Public Works (189) Department.

G.O., No. 695 9

Dated 17 August 1889

17/8/89

[Despatch Abstract.]

Old maintenance charges - Directing that no alteration in the present system of fixed debits and credits to irrigation systems on account of "old irrigation" need be made & calling on the Examiner of P.W. Accts to take the necessary steps for ascertaining the —— of certain Irrigation Systems

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BACK PAPERS.

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

FURTHER PAPERS.

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

IRRIGATION.

Government {1899} of Madras.

PUBLIC WORKS.

Recd. } 1899. *Enclosures*

Regd. } *Spare copies*

G.O., No. 715 I., 17th August 1899.

AUGUST.

Old Maintenance Charges

Directing that no alteration in the present system of fixed debits and credits to irrigation systems on account of "old irrigation" need be made, and calling on the Examiner of Public Works Accounts to take the necessary steps for ascertaining the — of certain irrigation systems.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

Read—the following papers :—

Records and

Proceedings of the Board of Revenue (Revenue Settlement, Land
Agriculture), No. 306, dated 18th August 1898.

ment, Madras,

Read—the following Memorandum from the Public Works Depart
No. 2082 C., dated 28th April 1896 :—

70 I., dated 20th

Read—the following note by the Chief Engineer for Irrigation, No.
March 1896 :—

ation works in

The question of reducing working expenses of the various irrig ed with G.O., this Presidency was raised by the Government of India in letter printe de to reduce No. 248 I., dated 22nd March 1893, and every endeavour is being ma sidering the expenditure on those works without affecting their efficiency. On con ich Capital matter it appears to the undersigned that so far as Minor Works for wh centage of and Revenue Accounts are kept are concerned, the prevailing high per s. These expenditure on revenue is largely due to the method of keeping account has been systems consist of tanks of old construction, the supply of water to which ikat and supplemented and assured by connecting them with a river by means of an an ements the necessary channels, and the proper proportion of revenue due to the impro is naturally a question of some difficulty.

2. In letter No. 68 A. I., dated 17th May 1883, printed with G.O., No. dated 16th June 1883, the Government of India proposed that the re enue and tenance charges of old works prior to their improvement by the B s' over should be once and for all finally settled, and the Government of ras, considerable hesitation, adopted the proposal with certain reservations.

3. In G.O., No. 395 I., dated 18th July 1890, the old irrigation revenue and maintenance charges for certain systems were fixed as requested by the Governme of India, though the improved supply from the anikat systems is extended, as necessity arises from time to time to other tanks which have never before received anikat supply.

4. It is in the opinion of the undersigned absolutely impossible and quite unnecessary to attempt to correctly fix once and for all, the old irrigation revenue and the old maintenance charges of these works. It will not complicate the accounts or in any way cause inconvenience if they are fixed annually. The old irrigation revenue, if fixed once and for all, will show at times absurd results as in times of scarcity when the whole of the irrigated area might be entirely dependent on the anikat and its channels, the fixed amount based on the average of a series of years might be more than the total revenue actually derived, in which case the result of improving the works and giving a better supply would appear in the accounts as a debit instead o

a credit to the system. The cost of maintenance of the old works, even if ascertained from the accounts before the improvements by the British Government, does not represent the correct share of the cost of maintenance as it is a matter of notoriety that these works were not properly maintained in those days and the actual cost is not known.

5. The Administration report shows that in several systems no deduction at all is made for the maintenance of tanks and in others the deductions are very inadequate. The Pálár anikat system, for instance, consists of over 250 tanks and in 1891–92, the Board of Revenue estimated that no less than 33,316 acres under first-crop and 11,827 acres under second crop were due to old irrigation, out of a total irrigated area, under first and second crops, of 55,626 acres. In the same year out of a total expenditure of Rs. 94,603, the allowance for old maintenance charges was Rs. 3,900. Thus 45,243 acres of old irrigation are said to have cost only Rs. 3,900 to maintain or at the rate of Rs. 0·086 per acre, while 10,483 acres, said to be irrigated by river water, were debited with Rs. 90,703 or at the rate of Rs. 8·65 per acre, although in that particular year the amount actually spent on tanks was Rs. 41,643 which sum instead of Rs. 3,900 should have been debited to works for which neither Capital nor Revenue Accounts are kept and not to the system. The year 1891–92 was, of course, exceptional as there was a general failure of rain, but this only emphasises the defects of the present system of accounts as probably the greater part of the irrigation was by river water supplied from the anikat.

6. From whatever point the accounts are viewed similar, though modified, results will be obtained in ordinary years, but a year of scarcity has been selected as an example to show how faulty the present system of accounts is. In 1891–92, the revenue accounts were not included in the Administration report, as they were not received in time from the Board of Revenue. Had these accounts been received, the Administration report would have recorded the fact that the supply of river water which saved the crops resulted in an inappreciable increase of revenue of Rs. 6,139 when it is probable that the bulk of the revenue was really due to the supply of river water and if the remissions granted had been a little heavier th supply of river water might easily, according to the accounts, have resulted in a loss of revenue.

7. From the above it does not seem necessary to produce further proof that the present system of fixing old irrigation revenue and maintenance charges is indefensible and it is suggested that the method indicated below is preferable.

8. The old irrigation revenue of each of the minor irrigation works for which Capital and Revenue Accounts are kept should, it is thought, be calculated on the areas reported by the Board of Revenue to be due to old irrigation under first and second crops in proportion to the total areas irrigated for each crop to the total revenue derived therefrom inclusive of remissions. By this method the remissions during bad years will be proportionately distributed.

9. The effect of the proposed method on the revenue derived from the Pálár anicut system during 1891–92 will be as shown below :—

—	First crop.	Second crop.	Total.
	ACRES.	ACRES.	ACRES.
Old irrigation	33,316	11,827	45,143
New „ „	10,483	..	10,483
Total ..	43,799	11,827	55,626
	RS.	RS.	RS.
Total irrigation revenue	1,13,052	18,087	131,139
Deduct proportionate share due to old irrigation	85,993	18,087	104,080
Increase due to new irrigation	27,059	..	27,059
Do. as entered in the accounts according to the present method	..	..	6,139
Difference ..	..	..	20,920

10. As regards charges it is suggested that the capital cost of the works being designed to give an improved supply to the existing irrigation and to bring fresh land under irrigation and the original cost of the tanks before the improvements were carried out not being included in the capital account, the working expenses may be allocated in direct proportion to the areas of old and new irrigation, as it is impossible to distinguish the amount spent on each.

11. Unless some such modification of the existing system of estimating revenue due to old irrigation and to old maintenance charges is adopted and steps are taken to distribute working expenses according to the areas actually watered, a time must come when the profit derived from these systems will be altogether concealed by imaginary credits and debits. With a fixed contribution towards working expenses, a constant increasing number of tanks and varying seasons, fixed credits and debits on account of working expenses and old irrigation revenue are impossible, if any value is to be derived from the accounts.

12. The statements attached compare the financial results for all minor irrigation works for which Capital and Revenue Accounts are kept for 1891–92 and for 1894–95 according to the present and proposed methods. From these statements it will be observed that during the year 1894–95, when the season was favourable, the difference in irrigation revenue, calculated according to the existing and proposed methods, will not be very considerable but, in a year of scarcity, such as 1891–92, when the whole of the irrigation was probably largely due to the supply of river water, the result of the proposed change will be to credit the systems with a fair share of revenue. The amount of revenue which in 1891–92, according to the proposed method was improperly credited to works for which Capital and Revenue Accounts are not kept was according to the statement, no less than Rs. 2,62,917 representing about 120 per cent. on the revenue actually credited in the accounts.

Memorandum No. 2082-C., Public Works, dated 28th April 1896.

Referred to the Revenue Department for remarks.

(Signed) F. J. WILSON,
Under Secretary to Government.

Mis. No. 1794, Revenue.

Referred to the Board of Revenue for remarks.

OOTACAMUND,
9th May 1896.

(Signed) F. J. WILSON,
for Ag. Secy to Government.

Read—also letter from W. HUGHES, Esq., Chief Engineer for Irrigation, No. 200 M., dated 9th June 1897, forwarding, with reference to Board's Memorandum Mis. No. 3981, dated 2nd June 1897, a copy of note on allocation of Irrigation Revenue and Working expenses of Minor Irrigation works for which capital and Revenue Accounts are kept.

Reference thereon, dated 23rd June 1897.

The Chief Engineer for Irrigation is requested to favour the Board with copies of the statements referred to in paragraph 12 of the copy of his note received with his endorsement read above.

(Signed) R. V. SRINIVASIAR,
Secretary.

Read—also the following letter from W. HUGHES, Esq., B.A., Chief Engineer for Irrigation, to the Secretary to the Commissioner of Revenue Settlement, Land Records and Agriculture, dated Madras, 26th August 1897, No. 281-M:—

With reference to Board's Reference on No. 4355-G.R., dated 23rd June 1897, I have the honour to forward herewith two statements.

The statement for 1894–95 is a copy of the statement for that year appended to the note by the Chief Engineer for Irrigation, No. 70 I., dated 20th March 1896. A copy of the original statement for 1891–92 was not kept. A fresh statement has therefore been prepared, but this shows that the amount of revenue which in that year according to the proposed method was improperly credited to works for which Capital and Revenue Accounts are not kept was Rs. 2,61,687 or Rs. 1,230 less than the sum mentioned in paragraph 12 of the above note. The difference cannot now be explained, it is probably due to some error in the calculations in the original statement.

ENCLOSURE No. 1.

STATEMENT showing the area irrigated, the revenue derived and the working expenses of Minor Irrigation Works for which Capital and Revenue Accounts are kept, the revenue and expenditure distributed between old and new irrigation in proportion to the area irrigated during 1891–92 and comparing the results with those arrived at according to the present method.

