bulrushes.

the soil through which it is excavated is favourable to the growth of weeds and rushes, which have been allowed to extend to so great an extent as to seriously affect the navigation. There was a mistake made originally—for which I am partly answerable myself—in throwing the banks too far back, and allowing too great a width of berm to be submerged. It is this berm which has encouraged the growth of the rushes and weeds. I was surprised, however, to find how little the canals generally were troubled with them, notwithstanding the low velocity which is maintained.

The importance of the Ellore Canal as a line of navigation is very great. It is literally thronged with boats and rafts. The town of Ellore, which had for some years fallen to decay, is now one of the busiest marts in the District. I counted 78 boats on the day I passed through it, all busy loading or discharging. It is the principal *entrepôt* to which produce from the Nizam's dominions is brought either for shipment to Coconada, or conveyance to Bezwada and the Kistna District generally. There is a very extensive tract of cultivation beneath it now, where formerly, before its construction, only a poor and precarious crop was raised. By means of these high-level canals there is a continuous line of water-communication from Coconada to Nizampatam, the respective ports of the two Districts, 166 miles in length.

The line next in importance is the Nursapoor Canal, which branches off at about 8 miles from the head of the Western Delta and runs to its extremity, being connected with the tidal portion of the Godavery at Nursapoor, and with the tidal River Oopootair, which separates the Godavery and Kistna Deltas, and to which a canal from the old Station of Masulipatam will eventually be brought.

In 1871 the Government of India sanctioned estimates to the amount of Rs. 13,04,640 for completing the system of irrigation and navigation in the Western Delta. Amongst these estimates was a new cut, with a double lock from the head of the Ellore Canal, to re-place the old structure by which boats were passed into the Akeed Line. The earth-work on this cut had been completed, and the lock well advanced when I inspected the works. It is hoped this link will be opened before the end of the current official year. In the same estimate were included new first class locks for the Nursapoor

Canal. Two of these, with their respective waste weirs, had been finished, and a third was being commenced. The canal itself is in very good order, with the exception of the towing-path on the left bank, which requires to be raised and strengthened. Since I last saw this work, the avenues have grown up and add greatly to its ornamental appearance. Upwards of 100,000 acres are irrigated from this canal and its branches.

The Gunnarum Canal runs along the margin of the Central Delta to the great aqueduct which conveys water to the island of Nuggarum, one of the most fertile parts of the Delta, and where sugarcane is largely cultivated. The aqueduct which has now been furnished with towing-paths protected by a neat iron-railing is in good order. The bed of the river above the aqueduct appears to have silted up considerably, and is of more uniform section than formerly. The dangerous deep channel which used to run close under the left wing-wall has been diverted. The Main Canal through Nuggarum is in excellent order, but the portion above the aqueduct, and between it and the second lock, requires attention, especially on the river bank side, on which there has in places been considerable erosion.

A good deal yet remains to be done to the Central Delta. Plans and estimates for the completion of the remaining works are now under preparation. When they, together with those which have already been sanctioned for the Eastern and Western Deltas, have been carried out, this great project may be said to be completed. It will, however, be some years before this is the case, for there is considerable difficulty now experienced in obtaining labour, for which there is great demand in several directions.

There is also an insufficiency of carrying plant, which has not of late years been kept up to a proper point of efficiency. The present District Engineer has done what he could towards supplying the deficiency and putting the boats into better order, but many of them are so old, that they cannot be used much longer. The slow progress which has been made on these works has lately been commented on both by the Government of India and the Secretary of State. In order, therefore, to ensure their being carried on more vigorously than hitherto, it will be necessary to increase the number of boats

The estimates for the Central Delta have been sent up for sanction, but at present there is quite as much work in progress in the other two sections of the Delta as the establishment available can supervise.

This subject has been enquired into. The existing floating plant has of probably managed as well as well as it has hitherto accomplished and the appointment of a Boat Superintendent has been recommended. The conversion of the hull of a steamer into a storeboat, & the construction of an iron punt have been sanctioned and it

has been recommended that to dredge punts be sanctioned for construction in 1874-75, which as much as can be undertaken at present.

A new quarry has been opened about 7 or 8 miles from Dowlaishwaram on the Samudhotta Canal and a line of railway laid to it. It is probable that the quarries about 26 miles up the river might be profitably worked & how that the river steamers are to run regularly throughout the season, additional facilities will be afforded. The District Engineer may with advantage look into the matter. The "Shamrock" has been sent to Calcutta.

It is seldom that 10 punts are required for ^a single dredge. Half that number will generally be enough and with a few trap-punts, the work may be done at least at the head lock channels much more expeditiously than at present.

at the District Engineer's disposal. On examining the quantity of material to be carried annually, and the means available for the purpose, I came to the conclusion that at least 15 new boats of 50 tons each were required, and I would, therefore, suggest that this number be either obtained from England, or be built on the spot, whichever may prove to be the quickest method.

The supply of stone in the Dowlaishwaram quarries is now apparently nearly exhausted, while the general quality of the stone is inferior. I think the time has come for new quarries to be opened higher up the river where there is an inexhaustible supply, and where stone could be obtained probably quite as cheaply as from Dowlaishwaram, notwithstanding the additional distance that it would have to be transported by the river. With a view to these quarries being worked, I would suggest the retention of the steamer *Shamrock*, which is a vessel of light draught, in preference to despatching her to Burmah, as was lately ordered in the Agriculture, Revenue and Commerce Department—a measure which, I think, would be accompanied with a considerable amount of risk and danger even under the most favourable circumstances.

I examined the steamers now at Dowlaishwaram, and append a description of the state in which they at present are. The only vessel which can be properly spared is the *Prince*, and this the Madras Government has, I believe, made over to the Master Attendant at Cocanada for employment in the harbour.

There are six dredgers, for all of which there is ample work, but from an insufficiency of punts, they can neither be worked continuously or as economically as they should be. There ought to be at least 60 punts, or 10 to each dredger, whereas there are only at present 32 punts in all, and these are often diverted from their proper work to carry stone. If systematically employed, the dredgers would obviate in many cases the necessity for closing the canals for clearance, and would prevent obstructions to navigation by at once removing shoals that often unavoidably form at certain points in every canal.

The dredgers are essentially part of the plant required for the annual repairs, and the cost of working them should be provided from the grant under that head. The 28 punts required to make up the full

number which should be attached to each dredger should be supplied at once by an assignment for Tools and Plant. Their dimensions are 60 feet long by 10 feet beam and 2 feet deep, and they should be made of iron.

There are two dredgers also especially provided for harbour work, and if the full number of punts be attached to them, and the tug steamer, which was originally built for the purpose, regularly employed, they would effectually keep the approach to the Coconada River clear and maintain a deep channel at all times of tide from the mouth of the river to the shipping. An assignment of Port or Local Funds should provide for the expense of this essential work, for Coconada has now become an important sea town, in whose prosperity and in the efficiency of whose harbour the whole district is intimately interested. The great progress which it has made within the last 30 years is best understood by those who have known, and watched its growth in that period, while the statement of the trade carried on there, which will be adverted to in another part of this Note, will be sufficient evidence generally of the importance to which the port has attained.

It is matter for regret that measures recommended 20 years ago for its preservation were not carried out, for the result of leaving it uncared for has been a gradual shifting of the anchorage to the northward until it is now over 3 miles instead of being only 1 mile from the mouth of the Coconada River. I believe that if the branches of the Godavery which discharge into the Bay had been closed, and the river confined to its main outlet, the silting up of the Bay would have been stopped, and Point Godavery extended further north would have enclosed and sheltered a still greater area than at present, while the anchorage would have remained where it was at that time.

The degree of prosperity to which the Godavery Works have raised the District has already exceeded what were then considered the over-sanguine expectations of its projector, and from being one of the poorest and most neglected of the Madras Provinces, it now contributes to the Imperial Exchequer a revenue only second to that of Tanjore. There has been much controversy on this point, and many doubts expressed as to the results of these works being as great as represented. I have, therefore, thought

it advisable to collect as many statistics as possible, regarding which there could be no doubt, and will now proceed to notice them *seriatim*.

First, with reference to the irrigated area, it will be seen from the accompanying statements prepared by the Revenue Officers of the District, that it amounts to 4,97,197 acres. The area entered as watered in the Zemindaries, however, cannot yet be accepted as reliable, for no Revenue Survey has as yet been made in those Estates, and in some instances, as in the Neddavole and Baharzully Estates, a composition rate has been accepted, so in all probability the area in such Estates is much larger than what the amount paid when divided by a water-rate of Rs. 4 per acre exhibits.

There is likewise still no real check exercised by the Irrigation Department of the returns which are furnished by the Village Revenue officials, but it is believed that those returns exhibit a fair approximation to the truth. The Subordinate Establishment attached to the District Engineer for the distribution of the water is also utilised in supervising the execution of repairs, and is too weak, and of too inefficient a character to be useful in ascertaining independently the irrigated area. It does not even attempt to classify the crops, and the so-called check which it is supposed to exercise is not made till the end of the irrigating season. As probably not more than 5 per cent. of the whole area is cultivated with other than paddy-crops, the classification of the various garden products would not be very laborious. No reports are furnished of each season's operations beyond what are contained in the Collector's Annual Statement to the Board of Revenue. It would certainly tend to keep Government and the public better informed if special Revenue Reports, somewhat similar to those rendered by the Irrigation Department in Northern India, were furnished by the Irrigation Officers in Madras.

