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Triennial Revenue Report
of the
Public Works Department
Irrigation Branch

Madras - 1901-02

1903

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TRIENNIAL REVENUE REPORT

OF THE

PUBLIC WORKS DEPARTMENT,

IRRIGATION BRANCH,

MADRAS,

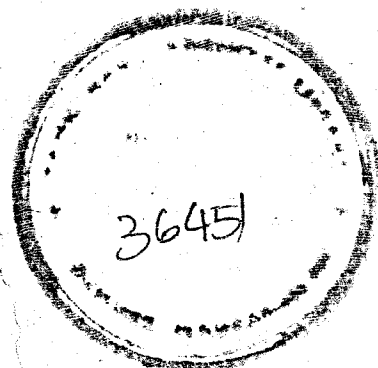
FOR THE THREE YEARS ENDING 1901-1902.

Madras:

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS.

1903.

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Do.	do.	of the Pennér river at Nellore anicut.
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Do.	do.	of the Ponnai at Nedungal.
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Do.	do.	at the Periyár lake.
Do.	do.	of the Vaigai river at Peranai anicut.
Do.	do.	of the Rushikulya river at the Janamilly anicut.

IRRIGATION.
ACCOUNT.

Government {1903} of Madras.
PUBLIC WORKS.

Recd.

Regd.

} 1903.

Enclosures

Spare copies . .

G.O., No. 552 I., 20th May 1903.

MAY.

Revenue Report of the Public Works Department, Irrigation Branch

Reviewing the — for the triennium ending March 1902, and directing that forty copies of the same and of the proceedings of this Government thereon be forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—again the following paper :—

G.O., No. 1011 I., dated 1st December 1900.

READ—also the following papers :—

From the Government of India, dated 6th June 1901, No. 670 C.W.I.
 " " " 12th Feb. 1902 " 199 C.W.I.
 " " " 17th April " " 431 C.W.I.

No. 116 I.

Note by the Chief Engineer for Irrigation.

The accompanying revenue report of the Public Works Department, Irrigation Branch, for the triennium ending March 1902 is submitted to Government. It has been prepared on the lines indicated in the note by the Inspector-General of Irrigation communicated with the Government order first read above and in the resolutions of the Government of India also read above. This report is the first of its kind prepared for irrigation works in this Presidency and has consequently involved considerable time and labour in preparation and delay in submission. Up to, and inclusive of, 1901-1902 the administration report of the Irrigation Branch submitted to the Government of India corresponded more closely with the revenue reports of other provinces, but, with reference to the recommendations of the Inspector-General of Irrigation that—

- (1) the annual revenue report should consist of a brief administration report, together with the statistical statements of irrigation works prescribed by the Secretary of State and the administrative accounts of irrigation works, and
- (2) other statistical information relating to the working of the irrigation systems, of which it may be important to maintain a permanent record, should be embodied in a triennial report in which the results attained in successive periods on the different systems may be brought into effective comparison,

the administration reports submitted for subsequent years have comprised only the documents named above.

2. The report deals with the following classes of irrigation works :—

Imperial.

Class I.—Major Productive and Protective works.

Class II.—Minor Works and Navigation for which Capital and Revenue Accounts are kept.

Class III.—Minor Works for which individual continuous records of expenditure and revenue only are maintained.

Class IV.—Works (in charge of both Public Works and Revenue Departments) for which neither Capital nor Revenue nor individual accounts are kept.

3. Of the following nine works, eight are classed as productive and one, the Rushikulya project, as protective :—

- | | |
|---------------------------------|--------------------------------------|
| (1) Godavari delta system. | (6) Canvery delta system. |
| (2) Kistna delta system. | (7) Srivaikuntam anicut system. |
| (3) Pénner river canals system. | (8) Periyár project. |
| (4) Kurnool-Cuddapah canal. | (9) Rushikulya project (protective). |
| (5) Barur tank project. | |

All these major works were under operation during the triennium under review and their construction estimates have been closed. The completion reports of the Kistna delta system, the Rushikulya and the Periyár projects will be shortly submitted to the Government of India.

4. Of the following 32 minor works under Class II, 28 are irrigation systems and 4 are tidal canals intended purely for navigation :—

Irrigation systems.

- | | |
|---------------------------------|--|
| (1) Ganjam minor rivers system. | (13) Chembarambakkam tank system. |
| (2) Muniyeru project. | (14) Madras water-supply and irrigation extension. |
| (3) Dondapad tank project. | (15) Valluru anicut system. |
| (4) Sagileru "upper" project. | (16) Tirukkóvilur " |
| (5) Cumbum tank system. | (17) Mehmathur " |
| (6) Chapad project. | (18) Vriddhachalam " |
| (7) Thadapalle channel system. | (19) Shatiatope " |
| (8) Arkenkottah " | (20) Pelandorai " |
| (9) Kalingaroyen " | (21) Lower Coleroon " |
| (10) Pálár anicut system | (22) Nandiyar channel. |
| (11) Poincy " | (23) Marudúr anicut system. |
| (12) Cheyaru " | |

Navigation systems.

- | | |
|-------------------------|-----------------------------|
| (24) Chilka lake canal. | (26) Védaranniyam canal. |
| (25) Buckingham canal. | (27) Ganjam-Gopalpur canal. |

Irrigation systems sanctioned but not commenced.

- | | |
|--|--------------------------|
| (28) Jangamaheswarapuram tank project. | (31) Hajipuram project. |
| (29) Ponnalur tank project. | (32) Yerur tank project. |
| (30) Vamula " | |

All the above works were in operation with the exception of the Chapad project which is in progress, the Ganjam-Gopalpur canal and the five systems described as sanctioned but not commenced. The construction estimates have been closed for all the works in operation except the Muniyeru project, Dondapad tank and Sagileru projects, and the Lower Coleroon anicut system.