Districts.	Minor irrigation works for which Capital and Revenue accounts are kept.	Particulars.	Area irrigated. First crop.	Area irrigated. Second crop.	Area irrigated. Total.	Irrigation revenue. First crop.	Irrigation revenue. Second crop.	Irrigation revenue. Total.	Enhanced share of land revenue.	Direct receipts in the Public Works Department.	Total revenue (columns 9 + 10 + 11).	Working expenses. Extensions and improvements.	Working expenses. Maintenance and repairs.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
			ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Kurnool ..	1. Cumbum tank ..	(1) Total	4,596	1,347	5,943	21,519	1,480	22,999	535	..	23,534	195	7,992
		(2) Deduct due to old irrigation ..	4,210	1,347	5,557	19,712	1,480	21,192	..	..	21,192	182	7,473
		(3) Net due to improvements ..	386	..	386	1,807	..	1,807	535	..	2,342	13	519
Coimbatore.	2. Thadapalli channel.	(1) Total	13,975	482	14,457	99,376	2,038	1,01,414	2,594	13	1,04,021	6,176	4,153
		(2) Deduct due to old irrigation ..	10,005	170	10,175	71,145	718	71,863	..	..	71,863	4,347	2,923
		(3) Net due to improvements ..	3,970	312	4,282	28,231	1,320	29,551	2,594	13	32,158	1,829	1,230
	3. Arakankottai do.	(1) Total	4,096	58	4,154	27,023	235	27,258	282	1	27,541	17	1,146
		(2) Deduct due to old irrigation ..	2,667	6	2,673	17,595	24	17,619	..	..	17,619	11	737
		(3) Net due to improvements ..	1,429	52	1,481	9,428	211	9,639	282	1	9,922	6	409
	4. Kalingarayen do.	(1) Total	11,250	10,505	21,755	64,518	36,338	1,00,856	387	222	1,01,465	512	10,808
		(2) Deduct due to old irrigation ..	8,338	8,403	16,741	47,818	29,067	76,885	..	..	76,885	394	8,317
		(3) Net due to improvements ..	2,912	2,102	5,014	16,700	7,271	23,971	387	222	24,580	118	2,491
North Arcot.	5. Pálár anikat ..	(1) Total	43,799	11,827	55,626	1,13,052	18,087	1,31,139	15,380	1,313	1,47,832	16,331	58,522
		(2) Deduct due to old irrigation ..	33,316	11,827	45,143	85,994	18,087	1,04,081	..	..	1,04,081	13,253	47,493
		(3) Net due to improvements ..	10,483	..	10,483	27,058	..	27,058	15,380	1,313	43,751	3,078	11,029
	6. Poiney do. ..	(1) Total	17,392	1,647	19,039	53,895	4,016	57,911	4,885	730	63,526	4,141	8,291
		(2) Deduct due to old irrigation ..	12,395	1,647	14,042	38,410	4,016	42,426	..	..	42,426	3,054	6,115
		(3) Net due to improvements ..	4,997		4,997	15,485	..	15,485	4,885	730	21,100	1,087	2,176
	7. Cheyáru do. ..	(1) Total	14,194	9,364	23,558	38,463	11,692	50,155	3,103	585	53,843	56,882	22,884
		(2) Deduct due to old irrigation ..	12,598	1,723	14,321	34,138	2,151	36,289	..	..	36,289	34,578	13,911
		(3) Net due to improvements ..	1,596	7,641	9,237	4,325	9,541	13,866	3,103	585	17,554	22,304	8,973
Chingleput..	8. Chambrambakam ..	(1) Total	6,050	1,528	7,578	13,643	2,631	16,274	386	5	16,665	94	12,502
		(2) Deduct due to old irrigation ..	5,505	1,235	6,740	12,414	2,126	14,540	..	..	14,540	83	11,119
		(3) Net due to improvements ..	545	293	838	1,229	505	1,734	386	5	2,125	11	1,383
	9. Madras water-supply and irrigation extension.	(1) Total	6,829	1,342	8,171	14,275	1,837	16,112	450	14,435	30,997	605	13,102
		(2) Deduct due to old irrigation ..	5,279	786	6,065	11,034	1,076	12,110	..	..	12,110	449	9,725
		(3) Net due to improvements ..	1,550	556	2,106	3,241	761	4,002	450	14,435	18,887	156	3,377
	10. Vallur anikat.	(1) Total	3,997	90	4,087	4,738	196	4,934	477	..	5,411	..	718
		(2) Deduct due to old irrigation ..	3,310	..	3,310	3,924	..	3,924	..	..	3,924	..	581
		(3) Net due to improvements ..	687	90	777	814	196	1,010	477	..	1,487	..	137
South Arcot.	11. Tirukkóyilúr do.	(1) Total	22,414	1,937	24,351	74,375	5,550	79,925	2,757	375	83,057	4,903	15,220
		(2) Deduct due to old irrigation ..	16,954	22	16,976	56,252	63	56,315	..	..	56,315	3,418	10,610
		(3) Net due to improvements ..	5,460	1,915	7,375	18,123	5,487	23,610	2,757	375	26,742	1,485	4,610

Statement showing the area irrigated, the revenue derived and the working expenses of Minor Irrigation Works, &c.—*cont.*

Districts.	Minor irrigation works for which Capital and Revenue Accounts are kept.	Particulars.	Working expenses—*cont.* Establishment.	Tools and plant.	Total.	Indirect charges.	Collection charges.	Total.	Net revenue (column 12—20).	Results according to the present method. Total revenue.	Working expenses.	Net revenue.
			15	16	17	18	19	20	21	22	23	24
			RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Kurnool ..	1. Cumbum tank ..	(1) Total	1,883	642	10,712	264	1,177	12,153	11,381	23,534	10,790	12,744
		(2) Deduct due to old irrigation ..	1,761	600	10,016	246	1,060	11,322	9,870	27,251	..	27,251
		(3) Net due to improvements ..	122	42	696	18	117	831	1,511	— 3,717	10,790	— 14,507
Coimbatore.	2. Thadapalli channel	(1) Total	1,896	..	12,225	265	5,201	17,691	86,330	1,04,021	13,928	90,093
		(2) Deduct due to old irrigation ..	1,334	..	8,604	186	3,593	12,383	59,480	75,249	..	75,249
		(3) Net due to improvements ..	562	..	3,621	79	1,608	5,308	26,850	28,772	13,928	14,844
	3. Arakankottai do.	(1) Total	268	..	1,431	37	1,377	2,845	24,696	27,541	1,897	25,644
		(2) Deduct due to old irrigation ..	172	..	920	24	881	1,825	15,794	18,955	..	18,955
		(3) Net due to improvements ..	96	..	511	13	496	1,020	8,902	8,586	1,897	6,689
	4. Kalingaroyen do.	(1) Total	2,626	..	13,946	368	5,062	19,376	82,089	1,01,465	15,211	86,254
		(2) Deduct due to old irrigation ..	2,021	..	10,732	283	3,844	14,859	62,026	83,301	..	83,301
		(3) Net due to improvements ..	605	..	3,214	85	1,218	4,517	20,063	18,164	15,211	2,953
North Arcot.	5. Pálár anikut ..	(1) Total	17,325	..	92,178	2,425	7,326	1,01,929	45,903	1,47,832	95,678	52,154
		(2) Deduct due to old irrigation ..	14,060	..	74,806	1,968	5,204	81,978	22,103	1,25,000	3,900	1,21,100
		(3) Net due to improvements ..	3,265	..	17,372	457	2,122	19,951	23,800	22,832	91,778	— 68,946
	6. Poiney do. ..	(1) Total	2,913	..	15,345	408	3,140	18,893	44,633	63,526	16,725	46,801
		(2) Deduct due to old irrigation ..	2,148	..	11,317	301	2,121	13,739	28,687	43,362	..	43,362
		(3) Net due to improvements ..	765	..	4,028	107	1,019	5,154	15,946	20,164	16,725	3,439
	7. Cheyáru do. ..	(1) Total	18,405	..	98,171	2,577	2,663	1,03,411	— 49,568	53,843	1,01,455	— 47,612
		(2) Deduct due to old irrigation ..	11,188	..	59,677	1,567	1,814	63,058	— 26,769	39,114	..	39,114
		(3) Net due to improvements ..	7,217	..	38,494	1,010	849	40,353	— 22,799	14,729	1,01,455	— 86,726
Chingleput..	8. Chembrambakam ..	(1) Total	2,898	..	15,494	406	833	16,733	— 68	16,665	15,933	732
		(2) Deduct due to old irrigation ..	2,578	..	13,780	361	727	14,868	— 328	16,000	6,900	9,100
		(3) Net due to improvements ..	320	..	1,714	45	106	1,865	260	665	9,033	— 8,368
	9. Madras water-supply and irrigation extension.	(1) Total	4,592	..	18,299	643	828	19,770	11,227	30,997	19,220	11,777
		(2) Deduct due to old irrigation ..	3,408	..	13,582	477	605	14,664	— 2,554	11,000	4,800	6,200
		(3) Net due to improvements ..	1,184	..	4,717	166	223	5,106	13,781	19,997	14,420	5,577
	10. Vallur anikut ..	(1) Total	165	..	883	23	271	1,177	4,234	5,411	1,015	4,396
		(2) Deduct due to old irrigation ..	134	..	715	19	196	930	2,994	3,240	..	3,240
		(3) Net due to improvements ..	31	..	168	4	75	247	1,240	2,171	1,015	1,156
South Arcot.	11. Tirukkóyilúr do.	(1) Total	4,666	..	24,789	653	4,134	29,576	53,481	83,057	26,816	56,241
		(2) Deduct due to old irrigation ..	3,252	..	17,280	455	2,815	20,551	35,764	55,191	..	55,191
		(3) Net due to improvements ..	1,414	..	7,509	198	1,318	9,025	17,717	27,866	26,816	1,050

Statement showing the area irrigated, the revenue derived and the working expenses of Minor Irrigation Works, &c.—*cont.*

