

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 171	Press ~~Mis.~~
351 - 352	
Dated 31 - 1 - 1865	

Not to be folded or roughly handled

B

*Proceedings of the Madras Government, Revenue Department,
31st January 1865.*

No. 351. Read the following Proceedings of the Madras Government in the Public Works Department:—

Directing the Abstract Statement submitted by the Collector of Nellore, shewing the results of Pennair irrigation under the Nellore anicut and Nellore tank in 1863-64 to lie over, pending the receipt of certain returns from the Controller of Public Works Accounts. (Here enter 17th January 1865, No. 156.)

No. 352. ORDER THEREON, 31st January 1865, No. 171.

Miscellaneous.

Communicated to the Board of Revenue.

(True Extract)

(Signed) C. G. MASTER,

Under Secretary to Government.

To the Board of Revenue, with Proceedings Public Works Department, No. 156.

Exd. S. T. Augustin.

B ✓

*Proceedings of the Madras Government, Public Works Department,
17th January 1865.*

Read the following:—

No. 327. Proceedings of the Board of Revenue, dated 14th October 1864, No. 6,792.
Read the following letter from J. W. B. DYKES, Esq., Collector of Nellore, to W. HUDLE-
STON, Esq., Secretary to the Board of Revenue, dated 12th September 1864,
No. 304.

SIR,

1. In accordance to the Orders of Government of the 9th January, No. 82,* I have the
honor to submit an Abstract Statement of the
* Public Works Department. results of Pennair irrigation under the Nellore

Anicut and Nellore tank in 1863-64, excluding such irrigation from the tank as lies above the
level of the anicut channels, and comparing the revenue since the completion of the anicut thus
computed, with the revenue similarly computed for the ten years immediately preceding.

2. In the similar Statement furnished for 1862-63, the area shewn as the basis of the com-
parison was an average area of 17,398 acres. From additional villages brought more or less
under the influence of the anicut in the year under report, the average area to be now compared
is 23,825 acres; and with the exception of 1853-54, the revenue on this area has fluctuated from
a lac to a lac and 25,000 Rupees.

3. In 1853-54, the revenue sank to half a lac, but it recovered itself by a quarter of a lac
the next year; in 1856-57 it was the highest of the series; in 1857-58 it was three-quarters of a
lac; and after another rise in 1860-61, the revenue was a lac and 5,000 Rupees, or close on the
average revenue of the ten years, viz., Rupees 1,00,812.

4. The anicut then came fairly into play. In 1861-62, the revenue under consideration was
a lac and 12,000 Rupees, in 1862-63 it was a lac and 31,000 Rupees, and in 1863-64 the year
under report, it was a lac and 54,000 Rupees, or in three years, in round numbers, had increased
53 per cent., a result which I trust will be considered satisfactory.

*Abstract Statement exhibiting the results of the Pennair system of irrigation under the
Anicut at Nellore, with reference to the Proceedings of Government of the 9th January 1864,
No. 82, Public Works Department.*

1 Years.	2		3		4		
	Area irrigated under the tanks, channels, and other subsidiary works now under the influence of the Anicut during the ten years prior to the completion of the Anicut in 1861-62, and the revenue derived therefrom.		Area irrigated under the tanks and channels shewn in column 2 including direct irrigation from new channels, &c., &c., and the revenue realized therefrom since the completion of the Anicut.		Expenditure on the Anicut itself since its first commencement in 1854-55 up to its completion as well as upon all works connected with it, new and old except the Nellore tank.		
	Area.	Revenue.	Area.	Revenue.	New works.	Repairs.	Total.
	Acres.	Rupees.	Acres.	Rupees.	Rupees.	Rupees.	Rupees.
1851-52... ..	25,280	1,17,141	.....	.....	.....	2,264	2,264
1852-53... ..	22,457	1,01,715	.....	.....	.....	3,367	3,367
1853-54... ..	11,336	50,047	.....	.....	.....	5,862	5,862
1854-55... ..	17,536	76,964	.....	.....	89,494	11,688	1,01,182
1855-56... ..	23,814	1,10,634	.....	.....	16,559	7,161	23,720
1856-57... ..	27,309	1,25,768	.....	.....	8,935	12,612	21,547
1857-58... ..	19,140	78,222	.....	.....	20,862	25,266	46,128
1858-59... ..	29,128	1,18,996	.....	.....	55,129	48,961	1,04,090
1859-60... ..	29,660	1,23,594	.....	.....	52,667	29,501	82,168
1860-61... ..	32,588	1,05,038	.....	.....	85,085	17,063	1,02,148
Average of above ten years.	23,825	1,00,812	.....	.....	32,873	16,374	49,247
1861-62... ..	.....	.....	33,140	1,12,422	67,283	6,032	73,315
1862-63... ..	.....	.....	34,119	1,31,893	56,858	3,881	60,739
1863-64... ..	.....	.....	37,932	1,54,251	39,830	7,734	47,564

*Proceedings of the Madras Government, Public Works Department,
17th January 1865.*

5. If we take the increase in the area since the completion of the anicut the results are equally satisfactory. On the average of the ten years, 23,825, or in round numbers 24,000 acres was the area to be irrigated; in 1863-64 the irrigated area was 38,000 acres, in other words, 14,000 acres of rice land had been added to the resources of the country; and taking the usual

* 2½ puttis per goru of 3½ acres.