Included in the above-mentioned irrigated area, 84,027 acres of rent-free and zemindary lands are said to have received irrigation before the anicut project was commenced, and they are, therefore, exempted from water-rates. Out of a total water assessment of Rs. 18,73,484, Rs. 3,36,059 are written off, leaving a balance of Rs. 15,37,425 as the actual sum realized under that head during the year 1870-71.

*The revision of the Coconada
Establishment has been recom-
mended for sanction. I doubt
whether the advantages derivable
from a check by the Irrigation
Department of the village
returns of area irrigated would
compensate for the labour and
expense it would entail. A
fair agreement has at length
been obtained between the
Irrigation accounts of the
two Departments and much
more accurate statements of
area & Revenue have been
compiled for the year 1871-72*

The gross revenue of the District from all sources has risen since the year 1845, in which the improvements were commenced, from Rs. 20,49,046 to Rs. 53,84,395 in 1870-71.

The trade at the Ports has in the same interval increased from Rs. 12,96,253 to Rs. 78,22,676, that is—

In Exports from Rs. 9,07,774 to Rs. 59,21,558.
And in Imports from Rs. 3,88,479 to Rs. 19,01,118.

In 1869-70 the trade, it will be seen, was Rs. 110,26,565. The fluctuation is owing apparently to the reduction in the current value of the articles exported, especially in that of cotton. The above sums are exclusive of bullion, which varies considerably.

The number of vessels and tonnage visiting the Port in 1870-71 were as follows:—

	No.	Tonnage.
British ..	131	1,07,162
Foreign ...	47	21,088
Native ...	385	48,444
Total ...	563	175,694

This prosperity in trade is no doubt owing in large measure to the facility and cheapness of communication afforded by so many lines of navigable canals permeating the Delta. The extent to which they are used will be evident from the statement which shows the number of boats passing through the Head Locks. In the past year these amounted to 13,113 laden boats, measuring 337,117 tons, and 15,852 empty boats, making a total of 28,965 boats, or a rate of 80 boats per day. In this the intermediate traffic, which does not pass through the Head Locks and of which there is a large quantity, is not included. The number of boats registered in 1871 were—

	No.
Cargo boats ...	1,221 average 27.8 tons
Passenger " ...	82 " 57 passengers.
Pleasure " ...	50
Total	1,353

From which license fees, amounting to Rs. 39,324, were levied.

I am unable to give the return of the timber-rafts, as they were not complete, but, as noticed before, the timber trade is very large.

The outlay on the Godavery Delta works may thus be summarized—

	Rs.
Capital—	
Anicut ...	12,27,403
Main and distribution channels ...	33,99,761
Tools and Plant ...	3,50,039
Compensation for land ...	15,200
	49,92,404
Establishment and contingencies	16,81,109
Total ...	66,73,513

The repairs have amounted to Rs. 23,91,796 in 22 years, being at the rate of Rs. 1,08,718, or 1.7 per cent. per annum.

Last year the repairs amounted to Rs. 1,30,436, and the irrigated area to 497,007 acres. The charge per acre, therefore, was 0.262 of a rupee, or 4.2 annas nearly.

The Conservancy establishments as marginally detailed cost Rs. 40,248, or .081, and the share of Executive establishment is stated to be Rs. 25,000, thus making the total charge Rs. 0.393, or Rs. 0.6-4 per acre.

I am inclined to think that the allowance for repairs has been cast too low, and that for a proper maintenance of the works, the above rate per acre is barely sufficient. If increased to 8 annas, it will still be moderate.

The receipts last year under the three following heads were—

	Rs.
Water-rates ...	15,37,425
Boat licenses ...	39,324
Plantations, &c. ...	19,891
	15,95,640

	Rs.
Deduct—	
Maintenance ...	40,248
Repairs ...	1,30,436
Share of Executive establishment ...	25,000
	2,01,339
Net receipts ...	13,96,301

To the above has to be added the amount by which the land revenue has annually increased in consequence of the works.

The average collections for five years prior to the commencement of the improvements is shown in the District Engineer's Statement as Rs. 17,57,000; those for the year 1871-72, after deducting the above-mentioned sum for water-rate, were Rs. 27,29,000, showing a net increase of Rs. 8,72,000. If this sum be added to the

	Rs.
For Irrigation ...	2,023
Navigation ...	1,321
	3,354 per month
	12
Total ...	40,248 per annum

A moderate addition to the cost of the Conservancy establishment has been recommended, and the repair grant has been increased considerably.

	Rs.
Gross collections from land ..	42,66,508
Deduct water-rates ...	15,37,425
	27,29,083
Net land revenue	
Average collections for five years prior to improvements ...	17,57,000
	9,72,000
Deduct the proportion due to the Settlement operations and additional area transferred from the Masalipatam District in 1861 ...	100,000
Net increase ...	8,72,000

(10)

above net receipts of Rs. 13,95,300, the annual increase of revenue directly due to the works will be Rs. 22,67,300, or over 33½ per cent.

A traveller along the Godavery Canals cannot fail to be struck with the number of passenger-boats. No less than 82 of these were registered last year, licensed to carry on an average 57 passengers. Supposing that, on an average, there were only 30 people per boat, the passenger traffic would amount to 2,400 people carried daily. The average distance travelled by each person, probably, being not less than 20 miles, the daily traffic will be represented by 48,000 people and the yearly traffic by 17,520,000 passengers through one mile. The price at which they are carried is 12 miles for one anna. Similarly, assuming the distance traversed 40 miles, the ton-mileage of the goods would be 13,484,680 tons.

There can be no doubt but that these results have fully borne out the far-sightedness of Sir Arthur Cotton in insisting upon the paramount importance for inter-communications of the cheapest character. Sanguinely as he was wont to look forward to the time when the Godavery Canals should be covered with traffic, I doubt whether even he expected that within so short a time traffic could develop to the extent it has done. Certainly the results in that District convey an important lesson in the designing of Irrigation projects which are intended to affect large tracts of country where expensive land carriage has hitherto formed the only means of transport.

*Colonel Hamilton's Report
Chief Engineer for Irrigation
Godavari
27 April 1874*

(11)

Statement showing the Revenue of the Godavery District from Fusli 1215 to Fusli 1281, or A. D. 1805 to 1871.

RAJAHMUNDRY.					RAJAHMUNDRY.				
Fusli.	Collections.	Average.	PERCENTAGE.		Fusli.	Collections.	Average.	PERCENTAGE.	
			Increase.	Decrease.				Increase.	Decrease.
	Rs.	Rs.				Rs.	Rs.		
1215	20,84,048	20,93,870	14½	7	1250	17,42,130	19,46,126	16	...
1216	20,48,104				1251	21,08,336			
1217	21,49,579				1252	19,62,753			
1218	20,43,322				1253	17,33,965			
1219	21,44,300				1254	21,83,448			
1220	25,89,850	24,02,180	...	...	1255	20,49,046	22,57,581	...	2
1221	21,06,493				1256	24,96,700			
1222	26,49,522				1257	25,44,364			
1223	23,91,442				1258	23,65,806			
1224	22,73,533				1259	18,31,388			
1225	18,69,569	22,34,515	2½	...	1260	19,72,760	23,09,769	34	...
1226	23,69,512				1261	20,24,525			
1227	23,42,326				1262	20,17,450			
1228	23,42,043				1263	24,65,863			
1229	22,49,125				1264	25,68,251			
1230	21,47,641	22,88,845	6½	...	1265	25,93,040	29,67,689	40	...
1231	22,87,446				1266	26,66,956			
1232	22,46,941				1267	27,36,870			
1233	21,85,221				1268	32,12,180			
1234	25,76,970				1269	36,29,399			
1235	23,41,323	24,08,050	...	3	1270	41,45,901	41,58,070	15	...
1236	25,09,240				1271	39,46,499			
1237	23,62,184				1272	41,42,598			
1238	24,86,468				1273	41,83,215			
1239	23,41,036				1274	43,66,153			
1240	23,57,544	23,31,507	...	20	1275	48,06,804	47,79,254	...	...
1241	20,77,801				1276	46,07,755			
1242	19,08,883				1277	47,76,515			
1243	26,73,884				1278	46,36,289			
1244	26,39,465				1279	50,69,079			
1245	19,53,892	19,40,865	...	...	1280	50,42,684			
1246	21,54,815				1281	53,84,395			
1247	21,41,490								
1248	17,28,809								
1249	17,22,318								

* Commencement of the Delta Project.

DOWLAISHWARUM; } J. F. FISCHER, Lieut.-Col., R. E.,
January 1873. } District Engineer, Godavery District.

Statement showing the number, tonnage and fees collected on account of boats in the Godavery District.