Districts.	Minor irrigation works for which Capital and Revenue Accounts are kept.	Particulars.	Area irrigated. First crop.	Area irrigated. Second crop.	Area irrigated. Total.	Irrigation revenue. First crop.	Irrigation revenue. Second crop.	Irrigation revenue. Total.	Enhanced share of land revenue.	Direct receipts in the Public Works Department.	Total revenue (colums 9 + 10 + 11).	Working expenses. Extensions and improvements.	Working expenses. Maintenance and repairs.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
			ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
South Arcot —*cont.*	12. Mehamattur anikat	(1) Total	2,614	23	2,637	8,813	78	8,891	34	5	8,930	..	12,433
		(2) Deduct due to old irrigation ..	542	..	542	1,827	..	1,827	..	..	1,827	..	2,555
		(3) Net due to improvements ..	2,072	23	2,095	6,986	78	7,064	34	5	7,103	..	9,878
	13. Vriddháchalam anikat.	(1) Total	5,880	226	6,106	20,741	657	21,398	807	3	22,208	2,840	5,331
		(2) Deduct due to old irrigation ..	1,888	..	1,888	6,659	..	6,659	..	..	6,659	878	1,648
		(3) Net due to improvements ..	3,992	226	4,218	14,082	657	14,739	807	3	15,549	1,962	3,683
	14. Shatiatope anikat .	(1) Total	27,825	2,013	29,838	89,108	6,010	95,118	13,936	195	1,09,249	1,647	14,897
		(2) Deduct due to old irrigation ..	7,304	6	7,310	23,391	18	23,409	..	..	23,409	403	3,649
		(3) Net due to improvements ..	20,521	2,007	22,528	65,717	5,992	71,709	13,936	195	85,840	1,244	11,248
	15. Pelandorai do.	(1) Total	8,201	88	8,289	26,191	229	26,420	126	109	26,655	3,571	9,746
		(2) Deduct due to old irrigation ..	2,070	88	2,158	6,611	229	6,840	..	..	6,840	929	2,532
		(3) Net due to improvements ..	6,131	..	6,131	19,580	..	19,580	126	109	19,815	2,642	7,214
	16. Lower Coleroon anikat.	(1) Total	105,082	4,722	109,804	3,36,393	12,782	3,49,175	53,717	761	4,03,653	2,736	17,178
		(2) Deduct due to old irrigation ..	43,423	..	43,423	1,39,007	..	1,39,007	..	..	1,39,007	1,082	6,793
		(3) Net due to improvements ..	61,659	4,722	66,381	1,97,386	12,782	2,10,168	53,717	761	2,64,646	1,654	10,385
Tinnevelly ..	17. Maradur anikat ..	(1) Total	17,420	16,213	33,633	1,17,155	68,240	1,85,395	226	1,038	1,86,659	599	7,661
		(2) Deduct due to old irrigation ..	16,955	429	17,384	1,14,027	1,805	1,15,832	..	..	1,15,832	309	3,960
		(3) Net due to improvements ..	465	15,784	16,249	3,128	66,435	69,563	226	1,038	70,827	290	3,701
	Total ..	(1) Total	315,614	63,412	379,026	11,23,278	1,72,096	12,95,374	1,00,082	19,790	14,15,246	1,01,249	2,22,584
		(2) Deduct due to old irrigation ..	186,759	27,689	214,448	6,89,958	60,860	7,50,818	..	..	7,50,818	63,370	1,40,141
		(3) Net due to improvements ..	128,855	35,723	164,578	4,33,320	1,11,236	5,44,556	1,00,082	19,790	6,64,428	37,879	82,443

Statement showing the area irrigated, the revenue derived and the working expenses of Minor Irrigation Works, &c.—*cont.*

Districts.	Minor irrigation works for which Capital and Revenue Accounts are kept.	Particulars.	Working expenses—*cont.* Establishment.	Tools and plant.	Total.	Indirect charges.	Collection charges.	Total.	Net revenue column (12—20).	Results according to the present method. Total revenue.	Working expenses.	Net revenue.
			15	16	17	18	19	20	21	22	23	24
			RS.	RS.	RS.	RS.	RS.	RS.	RS	RS.	RS.	RS.
South Arcot —*cont.*	12. Mehamattur anikat	(1) Total	2,860	..	15,293	400	446	16,139	— 7,209	8,930	16,046	— 7,116
		(2) Deduct due to old irrigation ..	588	..	3,143	82	91	3,316	— 1,489	1,863	..	1,863
		(3) Net due to improvements ..	2,272	..	12,150	318	355	12,823	— 5,720	7,067	16,046	— 8,979
	13. Vriddhachalam anikat.	(1) Total	1,880	..	10,051	263	1,110	11,424	10,784	22,208	11,143	11,065
		(2) Deduct due to old irrigation ..	581	..	3,107	81	333	3,521	3,138	5,627		5,627
		(3) Net due to improvements ..	1,299	..	6,944	182	777	7,903	7,646	16,581	11,143	5,438
	14. Shatiatope anikat .	(1) Total	3,825	..	20,369	535	5,453	26,357	82,892	1,09,249	25,390	83,859
		(2) Deduct due to old irrigation ..	937	..	4,989	131	1,170	6,290	17,119	19,324	..	19,324
		(3) Net due to improvements ..	2,888	..	15,380	404	4,283	20,067	65,773	89,925	25,390	64,535
	15. Pelandorai do.	(1) Total	3,010	..	16,327	421	1,327	18,075	8,580	26,655	17,925	8,730
		(2) Deduct due to old irrigation ..	784	..	4,245	109	342	4,696	2,144	3,000	150	2,850
		(3) Net due to improvements ..	2,226	..	12,082	312	985	13,379	6,436	23,655	17,775	5,880
	16. Lower Coleroon anikat.	(1) Total	4,619	..	24,533	647	20,145	45,325	3,58,328	4,03,653	38,883	3,64,770
		(2) Deduct due to old irrigation ..	1,827	..	9,702	256	6,950	16,908	1,22,099	1,28,826	..	1,28,826
		(3) Net due to improvements ..	2,792	..	14,831	391	13,195	28,417	2,36,229	2,74,827	38,883	2,35,944
Tinnevelly ..	17. Marudur anikat ..	(1) Total	2,007	..	10,267	281	9,281	19,829	1,66,830	1,86,659	14,112	1,72,547
		(2) Deduct due to old irrigation ..	1,037	..	5,306	145	5,792	11,243	1,04,589	1,14,337	..	1,14,337
		(3) Net due to improvements ..	970	..	4,961	136	3,489	8,586	62,241	72,322	14,112	58,210
	Total ..	(1) Total	75,838	642	4,00,313	10,616	69,774	4,80,703	9,34,543	14,15,246	4,42,167	9,73,079
		(2) Deduct due to old irrigation ..	47,810	600	2,51,921	6,691	37,539	2,96,151	4,54,667	7,70,640	15,750	7,54,890
		(3) Net due to improvements ..	28,028	42	1,48,392	3,925	32,235	1,84,552	4,79,876	6,44,606	4,26,417	2,18,189

ENCLOSURE No. 2.

STATEMENT showing the area irrigated, the revenue derived and working expenses of Minor Irrigation Works for which Capital and Revenue Accounts are kept, the revenue and expenditure distributed between old and new irrigation in proportion to the areas irrigated during 1894-95 and comparing the results with those arrived at according to the present method.

Districts.	Minor irrigation works for which Capital and Revenue Accounts are kept.	Particulars.	Area irrigated. First crop.	Area irrigated. Second crop.	Area irrigated. Total.	Irrigation revenue. First crop.	Irrigation revenue. Second crop.	Irrigation revenue. Total.	Enhanced share of land revenue.	Direct receipts in the Public Works Department.	Total revenue, columns 9, 10 and 11.	Working expenses. Extensions and improvements.	Working expenses. Maintenance and repairs.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
			ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Kurnool ..	1. Cumbum tank ..	(1) Total	5,649	4[illegible]	10,414	28,602	13,515	42,117	560	..	42,677	170	2,373
		(2) Deduct due to old irrigation ..	4,803	2,646	7,449	24,319	7,505	31,824	..	..	31,824	122	1,697
		(3) Net due to improvements ..	846	2,119	2,965	4,283	6,010	10,293	560	..	10,853	48	676
Coimbatore.	2. Thadapalli channel.	(1) Total	14,042	603	14,645	1,01,465	2,352	1,03,817	2,652	80	1,06,549	— 64	1,499
		(2) Deduct due to old irrigation ..	9,979	157	10,136	72,107	609	72,716	..	..	72,716	— 44	1,037
		(3) Net due to improvements ..	4,063	446	4,509	29,358	1,743	31,101	2,652	80	33,833	— 20	462
	3. Arakankottai do.	(1) Total	4,075	91	4,166	27,733	383	28,116	549	..	28,465	1	989
		(2) Deduct due to old irrigation ..	2,602	5	2,607	17,708	21	17,729	..	..	17,729	..	619
		(3) Net due to improvements ..	1,473	86	1,559	10,025	362	10,387	349	..	10,736	1	370
	4. Kalingaroyan do. ..	(1) Total	11,246	10,276	21,522	69,466	36,637	1,06,103	411	..	1,06,514	304	1,007
		(2) Deduct due to old irrigation ..	8,209	8,140	16,349	50,691	29,021	79,712	..	..	79,712	231	765
		(3) Net due to improvements ..	3,037	2,136	5,173	18,775	7,616	26,391	411	..	26,802	73	242
North Arcot.	5. Pálár anikat system.	(1) Total	74,947	23,428	98,375	2,04,233	48,410	2,52,643	16,091	1,077	2,69,811	7,327	41,408
		(2) Deduct due to old irrigation ..	53,184	15,227	68,411	1,44,928	31,464	1,76,387	..	..	1,76,392	5,095	28,805
		(3) Net due to improvements ..	21,763	8,201	29,964	59,305	16,946	76,256	16,091	1,077	93,419	2,232	12,603
	6. Poiney do.	(1) Total	23,061	4,820	27,881	72,347	12,624	84,971	5,162	689	90,822	2,589	19,540
		(2) Deduct due to old irrigation ..	16,033	2,325	18,358	50,212	6,094	56,306	..	..	56,306	1,707	12,866
		(3) Net due to improvements ..	7,028	2,495	9,523	22,135	6,530	28,665	5,162	689	34,516	882	6,674
	7. Cheyáru do.	(1) Total	20,372	12,853	33,225	61,350	17,039	78,395	3,320	129	81,844	2,227	13,227
		(2) Deduct due to old irrigation ..	15,538	1,740	17,278	46,601	2,307	48,908	..	..	48,908	1,158	6,929
		(3) Net due to improvements ..	4,834	11,113	15,947	14,755	14,732	29,487	3,320	129	32,936	1,069	6,298
Chingleput.	8. Chembrambakam tank.	(1) Total	11,565	3,885	15,450	28,990	9,158	38,148	882	50	39,080	1,260	3,119
		(2) Deduct due to old irrigation ..	10,327	1,185	11,512	25,887	2,793	28,680	..	..	28,680	939	2,324
		(3) Net due to improvements ..	1,238	2,700	3,938	3,103	6,365	9,468	882	50	10,400	321	795
	9. Madras water-supply irrigation extension.	(1) Total	7,418	2,630	10,048	16,990	4,538	21,528	460	13,462	35,450	309	6,214
		(2) Deduct due to old irrigation ..	5,570	770	6,340	12,757	1,329	14,086	..	..	14,086	195	3,921
		(3) Net due to improvements ..	1,848	1,860	3,708	4,233	3,209	7,442	460	13,462	21,364	114	2,293
	10. Vallur anikat system.	(1) Total	4,961	188	5,149	7,863	441	8,304	955	4	9,263	527	286
		(2) Deduct due to old irrigation ..	3,920	..	3,920	6,216	..	6,216	..	..	6,216	401	222
		(3) Net due to improvements ..	1,041	188	1,229	1,647	441	2,088	955	4	3,047	126	64
South Arcot.	11. Tirukkóyilúr anikat.	(1) Total	22,796	3,536	26,332	83,614	10,285	93,899	3,171	494	97,564	2,516	8,696
		(2) Deduct due to old irrigation ..	16,023	15	16,038	58,777	43	58,820	..	..	58,820	1,532	5,296
		(3) Net due to improvements ..	6,773	3,521	10,294	24,837	10,242	35,079	3,171	494	38,744	984	3,400