5. An index and a rainfall map of the Presidency, a financial diagram and sketch-maps of major works, and anicut diagrams of the principal rivers, as also a diagram of the Periyár lake, are appended to the report.

8th May 1903.

(Signed) J. P. DAVIDSON,
Ag. Chief Engineer for Irrigation.

ORDER—No. 552 I., dated 20th May 1903.

The report deals with nine major works and 32 minor works, for which capital and revenue accounts are kept, and numerous other irrigation works, individually small for which such accounts are not kept. Eight of the major works are classed as "Productive" and one as "Protective". All the major works were in operation during the period under review, and their construction estimates have been closed. Of the 32 minor works, 4 are tidal canals intended purely for navigation and on 5 of the 28 irrigation systems work had not been begun during the period under review. With the exception of the Chapad project, which is in progress, and the Ganjam-Gopalpur canal, all the completed minor works were in operation.

2. The capital outlay (direct charges) on major productive works, up to the end of the triennial period under review, was Rs. 6,45,34,633, as shown below:—

	RS.
Imperial	6,44,36,099
Provincial	98,534
Total ...	6,45,34,633

The Kurnool-Cuddapah canal and the Barur tank project not having satisfied the conditions of "Productive" works, the expenditure on them is now met from Provincial funds. The capital outlay from both Imperial and Provincial funds on these two systems up to the end of the triennium under review was Rupees 2,21,39,652 as shown in the margin.

	RS.
Kurnool-Cuddapah canal	2,17,31,455
Barur tank project	4,08,197
Total ...	2,21,39,652

3. The total length of main canals and branches of major productive works at the end of the period under review was 2,011 miles; of this length the 990 miles were for navigation and irrigation combined and the balance for irrigation only. There was an increase of $70\frac{5}{16}$ miles in the total length of distributaries; this, at the end of the triennium, stood at $5,788\frac{9}{16}$ miles.

4. The average area irrigated by all the systems during the triennial period was 2,699,671 acres, of which 275,191 acres represent the acreage under second crop, the averages for the previous triennium being 2,569,012 acres and 292,316 acres, respectively.

5. On the Rushikulya project the only "Protective" work in the Presidency, the capital outlay (direct charges) incurred up to the end of the period under review was Rs. 44,39,121. The length of main and branch canals and distributaries of this system is 210 miles. The average area irrigated during the triennium was 82,877 acres, which takes count of 2,496 acres of second crop. The corresponding figures for the previous triennium were 67,462 acres and 1,499 acres, respectively.

6. The average receipts of the major productive works from all sources during the triennial period were Rs. 79,93,492, against the average working expenses of Rs. 19,21,453, showing an average net revenue of Rs. 60,72,039, which exceeds the averages of the triennial periods ending March 1899 and 1896 by Rs. 6,49,067 and Rs. 15,38,702, respectively. The average receipts of the major protective work were Rs. 99,093, against the average working expenses of Rs. 69,853, showing an average net revenue of Rs. 27,906. This was less than the average net revenue for the period ending March 1899 by Rs. 1,699, but greater than that of the average for the period ending March 1896 by Rs. 19,611.

In the table below the financial results of major works during the period under review are compared with those of the two preceding triennia:—

Systems.	Capital expenditure (direct and indirect) to end of 1901-1902.	Average receipts during the triennial period ending March 1902.	Average expenditure during the triennial period ending March 1902 (direct and indirect).	Average interest charges during the triennial period ending March 1902.	Total of columns 4 and 5.	Average net income of the triennial period ending March 1902 (columns 3 and 6).	Average net income of the triennial period ending	
							March 1899.	March 1896.
1	2	3	4	5	6	7	8	9
Major (Productive) Works.								
Godavari delta system ..	1,33,08,495	31,25,386	8,13,746	4,50,576	12,64,322	18,61,064	18,88,791	14,59,975
Kistna do. ..	1,10,10,725	28,50,239	6,83,122	5,10,496	11,93,618	16,56,621	11,94,842	10,04,124
Pennér river canals ..	60,90,130	3,48,831	58,008	1,98,023	2,56,031	92,800	99,233	78,608
Kurnool-Cuddapah canal ..	2,17,34,414	1,94,955	1,13,842	8,69,070	9,82,912	7,87,557	8,27,801	8,61,400
Barur tank project ..	4,31,223	11,226	4,630	16,487	21,117	9,891	9,847	11,427
Cauvery delta system ..	29,61,916	9,35,334	1,03,234	94,805	1,98,042	7,37,292	7,88,918	7,78,682
Brivaikuntam anicut system ..	14,98,004	1,21,255	25,904	55,419	81,323	39,932	9,616	4,975
Periyár project ..	88,93,689	4,06,266	1,18,937	3,41,026	4,59,963	53,597	2,27,068	..
Total ..	6,89,28,596	79,93,492	19,21,423	23,35,905	44,57,328	35,36,164	29,16,684	24,53,537
Major (Protective) Work.								
Rushikulya project ..	48,38,030	99,093	69,853	1,74,790	2,44,643	1,45,550	..	..
Grand Total ..	7,37,66,626	80,92,585	19,91,276	27,10,695	47,01,971	33,90,614	..	..

The above statement shows that there has been a steady increase in the net income from productive works during the last three triennia. The average net revenue from the productive works during the triennium under review is 5.10 per cent. of the capital expenditure (direct and indirect) up to the end of that period. It would be 9.16 per cent. if the Kurnool-Cuddapah canal, which is not financially a success, were excluded.