Years.	CARGO BOATS.		PASSENGERS' BOATS.		PLEASURE BOATS.		RAFTS.	Total fees collected in Godavery District.	REMARKS.
	No.	Tonnage.	No.	Passengers.	No.	No.			
								Rs. A. P.	
1867	1,201	24,823½	85	3,964	69			34,215 10 10	Average tonnage of cargo boats 27·8 tons.
1868	1,176	25,403½	97	5,119	79			36,588 15 2	Average number of passenger 5·77 licensed per boat is 57.
1869	1,269	27,222½	113	6,508	72			39,325 12 1	
1870	1,181	25,641	90	5,896	68			36,638 6 9	
1871	1,221	24,794½	82	5,333	50			34,486 9 3	
Total	6,048	127,974	467	26,820	338			1,81,255 6 1	
Average	1,210	25,595	93	5,364	68			36,251 1 2	

DOWLAISHWARUM, No. 1 or EASTERN
DISTRICT RANGE OFFICE;
The 6th January, 1873.

F. MEAD, Captain, R. E.,
Exec. Engr., Godavery District.

Abstract of the Conservancy Establishment employed on the Godavary Delta Canals.

NAVIGATION.				IRRIGATION.			
Particulars.	Number.	Rate per each.	Amount.	Particulars.	Number.	Rate.	Amount.
Lock Superintendents, 1st class ...	2	Rs. 15 0 0	Rs. 30 0 0	Delta Superintendents, 1st grade ...	3	Rs. 70 0 0	Rs. 210 0 0
" " 2nd " ...	12	12 0 0	144 0 0	" " 2nd " ...	7	50 0 0	350 0 0
" " 3rd " ...	17	10 0 0	170 0 0	" " 3rd " ...	12	40 0 0	480 0 0
" " 4th " ...	10	8 0 0	80 0 0	" " 4th " ...	5	30 0 0	150 0 0
" " Lascars, 1st class ...	127	6 0 0	762 0 0	" " Lascars, 1st class ...	48	5 0 0	240 0 0
" " 2nd " ...	49	5 0 0	245 0 0	" " Channel Lascar ...	1	6 0 0	6 0 0
			1,431 0 0		2	5 0 0	10 0 0
Calingula " 1st " ...	2	6 0 0	12 0 0				
" " 2nd " ...	14	5 0 0	70 0 0				
Irrigation Writer ...	1	15 0 0	15 0 0				
Anicut " ...	1	15 0 0	15 0 0				
" Gomasta ...	1	15 0 0	15 0 0				
" Sharab ...	1	10 0 0	10 0 0				
" Maistry ...	1	18 0 0	18 0 0				
" " ...	1	15 0 0	15 0 0				
" " ...	1	12 0 0	12 0 0				
" " ...	1	150 0 0	150 0 0				
" " Lascars, 1st class ...	25	5 0 0	125 0 0				
" " 2nd " ...	15	20 0 0	300 0 0				
Superintendent ...	1	20 0 0	20 0 0				
" " ...	3	10 0 0	30 0 0				
" " ...	4	5 0 0	20 0 0				
			577 0 0				
			1,908 0 0				1,416 0 0
			577 0 0				577 0 0
Deduct ...			1,331 0 0	Total for Irrigation ...			2,023 0 0
Total for Navigation ..							

(14)

Statement showing the value of Imports and Exports by sea in the Godavary District for 28 years, from 1844 to 1872.

OFFICIAL YEARS.	COBINGA.			COCONADA.			NARSAPUR.			TOTAL.				PARTICULARS.				
	Value of British goods.	Value of Foreign goods.	Total.	Value of British goods.	Value of Foreign goods.	Total.	Value of British goods.	Value of Foreign goods.	Total.	Value of British goods.	Value of Foreign goods.	Total.	Paddy, Rice, and other grains &c.	Pulses.	Gingelly and Lamp oil-seeds.	Sugar.	Gruff goods.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	
1844-45 ...	4,08,431	...	4,08,481	2,26,076	...	2,26,076	95,941	...	95,941	7,30,498	...	7,30,498	1,99,502	2,06,368	3,001	7,280	2,54,317,	
1845-46 ...	4,27,475	2,728	4,30,203	3,85,178	...	3,85,178	92,393	...	92,393	9,05,046	2,728	9,07,774	3,78,969	2,01,739	22,940	16,414	2,87,712	
1846-47 ...	7,54,205	...	7,54,205	4,66,345	...	4,66,345	1,35,696	...	1,35,696	13,56,336	...	13,56,336	4,21,481	2,86,492	37,985	26,281	5,84,097	
1847-48 ...	6,99,679	...	6,99,679	3,05,819	360	3,06,179	91,380	...	91,380	10,96,578	360	10,97,238	2,59,705	2,22,885	1,71,754	721	4,42,173	
1848-49 ...	6,51,914	3,852	6,55,766	3,12,050	110	3,12,160	84,130	...	84,130	10,48,094	3,962	10,52,056	2,23,004	3,12,353	1,23,867	46,295	3,46,537	
1849-50 ..	6,27,939	4,129	6,32,068	2,59,630	54	2,59,684	76,965	...	76,965	9,64,534	4,183	9,68,717	1,07,503	2,74,414	1,59,417	74,273	3,53,110	
1850-51 ..	7,52,872	2,086	7,54,958	5,40,556	136	5,40,692	1,03,417	...	1,03,417	13,96,345	2,222	13,99,067	2,85,073	2,90,851	2,58,338	2,17,695	3,47,110	
1851-52 ...	6,30,972	403	6,31,377	5,64,497	100	5,64,597	1,10,640	...	1,10,640	13,06,614	505	13,06,614	4,36,266	3,04,538	1,29,870	1,35,289	3,01,651	
1852-53 ...	5,78,941	288	5,79,229	9,04,729	18	9,04,747	1,49,003	...	1,49,003	16,32,973	306	16,32,979	4,61,244	2,18,390	2,00,963	2,98,734	4,53,643	
1853-54 ...	6,98,891	...	6,98,891	9,53,300	3,511	9,56,811	1,77,831	...	1,77,831	18,30,022	3,511	18,33,533	3,75,248	4,53,749	1,99,999	2,85,652	4,18,885	
1854-55 ...	6,00,345	93	6,00,438	8,55,800	...	8,55,800	1,70,662	...	1,70,662	16,26,907	93	16,26,900	2,80,743	2,79,339	2,29,941	3,98,071	4,38,806	
1855-56 ...	7,99,900	...	7,99,900	9,64,212	...	9,64,212	1,50,229	...	1,50,229	19,14,341	...	19,14,341	5,79,770	1,04,666	6,26,105	1,30,165	4,73,635	
1856-57 ...	8,19,726	...	8,19,726	8,51,694	...	8,51,694	73,816	...	73,816	17,45,236	...	17,45,236	2,40,277	3,15,944	4,56,674	1,98,245	5,28,096	
1857-58 ...	11,63,548	...	11,63,548	15,54,893	...	15,54,893	2,11,566	...	2,11,566	29,30,007	...	29,30,007	5,64,221	4,59,794	7,60,853	3,95,877	7,49,262	

(15)

Statement showing the value of Imports and Exports by sea in the Godavery District, &c.—(contd.)

PARTICULARS.	OFFICIAL YEARS.	CORINGA.	Value of British goods.	COCONADA.	Value of Foreign goods.	NARSAPUR.	Value of British goods.	TOTAL.	Value of Foreign goods.	PADDY, RICE, AND OTHER GRAINS &c.	Pulses.	GINGELLY AND LAMP OIL-SEEDS.	SUGAR.	GRUFF GOODS.																			
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.	11.	Rs.	12.	Rs.	13.	Rs.	14.	Rs.	15.	Rs.	16.	Rs.	17.	Rs.	18.	Rs.
1.	2.	3.	Rs.	4.	Rs.	5.	Rs.	6.	Rs.	7.	Rs.	8.	Rs.	9.	Rs.	10.	Rs.																

EXPORT—(contd.)