Statement showing the area irrigated, the revenue derived and the working expenses of Minor Irrigation Works, &c.—*cont.*

Districts.	Minor irrigation works for which Capital and Revenue Accounts are kept.	Particulars.	Working expenses—*cont.* Establishment.	Tools and plant.	Total.	Indirect charges.	Collection charges.	Total.	Net revenue, column (12—20).	Results according to present method. Total revenue.	Working expenses.	Net revenue.
			15	16	17	18	19	20	21	22	23	24
			RS.		RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Kurnool ..	1. Cumbum tank ..	(1) Total	585	..	3 128	82	2,134	5,344	37,333	42,677	3,845	38,832
		(2) Deduct due to old irrigation ..	418	..	2,237	58	1,591	3,886	27,938	29,975	..	29,975
		(3) Net due to improvements ..	167	..	891	24	543	1,458	9,395	12,702	3,845	8,857
Coimbatore.	2. Thadapalli channel.	(1) Total	394	..	1,829	55	5,323	7,207	99,342	1,06,549	3,389	1,03,160
		(2) Deduct due to old irrigation ..	272	..	1,265	38	3,636	4,939	67,777	76,369	..	76,369
		(3) Net due to improvements ..	122	..	564	17	1,687	2,268	31,565	30,180	3,389	26,791
	3. Arakankottai do.	(1) Total	216	..	1,206	30	1,423	2,659	25,806	28,465	1,684	26,781
		(2) Deduct due to oly irrigation ..	135	..	754	19	886	1,659	16,070	19,498	..	19,498
		(3) Net due to improvements ..	81	..	452	11	537	1,000	9,736	8,967	1,684	7,283
	4. Kalingaroyan do. ..	(1) Total	177	..	1,488	25	5,326	6,839	99,675	1,06,514	2,599	1,03,915
		(2) Deduct due to old irrigation ..	134	..	1,130	18	3,986	5,134	74,578	84,786	..	84,786
		(3) Net due to improvements ..	43	..	358	7	1,340	1,705	25,097	21,728	2,599	19,129
North Arcot.	5. Pálár anikat system.	(1) Total	11,045	..	59,780	3,017	13,437	76,234	1,93,577	2,69,811	69,984	1,99,827
		(2) Deduct due to old irrigation ..	7,688	..	41,588	2,098	8,820	52,506	1,23,886	1,25,000	3,900	1,21,100
		(3) Net due to improvements ..	3,357	..	18,192	919	4,617	23,728	69,691	1,44,811	66,084	78,727
	6. Poiney do.	(1) Total	5,151	..	27,280	738	4,507	32,525	58,297	90,822	30,198	60,624
		(2) Deduct due to old irrigation ..	3,392	..	17,965	486	2,815	21,266	35,040	46,539	..	46,539
		(3) Net due to improvements ..	1,759	..	9,315	252	1,692	11,259	23,257	44,283	30,198	14,085
	7. Cheyáru do.	(1) Total	3,567	..	19,021	499	4,086	23,606	58,238	81,844	21,388	60,456
		(2) Deduct due to old irrigation ..	1,855	..	9,942	256	2,445	12,643	36,265	44,349	..	44,349
		(3) Net due to improvements ..	1,712	..	9,079	243	1,641	10,963	21,973	37,495	21,388	16,107
Chingleput.	8. Chembrambakam tank.	(1) Total	972	..	5,351	136	1,951	7,438	31,642	39,080	6,638	32,442
		(2) Deduct due to old irrigation ..	724	..	3,987	101	1,434	5,522	23,158	16,000	6,900	9,100
		(3) Net due to improvements ..	248	..	1,364	35	517	1,916	8,484	23,080	— 262	23,342
	9. Madras water-supply irrigation extension.	(1) Total	2,843	..	9,366	398	1,099	10,863	24,587	35,450	10,313	25,137
		(2) Deduct due to old irrigation ..	1,794	..	5,910	251	704	6,865	7,221	11,000	4,800	6,200
		(3) Net due to improvements ..	1,049	..	3,456	147	395	3,998	17,366	24,450	5,513	18,937
	10. Vallur anikat system.	(1) Total	187	..	1,000	26	463	1,489	7,774	9,263	1,225	8,038
		(2) Deduct due to old irrigation ..	142	..	765	19	311	1,095	5,121	5,282	..	5,282
		(3) Net due to improvements ..	45	..	235	7	152	394	2,653	3,981	1,225	2,756
South Arcot.	11. Tirukkóyilúr anikat.	(1) Total	2,628	..	13,840	368	4,853	19,061	78,503	97,564	16,134	81,430
		(2) Deduct due to old irrigation ..	1,601	..	8,429	224	2,941	11,594	47,226	58,551	..	58,551
		(3) Net due to improvements ..	1,027	..	5,411	144	1,912	7,467	31,277	39,013	16,134	22,879

Statement showing the area irrigated, the revenue derived and the working expenses of Minor Irrigation Works, &c.—*cont.*

Districts.	Minor irrigation works for which Capital and Revenue Accounts are kept.	Particulars.	Area irrigated. First crop.	Area irrigated. Second crop.	Area irrigated. Total.	Irrigation revenue. First crop.	Irrigation revenue. Second crop.	Irrigation revenue. Total.	Enhanced share of land revenue.	Direct receipts in the Public Works Department.	Total revenue, columns 9, 10 and 11.	Working expenses. Extensions and improvements.	Working expenses. Maintenance and repairs.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
			ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
South Arcot—*cont.*	12. Mehamuttur anikat.	(1) Total	2,852	55	2,907	12,148	194	12,342	36	20	12,398	186	2,354
		(2) Deduct due to old irrigation	447	..	447	1,904	..	1,904	..	..	1,904	29	361
		(3) Net due to improvements	2,405	55	2,460	10,244	194	10,438	36	20	10,494	157	1,993
	13. Vriddhachalam anikat.	(1) Total	6,363	247	6,610	24,311	777	25,088	276	55	25,419	440	2,978
		(2) Deduct due to old irrigation	2,395	..	2,395	8,993	..	8,993	..	..	8,993	159	1,079
		(3) Net due to improvements	3,968	247	4,215	15,318	777	16,095	276	55	16,426	281	1,899
	14. Shatiatope anikat.	(1) Total	28,608	3,518	32,126	95,976	10,323	1,06,299	15,141	315	1,21,755	894	6,209
		(2) Deduct due to old irrigation	7,260	..	7,260	17,341	..	17,341	..	..	17,341	202	1,403
		(3) Net due to improvements	21,348	3,518	24,866	78,635	10,323	88,958	15,141	315	1,04,414	692	4,806
	15. Pelandorai anikat.	(1) Total	8,760	188	8,948	31,308	532	31,840	183	273	32,296	422	6,721
		(2) Deduct due to old irrigation	2,062	83	2,145	7,369	235	7,604	..	..	7,604	101	1,611
		(3) Net due to improvements	6,698	105	6,803	23,939	297	24,236	183	273	24,692	321	5,110
	16. Lower Coleroon anikat.	(1) Total	107,017	4,649	111,666	3,70,930	14,859	3,85,789	53,933	1,619	4,41,341	3,934	18,739
		(2) Deduct due to old irrigation	44,337	..	44,337	1,53,673	..	1,53,673	..	..	1,53,673	1,562	7,440
		(3) Net due to improvements	62,680	4,649	67,329	2,17,257	14,859	2,32,116	53,933	1,619	2,87,668	2,372	11,299
Tinnevelly.	17. Marudur anikat ..	(1) Total	17,415	16,185	33,600	1,17,504	68,149	1,85,653	243	192	1,86,088	496	10,005
		(2) Deduct due to old irrigation	16,875	447	17,322	1,13,458	1,882	1,15,340	..	..	1,15,340	256	5,158
		(3) Net due to improvements	540	15,738	16,278	4,046	66,267	70,313	243	192	70,748	240	4,847
	Total	(1) Total	371,147	91,917	463,064	13,54,836	2,50,216	16,05,052	1,03,825	18,459	17,27,366	23,538	1,45,364
		(2) Deduct due to old irrigation	219,564	32,740	252,304	8,12,941	83,303	8,96,244	..	..	8,96,244	13,645	81,533
		(3) Net due to improvements	151,583	59,177	210,760	5,41,895	1,66,913	7,08,808	1,03,825	18,459	8,31,092	9,893	63,831

Statement showing the area irrigated, the revenue derived and the working expenses of Minor Irrigation Works, &c.—*cont.*