† 11,200 puttis.

‡ Rupees 40 per putti.

calculation in this District of produce,* then on these 14,000 acres in round numbers, we have raised eight to nine thousand tons† of paddy (rice in the husk), worth at present prices‡ Rupees 4,48,000, and sufficient to feed for a year a population of 20,000.

6. And it is a remarkable fact and well worthy of notice that thus, as shewn in the preceding paragraph, the gross value of the excess produce of one year, so soon after the anicut's completion, is not only enough to feed a large

§ Value of produce..... RS.
Cost of Anicut up to 1863-64. 3,23,218

population, but also is worth a lac§ more than the anicut has cost.

7. As regards expenditure however in the Abstract Statement submitted, I have entered, as last year, only the expenditure on the anicut, channels, and subsidiary reservoirs below the channels, and have excluded the Nellore tank, not yet having received the decision of Government on this point. As I have stated, in my own opinion, the expenditure on the Nellore tank, Rupees 84,000 ought to be included if we would shew true results; and until I get the orders of Government, I refrain from entering into comparisons that I consider calculated to mislead.

8. In the 5th paragraph of the Order of the 8th January, the Government refer to the objection raised that the great mass of the tank irrigation is above the level of the anicut channels, and can never derive any benefit from it; and in my letter¶ of the 2nd April, I gave the names of seven villages to which this objection was not applicable. Shortly afterwards, I found an eighth village that had been similarly supplementing its arrangements by the aid of the anicut without reporting the same, and at the present time so far from the great mass of the tank irrigation being above the levels of the channels, the proportions are as follows:—

Above the levels..... 5,464 acres.

Below the levels..... 4,016 "

The revenue being respectively Rupees 15,487 and Rupees 12,855.

9. With 4,000 acres below the level of the channels, it is of course easy to see how the area above the levels can be benefited by the anicut. The tank supply for the lands irrigated jointly by the anicut, is to a great extent set free. It is available for other lands. It is used for the upper villages; and thus used, it shews itself by a rise in the revenue during the last three years, as shewn in the margin, of 2,000 Rupees. It is also used of course to a certain extent by the villages to which it properly belongs; and thus used to villages that form the nucleus from which the anicut irrigation radiates, the extent to which its benefits are extended, it is physically impossible to define. There are open channels running from village to village. How is it possible to say—here Nellore tank water ends, anicut begins; and whether viewed as regards its effects, or as regards the extent to which it itself is affected, it seems to me no method can possibly be devised that will rightly represent the results of the Nellore anicut without including the Nellore tank. Tank irrigation and tank expenditure must be viewed as a whole with the anicut, and then we shall have correct results so far as it is possible to obtain the same, when we don't know the original cost of the Nellore tank and other subsidiary reservoirs.

Average of the 10 years... RS.
1861-62 13,297
1862-63 13,893
1863-64 14,962
 15,487

10. Pending the receipt of the orders in question, I will however in closing this report submit for consideration some of the results of local expenditure, as shewn by the detailed accounts I keep to enable me to see how the several channels are paying. In these comparisons, I only

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17th January 1865.*

take the expenditure on the channels and the subsidiary reservoirs for comparison, and thus compared, I give below results which are instructive of what water will do in a dry and thirsty land.

Name of the channel.	AVERAGE REVENUE.		Revenue in 1863-64.	Gross increase in 1863-64.	Per centage of gross increase.	Return on expenditure.
	1851-52 to 1855-56.	1856-57 to 1861-62.				
Name.	RS.	RS.	RS.	RS.	Per cent.	Per cent.
Gengapatnam and Leburu...	24,000	32,000	44,000	20,000	86	31
Idurukoduru...	30,000	38,000	46,000	16,000	55	30
Kristnapatnam ...	25,000	25,000	42,000	17,000	68	20
Sarvapalli ...	12,000	14,000	19,000	7,000	64	20

11. In each case under the name of one channel I give the area irrigated and revenue derived from a system of branch channels and subsidiary reservoirs, and the first and second channels and their systems were the first to be benefited by the anicut. It will be observed that dividing the ten years selected by Government into two periods, on the first period in one instance the increase in the revenue in 1863-64 is 86 per cent.† and in either case, the return on the local expenditure is 30 per cent. Whilst taking the Kristnapatnam channel which has been only recently dug the effects of the anicut are seen still more clearly. From 1851-52 to 1855-56, the revenue was Rupees 25,000. From 1856-57 to 1861-62 the revenue was again an average in round numbers of Rupees 25,000; and then the channel being dug, and the anicut turned on, the stagnation disappears, the revenue goes up 17,000 Rupees, and the increase being 68 per cent. on the cost of digging the channel, repairing the subsidiary works for thirteen years, and building regulating works, the returns at once are 20 per cent.