1814-15...	2,91,079	605	2,91,684	11,808	316	12,184	27,774	...	27,774	3,30,721	921	3,31,612	1,87,661	841	606	...	1,42,414
1815-16...	3,55,943	430	3,56,382	9,865	2,097	11,962	20,405	...	20,405	3,86,213	2,536	3,88,749	2,45,384	4,764	...	...	1,35,601
1816-17...	3,05,849	211	3,06,060	55,422	212	55,634	49,671	...	49,671	4,10,942	423	4,11,365	1,86,916	1,735	1,933	881	2,19,900
1817-18...	5,62,263	665	5,62,928	32,836	688	33,524	40,133	...	40,133	6,35,232	1,353	6,36,585	3,97,656	2,261	...	...	2,95,976
1818-19...	3,59,491	60	3,59,551	14,513	1,586	16,099	38,252	...	38,252	4,42,256	1,616	4,43,902	2,34,362	...	...	...	2,09,510
1819-20...	2,80,588	4,549	2,85,132	27,939	2,378	30,317	15,678	...	15,678	3,24,200	6,927	3,31,127	1,74,085	...	...	...	1,57,012
1820-21...	2,24,773	...	2,24,773	21,463	4,457	25,920	51,101	...	51,101	2,97,337	4,457	3,01,794	1,20,415	56	...	139	1,81,154
1821-22...	2,53,931	883	2,59,814	35,124	2,212	37,336	51,253	...	51,253	3,45,308	3,095	3,48,403	91,583	8,975	23,064	1,939	2,22,812
1822-23...	1,53,395	...	1,53,395	34,611	1,629	36,239	49,332	...	48,832	2,36,338	1,628	2,37,966	33,473	3,290	5,726	1,483	1,93,994
1823-24...	1,68,172	557	1,68,729	50,374	6,672	57,046	38,771	...	38,771	2,57,317	7,229	2,64,546	43,193	2,038	3,073	1,397	2,14,815
1824-25...	3,39,043	1,459	3,40,502	39,912	1,790	41,702	64,384	...	64,384	4,43,339	3,249	4,46,588	81,411	20,499	1,158	1,060	3,42,460
1825-26...	3,75,711	1,418	3,77,129	1,02,381	2,803	1,05,184	84,832	...	84,832	5,62,924	4,221	5,67,145	16,700	467	1,850	516	6,47,552
1826-27...	4,67,067	1,560	4,68,627	1,63,561	7,767	1,71,328	1,07,901	...	1,07,901	7,38,529	9,327	7,47,856	98,066	22,909	812	3,350	6,22,719
1827-28...	1,70,300	6,106	1,76,406	2,28,966	10,290	2,39,256	95,237	...	95,237	4,94,503	16,396	5,10,899	19,021	1,229	23,788	28,697	4,38,164
1828-29...	3,10,180	770	3,10,900	2,13,961	29,781	2,43,742	2,14,876	...	2,14,876	7,38,467	32,453	7,71,420	30,252	22,301	2,538	382	7,15,952
1829-30...	1,80,838	644	1,81,482	1,82,179	6,536	1,88,715	97,692	...	97,692	4,60,709	7,180	4,67,889	3,849	2,008	7,321	223	4,54,493
1830-31...	1,58,271	368	1,58,639	3,88,360	8,010	3,96,370	86,500	...	86,500	6,33,131	8,378	6,41,509	33,781	19,562	7,405	380	5,80,331
1831-32...	2,83,605	2,206	2,85,811	2,79,780	10,325	2,90,105	1,31,657	...	1,31,657	6,95,042	12,531	7,07,573	94,599	41,563	11,210	679	5,59,525
1832-33...	4,00,877	415	4,01,292	5,03,383	23,900	5,27,283	72,183	...	72,183	9,76,443	24,315	10,00,758	3,43,435	1,397	57,249	7,742	5,90,935
1833-34...	4,79,197	2,313	4,81,510	3,71,727	29,689	4,01,416	51,100	...	51,100	9,02,024	32,002	9,34,026	4,31,105	3,854	16,463	1,014	4,81,590
1834-35...	5,75,810	678	5,76,488	3,92,982	52,423	4,45,405	68,153	...	68,153	10,36,945	53,101	10,90,046	5,50,590	5,276	19,996	2,192	5,11,992

IMPORT.

Statement showing the value of Imports and Exports by sea in the Godavary District, &c.—(conclld.).

OFFICIAL YEARS.	CORINGA.			COCONADA.			NARSAPUR.			TOTAL.			PARTICULARS.				
	Value of British goods.		Total.	Value of British goods.		Total.	Value of British goods.		Total.	Value of Foreign goods.		Total.	Paddy, Rice, and other grains &c.	Gingelly and Lamp oil-seeds.	Sugar.	Gruff goods.	
	Rs.			Rs.			Rs.			Rs.			Rs.	Rs.	Rs.	Rs.	
1.																	
1865-66...	3,55,084	214	3,55,298	6,45,857	53,865	6,99,722	1,12,605	...	1,12,605	54,079	11,67,625	1,34,077	27,932	17,310	1,497	9,86,800	
1866-67...	1,44,377	1,054	1,45,431	15,51,724	85,109	15,86,833	82,093	...	82,803	36,163	18,14,347	1,13,443	3,615	1,152	3,299	16,92,838	
1867-68...	3,34,686	2,641	3,37,327	9,43,793	80,956	10,24,739	10,206	73,606	83,812	12,88,675	1,57,203	14,45,878	18,460	27,966	5,492	13,84,880	
1868-69...	1,42,466	57,707	2,00,173	10,98,087	3,84,037	14,82,174	10,165	1,66,876	1,77,041	12,50,719	6,08,670	18,59,388	59,093	...	5,946	17,88,255	
1869-70...	76,501	79,951	1,56,452	3,13,322	15,44,637	18,57,959	8,768	47,307	56,075	3,98,591	16,71,896	20,70,487	18,453	11,605	15,116	20,23,288	
1870-71...	1,50,768	23,179	1,73,947	4,90,536	11,94,625	16,85,161	16,266	25,744	42,010	6,57,570	12,43,548	19,01,118	1,66,046	1,192	43,490	16,83,236	
1871-72...	28,021	9,289	37,310	2,11,979	12,74,602	14,86,581	14,294	24,207	38,501	2,54,294	13,08,098	15,62,392	18,455	18,702	12,813	15,16,311	

IMPORT—(conclld.)

Memorandum of Sea Customs Duty and the value of Exports and Imports.

Memorandum of Sea Customs Duty and the value of Exports and Imports									
Official years.	SEA CUSTOMS DUTY				Total amount of Export and Import duty.	VALUE OF		Port Dues.	
	On Exports.		On Imports.	Exports.		Imports.			
	Rs.	A. P.							
1859-60	...	...	...	...	Rs. A. P.	Rs.	Rs.	Rs. A. P.	
1860-61	...	...	...	...	79,099 10 5	2,748 3 0	28,47,909	4,67,889	
1861-62	...	...	...	...	1,23,095 1 5	2,796 2 11	42,14,715	6,41,509	
1862-63	...	...	...	...	67,298 11 7	8,559 3 6	31,29,232	7,07,573	
1863-64	...	...	...	...	40,729 10 8	3,931 9 6	33,51,024	10,00,758	
1864-65	...	...	...	...	27,129 2 2	6,415 6 7	47,78,750	9,34,026	
1865-66	...	...	...	...	26,210 5 0	6,874 8 9	56,68,244	10,90,046	
1866-67	...	...	...	...	34,522 7 11	9,310 2 0	88,74,321	11,67,625	
1867-68	...	...	...	...	39,470 9 0	7,361 14 11	64,12,041	18,14,348	
1868-69	...	...	...	...	68,081 9 6	10,070 3 8	48,24,602	14,45,878	
1869-70	...	...	...	...	87,155 9 7	9,811 3 11	80,57,106	18,59,388	
1870-71	...	...	...	...	93,588 7 10	16,753 9 4	89,56,078	20,70,487	
1871-72	...	...	...	...	1,13,870 10 9	13,923 1 8	59,21,558	19,01,118	
	...	...	...	...	81,546 10 1	12,119 2 2	86,66,326	15,62,392	

(19)

Particulars of the trade of the Ports in the Godavary District for the official year 1870-71, ending 31st March 1871.

Names of the Ports.	BRITISH.						FOREIGN.					
	Vessels.	Tonnage.	Dues at 4 annas 6 pie per ton.	Vessels.	Tonnage.	Dues at 3 annas per ton.	Vessels.	Tonnage.	Dues at 3 annas per ton.	Vessels.	Tonnage.	Dues at 1 anna 6 pie per ton.
Coringa ...	...	...	Rs. A. P.	...	...	Rs. A. P.	...	...	Rs. A. P.	...	...	Rs. A. P.
Coconada ...	1	1,007	253 3 6	39	28,939	5,426 1 0	6	2,505	234 13 6	37	16,050	3,009 6 0
Narsapur ...	...	...	...	...	...	...	85	74,711	...	...	...	...
TOTAL ..	1	1,007	253 3 6	39	28,939	5,426 1 0	19	77,213	234 13 6	37	16,050	3,009 6 0
												361 9 6

(20)

Particulars of the trade of the Ports in the Godavary District for the official year 1870-71, ending 31st March 1871.

Names of the Ports.	COUNTRY OR NATIVE CRAFT.						TOTAL.		VALUE OF				DUTY ON	
	Vessels.	Tonnage.	Dues at 3 annas per ton.	Vessels.	Tonnage.	Dues at 1 anna 6 pie per ton.	Vessels.	Tonnage.	Dues.	Exports.	Imports.	Imports.	Exports.	Total
Coringa ...	...	...	Rs. A. P.	...	...	...	...	...	Rs. A. P.	Rs.	Rs.	Rs.	Rs. A. P.	Rs. A. P.
Coconada ...	1	375	70 5 0	85	15,199½	1,424 15 3	...	...	10,810 5 9	3,80,076	1,73,947	13,923 1 8	101,264 4 9	1,15,187 6 5
Narsapur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL ..	1	375	70 5 0	190	35,972½	3,372 6 9	194	12,097	14 4 6	563	176,694½	12,772 1 9	59,21,558	1,27,793 12 5

(21)

Statement showing the value of goods exported by Sea from the District of Godavery from the official years 1835-36 to 1871-72.