Districts.	Minor irrigation works for which Capital and Revenue Accounts are kept.	Particulars.	Working expenses—*cont.* Establishment.	Tools and plant.	Total.	Indirect charges.	Collection charges.	Total.	Net revenue column (12—20).	Results according to present method. Total revenue.	Working expenses.	Net revenue.
			15	16	17	18	19	20	21	22	23	24
			RS.		RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
South Arcot—*cont.*	12. Mehamuttur anikat.	(1) Total	540	..	3,080	76	619	3,775	8,623	12,398	3,671	8,727
		(2) Deduct due to old irrigation	83	..	473	11	95	579	1,325	2,084	..	2,084
		(3) Net due to improvements	457	..	2,607	65	524	3,196	7,298	10,314	3,671	6,643
	13. Vriddhachalam anikat.	(1) Total	792	..	4,210	111	1,268	5,589	19,830	25,419	5,166	20,253
		(2) Deduct due to old irrigation	287	..	1,525	40	449	2,014	6,979	8,463	..	8,463
		(3) Net due to improvements	505	..	2,685	71	819	3,575	12,851	16,956	5,166	11,790
	14. Shatiatope anikat.	(1) Total	1,612	..	8,715	226	6,272	15,013	1,06,742	1,21,755	14,012	1,07,743
		(2) Deduct due to old irrigation	364	..	1,969	51	867	2,887	14,454	20,027	..	20,027
		(3) Net due to improvements	1,248	..	6,746	175	5,205	12,126	92,288	1,01,728	14,012	87,716
	15. Pelandorai anikat.	(1) Total	1,670	..	8,813	234	1,601	10,648	21,648	32,296	10,498	21,798
		(2) Deduct due to old irrigation	400	..	2,112	56	380	2,548	5,056	3,000	150	2,850
		(3) Net due to improvements	1,270	..	6,701	178	1,221	8,100	16,592	29,296	10,348	18,948
	16. Lower Coleroon anikat.	(1) Total	5,061	..	27,734	709	21,986	50,429	3,90,912	4,41,341	43,164	3,98,177
		(2) Deduct due to old irrigation	2,009	..	11,011	281	7,684	18,976	1,34,697	1,45,302	..	1,45,302
		(3) Net due to improvements	3,052	..	16,723	428	14,302	31,453	2,56,215	2,96,039	43,164	2,52,875
Tinnevelly ..	17. Maradur anikat ..	(1) Total	2,434	..	12,935	341	9,295	22,571	1,63,517	1,86,088	16,858	1,69,230
		(2) Deduct due to old irrigation	1,255	..	6,669	176	5,767	12,612	1,02,728	1,14,264	..	1,14,264
		(3) Net due to improvements	1,179	..	6,266	165	3,528	9,959	60,789	71,824	16,858	54,966
	Total ..	(1) Total	39,874	..	2,08,776	7,071	85,443	3,01,290	14,26,046	17,27,336	2,60,766	14,66,570
		(2) Deduct due to old irrigation	22,553	..	1,17,731	4,183	44,811	1,66,725	7,29,519	8,10,489	15,750	7,94,739
		(3) Net due to improvements	17,321	..	91,045	2,888	40,632	1,34,565	6,96,527	9,16,847	2,45,016	6,71,831

Resolution—No. 306, dated 18th August 1898.

In the first paper read above, the Chief Engineer for Irrigation proposes certain new methods for determining the shares of Irrigation revenue to be credited to "Old works" and the shares of maintenance charges to be debited thereto in the case of Minor Irrigation works for which Capital and Revenue Accounts are kept.

2. The proposal is made in view of a remark by the Government of India in its letter, No. 41-A.I., dated 20th February 1893, printed in G.O., No. 248 I., dated 22nd March 1893, to the effect that an attempt should be made to reduce the working expenses of irrigation works as far as possible. The Chief Engineer states that every endeavour is being made to reduce expenditure on these works; that it appears to him that, as regards minor works, the prevailing high percentage of expenditure on revenue is largely due to the method of keeping accounts and that this method, by which he refers indiscriminately to two distinct methods which will be described below, should be replaced by another method which he suggests.

3. In the case of all irrigation works, whether belonging to class I or class II, which have been improved by Government and for which Capital and Revenue Accounts are kept, the distribution of Irrigation revenue between old works and improvements used to be effected according to an elaborate method devised in 1879—83 by Mr. Wilson, the then Director of Revenue Settlement, who was placed on special duty in connection with Irrigation Accounts. That method is briefly described in paragraph 2 of B.P., No. 73, dated 14th March 1890. As will be seen from the papers quoted in that Board's Proceedings and in paragraph 5 of B.P., No. 516, dated 6th December 1894, the Government of India and the Secretary of State were, from the very beginning, in favour of the adoption of some simple method of making the distribution, but this Government elected to adopt the method suggested by Mr. Wilson.

4. As regards the maintenance charges also the method of distribution adopted by this Government was somewhat elaborate; but on a suggestion made by the Government of India in its letter, No. 68-A.I., dated 17th May 1883, the system of taking certain fixed amounts to represent the old maintenance charges was adopted. A similar method of taking the old irrigation revenue at certain fixed amounts was recommended by the Government of India in its letter quoted above; but this Government preferred to continue Mr. Wilson's method.

5. Matters were in this state until 1889, when the Government of India again returned to the subject and, in its letter, No. 184 I., dated 14th September 1889, it pointed out that the old irrigation revenue, calculated according to Mr. Wilson's method, showed little fluctuation from year to year and suggested the adoption of certain fixed amounts to represent such revenue.

This method was accordingly adopted in 1890 in respect of all works then shown under classes I and II. In the case of works since added to classes I and II, Mr. Wilson's method continues to be followed pending the collection of sufficient data for fixing the old irrigation revenue in their case.

6. Though the method of fixing once for all the credit due to old irrigation is open, in any year of drought, to the objections urged by the Chief Engineer, the Board is nevertheless convinced of the desirability of accepting some approximate figure, based on averages, in preference to Mr. Wilson's elaborate and laborious system, which necessitates the annual compilation of particulars for every irrigated field under a score of different heads, showing the group of the village, the class and sort of soil, extent, assessment divided between land and water, single crop, double crop, usual wet, dry converted into wet, dry crops watered, waste brought in, zemin and inam charged for and free, deductions and remissions, fixed and temporary, and so on.

7. The subject is one of great complexity and the Board has not yet found time to deal with it; but it would, in the first place, demur to the assumption which underlies the Chief Engineer's proposals, viz., that there will be a continuance of the present method, under which the old and new irrigation revenue is annually ascertained by a compilation of particulars field by field. When the Chief Engineer asserts that to ascertain the old irrigation revenue annually will not complicate the accounts or

cause inconvenience, he contemplates the continuance of a system which the Board earnestly hopes to see abolished, as involving an intolerable amount of tabulation of figures which cannot be verified and on the correctness of which it is after all unsafe to rely. That (as pointed out by the Chief Engineer) the system of fixing the old irrigation revenue may, in any particular year, lead to absurd results cannot be denied; but in answer to the Chief Engineer's suggested improvement it may suffice to point out that his method would be yet more faulty, and would have quite the opposite effect to what he supposes and desires. For instance, in the case of the Pálár anikat system, which has been taken by the Chief Engineer to exemplify his method, the marginally-noted figures compare for the six years ending with 1896–97 the amounts which should be credited to new irrigation in accordance with each of the three methods mentioned above. It will be seen that while it is true, as pointed out by the Chief Engineer, that for the year 1891–92, his method gives larger credit to new irrigation by about Rupees 21,000 than the old method, it gives for the next five years smaller credit, aggregating more than Rs. 2,60,000.

Fasli.	Mr. Wilson's method.	Fixed credit.	Chief Engineer's method.
	Rs.	Rs.	Rs.
1301 (1891–92)..	1,843	6,139	27,058
1302 (1892–93)..	1,16,293	1,23,056	56,819
1303 (1893–94)..	1,21,662	1,33,632	82,366
1304 (1894–95)..	1,13,987	1,27,643	76,256
1305 (1895–96)..	1,29,052	1,41,301	89,377
1306 (1896–97)..	94,796	1,12,904	73,362
Total ..	5,77,633	6,44,675	4,05,238

8. That this is not an isolated result will be seen from statement No. I appended to these Proceedings, in which the results of the application of the two methods to all the works included in class II are shown for each of the six years ending with fasli 1306. The statement shows that while the gain to new irrigation according to the Chief Engineer's method for fasli 1301 will be less than Rs. 19,000, the loss during the next five faslis will be about Rs. 5·34 lakhs. The reason for this remarkable result is not far to seek. The new method proposes to distribute the revenue in the proportion of the areas shown under the old and new irrigation; but under each irrigation system there are large areas, mostly included under old irrigation, which are either irrigated free of charge (*mámúl* wet areas in zamindari and inam villages), or for which irrigation revenue gets credit only at certain reduced rates (wet inams paying quit-rent), and to credit all these areas with their proportion of the total revenue is obviously to give undue credit to "old irrigation."

The results will be more striking if the Chief Engineer's method and the present method are applied to systems like the Gódávari and Kistna anikats. The results for these two systems for the year 1891–92 (fasli 1301) are shown in statement No. II appended. It will be seen from the statement that even for that unfavourable year the Chief Engineer's method will result in credit being given to old irrigation to a much larger amount than under the present system of fixed credits, the excess amounting to Rs. 3·62 lakhs in the case of the former anikat and to Rs. 2·05 lakhs in the case of the latter. In ordinary years the excess will be still larger, as will be seen from statement No. III appended.

9. It is not clear why the Chief Engineer has limited his proposal to class II works, when the remark of the Government of India referred to by him seems to apply more to major than to minor works.

10. It may be further remarked that in a year of drought the Chief Engineer's plan would no more represent the truth than the method of fixed credits. He proposes that the credit to old and new irrigation should be apportioned in proportion to the actual irrigation of the old area and the new area as ascertained by annual field-war tabulation. But it is obviously probable that in a year of drought the effective irrigation of the old area may be in great measure due to the outlay on improvements, and this the Chief Engineer's method of distribution would in no way disclose.