7. On all the systems classed as productive works, the capital outlay incurred during the period under review amounted to Rs. 21,32,233. This amount was expended chiefly on the following works:—

Godavari Delta System.—Fitting falling shutters to the anicut, excavation of a short cut on the Yenamadurra drain, the Pasumilla channel project, excavation of the Billakurru drain, and the construction of the new Allaram aqueduct.

Kistna Delta System.—New head sluice at Bezvada, improvements to the Ellore, Pulleru, Polraz, Bank, and Commamur canals, and the Peddalanka channel.

Pennér River Canals System.—Diverting the surplus of the Kanigiri reservoir into the Pyderu, and improvements to the Nellore tank supply channel.

Cauvery Delta System.—Fitting lift shutters to the grand anicut, remodelling the Upper Coleroon anicut, conversion of the Cauvery-Kodamurti open dam into a regulator, construction of regulators across the Puthar-Solasudamani and Puthar-Velappar.

Periyár Project.—Improvements and fitting falling shutters to the Peranai anicut, banking Thandalai off-take, improvements to the Vodakarai kanmoy, and excavating the tail end of the Pappagudi off-take.

8. The following statement shows the average areas irrigated, during the triennium under review, compared with those in the two previous triennia :—

	Gódvári delta.	Kistna delta.	Pennér river canals.	Kurnool-Cuddapah canal.	Barur tank.	Cauvery delta.	Srivai-kuntam anicut.	Periyár project.	Total.
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
1893-94 ..	729,624	482,643	136,963	31,169	3,760	956,917	34,136	..	2,375,212
1894-95 ..	751,535	495,946	140,770	29,058	3,481	956,316	32,184	..	2,409,319
1895-96 ..	690,049	500,457	137,483	27,604	3,885	957,625	27,783	..	2,344,286
Triennial average.	720,736	493,015	136,405	29,277	3,542	956,962	31,367	..	2,373,304
1896-97 ..	752,124	480,365	138,864	86,163	3,518	942,060	34,245	66,784	2,502,123
1897-98 ..	809,289	537,373	138,792	45,863	3,539	949,530	33,146	90,062	2,603,594
1898-99 ..	776,697	536,600	143,352	47,570	3,556	958,521	34,814	100,223	2,601,233
Triennial average.	776,370	518,079	139,699	59,865	3,538	950,037	35,735	85,689	2,569,012
1899-1900 ..	732,248	575,574	130,761	76,570	4,281	877,733	35,463	118,433	2,551,163
1900-1901 ..	810,846	590,970	161,337	61,456	3,898	945,254	41,745	131,613	2,737,059
1901-1902 ..	823,311	622,453	164,874	67,727	4,333	955,916	39,009	143,170	2,810,793
Triennial average.	788,802	596,332	145,657	68,617	4,151	926,301	38,739	131,072	2,699,671

The average area irrigated, during the triennium under review, shows an increase under all works except the Cauvery delta system, the decrease under which is due to deficient rainfall during the south-west monsoon of 1899. The Cauvery was, in August 1899, abnormally low and cultivation was therefore restricted.

9. The navigation receipts, during the triennium under review, are compared below with those of the two preceding periods :—

	Gódvári delta system.	Kistna delta system.	Kurnool-Cuddapah canal.	Total	Miles open.	Tollage per mile.
	RS.	RS.	RS.	RS.		
1899-1900 ..	95,609	88,029	1,577	1,35,215	990	137
1900-1901 ..	97,962	42,602	1,208	1,41,772	990	143
1901-1902 ..	89,815	39,486	1,042	1,30,343	990	132
Triennial average ..	94,462	40,039	1,276	1,35,777	990	137
Triennial average for the period ending March 1899 ..	84,589	36,827	1,382	1,22,798	990	124
Triennial average for the period ending March 1896 ..	97,532	36,192	1,496	1,35,220	986	137

The decrease in the navigation receipts from the Gódvári and Kistna canals, during 1901-1902, was due to the competition with the North-East Line of the Madras Railway (East-Coast Railway), while that, in the case of the Kurnool-Cuddapah canal, was owing to the interruption of traffic caused by a breach in the Tangadenza tank.

10. The capital outlay (direct and indirect) on the 27 irrigation systems, under Class II—Minor Works for which capital and revenue accounts are kept, was rupees 8,55,045 during the triennium under review and Rs. 1,00,35,761 represents the total capital outlay on the systems up to the end of that period. The average receipts and working expenses amounted to Rs. 8,73,626 and Rs. 2,92,938, respectively, the average net revenue being Rs. 5,80,688 as against Rs. 7,24,230 and Rs. 2,27,316, the averages for the periods ending March 1899, and March 1896, respectively.