ITEMS.	1835-36.	1836-37.	1837-38.	1838-39.	1839-40.	1840-41.	1841-42.	1842-43.	1843-44.	1844-45.	1845-46.	1846-47.	1847-48.
Piece-goods	Rs. 4,91,502	4,37,451	4,08,819	2,26,768	1,94,515	2,11,353	1,67,212	1,59,312	1,08,119	1,01,100	1,35,456	Rs. 3,89,006	Rs. 1,75,135
Sugar	...	...	...	...	...	...	...	...	...	7,280	16,414	26,281	721
Rice	40,604	6,094	46,599	27,706	27,278	1,374	17,237	87,112	1,19,440	1,90,518	3,55,950	3,78,422	2,53,825
Gingelly seeds	...	...	1,018	12,156	4,533	2,459	7,593	1,509	9,500	796	8,215	27,035	1,54,959
Lamp oil-seeds	1,318	...	1,656	2,319	1,390	...	3,067	4,725	5,942	2,205	14,725	10,950	16,795
Bengal gram	10,777	14,809	30,650	33,250	3,393	1,181	7,596	53,476	58,001	1,47,131	99,166	69,664	1,47,677
Paddy	...	...	...	...	...	...	...	...	...	...	...	...	...
Cotton	...	...	...	...	...	...	...	...	...	...	...	...	...
Other articles	1,59,133	2,28,014	1,57,372	1,33,730	90,279	2,56,657	2,58,241	3,32,989	2,81,468	2,77,848	4,54,978	3,48,126	...
Total	7,03,334	6,86,368	6,46,114	3,64,839	3,06,646	4,59,362	5,64,375	6,33,991	7,30,498	9,07,774	13,56,336	10,97,238	...

(22)

Statement showing the value of goods exported by Sea from the District of Godavery from the official years 1849-50 to 1859-60.

ITEMS.	1848-49.	1849-50.	1850-51.	1851-52.	1852-53.	1853-54.	1854-55.	1855-56.	1856-57.	1857-58.	1858-59.	1859-60.
Piece-goods	Rs. 1,22,039	1,53,703	1,65,884	1,31,459	1,11,461	1,58,265	1,27,349	1,14,753	1,26,745	1,27,575	1,07,034	Rs. 72,271
Sugar	46,295	74,273	2,17,695	1,35,289	2,98,734	2,85,652	3,98,071	1,30,165	1,98,245	3,95,877	2,38,215	2,93,321
Rice	2,14,655	1,02,041	2,50,410	3,33,747	4,20,711	3,33,809	2,10,441	4,62,247	2,24,561	3,94,636	8,26,552	8,14,493
Gingelly seeds	97,944	1,48,676	2,52,390	1,21,047	1,48,811	2,92,036	2,05,160	5,74,602	3,42,705	6,94,008	3,96,482	2,30,655
Lamp oil-seeds	25,923	10,741	4,711	4,038	38,511	6,365	24,781	51,503	1,13,969	66,845	91,415	12,077
Bengal gram	2,34,964	2,25,246	1,66,587	2,23,802	1,07,056	3,02,627	1,15,551	62,868	2,09,725	3,53,161	5,38,087	3,82,865
Paddy	...	...	...	...	...	...	...	...	...	...	9,21,058	4,68,404
Cotton	...	...	...	...	...	...	...	...	...	...	...	...
Other articles	8,10,216	2,54,037	3,41,390	3,57,232	5,07,695	4,54,779	5,45,547	5,18,203	5,29,286	8,97,905	6,73,516	5,73,823
Total	10,52,056	9,68,717	13,99,067	13,06,614	16,32,979	18,38,533	16,26,900	19,14,341	17,45,236	29,30,007	37,92,359	28,47,909

(23)

Statement showing the value of goods exported by Sea from the District of Godavery from the official years 1860-61 to 1871-72

Items.	1860-61.	1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Piece-goods ...	1,60,024	2,90,526	1,74,605	45,233	1,00,932	2,88,826	3,61,545	2,32,466	2,16,240	3,04,751	2,64,109	2,32,008
Sugar ...	3,64,842	5,52,466	5,74,856	8,46,955	10,11,635	4,35,394	8,65,514	58,326	5,67,771	3,29,352	2,01,373	1,17,823
Rice ..	11,13,677	4,10,898	46,371	71,504	78,363	5,10,265	14,90,131	4,99,886	8,66,466	2,39,432	9,09,109	6,33,934
Gingelly seeds ...	6,16,172	3,83,316	8,60,702	3,43,457	5,07,012	5,29,036	70,880	10,66,976	9,26,809	22,56,133	14,69,015	8,43,593
Lamp oil seeds ...	1,30,590	1,68,393	2,78,067	96,633	34,771	22,506	92,892	1,33,715	3,32,590	38,877	48,472	8,73,442
Bengal gram ...	7,87,099	4,54,018	1,35,654	2,12,327	1,25,899	1,73,351	79,431	1,01,123	1,93,327	1,74,870	10,125	1,09,289
Paddy ...	4,14,199	93,150	31,695	25,740	5,802	3,25,528	5,46,266	3,65,395	9,15,123	6,78,912	2,86,580	1,28,169
Cotton ...	...	...	4,87,888	23,79,967	29,18,516	55,83,139	13,64,934	12,06,692	28,26,426	35,80,924	16,45,454	42,02,107
Other articles ...	6,28,142	7,76,465	7,56,964	8,85,314	10,06,276	15,40,498	11,55,023	12,12,354	13,52,827	10,87,321	15,20,361	...
Total ...	42,14,745	31,29,232	33,51,024	47,78,780	56,68,244	88,74,321	64,12,041	48,24,602	80,57,106	89,56,078	59,21,558	86,66,326

(24)

Particulars of the trade of the Ports in the Godavery District for the official year 1871-72, ending 31st March 1872.

Names of the Ports.	BRITISH.						FOREIGN.					
	Vessels.	Tonnage.	Dues at 4 annas 6 pie per ton.	Vessels.	Tonnage.	Dues at 3 annas per ton.	Vessels.	Tonnage.	Dues at 1 anna 6 pie per ton.	Vessels.	Tonnage.	Dues at 3 annas per ton.
Coringa ...	...	...	...	...	...	...	...	...	...	...	...	...
Coonada ...	1	912	256 8 0	30	25,304	4,744 8 0	5	2,114	198 3 0	82	14,745	2,764 11 0
Narsapur ...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	1	912	256 8 0	30	25,304	4,744 8 0	87	73,738	198 3 0	32	14,745	2,764 11 0
												550

(25)

Particulars of the trade of the Ports in the Godavery District for the official year 1871-72, ending 31st March 1872—(concluded).

Particulars of the trade of the Ports in the Godaverry District for the year 1900-1901																	
Names of the Ports.	COUNTRY OR NATIVE CRAFT.										TOTAL.			VALUE OF		DUTY ON	
	Vessels.	Tonnage.	Dues at 3 annas per ton.	Vessels.	Tonnage.	Dues at 1 anna 6 pie per ton.	Vessels.	Tonnage.	Dues at 9 pie per ton.	Vessels.	Tonnage.	Dues.	Exports.	Imports.	Imports.	Exports.	Total.
Coringa	...	...	Rs. A. P.	71	11,830	1,109 5 0	2	390	18 4 3	73	12,220	1,127 9 3	Rs.	Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.
	...	...	...	3	415	...	...	...	...	...	...	...	...	...	...	...	...
Coconada	1	257	48 3 0	86	12,609	1,182 1 6	1	185	8 10 9	156	56,126	9,202 13 3	82,52,876	14,86,581	12,119 2 2	69,267 8 5	81,386 10 7
	...	...	...	15	1,576	...	...	...	...	98	73,750	...	...	...	...	...	...
Narsapur	...	...	...	28	1,503	...	...	...	...	28	1,503	...	63,665	38,501	...	...	...
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	1	257	48 3 0	157	24,439	2,291 6 6	49	4,069	26 15 0	358	144,014	10,330 6 6	86,66,326	15,62,392	12,119 2 2	81,516 10 1	93,665 12 3