11. Turning next to the question of "working expenses," the Chief Engineer's proposal is to distribute them in direct proportion to the areas of old and new irrigation instead of taking, as at present, the average of the charges actually incurred prior

to improvements as the old maintenance charges, and debiting the balance of the expenditure of the year to the area under new irrigation.

The same circumstances that forbid a distribution of revenue in proportion to area are equally fatal to the proposal to distribute working charges according to area.

The zamindari and inam "*mamul* wet" now irrigated by one or other of the systems, and contributing nothing to the irrigation revenue, formerly cost Government nothing for the maintenance of its irrigation. The zamindari and inam tanks, which were the old sources of supply were maintained by the proprietors, and obviously no portion of the working expenses of the system can be properly debited to the ayakats of these superseded tanks.

It has been shown that the proposed distribution of revenue according to area will not work, and if the one proposal be disapproved, the other, viz., the proposed distribution of charges according to area, must fall with it.

12. No doubt in the case of several of the second-class works the fixed debit for working expenses seems (as urged by the Chief Engineer) absurdly low; but the amounts were the average of actuals ascertained by the Public Works Department itself. The fact is that where natural facilities for irrigation existed a certain amount of irrigation revenue could be got with little or no outlay on maintenance. The ryots were left to do most of the work. But when the works are improved up to as high a standard as engineering science can attain, and are placed under special professional supervision, the cost of maintenance becomes great. This is, to some extent, illustrated by the marginal statement in which the proportion of maintenance charges to revenue in the case of minor irrigation works in charge of the Revenue Department is compared with that of the same class of works in charge of the Public Works Department.

Faslis.	Percentage of maintenance charges on revenue.	
	Public Works Department.	Revenue Department.
1300 (1890-91)	55·6	13·9
1301 (1891-92)	42·5	18·6
1302 (1892-93)	41·7	11·6
1303 (1893-94)	34·6	7·7
1304 (1894-95)	36·5	10·7
1305 (1895-96)	31·0	9·2
1306 (1896-97)	40·6	12·6

13. For the above reasons the Board is unable to accept the Chief Engineer's proposal in regard to the distribution of "maintenance charges," and must advocate strongly the retention of the system of fixed credits and debits.

14. In the statements appended to the Chief Engineer's letter, the amount of "net revenue" due to improvements (that is, gross revenue *minus* working expenses), arrived at according to his proposals, is compared with the amount "according to present method," in the case of 17 systems under class II works (columns 21 and 24 of the statements). The former is in many cases much in excess of the latter; but the main reason for the difference appears to be that in respect of 13 Systems which were added to class II after 1890, the working expenses debitable to "old irrigation" are shown as *nil*. The Board is not aware of any order directing that the entire working expenses of these systems should be debited to improvements. Possibly the portion to be debited to "old works" has not yet been fixed. If so, the comparison instituted in the case of these works is misleading.

(True Copy and Extract.)

(Signed) C. BENSON,
for Secretary.

APPENDIX

COMPARATIVE statement showing the results of the application of the Chief Engineer's method to irrigation revenue derived from class II works, for faslis 1301 to 1306.

1	Fasli 1301.			Fasli 1302.			Fasli 1303.			Fasli 1304.		
	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.
	2	3	4	5	6	7	8	9	10	11	12	13
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
	6,139	27,058	+ 20,919	1,23,056	56,819	— 66,237	1,33,632	82,366	— 51,266	1,27,643	76,256	— 51,387
Pálár anikat	**1,25,000**	**1,04,081**	— **20,919**	**1,25,000**	**1,91,237**	+ **66,237**	**1,25,000**	**1,76,266**	+ **51,266**	**1,25,000**	**1,76,387**	+ **51,387**
	274	1,734	+ 1,460	33,206	8,251	— 24,955	39,784	18,326	— 21,458	22,148	9,468	— 12,680
Chembrambákam tank	**16,000**	**14,540**	— **1,460**	**16,000**	**40,955**	+ **24,955**	**16,000**	**37,458**	+ **21,458**	**16,000**	**28,680**	+ **12,680**
	5,112	4,002	— 1,110	8,219	5,551	— 2,668	9,173	6,283	— 2,890	10,528	7,442	— 3,086
Madras water-supply and irrigation extension project.	**11,000**	**12,110**	+ **1,110**	**11,000**	**13,668**	+ **2,668**	**11,000**	**13,890**	+ **2,890**	**11,000**	**14,086**	+ **3,086**
	23,420	19,580	— 3,840	23,828	21,958	— 1,870	25,751	21,523	— 4,228	28,840	24,236	— 4,604
Pelandorai anikat	**3,000**	**6,840**	+ **3,840**	**3,000**	**4,870**	+ **1,870**	**3,000**	**7,228**	+ **4,228**	**3,000**	**7,604**	+ **4,604**
	— 4,252	1,807	+ 6,059	11,062	9,230	— 1,832	10,298	8,506	— 1,792	12,142	10,293	— 1,849
Cumbum tank	**27,251**	**21,192**	— **6,059**	**26,914**	**28,746**	+ **1,832**	**27,712**	**29,504**	+ **1,792**	**29,975**	**31,824**	+ **1,849**
	26,165	29,551	+ 3,386	27,768	31,962	+ 4,194	26,780	30,410	+ 3,630	27,448	31,101	+ 3,653
Tadepalli channel	**75,249**	**71,863**	— **3,386**	**75,462**	**71,268**	— **4,194**	**75,394**	**71,764**	— **3,630**	**76,369**	**72,716**	— **3,653**
	8,303	9,639	+ 1,336	8,419	9,702	+ 1,283	8,095	9,514	+ 1,419	8,618	10,387	+ 1,769
Arakankóttai channel	**18,955**	**17,619**	— **1,336**	**18,952**	**17,669**	— **1,283**	**18,921**	**17,502**	— **1,419**	**19,498**	**17,729**	— **1,769**
	17,555	23,971	+ 6,416	20,336	25,000	+ 4,664	20,490	25,067	+ 4,577	21,317	26,391	+ 5,074
Kalingaroyen channel	**83,301**	**76,885**	— **6,416**	**83,301**	**78,637**	— **4,664**	**83,328**	**78,751**	— **4,577**	**84,786**	**79,712**	— **5,074**
	1,694	1,010	— 684	2,289	1,403	— 886	1,582	1,202	— 380	3,022	2,088	— 934
Valluru anika	**3,240**	**3 924**	+ **684**	**4,521**	**5,407**	+ **886**	**3,352**	**3,732**	+ **380**	**5,282**	**6,216**	+ **934**
	11,041	13,866	+ 2,825	41,092	32,881	— 8,211	42,162	33,625	— 8,537	34,046	29,487	— 4,559
Cheyaru do.	**39,114**	**36,289**	— **2,825**	**39,259**	**47,470**	+ **8,211**	**40,201**	**48,738**	+ **8,537**	**44,349**	**48,908**	+ **4,559**
	14,549	15,485	+ 936	42,865	23,955	— 18,910	43,343	31,343	— 12,000	38,432	28,665	— 9,767
Poiney do.	**43,362**	**42,426**	— **936**	**43,490**	**62,400**	+ **18,910**	**45,862**	**57,862**	+ **12,000**	**46,539**	**56,306**	+ **9,767**
	2,20,349	2,10,168	— 10,181	2,22,487	2,11,491	— 10,996	2,40,421	2,28,396	— 12,025	2,40,487	2,32,116	— 8,371
Lower Coleroon do.	**1,28,826**	**1,39,007**	+ **10,181**	**1,32,896**	**1,43,892**	+ **10,996**	**1,37,777**	**1,49,802**	+ **12,025**	**1,45,302**	**1,53,673**	+ **8,371**
	75,794	71,709	— 4,085	79,100	74,655	— 4,445	82,728	78,380	— 4,348	86,272	88,958	+ 2,686
Shatyatope do.	**19,324**	**23,409**	+ **4,085**	**22,566**	**27,011**	+ **4,445**	**19,631**	**23,979**	+ **4,348**	**20,027**	**17,341**	— **2,686**
	15,771	14,739	— 1,032	10,232	8,509	— 1,723	15,406	14,756	— 650	16,625	16,095	— 530
Vriddháchalam do.	**5,627**	**6,659**	+ **1,032**	**5,326**	**7,049**	+ **1,723**	**8,485**	**9,135**	+ **650**	**8,463**	**8,993**	+ **530**
	7,028	7,064	+ 36	6,860	7,377	+ 517	8,837	9,023	+ 186	10,258	10,438	+ 180
Mehmattur do.	**1,863**	**1,827**	— **36**	**1,751**	**1,234**	— **517**	**2,044**	**1,858**	— **186**	**2,084**	**1,904**	— **180**
	24,734	23,610	— 1,124	28,843	25,096	— 3,747	36,925	36,928	+ 3	35,348	35,079	— 269
Tirukkóyilúr do.	**55,191**	**56,315**	+ **1,124**	**54,674**	**58,421**	+ **3,747**	**61,999**	**61,996**	— **3**	**58,551**	**58,820**	+ **269**
	71,058	69,563	— 1,495	62,279	57,942	— 4,337	71,857	70,708	— 1,149	71,389	70,313	— 1,076
Marudur do.	**1,14,337**	**1,15,832**	+ **1,495**	**90,037**	**94,374**	+ **4,337**	**1,15,032**	**1,16,181**	+ **1,149**	**1,14,264**	**1,15,340**	+ **1,076**
	* 23,891	22,182	— 1,709	20,303	17,373	— 2,930	21,177	19,275	— 1,902	* 22,024	20,603	— 1,421
Ganjám minor rivers system ..	**88,452**	**90,161**	+ **1,709**	**88,924**	**91,854**	+ **2,930**	**89,310**	**91,212**	+ **1,902**	**95,068**	**96,489**	+ **1,421**
Total ..	5,48,625	5,66,738	+ 18,113	7,72,244	6,29,155	— 1,43,089	8,38,441	7,25,631	— 1,12,810	8,16,587	7,29,416	— 87,171

Note.—1. Figures in columns 3 and 12 are those given in columns 9 of the Chief Engineer's statements.
2. Figures in columns 2 and 11 = column 22—(columns 10 + 11) of Chief Engineer's statements.
3. Revenue due to new irrigation is printed in roman figures.
4. Do. old do. antique figures.