11. The financial results of each of the systems during, and the capital expenditure up to the end of, the triennium under review are shown below :—

	Average area irrigated during the triennial period.		Capital expenditure (direct and indirect).		Average receipts of the triennial period.	Average working expenses of the triennial period including indirect charges.	Average net income of the triennial period.	Average net income of the triennial period.	
	First crop.	Second crop.	Of the triennial period.	To the end of the triennial period.				Ending March 1899.	Ending March 1896.
1	2	3	4	5	6	7	8	9	10
	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Ganjám minor river system ..	57,808	15,141	94,709	1,78,625	42,143	35,883	6,260	13,804	..
Munniyeru project ..	2,146	..	47,967	6,68,909	8,063	4,634	3,429	..	..
Dondapad tank project ..	126	..	21,252	1,27,975	413	288	126	..	..
Sagileru "upper" project ..	3,994	561	9,744	4,57,373	801	5,023	4,222	..	..
Cumbum tank system ..	5,077	926	1,822	66,255	102	460	562	6,507	9,404
Chapad project ..	..	..	2,15,075	3,09,870	..	..	..	..	..
Thadapalle channel system ..	14,298	827	21,576	1,47,230	32,446	10,586	21,860	21,518	24,831
Arkankotah do. ..	4,239	51	835	1,03,799	9,561	5,832	3,729	4,429	7,009
Kalingaroyen do. ..	11,425	8,899	11,864	91,855	21,696	12,855	8,841	11,597	16,809
Palar anicut system ..	60,789	16,468	22,280	21,00,885	90,279	65,758	24,521	98,064	94,610
Poincy do. ..	15,350	3,474	4,594	2,36,290	32,909	16,179	16,730	37,374	19,843
Cheyarru do. ..	17,494	7,343	2,824	4,08,271	36,596	14,427	22,169	24,799	47,561
Chembrambakkam tank system ..	11,333	2,914	8	7,47,107	23,751	1,004	24,755	30,456	29,662
Madras water-supply and irrigation extension ..	6,875	1,776	..	17,54,045	29,850	3,704	26,148	23,656	18,406
Vallur anicut system ..	4,051	196	117	65,425	3,115	420	3,535	3,400	2,489
Tirukkóvilár anicut system ..	21,775	3,564	14,758	2,69,223	36,382	19,472	16,910	21,141	22,000
Mohamthur do. ..	3,736	261	856	71,903	12,786	5,921	6,865	7,639	5,461
Vridhdachalam do. ..	6,484	436	26,163	75,900	16,967	9,136	7,831	11,772	10,593
Shaktiapo do. ..	26,754	4,828	6,622	2,35,205	1,01,118	18,542	82,576	89,213	88,878
Pekandurai do. ..	9,612	447	9,205	5,94,844	34,189	14,420	19,769	16,553	16,201
Lower Coleroon do. ..	101,305	4,880	3,82,383	13,21,723	2,64,981	46,227	2,18,754	2,51,729	2,60,756
Nandiyar channel ..	4,821	1,983	3,130	58,838	2,290	4,403	2,113	1,572	..
Marudur anicut system ..	17,150	14,255	..	44,803	73,392	10,612	62,780	51,751	52,803
Total ..	405,673	89,229	8,55,045	1,00,35,761	8,73,626	2,92,938	5,80,688	7,24,230	7,27,316

The bulk of the expenditure, during the triennium under review, was incurred on the Ganjám minor rivers system, Chapad project, and the Lower Coleroon anicut system. In the Ganjám minor rivers system the principal works carried out were (1) constructing a scouring surplus sluice in the banks of the Bhairi and Polaki channels, (2) constructing a head sluice to Dusi channel, (3) diverting the Wadada main channel and (4) fitting screw-gearing shutters to Polaki channel head sluice. On the Chapad project the outlay was chiefly incurred on the head works, the excavation of the main channel and cross drainage works. In the case of the Lower Coleroon anicut system, the principal works carried out were, (1) improvements to the anicut by fitting lift shutters, (2) extension of the Old Coleroon aqueduct and bridge in connection with the Chidambaram drainage scheme, (3) clearing, widening and forming banks of Old Coleroon, and (4) providing screw-gearing shutters to 18 sluices in Vadavar.

12. The average net revenue during the triennium under review was less than the average for each of the two preceding periods. The decrease occurred chiefly under the Lower Coleroon, Palar, and Poincy anicut systems. The decrease in the Lower Coleroon anicut system, was due to large remissions, granted in 1899-1900, on account of the unfavourable character of the season. The decrease, in the other two systems, was due to deficient rainfall in the first two years of the triennium, and consequent failure of crops.

13. The financial results of the Buckingham canal, which is the most important of the four navigation systems under Class II. Minor Works and Navigation, are shown below.

8

No. 552 I., 20TH MAY 1903.

	Capital outlay, direct and indirect.		Average receipts during the triennial period.	Average working expenses during the triennial period.	Average net revenue of the triennial period.	Average net revenue of triennial period ending March 1899.
	During the triennial period.	To end of triennial period.				
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Buckingham canal	21,043	89,80,440	73,073	96,722	—23,649	6,285

The falling off of the net revenue during the triennium is attributable to unfavourable competition with the East-Coast Railway.

14. The following statement shows the areas charged as irrigated by revenue derived from, and outlay incurred on, works falling under classes III and IV. Minor Works for which Capital and Revenue accounts are kept :—

	Areas charged as irrigated.			Irrigation revenue.	Outlay including establishment and tools and plant.
	First crop.	Second crop.	Total.		
<i>Class III Works.</i>	ACS.	ACS.	ACS.	RS.	RS.
1896-97	94,561	69,451	164,012	6,52,058	54,356
1897-98	101,580	75,391	176,971	7,02,460	26,687
1898-99	101,839	73,833	175,672	7,06,970	46,604
Triennial average ..	99,326	72,892	172,218	6,87,159	42,549
1899-1900	98,644	76,017	174,661	6,88,921	39,585
1900-1901	122,686	92,483	215,169	7,56,014	39,208
1901-1902	120,710	93,820	214,530	7,33,085	44,728
Triennial average ..	114,013	89,107	203,120	7,27,473	41,173
<i>Class IV Works.</i>					
1896-97	2,055,743	629,430	2,685,173	67,52,136	17,82,141
1897-98	2,228,512	725,426	2,953,938	75,91,925	14,53,364
1898-99	2,368,653	806,235	3,174,888	82,85,151	14,88,939
Triennial average ..	2,217,670	720,363	2,938,033	75,46,403	15,74,815
1899-1900	2,021,573	631,704	2,653,277	65,19,224	19,93,113
1900-1901	2,263,921	694,780	2,958,681	72,29,606	22,43,419
1901-1902	2,336,911	778,077	3,114,988	78,00,486	21,71,230
Triennial average ..	2,207,468	701,514	2,908,982	71,83,238	21,35,921

Under Class IV. Works, the average area charged as irrigated, and average revenue, during the triennium under review, are less than those of the previous triennial period ending March 1899, owing to the very scanty rainfall in 1899-1900, when large remissions had to be granted.