Register showing the total area irrigated by the several

NAMES OF TALUQS.	CANALS.	AREA OF GOVERNMENT LAND IRRIGATED UNDER THE ANICUT.								INAM AND ZEMINDARY LANDS IRRIGATED UNDER THE ANICUT, SUBJECT			
		CULTIVATED WITH WET CROPS.				DRY CROPS IRRIGATED.		TOTAL.		CULTIVATED WITH WET CROP.			
		1st crop.		Dalwa and 2nd crop.		1st crop.		Dalwa and 2nd crop.		1st crop.		Dalwa and 2nd crop.	
		Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. RAMACHUNDRAPUR	1.—Samalotta Canal	11,759	46,966	333	1,342	45	163	12,137	48,471	1,506	5,963	101	416
	2.—Coconada "	16,807	66,997	72	283	60	233	16,939	67,513	9,466	37,848	56	225
	3.—Mundapetah "	13,144	52,693	109	436	663	2,017	13,916	35,146	10,939	43,730	54	211
	4.—Yanam "	2,681	10,652	5	18	3,051	6,969	5,740	17,639	2,909	11,633	40	162
	5.—Injeram "	3,719	14,978	17	70	194	475	3,960	15,523	7,838	31,257	6	22
	6.—Coringa "	11,748	47,016	31	127	116	315	11,895	47,438	6,377	25,494	7	29
	Total	59,891	2,39,332	567	2,276	4,129	10,172	64,587	2,51,780	39,035	1,55,925	264	1,065
2. AMALAPUR	1.—Amalapur Canal	8,107	32,415	...	...	251	1,153	8,358	33,568	7,956	31,847	58	231
	2.—Gannavaram "	437	1,763	...	...	427	1,652	864	3,415	1,709	6,875	11	33
	3.—Raiy "	...	...	...	...	5	7	5	7	...	...	...	...
	4.—Bendamurlunka Canal	5,465	21,833	...	...	32	98	5,497	21,931	1,639	6,570	...	...
	5.—East Bank Canal "	10,060	40,210	...	...	140	359	10,200	40,599	5,912	23,627	...	...
	Total	24,069	96,251	...	...	855	3,269	24,924	99,520	17,216	68,919	69	264
3. NARASAPUR	1.—Narasapur Canal	16,395	65,859	249	1,000	136	385	16,780	67,244	5,046	20,364	106	432
	2.—Mukkamala "	6,046	24,870	761	3,064	633	1,539	7,440	29,473	3,905	16,119	449	1,803
	3.—Gostanady	749	2,998	14	53	...	...	763	3,051	115	460	3	10
	4.—Nagarum Main Canal	17,712	73,377	292	1,367	111	286	18,115	75,030	11,740	48,169	108	478
	Total	40,902	1,67,104	1,316	5,484	880	2,210	43,098	1,74,798	20,806	85,112	666	2,723
4. BHEEMAVARAM	1.—Venkiahand Vuyeru Canal	8,802	35,208	...	...	...	...	8,802	35,208	14,289	5,405	...	...
	2.—Gostanady	11,989	47,975	24	75	1	3	12,014	48,053	1,158	4,632	...	...
	3.—Narasapur Canal	4,453	17,815	60	237	11	22	4,524	18,074	603	2,417	3	12
	4.—Velpuru "	1,874	7,425	15	63	...	...	1,889	7,438	530	212	...	...
	5.—Attili "	1,533	6,121	4	16	...	...	1,537	6,137	841	1,051	...	...
	6.—Ellore "	1	1	...	...	...	...	1	1	2,094	320	...	...
	7.—Gostanady Drainage Channel	1,216	4,716	...	...	...	...	1,216	4,716	28	113	...	...
	8.—Undi High Level Channel	15,471	61,797	...	...	...	...	15,471	61,797	13,239	13,684	9	34
	Total	45,339	1,81,058	103	391	12	25	45,454	1,81,474	32,782	27,834	12	46
Add cess compounded by the Niddavolu and Bahaghalay													
5. ELLORE	1.—Ellore Canal	13,355	53,616	...	...	...	...	13,355	53,616	50	200	...	...
	2.—Kistna "	9,358	37,461	...	...	2	3	9,360	37,461	192	755	...	...
	Total	22,713	91,077	...	...	2	3	22,715	91,080	242	955	...	...

Delta Canals in the Godavery District, in the year 1870-71.

LANDS IRRIGATED UNDER TO WATER TAX.				INAM AND ZEMINDARY LANDS IRRIGATED UNDER THE ANICUT FREE OF WATER TAX.								TOTAL AREA IRRIGATED.							
DRY CROPS IRRIGATED.		TOTAL.		CULTIVATED WITH WET CROP.				DRY CROPS IRRIGATED.		TOTAL.		CULTIVATED WITH WET CROP.				DRY CROPS IRRIGATED.		TOTAL.	
1st crop.		1st crop.		Dalwa and 2nd crop.		1st crop.		1st crop.		1st crop.		Dalwa and 2nd crop.		1st crop.		Dalwa and 2nd crop.		1st crop.	
Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
24	97	1,631	6,476	2,841	11,366	...	...	...	...	2,841	11,366	16,106	64,295	434	1,758	69	260	16,609	66,313
38	144	9,560	38,217	5,423	21,690	...	...	2	9	5,425	21,699	31,696	1,26,585	128	508	100	386	31,924	1,27,429
1,006	2,840	11,999	46,781	293	1,171	...	...	...	...	293	1,171	24,376	97,594	163	647	1,669	4,857	26,208	1,03,098
3,043	7,285	5,992	19,080	449	1,798	...	...	...	...	449	1,798	6,042	24,083	45	180	6,094	14,254	12,181	38,517
297	558	8,141	31,837	1,920	7,650	...	...	2	7	1,922	7,687	13,507	53,915	23	92	493	1,040	14,023	55,047
29	73	6,413	25,596	2,913	11,656	...	...	3	12	2,916	11,668	21,038	84,196	38	156	148	400	21,224	84,752
4,437	10,997	43,736	1,67,987	13,839	55,361	...	...	7	28	13,846	55,389	1,12,765	4,50,618	831	3,341	8,573	21,197	1,22,169	4,75,156
630	2,318	8,644	34,396	5,334	21,273	...	...	...	...	5,334	21,273	21,397	85,535	58	23	881	3,471	22,336	89,237
942	4,329	2,662	11,237	...	...	...	...	...	...	...	...	2,146	8,638	11	33	1,369	5,981	3,526	14,652
1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	6	8	6	8
19	75	1,658	6,615	2,304	9,198	...	...	...	...	2,304	9,198	9,408	37,601	...	...	51	173	9,459	37,774
262	601	6,174	24,228	3,924	15,696	...	...	...	...	3,924	15,696	19,896	79,563	...	...	402	960	20,298	80,523
1,854	7,324	19,139	76,507	11,562	46,167	...	...	...	...	11,562	46,167	52,847	2,11,337	69	264	2,709	10,593	55,625	2,22,194
58	157	5,210	20,953	4,179	16,702	...	...	15	63	4,194	16,765	25,620	1,02,925	355	1,432	209	605	26,184	1,04,962
453	1,007	4,807	18,929	88	383	...	...	...	...	88	383	10,039	41,372	1,210	4,867	1,086	2,546	12,335	48,785
...	...	118	470	1,358	5,430	...	...	...	...	1,358	5,430	2,222	8,888	17	63	...	...	2,239	8,951
53	121	11,901	48,768	3,345	13,385	...	...	2	3	3,347	13,388	32,797	1,34,931	400	1,845	166	410	33,363	1,37,186
564	1,285	22,036	89,120	8,970	35,900	...	...	17	66	8,987	35,966	70,678	2,88,116	1,982	8,207	1,461	3,561	74,1	2,99,884
...	...	14,289	5,405	7,485	29,910	...	...	...	...	7,485	29,940	30,576	70,553	...	...	...	...	30,576	70,553
...	...	1,162	4,640	5,448	21,790	12	47	...	...	5,460	21,837	18,595	74,397	36	122	5	11	18,636	74,530
...	...	606	2,429	836	3,346	6	25	...	...	842	3,371	5,892	23,578	69	274	11	22	5,972	23,874
...	...	530	212	796	3,184	...	...	...	...	796	3,181	3,200	10,821	15	63	...	...	3,215	10,884
...	...	842	1,053	568	2,274	...	...	...	...	568	2,274	2,942	9,446	4	16	1	2	2,947	9,464
...	...	2,094	320	953	3,811	...	...	...	...	953	3,811	3,048	4,132	...	...	...	...	3,048	4,132
...	...	28	113	731	2,923	...	...	...	...	731	2,923	1,975	7,752	...	...	...	...	1,975	7,752
...	...	13,259	13,739	9,005	36,022	...	...	...	...	9,005	36,022	37,715	1,11,503	9	34	11	21	37,735	1,11,558
11	21	13,259	13,739	9,005	36,022	...	...	...	...	9,005	36,022	37,715	1,11,503	9	34	11	21	37,735	1,11,558
16	31	32,810	27,911	25,822	1,03,290	18	72	...	...	25,810	1,03,362	1,03,943	3,12,182	133	509	28	56	1,04,104	3,12,747
Zemindarees.	...	29,488	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28,488
...	...	56,329	...	...	...	...	...	...	...	1,730	6,921	15,135	60,737	...	...	...	...	15,135	60,737
...	...	200	1,730	6,921	...	...	...	...	...	3,000	12,240	12,610	50,456	...	...	2	3	12,612	50,459
...	...	192	755	3,000	12,240	...	...	...	...	...	...	...	...	...	...	2	3	27,747	1,11,196
...	...	242	955	4,799	19,161	...	...	...	...	4,799	19,161	27,745	1,11,193	...	...	...	...	...	...