* The figures relating to Ganjám minor rivers system are not included in the Chief Engineer's statements.

APPENDIX I—*cont.*

Comparative statement showing the results of the application of the Chief Engineer's method to Irrigation Revenue derived from class II works, for faslis 1301 to 1306—*cont.*

—	Fasli 1305.			Fasli 1306.			Total.		
	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.
	14	15	16	17	18	19	20	21	22
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Pálár anikat	1,41,301	89,377	— 51,924	1,12,904	73,362	— 39,542	6,44,675	4,05,238	— 2,39,437
	1,25,000	1,76,924	+ 51,924	1,25,000	1,64,542	+ 39,542	7,50,000	9,89,437	+ 2,39,437
Chembrambákam tank	19,968	5,933	— 14,035	29,875	7,494	— 22,381	1,45,255	51,206	— 94,049
	16,000	30,035	+ 14,035	16,000	38,381	+ 22,381	96,000	1,90,049	+ 94,049
Madras water-supply and irrigation extension project	9,530	6,532	— 2,998	9,798	6,819	— 2,979	52,360	36,629	— 15,731
	11,000	13,998	+ 2,998	11,000	13,979	+ 2,979	66,000	81,731	+ 15,731
Pélandorai anikat	29,751	25,462	— 4,289	31,202	26,392	— 4,810	1,62,792	1,39,151	— 23,641
	3,000	7,289	+ 4,289	3,000	7,810	+ 4,810	18,000	41,641	+ 23,641
Cumbum tank	10,831	8,840	— 1,991	3,144	3,813	+ 669	43,225	42,489	— 736
	30,001	31,992	+ 1,991	30,048	29,379	— 669	1,71,901	1,72,637	+ 736
Tadepalli channel	26,795	31,434	+ 4,639	27,461	32,498	+ 5,037	1,62,417	1,86,956	+ 24,539
	76,063	71,424	— 4,639	76,710	71,673	— 5,037	4,55,247	4,30,708	— 24,539
Arakankóttai channel	8,446	9,720	+ 1,274	8,388	9,813	+ 1,425	50,269	58,775	+ 8,506
	18,943	17,669	— 1,274	19,021	17,596	— 1,425	1,14,290	1,05,784	— 8,506
Kalingaroyen do.	20,141	25,638	+ 5,497	20,071	25,730	+ 5,659	1,19,910	1,51,797	+ 31,887
	84,963	79,466	— 5,497	84,932	79,273	— 5,659	5,04,611	4,72,724	— 31,887
Valluru anikat	3,185	2,202	— 963	3,191	2,125	— 1,066	14,943	10,030	— 4,913
	5,259	6,222	+ 963	5,092	6,158	+ 1,066	26,746	31,659	+ 4,913
Cheyaru do.	46,311	38,324	— 7,987	46,664	39,038	— 7,626	2,21,316	1,87,221	— 34,095
	44,391	52,378	+ 7,987	44,325	51,951	+ 7,626	2,51,639	2,85,734	+ 34,095
Poiney do.	40,938	27,410	— 13,528	35,945	22,428	— 13,517	2,16,072	1,49,286	— 66,786
	40,514	54,042	+ 13,528	38,160	51,677	+ 13,517	2,57,927	3,24,713	+ 66,786
Lower Coleroon do.	2,39,405	2,32,515	— 6,890	2 30,971	2,26,369	— 4,602	13,94,120	13,41,055	— 53,065
	1,49,424	1,56,314	+ 6,890	1,52,033	1,56,695	+ 4,602	8,46,318	8,99,383	+ 53,065
Shatyatope do.	89,467	85,361	— 4,106	90,634	86,657	— 3,977	5,03,995	4,85,720	— 18,275
	20,999	25,105	+ 4,106	21,107	25,084	+ 3,977	1,23,654	1,41,929	+ 18,275
Vriddhachalam do.	15,094	14,666	— 428	16,014	15,633	— 381	89,142	84,398	— 4,744
	8,400	8,828	+ 428	8,402	8,783	+ 381	44,703	49,447	+ 4,744
Mehmattur do.	12,719	12,831	+ 112	13,045	13,177	+ 132	58,747	59,910	+ 1,163
	2,089	1,977	— 112	2,096	1,964	— 132	11,927	10,764	— 1,163
Tirukkóyilúr do.	31,929	31,822	— 107	31,821	32,238	+ 417	1,89,600	1,84,773	— 4,827
	59,914	60,021	+ 107	59,696	59,279	— 417	3,50,025	3,54,852	+ 4,827
Marudur do.	68,651	67,683	— 968	71,220	70,343	— 877	4,16,454	4,06,552	— 9,902
	1,10,412	1,11,380	+ 968	1,14,892	1,15,769	+ 877	6,58,974	6,68,876	+ 9,902
Ganjám minor rivers system	26,138	23,844	— 2,294	34,204	32,925	— 1,279	1,47,737	1,36,202	— 11,535
	95,249	97,543	+ 2,294	83,822	85,101	+ 1,279	5,40,825	5,52,360	+ 11,535
Total ..	8,40,580	7,39,594	— 1,00,986	8,16,552	7,26,854	— 89,698	46,33,029	41,17,388	— 5,15,641

Note 1.—Revenue due to new irrigation is printed in roman figures.
2. Do. old do. antique figures.

APPENDIX II.

Comparative statement showing results of application of the Chief Engineer's method to Gódávari and Kistna Anikats in fasli 1301.

—	First crop.	Second crop.	Total
Gódávari Anikat.			
Old irrigation	Acs. 154,241	Acs. ..	Acs. 154,241
New ,, ...	486,540	91,583	578,123
Total ..	640,781	91,583	732,364
Total irrigation revenue	Rs. 20,20,345	Rs. 2,24,230	Rs. 22,44,575
Deduct proportionate share due to old irrigation	4,86,313	..	4,86,313
Increase due to new irrigation	15,34,032	2,24,230	17,58,262
Do. as entered in the accounts according to the present method ..	..	..	21,20,575
Difference, or excess credit to old irrigation under the Chief Engineer's method	..	..	3,62,313
Kistna Anikat.	Acs.	Acs.	Acs.
Old irrigation	77,045	..	77,045
New ,, ...	403,286	397	4,03,683
Total ..	480,331	397	4,80,728
Total irrigation revenue	Rs. 17,20,771	Rs. 1,620	Rs. 17,22,391
Deduct proportionate share due to old irrigation	2,76,011	..	2,76,011
Increase due to new irrigation	14,44,760	1,620	14,46,380
Do. as entered in the accounts according to the present method ..	..	..	16,51,391
Difference, or excess credit to old irrigation under the Chief Engineer's method	..	..	2,05,011

APPENDIX III.

COMPARATIVE statement showing the results of the application of the Chief Engineer's method to Irrigation Revenue derived from Gódávari and Kistna Anikats, for faslis 1301 to 1306.

—	Fasli 1301.			Fasli 1302.			Fasli 1303.		
	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.
1	2	3	4	5	6	7	8	9	10
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Gódávari anikat	21,20,575	17,58,262	— 3,62,313	21,78,258	17,99,877	— 3,78,381	21,36,898	17,62,935	— 3,73,963
	1,24,000	**4,86,313**	+ **3,62,313**	**1,24,000**	**5,02,381**	+ **3,78,381**	**1,24,000**	**4,97,963**	+ **3,73,963**
Kistna anikat	16,51,391	14,46,380	— 2,05,011	16,76,531	14,59,848	— 2,16,683	17,88,577	15,75,800	— 2,12,777
	71,000	**2,76,011**	+ **2,05,011**	**71,000**	**2,87,683**	+ **2,16,683**	**71,000**	**2,83,777**	+ **2,12,777**

—	Fasli 1304.			Fasli 1305.			Fasli 1306.			Total.		
	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.	Under present method.	Under proposed method.	Difference.
	11	12	13	14	15	16	17	18	19	20	21	22
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Gódávari anikat	22,22,014	18,49,879	— 3,72,135	23,23,457	18,77,379	— 4,46,078	25,55,408	21,14,200	— 4,41,208	1,35,36,610	1,11,62,532	—23,74,078
	1,24,000	**4,96,135**	+ **3,72,135**	**1,24,000**	**5,70,078**	+ **4,46,078**	**1,24,000**	**5,65,208**	+ **4,41,208**	**7,44,000**	**31,18,078**	+ **23,74,078**
Kistna anikat	17,93,067	15,86,479	— 2,06,588	20,21,295	17,82,437	— 2,38,858	19,88,375	17,65,348	— 2,23,027	1,09,19,236	96,16,292	— 13,02,944
	71,000	**2,77,588**	+ **2,06,588**	**71,000**	**3,09,858**	+ **2,38,858**	**71,000**	**2,94,027**	+ **2,23,027**	**4,26,000**	**17,28,944**	+ **13,02,944**

Note.—Revenue due to new irrigation is printed in roman figures.
Do. old do. in antique figures.

Mis. No. 2378, Revenue.

Transferred to the Public Works Department.

(By order.)

H. E. CLERK,
(Signed) *for* Ag. Secretary to Government.

OOTACAMUND,
28th June 1899.

No. 153 I.

Note by the Chief Engineer for Irrigation.

The Revenue Board shows conclusively that the method of calculating old irrigation revenue proposed in the note by Chief Engineer for Irrigation, No. 70 I., dated 20th March 1896, would lead to no better results than the present method, but would on the contrary be more faulty. The undersigned quite agrees with the Board in the circumstances brought to notice that the present system of fixed credits and debits on account of old irrigation should be adhered to. It is, however, necessary that particular care should be taken in fixing the amounts of these credits and debits; the Board admits that, as pointed out by the Chief Engineer for Irrigation, the fixed debits for working expenses in the case of several second-class works are absurdly low and the delay in fixing the amount of debit for working expenses of old irrigation in the case of the Periyár project is due to a desire to avoid a repetition of such an error in this case and to the enquiries thus involved. As regards the remarks of the Board in the final paragraph of its proceedings, it would appear to be the case that the amount which should be debited as working expenses of old works in respect of thirteen systems referred to has not yet been fixed and enquiries on this subject should be made.