15. From paragraph 8 of the revenue report, relating to the Gôdâvari delta system, it will be seen that the duty of water for each crop cannot be calculated, as the periods of cultivation of the crops actually overlap, and the definition of first crop, as accepted by the Revenue Department, does not relate to crop raised during any fixed period.

16. The rainfall during the first year of the triennium was scanty throughout the Presidency.

17. Mr. W. Hughes, Chief Engineer, first class, was in charge of the Irrigation Branch of the department during the greater portion of the triennium and was succeeded on the 16th September 1901 by Colonel A. W. Smart, R.E.; Mr. Hughes has since retired from the service.

18. Ordered that forty copies of the revenue report and of these proceedings be forwarded to the Government of India.

[Here enter No. 553 I., dated 20th May 1903.]

(True Extract.)

(Signed) J. P. DAVIDSON,
Ag. Joint Secretary to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
 „ the Chief Engineer for Irrigation, Tank Restoration Scheme.
 „ the Chief Engineer, Public Works Department.
 „ the Consulting Engineer for Railways.
 „ Superintending Engineers of Circles.
 „ the Superintending Engineer on Special duty.
 „ the Superintendent of Works, Cauvery-Bhavani Investigations.
 „ the Executive Engineer, Tungabhadra and Pennér Projects.
 „ the Examiner, Public Works Accounts.
 „ the Revenue Department.
 „ the Public „
 „ the Financial „

Exd. Shaik Karim.

CLASS I.
MAJOR (PRODUCTIVE AND PROTECTIVE) WORKS.
STATEMENT showing areas charged as irrigated.