NAMES OF TALUQS.	CANALS.	AREA OF GOVERNMENT LAND IRRIGATED UNDER THE ANICUT.								INAM AND ZEMINDARY THE ANICUT, SUBJECT			
		CULTIVATED WITH WET CROPS.				DRY CROPS IRRIGATED.		TOTAL.		CULTIVATED WITH WET CROP.			
		1st crop.		Dalwa and 2nd crop.						1st crop.		Dalwa and 2nd crop.	
		Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
6. TANUKU	1.—Narasapur Canal ...	14,248	57,291	129	528	272	538	14,649	58,357	21,298	85,267	121	484
	2.—Ellore " ...	24,679	98,749	43	171	89	178	24,811	99,098	18,335	73,383	2	7
	3.—Niddavolu Madugu ...	...	...	...	...	...	...	...	...	439	1,756	269	1,078
	Total ...	38,927	1,56,040	172	699	361	716	39,460	1,57,455	40,072	1,60,406	392	1,569
7. RAJAHMUNDEY	1.—Coconada Canal ...	7	28	...	...	3	7	10	35	358	1,432	8	33
	2.—Samalcotta " ...	...	...	...	...	...	...	...	...	57	227	...	...
	3.—Mundapetta " ...	...	...	...	...	...	...	...	...	548	2,194	2	5
	4.—Coringa " ...	...	...	...	...	34	68	34	68	...	...	...	...
	Total ...	7	28	...	...	37	75	44	103	963	3,853	10	38
8. YERNAGUDEM	1.—Ellore Canal ...	534	1,978	...	...	1	2	535	1,980	534	2,137	...	...
	2.—Singaram " ...	...	...	10	39	...	...	10	39	...	...	...	...
	3.—Vemulu " dug from the Niddavolu Madugu ...	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	534	1,978	10	39	1	2	545	2,019	534	2,137	...	...
9. COCONADA	1.—Coconada Canal ...	28	110	...	...	...	...	28	110	814	3,257	84	335
	2.—Samalcotta " ...	6	25	...	...	...	...	6	25	277	1,112	178	711
	3.—Coringa " ...	...	...	...	...	...	...	...	...	2,096	8,379	9	36
	Total ...	34	135	...	...	...	...	34	135	3,187	12,748	271	1,082
10. CORINGA	1.—Yanam Canal ...	1	2	...	...	...	...	1	2	1,081	4,325	4	15
	2.—Coringa " ...	6	...	...	...	...	...	6	...	229	841	...	...
	3.—Penuguduru " ...	...	...	...	...	...	...	...	...	66	265	...	...
	Total ...	7	2	...	...	...	...	7	2	1,376	5,431	4	15
	GRAND TOTAL	2,32,423	9,33,005	2,168	8,889	6,277	16,472	2,40,868	9,58,366	1,56,213	5,23,320	1,688	6,802

Water cess compounded by the Zemindarees of Niddavolu

GODAVERY DISTRICT, COLLECTOR'S OFFICE
COCONADA;
14th August, 1872.

(Sd.) W. S. FOSTER,
Acting Collector.

DOWLAISHWARAM;
2nd January, 1872.

J. F. FISCHER, *Lieut.-Col., R. E.,*
District Engineer, Godavery.

Anicut Canals in the Godavery District, Fusli 1280.

LANDS IRRIGATED UNDER TO WATER TAX.				INAM AND ZEMINDARY LANDS IRRIGATED UNDER THE ANICUT FREE OF WATER TAX.								TOTAL AREA IRRIGATED.							
DRY CROPS IRRIGATED.		TOTAL.		CULTIVATED WITH WET CROP.				DRY CROPS IRRIGATED.		TOTAL.		CULTIVATED WITH WET CROP.				DRY CROPS IRRIGATED.		TOTAL.	
				1st Crop.		Dalwa and 2nd crop.						1st crop.		Dalwa and 2nd crop.					
Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.	Extent.	Net amount of water tax.
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
242	482	21,661	86,233	6	26	...	...	...	...	6	26	35,552	1,42,584	250	1,012	514	1,020	36,316	1,44,616
73	136	18,410	73,526	4,495	17,980	...	...	...	...	4,495	17,980	47,509	1,90,112	45	178	162	314	47,716	1,90,604
34	68	742	2,902	...	...	...	...	...	...	...	...	439	1,756	269	1,078	34	68	742	2,902
349	686	40,813	1,62,661	4,501	18,006	...	...	...	...	4,501	18,006	83,500	3,34,452	564	2,268	710	1,402	84,774	3,38,122
3	6	369	1,471	...	...	...	...	...	...	...	...	365	1,460	8	33	6	13	379	1,506
...	...	57	227	...	...	...	...	...	...	...	...	57	227	...	...	...	...	57	227
6	19	556	2,218	...	...	...	...	...	...	...	...	548	2,194	2	5	6	19	556	2,218
48	96	49	96	...	...	...	...	...	...	...	...	...	...	...	...	82	164	82	164
57	121	1,030	4,012	...	...	...	...	...	...	...	...	970	3,881	10	38	94	196	1,074	4,115
1	3	535	2,140	304	1,213	...	...	...	...	304	1,213	1,372	5,328	...	...	2	5	1,374	5,333
...	...	...	...	103	414	134	538	...	...	237	952	103	414	144	577	...	...	247	991
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	3	535	2,140	407	1,627	134	538	...	...	541	2,165	1,475	5,742	144	577	2	5	1,621	6,324
1	2	899	3,594	5,540	22,164	...	...	...	...	5,540	22,164	6,382	25,531	84	335	1	2	6,467	25,868
...	...	455	1,823	6,907	27,627	...	...	...	...	6,907	27,627	7,190	28,764	178	711	...	...	7,368	29,475
...	...	2,105	8,415	571	2,283	...	...	...	...	571	2,283	2,667	10,662	9	36	...	...	2,676	10,698
1	2	3,459	13,832	13,018	52,074	...	...	...	...	13,018	52,074	16,239	64,957	271	1,082	1	2	16,511	66,041
...	...	1,085	4,340	767	3,069	...	...	...	...	767	3,069	1,849	7,396	4	15	...	...	1,853	7,411
...	...	229	841	2	9	...	...	...	...	2	9	237	850	...	...	...	...	237	850
...	...	66	265	173	691	...	...	...	...	173	691	239	956	...	...	...	...	239	956
...	...	1,380	5,446	942	3,769	...	...	...	...	942	3,769	2,325	9,202	4	15	...	...	2,329	9,217
7,279	20,449	1,65,190	5,50,571	83,851	3,35,355	152	610	24		84,027	3,36,059	4,72,487	17,91,680	4,008	16,301	13,580	37,015	4,90,075	18,44,996
and Baharzhally		...	28,488																28,488
																			18,73,484

5,79,059

FORT ST. GEORGE,
22nd November, 1872.

(Signed) R. F. OAKES, Major, R. E.,
Acting Chief Engineer for Irrigation.

Statement showing the outlay incurred on the

	TOTAL EXPENDITURE FROM 1847 TO 1866-67 AS PER STATEMENT No. 1 EMBODIED IN G. O. No. 93 OF 13TH JANUARY 1869.		EXPENDITURE IN 1867-68.	
	Main and distribution channels.		Main and distribution channels.	
	Original Works.	Repairs.	Original Works.	Repairs.
	Rs.	Rs.	Rs.	Rs.
Eastern Delta ...	84,661	36,989	...	...
Coconada Canal ...	1,08,631	95,339	6,532	1,429
Bank " ...	37,253	25,116	1,993	6,066
Coringa " ...	26,021	47,425	864	9,192
Injerum " ...	26,385	10,598	...	140
Samulcottah " ...	3,03,747	72,676	26,947	1,478
Mundapetta " ...	47,385	14,352	8,175	449
Drainage ...	12,297	34,064	2,847	3,088
	6,46,380	3,36,559	47,358	21,842
Central Delta ...	2,22,114	72,425	...	...
Ralli Canal ...	2,08,153	77,662	1,761	8,110
Gunnaravum Canal ...	3,63,910	37,856	13,424	2,564
Nagarum " ...	22,763	17,165	...	5,955
East Bank " ...	14,853	28,126	1,570	476
Inapoor Channel ...	...	2,022	...	130
Drainages ...	7,865	12,214	...	1,467
	8,39,658	2,47,470	16,755	18,702
Western Delta ...	25,209	54,736	377	187
Main Canal ...	26,807	47,108	5,632	3,316
Ellore " ...	6,21,063	1,30,971	28,488	5,060
Wyaru " ...	1,39,657	58,382	272	2,842
Oondee Channel ...	15,534	8,200	1,454	3,510
Akced Canal ...	...	362	...	...
Chinnacavarum Channel ...	...	1,412	17,046	619
Rudriah Codu ...	31	30,640	368	210
Attili Canal ...	6,147	76,068	2,227	2,403
Nursapur Canal ...	2,51,061	7,432	335	5,165
Boopeah Channel ...	6,684	1,002	...	2,260
Rapaka " ...	6,495	4,257	...	2,097
Chinchinada Channel ...	9,949	3,239	275	...
Jinnoor " ...	...	4,170	...	1,661
Gostanuddy ...	12,287	16,239	2	9,751
Bank Canal ...	12,588	38,392	1,212	7,575
Drainage ...	91,492	...	...	426
Muccamala ...	...	...	...	...
Junction Canal ...	...	...	...	...
	12,25,004	4,82,610	57,688	47,082
Compensation for land taken up by channels ...	...	...	15,201	...
Anicut ...	11,95,492	7,76,084	25,379	16,784
Tools and Plant, Establishments, and sundry minor improvements ...	3,39,144	15,74,306	57	29,864
GRAND TOTAL ...	...	...	...	...