W. HUGHES,
(Signed) Chief Engineer for Irrigation.

22nd July 1899.

ORDER—No. 715 I., dated 17th August 1899.

In the circumstances reported by the Board of Revenue and dealt with in the foregoing note by the Chief Engineer for Irrigation, no alteration in the present system of fixed debits and credits to irrigation systems on account of "old irrigation" need be made.

2. The Examiner of Public Works Accounts will, as soon as possible, take the necessary steps for ascertaining the old maintenance charges of the thirteen systems referred to in G.O., No. 286 I., dated 21st May 1890.

(True Extract.)

W. HUGHES,
(Signed) Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineers of Circles.
" the Examiner of Public Works Accounts.
" the Revenue Department.

Exd./T. K. Narayana Aiyangar.

Public Works (1899) Department.

CURRENT No. 6675

From The Chief Engineer for Irrigation

Order

No. 153 I

Dated 22nd July 1899

Received } 15-8-99
Registered }

Enclosures plans - nil } Total
other - 2 } 2

Spare copies.

SUBJECT.

Old maintenance charges— Note recommending that the present system of fixed credits and debits on account of— should be adhered to.

S./

BACK PAPERS.	
No.	Date.

FURTHER PAPERS.	
No.	Date.

Read P.as of the Board of Rev: No. 306 d. 18. 8-98
Submit deviation of the Rev: Dept. No. 2378 Rev d. 28. 6-98

To H.E.

No. 153 Irr of 22. 7-99

Dept proposal of contra entries

21 P

Flag B.

Issue
7. 8. 99 JMA
J

Note by E.I.

The Revenue Board shows conclusively that the method of calculating old irrigation revenue proposed in the note of Chief Engr for Irrigation No. 70 I d. 20 March /86 would lead to no better results than the present method but would on the contrary be more faulty. The undersigned quite agrees with the Board in the circumstances brought to notice that the present system of fixed credits and debits on account of old irrigation should be adhered to. It is however necessary that particular care should be taken in fixing the amount of these credits and debits; the Board admits that as pointed out by the Chief Engr. for Irrg. the fixed debits for working Expenses in the case of several second class works are abnormally low and

the [illegible] in fixing the am[illegible] of debit for working expenses of old irrigation in the case of the Periyar project is due to a desire to avoid a repetition of such an error in this case and to the enquiries thus involved. As regards the remarks of the Board in the final para. of its proceedings ~~the Board would appear the award~~ it would appear to be the case that the amount which should be debited ~~to old~~ as working expenses of old works in respect of 13 systems referred to have not yet been fixed and enquiries on this subject should be ~~not being~~ made.

J.F.B.
6/7

No: 715 L.D. 17-8-99

Order: In the circumstances reported by the Board of Rev: and dealt with in the foregoing note by the C.I. ~~[illegible]~~ no alteration in the present system of fixed debits and credits to irrigation systems on account of "old irrigation" need be made.

2 The Examiner of P.W.A. will as soon as possible take the necessary steps for ascertaining the old maintenance charges of the 13 systems referred to in G.O. 2028 I., d/ 21st May/90.

A.S.H.
5.8.99

J.F.B.
6/7
99.

22 P

J.F.B.
20/7
99.

W.H.
22-7-99

H.T.
31.7.99

To

The Chief Engineer for Irrign.
" Superintending Engrs of Circles
" Examiner of P. W. Accounts
" Revenue Department

D. 4/8

D 1,000—8-4-97.

REVENUE DEPARTMENT.

No. 7693 of 1898.

From the Board of Revenue (Rev. Sett)

No 306 Dated 18 — 8 — 1898.
received 10 — 11 — 1898

FOR ORDERS.

In the case of ~~Irrigation~~ irrigation works ~~in this District~~ for which Capital and Revenue accounts are kept i.e. works of classes I & II, the distribution of irrigation revenue between "old Godavari works" and "improvements by the British Govt" was originally effected according to the method devised by Mr. Wilson. Under this method the revenue due to "old irrigation" comprised the following items:—

(a) the portion due to water of the Consolidated Assessment and quit-rent on usual wetlands minus the average of the remissions, of the five years prior to the improvements; and

(b)

Para 2 of B.P.
No 73 printed in
14-3-90
Gr 395 I A
18-7-90

(b) The average annual net receipts due to water during the five years preceding the improvements, from dry lands converted into wet and dry crops watered, from inam and Zamindari lands charged for water, and from second crop.

This system necessitated the annual compilation of a great many particulars and is characterized by the Board as very elaborate and laborious.

Para 6 of the B.P. (Current).

2. In 1883 the Govt of India suggested that the gross revenue and maintenance charges of the old works prior to the improvements by the British Govt should be once and for all finally settled, so that the difference between the gross irrigation revenue under each work and the gross revenue due to old work, and that between the gross outlay actually incurred on the maintenance and repairs of the works and the gross ~~fixed~~ fixed expenditure on old work might represent

Para 2 of the Govt of I letter in Go 477.I 16-6-83 B

Para 4 of the Govt of I letter in Go. 3086 19-6-90 C

Para 3. do.

Sub-para (b) para 5 of the B.P. Current.

respectively the gross revenue due to improvements and the working charges thereon. This method was adopted and followed by the Govt only so far as it related to maintenance charges the old (Mr Wilson's) method having been still followed in regard to irrigation revenue.

In 1889 the Govt of India pointed out that the old irrigation revenue Calculated according to Mr Wilson's method showed very slight ~~alteration~~ variations from year to year and consequently urged upon the Govt the necessity for the adoption of a definite figure to represent such revenue. This suggestion was accepted by the Govt and adopted in the case of all the new works falling under classes I & II. In the case of works since added to these classes, Mr Wilson's method is being followed pending the collection of data for fixing the old irrigation revenue

revenue in those cases.

3. In 1893 the Govt of India desired that an attempt should be made to reduce the working expenses of irrigation works without in any way affecting their efficient maintenance and that the result should be reported. With reference to this question the Chief Engineer for irrigation while stating that every endeavour was being made to reduce the expenditure, remarked that so far as Minor Irrigations Works (c. class III) were concerned, the prevailing high percentage of expenditure on revenue was largely due to the method of keeping accounts. He was of opinion that it was absolutely impossible and quite unnecessary to attempt to correctly fix once and for all the old irrigation revenue and the old maintenance charges, and that it would not complicate accounts or

Para 3 of this
¶ of letter in
fo. 248 I
22-3-93 D

Para 1 of this note
printed on page 2
of the current.

Para 4 of this note

Para 4 of this
note in the current.

or in any way cause inconvenience if they are fixed annually. His objections to the system of fixing the old revenue and charges once and for all are

(1) that the old irrigation revenue if fixed once and for all would show at times absurd results especially in times of scarcity when the whole of the irrigated area might be entirely dependent on the ancient and old channels, and (2) that the fixed amount based on the average of a series of years might be more than the total revenue actually in a year of drought
derived (in which case the result of improving the works and giving a better supply would appear in the accounts as a debit instead of as a credit to the system.

(2) that the cost of the maintenance of the old works even if ascertained from the accounts kept prior to the im-

provement

provement by the British Govt would not represent the correct share of the cost of maintenance as it was not known that the works were not properly maintained before. Consequently the Chief Engineer [struck out] suggested a method by which the old irrigation revenue is to be calculated on the areas reported by the Board of Rev to be due to old irrigation under first and second crops in proportion to the total areas irrigated for each crop to the total revenue derived therefrom inclusive of remissions. Adopting this plan the Chief Engineer works out an additional credit of Rs 21,000 to new irrigation under the Palar Anicut System for the year 1891–92. The working charges are also to be allocated under his proposal in direct proportion to the areas of old and new irrigation.

Para 8 of his note.

The area due to old irrign : The revenue derived therefrom :: The total area irrigd : The total revenue

Unless some such system is adopted, the Chief Engineer considers that a time must come when the profit de-

Para 11 of note printed in the current

-rived from improvements will be altogether concealed by imaginary credits and debits, and that "with a fixed contribution " towards working expenses, a " constant increasing number " of tanks and varying seasons " fixed credits and debits (on account of working expenses) would " be impossible if any value " is to be attached to the accounts."

~~3~~ 4 The Chief Engineer's note which was referred for the remarks of the R.D. was referred to the Board of Revenue for remarks. The current read above is the Board's reply.

Go. 1794 / 9-5-96 S

5. The Board agrees with the Chief Engineer in considering that the present method of fixing once and for all the credit due to old irrigation is open to objection in any year of drought, but it is at the same time convinced of the desirability of accepting some approximate figure based on averages in preference to Mr Wilson's elaborate and laborious

Para 6 of the B P

system

of annual Calculation.

System x The Board admits that the system of fixing the old irrigation Revenue may in any particular lead to absurd results as pointed out by the Chief Engineer, but at the same time it considers that the method suggested by the Chief Engineer would be yet more faulty and would have quite the opposite effect to what he supposes and desires. It gives an illustration of this in the case of the Palar Anicut System in which the Chief Engineer's method gives to new irrigation a ~~credit~~ smaller credit than the present fixed credit System by Rs 2,60,000 for the first years ending 1896-97 though it brings an additional credit of Rs 21,000 for the year 1891-92. Applying the two methods to all the works included in Class II, the Board arrives at the conclusion that while the Chief

Para 7 of the B.P.

Para 8 of the B.P.

Para 8 of the B.P.

Chief Engineers method brings an additional credit of less than Rs 19,000 to the new works in 1891-92, it brings on a loss of about 5.34 lakhs for the 5 years ending 1896-97.

6 The fault underlying the Chief Engineers method by which the revenue has to be distributed according to the area, is stated to be that, while, under each irrigation System, there are large areas mostly included under old irrigation which are either irrigated free of charge (such as manual wet areas in Lanka and main villages) or for which reduced rates are paid (such as wet areas paying quit rent) the Chief Engineer's System proposes to credit all these areas with their proportion of the total revenue which is obviously to give undue credit to old irrigation. This is illustrated in the case of Godavari and Kistna Anicuts in which the old