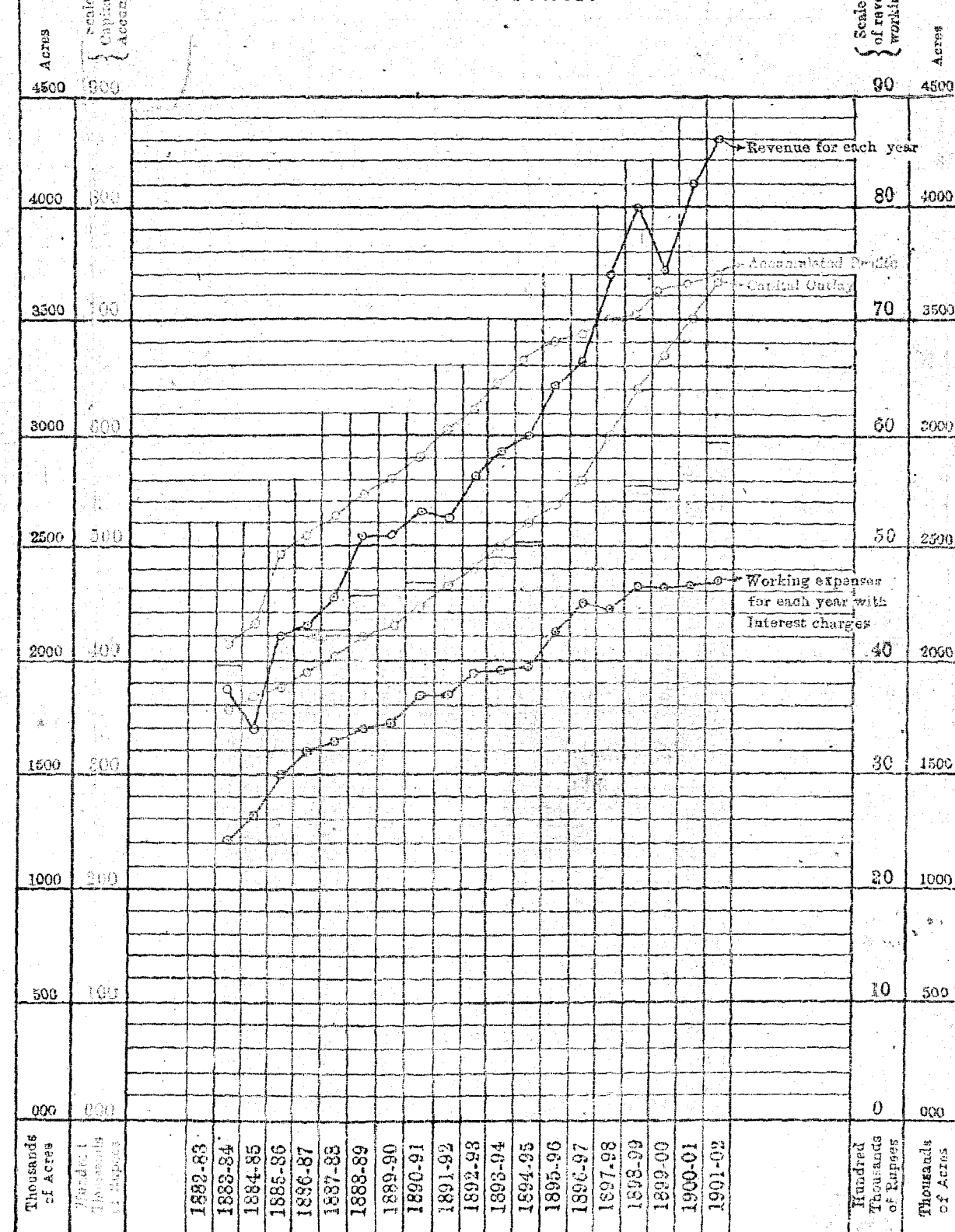
Year.	Areas in acres.			Remarks.
	First crop.	Second crop.	Total.	
	ACRES.	ACRES.	ACRES.	
1866-1867	1,494,803	52,291	1,547,094	Increase is due to the addition of the Srival-kuntam anicut system.
1867-1868	1,553,806	57,259	1,611,065	
1868-1869	1,543,766	57,895	1,601,661	
Triennial average ..	1,530,792	55,615	1,586,407	
1869-1870	1,501,079	61,460	1,562,539	
1870-1871	1,638,275	70,473	1,708,748	
1871-1872	1,623,958	70,715	1,694,673	
Triennial average ..	1,591,104	67,549	1,658,653	
1872-1873	1,662,200	69,199	1,731,399	
1873-1874	1,967,753	80,407	1,748,170	
1874-1875	1,698,900	84,673	1,783,573	
Triennial average ..	1,676,254	78,160	1,754,414	
1875-1876	1,725,407	88,911	1,814,318	Decrease is due to unfavourable character of the season.
1876-1877	1,690,753	88,269	1,788,012	
1877-1878	1,757,705	126,206	1,883,906	
Triennial average ..	1,727,820	101,135	1,828,955	
1878-1879	1,764,722	137,935	1,902,657	
1879-1880	1,849,378	145,073	1,994,451	
1880-1881	1,816,889	161,323	1,978,212	
Triennial average ..	1,810,330	144,973	1,955,303	
1881-1882	1,785,550	140,407	1,925,957	Increase is due to the addition of the Kurnool-Cuddapah canal.
1882-1883	1,819,970	157,133	1,977,103	
1883-1884	1,857,078	154,936	2,012,014	
Triennial average ..	1,817,866	157,190	1,975,056	
1884-1885	1,656,665	126,830	1,783,495	Decrease is due to the serious damage caused to the Cauvery delta system by the extraordinary floods of December 1884.
1885-1886	1,943,025	155,198	2,098,223	
1886-1887	1,960,610	155,325	2,115,935	
Triennial average ..	1,856,833	145,785	2,002,618	
1887-1888	2,034,230	149,800	2,184,030	
1888-1889	2,104,135	163,119	2,267,254	
1889-1890	2,127,040	184,317	2,311,357	
Triennial average ..	2,088,468	165,679	2,254,147	
1890-1891	2,171,334	174,698	2,346,032	
1891-1892	2,194,098	219,410	2,413,508	
1892-1893	2,198,394	190,125	2,388,519	
Triennial average ..	2,188,142	197,745	2,385,887	
1893-1894	2,237,431	222,760	2,460,191	Increase is due to the addition of the Rushikulya project.
1894-1895	2,283,593	238,036	2,521,629	
1895-1896	2,164,288	251,802	2,416,090	
Triennial average ..	2,225,104	237,522	2,462,626	
1896-1897	2,324,486	285,249	2,609,735	Increase is due to the addition of the Periyar project.
1897-1898	2,382,947	328,386	2,711,333	
1898-1899	2,472,469	303,313	2,775,782	
Triennial average ..	2,393,301	305,649	2,698,950	
1899-1900	2,555,461	323,207	2,768,668	
1900-1901	2,588,284	327,007	2,915,291	
1901-1902	2,657,602	324,015	2,981,617	
Triennial average ..	2,600,776	324,743	2,925,519	