DOWLAISHWARUM,

January 1873.

Delta Works from the year 1847 up to 1871-72.

EXPENDITURE IN 1868-69.		EXPENDITURE IN 1869-70.		EXPENDITURE IN 1870-71.		EXPENDITURE IN 1871-72.		TOTAL.		GRAND TOTAL.
Main and distribution channels.		Main and distribution channels.		Main and distribution channels.		Main and distribution channels.		Main and distribution channels.		
Original Works.	Repairs.	Original Works.	Repairs.	Original Works.	Repairs.	Original Works.	Repairs.	Original Works.	Repairs.	
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
21	...	7	3,269	242	21,085	...	9,700	84,931	71,043	14,02,500
6,890	2,787	4,264	3,733	20,448	4,526	61,852	3,511	2,08,617	1,11,325	
...	740	...	1,566	390	4,005	321	1,856	39,957	39,349	
107	2,448	2,156	2,091	2,146	3,451	...	7,148	31,294	71,755	
...	101	...	194	...	602	795	220	27,180	11,855	
60,362	1,189	26,146	1,387	21,411	8,775	8,173	3,026	4,30,440	88,531	
3,209	1,489	1,102	1,309	539	1,100	30	2,852	60,440	21,551	
1,141	4,148	6	2,675	183	522	41,774	1,487	58,248	45,984	
71,730	12,902	33,681	16,224	45,359	44,066	96,599	29,800	9,41,107	4,61,393	
...	...	...	...	497	5,421	...	18,440	2,22,611	96,286	
...	5,933	48	19,844	...	4,975	34	5,925	2,09,996	1,22,449	
...	4,167	...	1,214	23	1,555	172	4,573	3,77,529	51,929	
5,563	6,915	4,280	2,148	70	5,285	245	6,857	32,921	44,325	
1,149	1,457	...	468	...	1,042	66	4,933	17,638	36,502	
...	155	...	98	...	1,533	...	55	...	3,993	
...	1,190	...	437	580	413	...	1,938	8,445	17,659	
6,712	19,817	4,328	24,209	1,170	20,224	517	42,721	8,69,140	3,73,143	12,42,283
271	81	256	103	...	2,056	...	15,497	26,113	72,660	
...	484	...	2,396	...	960	...	106	32,439	54,370	
37,794	6,045	27,979	5,772	4,771	2,676	24,943	3,508	7,45,038	1,54,032	
...	1,437	1,389	677	185	926	...	3,439	1,41,495	67,703	
656	3,662	...	569	744	1,453	111	833	18,499	18,227	
...	...	...	446	...	...	...	...	446	...	
...	7	203	302	...	403	...	...	203	1,693	
52,116	47	7,735	511	...	81	...	...	76,928	226	
249	1,651	1,443	1,072	84	926	348	451	8,639	37,143	
4,727	4,766	14,220	13,082	20,071	5,123	19,320	5,395	3,11,626	1,09,599	
119	1,011	1,056	1,189	...	247	...	76	8,194	12,215	
...	876	...	339	132	79	...	1,260	6,627	5,653	
...	201	...	327	...	387	...	7	9,949	5,179	
...	682	...	55	...	...	...	346	275	4,322	
3,600	229	50	1,167	340	1,046	...	65	16,277	8,338	
1,616	6,116	1,266	4,126	348	2,178	...	619	15,124	39,029	
13,502	2,713	28,380	2,385	2,558	6,663	5,158	2,404	1,42,297	60,132	
...	638	...	877	144	439	...	...	144	2,380	
...	...	...	...	14,517	...	14,684	...	29,201	...	
1,14,650	30,646	83,969	34,949	43,639	25,643	64,564	34,006	15,89,514	6,54,936	22,44,450
...	...	...	...	...	...	...	...	15,201	...	15,201
...	...	...	...	...	...	...	...	...	...	49,04,434
6,532	29,377	...	30,169	...	26,001	...	23,909	12,27,403	9,02,324	41,60,875
...	21,249	...	17,486	3,936	18,746	6,932	19,458	3,50,039	16,81,109	
...	...	...	...	...	...	...	...	...	...	90,65,306

DISCHER Lieut. Col. R. E.

J. F. FISCHER, Lieut.-Col., R. E.,
District Engineer, Godavery District.

1-1-74

3633

Mr 3483 A/74

Ph. 7 15 July/74
Ln B N° 307

All communications
should be addressed to
the Secretary.

No. 012 J

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

Irrigation

To, The Secretary to Govt. of Madras
Public Works Department, Irrigation Branch

Fort William, 16th October 1873.

By Book post
in 3 packets.

X 1111
311111
24/10

In compliance with instructions
received from the Public Works Department
at Shila, the Undersigned has the honor
to forward 20 Copies each, of Parts II to
VI of the four notes on the Upper Goda-
vary Navigation Works, by Colonel Rundle
R. E., Inspector General of Irrigation
Works.

J. O'Hara Colonel,
In Charge P.W. Dept. Calcutta,

Has

Statement showing the number of boats passing through Head Locks.

From the foot of Lucia (H.S. no 0129. 7/16 Oct: 193)

2. Orderd also that
a



P. 24
 The
 No. 3433 of
 The year of 1844
 of the year of 1844
 of the year of 1844

10/12/1

L. O. No: 1968/1909.159-74
 10 April 1874
 Reed 21
 Reed 8 June 1874
 Enclad. 1

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 copies each of
 II to VII of the
 two sets in the
 Upper Godwin
 -excavation -
 by of Smith &

Public Works Dept.
 Proceedings of the Madras Government
 Read the following.

From the Govt. of India (H.S. No 0129 of 16 Oct. 1913)

Ordered that Part II of the notes by Colonel Rundall, Inspector General of Irrigation, containing his observations on the Godavery Delta, which was visited by him at the end of 1872, together with the remarks by the Chief Engineer for Irrigation be communicated to the District Engineer Godavery.

2. Ordered also that a

MR 175

P. O. No. 1408/1909/159-94
 dated 16th Decr 1913
 Recd. 21 Decr 1874
 Encl. 1

10121

Remarks to
 Chief Secy of Govt
 II to VI of the
 two sets in the
 Upper Godavery
 Irrigation works
 by Mr. Rundall

Public Works Dept.
 Proceedings of the Madras Government
 Read the following.

From the Govt. of India (H.S. No 0129 of 16 Decr 1913)

Ordered that Part II of the notes by Colonel Rundall, Inspector General of Irrigation, containing his observations on the Godavery Delta, which was visited by him at the end of 1872, together with the remarks by the Chief Engineer for Irrigation be communicated to the District Engineer Godavery.

2. Ordered also that a

MR
175

P. O. No. 1408/1909/159-94
 dated 16th Decr 1913
 Recd. 8 June 1874
 Enclosed

10121

Remarks to
 Chief Secy of Govt
 II to VI of the
 two sets in the
 Upper Godavery
 Irrigation works
 by Mr. Rundall

Statement showing the number of boats passing through Head Locks.

a copy of the Report with
the remarks of the Chief
Engineer for Irrigation,
and a copy of the Pro-
ceedings of this Govt.
containing the memoran-
dum of Inspection of the
latter Officer be transmit-
ted for the information
of the Government of
India.

A. 9.

May 15/74

G.M.

Copy of the above
forwarded to the Govt.
of India —

To the St Engineer Godanji
" Ch Engineer for Irrig.
Sign + the Copies checked
22/7/74
Printed copies of Part II
of the Report dated 13/8/74

Sign + the Copies checked
22/7/74
6 Copies of Part II of the
Report + 6 Copies of G.O. No.
1906 sent to the Govt of
India - 13/8/74

307-303

cc 4/5/74 Rd 5/5/74

of 1874 Madras.

BLIC WORKS.

to Dist. Engr. Godavery
to Govt. of India

Encl. 1.

15 July 1874, No. 1908
1909

Nos. 381-383

Forwarding

Transmitting a copy
of the Tour Notes by
Col. Rindall Inspr.
Genl. of Engrs. containing
his observations on the
Godavery Delta. No.
with the remarks of
Chief Engr. for Dist.
together with a copy of
the Proceedings of the
Govt. containing the
Memo: of inspection
Lt. Col. Mullins —

very Delta
II of the ~~Notes~~ tour
~~the Godavery~~
by Col. Rindall
Genl. of Engrs.
his observations
Godavery Delta to
with the remarks of
Chief Engr. for Dist.
to the Dist. Engr. &c.
for the in
ation of the Govt. of India