12. That the returns on the Krishnapatnam channel have been so satisfactory is mainly due to Lieutenant C. J. Smith, R.E., whose watchful superintendence and unceasing care for the due distribution of anicut water generally, has everywhere had a most excellent effect. And started on sound arrangements, that anicut irrigation will rapidly extend, and the current year's results in 1864-65 be still more satisfactory there is I trust every reason to expect.

1. Ordered to be submitted for the information of Government. The Board observe that the increase in the past year was,

Area. Revenue.
Acres 3,813 Rupees 22,358

2. Mr. Dykes has brought forward a new argument in favor of his proposal to include the Ayacut of the Nellore tank in these returns; which is, that as part of that area is commanded by the anicut channels, the necessary supply is now to some extent obtained from those channels, a corresponding supply from the tank being thus rendered available for the extension of wet cultivation in that portion of the tank Ayacut which is above the level of the anicut works, and that thus this extension is properly due to the anicut works, but is not credited to them.

3. The Board admit that there is considerable force in this argument, as it is impossible (it seems) to distinguish tank from anicut irrigation in the area which is commanded by both sets of works, and they therefore recommend that the Collector be permitted to shew in a separate column in future Statement the increase in the tank cultivation above the level of the anicut works, and to include the whole tank and anicut cultivation below those works in one column.

(A true Copy and Extract.)

(Signed) W. HUDLESTON, Secretary.

Referred to the Superintending Engineer, 2nd Division, for report.

CHEPAUK,
27th October 1864.

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government, P.W.D.

*Proceedings of the Madras Government, Public Works Department,
17th January 1865.*

No. 328. From Lieutenant-Colonel J. C. ANDERSON, R. E., Superintending Engineer, 2nd Division, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Masulipatam, 21st December 1864, No. 118.

SIR,

1. With reference to the Proceedings of the Board of Revenue, No. 6,792, dated 14th October 1864, embodying the Collector of Nellore's letter on the Pennair Anicut Returns for 1863-64, a copy of which you have forwarded to me for report, I have the honor to state, that I despatched a remunerative statement to the Controller on the 28th ultimo, based on the information furnished by the Collector in the letter in question, and compiled in accordance with the instructions passed by Government in paragraph 6 of their Order No. 82, dated 9th January last.

2. I have taken the average revenue of the five years from 1851-52 to 1855-56 inclusive (the first anicut having been completed in the latter year), and deducted it from the revenue of 1863-64, to shew the increase in that year; while for the charges against the anicut I have added the expenditure on new works and repairs from 1851-52, the result being a return of 9½ per cent. for year 1863-64.

3. The remunerative statements for the Kistna anicut have been prepared in a similar manner, except that the expenditure in the Delta works was charged against the anicut, only from the year on which the supply of Kistna water was introduced. In neither case are the apparent returns so satisfactory, as they would have been had the repairs of existing Delta tanks and channels been regarded as a normal charge against the revenue, and had the difference only of the average revenue and average repair expenditure for five or ten years prior to the construction of the anicut been adopted as the standard amount with which the Returns (similarly, the difference between revenue and repair expenditure *minus* interest on total expenditure on the new works) of future years should be calculated. But this view is opposed to that held by the Collector, and as at the best the calculations of the remunerative effect of the works in question, must be to a certain extent empirical, and as the Government have already received ample proof that the outlay has produced satisfactory results, by whatever process they may be calculated, I am quite willing to adopt the Collector's mode of estimating them.

4. The expenditure on the Nellore tank has not been included in the remunerative statement for 1863-64, but in future statements, the expenditure on, and revenue of, this work will be included as far as possible in the manner proposed by the Revenue Board in paragraph 3 of their Proceedings.

No. 329. ORDER THEREON, 17th January 1865, No. 156.

Ordered to lie over pending the receipt from the Controller of the Statement of Remunerative works referred to.

(True Extract)



Colonel, R. E.,

Secretary to Government.

To the Superintending Engineer, 2nd Division.

„ Controller of Public Works Accounts.

„ Revenue Department.

Ms. 171.
Commenced to

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Chas. W. George
31st. May. 1863.

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No 174. 31st Dec 1892
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