CLASS I.—MAJOR PRODUCTIVE AND PROTECTIVE WORKS—*cont.*

STATEMENT showing the Capital outlay, Interest charges, Sum at charge, Gross revenue, Working expenses and Net revenue under all Major Works in the Presidency.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year (accumulated profits).	Sum at charge to end of year (columns 2 + 3 - 4).	For the year.			Per-centage on capital.
					Revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	
1866-1867 ..	1,17,92,524	48,07,333	47,83,977	1,19,16,789	65,423	— 6,881	72,304	— 61
1867-1868 ..	1,23,78,615	53,91,772	54,13,317	1,13,50,570	24,79,059	3,58,980	21,20,073	17-13
1868-1869 ..	1,30,91,742	59,11,975	79,97,451	1,10,05,563	24,68,989	3,72,252	20,96,737	16-02
Triennial average.	1,24,20,980	54,03,392	64,00,048	1,14,24,304	16,71,157	2,41,450	14,29,707	11-51
1869-1870 ..	1,35,71,131	64,50,148	37,99,822	1,02,21,457	27,65,929	4,20,345	23,45,584	17-23
1870-1871 ..	1,40,26,359	70,29,429	1,18,53,536	92,92,722	28,83,552	4,54,587	23,29,045	17-32
1871-1872 ..	1,46,41,500	75,72,655	1,34,96,079	87,17,426	28,09,357	4,23,068	23,86,289	16-29
Triennial average.	1,40,79,830	70,20,787	1,17,16,689	98,83,868	28,19,636	4,39,520	23,80,116	16-05
1872-1873 ..	1,63,29,329	82,87,134	1,51,55,527	94,09,876	28,24,027	5,16,514	23,07,513	14-17
1873-1874 ..	1,69,78,253	88,71,111	1,89,77,660	89,71,749	30,32,633	5,78,585	24,54,048	14-46
1874-1875 ..	1,77,31,871	95,33,929	1,27,10,973	85,54,718	31,60,787	7,64,765	23,96,022	13-51
Triennial average.	1,70,13,163	88,80,066	1,69,46,407	89,45,445	30,00,149	6,17,955	23,82,194	14-04
1875-1876 ..	1,56,28,496	1,02,30,566	2,03,95,394	84,63,668	31,78,112	7,65,851	23,71,267	12-72
1876-1877 ..	1,90,88,390	1,09,52,317	2,19,61,520	81,89,187	29,89,165	7,61,579	22,27,577	11-72
1877-1878 ..	1,84,59,856	1,10,65,610	2,40,40,336	71,25,543	36,13,137	7,89,454	28,73,693	14-75
Triennial average.	1,90,65,913	1,09,57,132	2,21,12,611	78,10,484	32,39,140	7,65,961	24,34,179	13-08
1878-1879 ..	1,97,70,432	1,24,41,307	2,61,50,877	60,50,893	36,86,459	7,23,535	23,92,934	14-53
1879-1880 ..	2,03,14,393	1,32,09,241	2,84,69,776	50,54,457	39,81,329	9,24,715	30,56,613	15-04
1880-1881 ..	2,06,99,955	1,39,95,324	3,04,27,686	42,66,709	37,36,119	9,92,132	27,43,987	13-26
Triennial average.	2,02,58,183	1,32,15,290	2,83,69,444	51,14,009	38,01,319	9,03,461	28,97,858	14-30
1881-1882 ..	2,11,13,555	1,47,20,826	3,26,73,141	31,61,238	37,65,181	8,69,826	28,95,355	13-71
1882-1883 ..	2,21,61,256	1,54,86,337	3,44,08,489	32,43,104	35,27,280	9,32,431	25,94,849	11-71
1883-1884 ..	4,55,50,369	1,75,96,964	3,48,81,233	2,82,63,095	37,85,960	12,29,895	25,56,064	6-61
Triennial average.	2,96,08,391	1,59,34,376	3,39,86,965	2,15,55,811	36,82,817	10,10,718	26,72,099	0-06
1884-1885 ..	4,71,70,942	1,83,39,268	3,52,28,678	3,12,81,632	33,96,058	12,09,414	21,86,644	4-63
1885-1886 ..	4,91,33,270	1,95,02,437	3,78,89,338	3,07,26,349	42,38,913	13,84,001	28,54,912	5-81
1886-1887 ..	5,02,10,773	2,13,42,758	3,90,94,668	3,27,88,663	43,28,353	13,14,394	30,13,959	6-00
Triennial average.	4,88,34,995	2,00,61,487	3,74,04,201	3,14,92,281	39,87,777	13,02,604	26,85,173	5-60
1887-1888 ..	5,11,13,910	2,32,28,177	4,04,18,363	3,39,23,724	45,54,134	13,44,590	32,09,544	6-48
1888-1889 ..	5,22,77,587	2,31,94,862	4,21,22,916	3,53,49,333	50,97,300	14,27,106	36,70,194	7-02
1889-1890 ..	5,29,75,162	2,71,63,127	4,39,14,743	3,62,13,646	51,80,636	13,99,012	37,31,824	7-04
Triennial average.	5,21,22,220	2,61,92,055	4,21,62,007	3,51,62,268	49,27,423	13,90,236	35,37,187	6-23
1890-1891 ..	5,35,41,589	2,91,34,825	4,56,42,424	3,70,33,990	52,96,832	15,77,244	37,19,688	6-95
1891-1892 ..	5,41,10,966	3,11,37,227	4,74,96,819	3,77,59,374	52,44,600	15,95,363	37,49,237	6-93
1892-1893 ..	5,77,34,999	3,35,60,384	4,90,42,688	4,22,51,796	56,43,888	16,79,821	40,64,065	7-04
Triennial average.	5,61,26,564	3,12,77,479	4,73,94,010	3,80,12,053	53,95,106	15,50,842	38,44,264	6-97
1893-1894 ..	5,86,63,056	3,57,23,492	5,12,47,854	4,31,38,694	58,66,493	15,22,921	43,63,572	7-44
1894-1895 ..	5,94,83,794	3,79,19,354	5,35,75,769	4,38,27,389	59,87,241	14,67,746	45,19,495	7-60
1895-1896 ..	6,03,76,268	4,01,47,363	5,60,81,961	4,44,40,670	64,26,014	16,86,897	47,39,117	7-85
Triennial average.	5,95,07,372	3,79,30,068	5,36,35,191	4,38,02,249	61,00,045	15,62,521	45,37,524	7-63
1896-1897 ..	6,66,96,115	4,40,17,284	5,69,66,550	5,67,46,849	67,18,924	19,68,586	47,50,348	6-82
1897-1898 ..	7,07,07,785	4,66,43,642	6,00,10,274	5,73,41,053	74,93,595	18,27,382	56,66,213	8-01
1898-1899 ..	7,13,60,977	4,93,00,306	6,32,85,747	5,73,74,636	78,67,704	19,27,049	59,30,652	8-31
Triennial average.	7,05,87,991	4,66,63,710	6,00,87,523	5,71,54,178	73,66,713	19,07,648	54,49,070	7-70
1899-1900 ..	7,20,34,128	5,19,81,200	6,60,33,958	5,79,81,370	74,37,369	19,35,767	55,01,602	7-63
1900-1901 ..	7,28,68,298	5,46,50,871	6,94,07,268	5,81,46,911	82,20,975	20,37,954	61,83,021	8-47
1901-1902 ..	7,37,66,826	6,74,31,500	7,32,86,049	6,79,12,077	86,19,416	20,00,128	66,19,290	8-96
Triennial average.	7,29,21,350	5,47,01,173	6,95,75,755	5,80,48,768	80,92,585	19,91,276	61,01,303	8-34

DIAGRAM
SHOWING THE
CAPITAL OUTLAY, ACCUMULATED PROFITS,
REVENUE, WORKING EXPENSES
AND AREA IRRIGATED
ON THE
MAJOR WORKS.



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NOTE.—The areas irrigated are shewn by the tinted columns

	M.	Ch.
DELTA		
CANAL	11	0
and Sluice and Lock		
CANAL		
Lock	9	77
	15	0
	21	5
Lock	29	37
	39	40
CANAL		
	14	10
	14	11
	23	76
	25	18
CANAL		
Lock	30	4
Canal	32	73
KA CANAL		
	9	38
	15	73
	20	41
	29	28
FT CANAL		
	11	39
	18	0
THE RIVER CANAL		
Ameliorated	33	67
FT CANAL		
Lock	30	37
Farm Lock	32	68
Lock	37	9
DELTA		
Sluice and Double Lock		"
AM CANAL		
John S. Weir	2	4
Lock	17	20
plus Weir	19	7
Lock	27	1
Lock	28	8
Lock	33	72
Lock	38	10
CANAL		
	8	4
	20	0
	27	0
	38	51
Drain under Tunnel	42	60
Ameliorated	42	60
Weir	43	8
UR CANAL		
	11	49
	19	60
plus Weir	25	40
	26	0
	29	60
	34	29
	39	70
ANKA CANAL		
Surplus Weir	32	34
	38	5
DELTA		
Sluice and		13
converted into		
UR CANAL		
	6	0
	16	30
	21	61
	25	30
	28	42
	33	27
Lock	38	28
Lock	45	18
CANAL		
Weir	15	3
plus Weir (Old)	17	3
	25	7
	31	45
dal Lock	40	39
Sluice		
VELPUR CANAL		
	7	37
	21	80
	30	79
	37	34
al Lock	4	17
CANAL		
	11	1
MEYERU CANAL		
	20	41
Lock	14	0
Lock	21	17
Lock	35	15
Lock	45	18
CANAL		
Sluice and Head Sluice	16	78
CANAL		
duct	7	75
ON CANAL		
Sluice Lock	12	40

the Map indicate the position
as specified above.

CLASS I.

Major Works.

GODAVARI DELTA SYSTEM.

STATEMENT showing the areas charged as irrigated.

Year.	Area in acres.			Remarks.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1866-1867	ACS. 407,657	ACS.	ACS. 407,657	
1867-1868	445,268		445,268	
1868-1869	432,580		432,580	
Triennial average ..	428,501		428,501	
1869-1870	473,480		473,480	
1870-1871	491,446		491,446	
1871-1872	470,961		470,961	
Triennial average ..	478,629		478,629	
1872-1873	489,606		489,606	
1873-1874	496,011		496,011	
1874-1875	497,270		497,270	
Triennial average ..	490,962		490,962	
1875-1876	506,954		506,954	
1876-1877	520,610		520,610	
1877-1878	559,395	12,371	581,766	
Triennial average ..	532,319	4,120	536,443	
1878-1879	518,659	26,939	545,598	
1879-1880	568,701	19,474	588,175	
1880-1881	543,770	19,349	563,119	
Triennial average ..	542,710	23,100	565,810	
1881-1882	521,573	29,425	549,998	
1882-1883	604,213	21,183	625,396	
1883-1884	521,387	24,592	545,979	
Triennial average ..	515,724	28,666	543,791	
1884-1885	520,791	24,681	545,472	
1885-1886	555,906	32,473	588,381	
1886-1887	593,621	34,615	628,236	
Triennial average ..	545,773	30,589	577,363	
1887-1888	586,379	22,317	608,696	
1888-1889	612,452	39,167	651,619	
1889-1890	618,649	59,590	678,239	
Triennial average ..	605,826	39,358	644,188	
1890-1891	631,187	49,358	680,425	
1891-1892	640,781	91,633	732,364	
1892-1893	641,839	65,459	697,388	
Triennial average ..	634,535	68,630	703,415	
1893-1894	640,744	80,593	721,740	
1894-1895	658,658	100,855	759,513	
1895-1896	581,624	121,602	683,126	
Triennial average ..	620,308	101,151	721,459	
1896-1897	602,298	137,651	739,849	
1897-1898	635,954	163,481	799,435	
1898-1899	656,062	120,431	776,493	
Triennial average ..	631,471	140,487	771,925	
1899-1900	683,205	66,407	749,612	
1900-1901	683,335	137,184	820,519	
1901-1902	733,990	132,659	839,555	
Triennial average ..	692,845	112,150	804,935	

CLASS I.—GODAVARI DELTA SYSTEM—cont.

STATEMENT showing the Capital outlay, Interest charges, Sum at charge, Gross revenue, Working expenses, and Net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year (or accumulated profits).	Sum at charge at end of year (column 2 + 3 - 4).	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1866-1867 ..	67,74,090	28,80,628	4,07,298	92,47,420	14,04,011	2,70,751	11,33,260	15.32
1867-1868 ..	69,42,751	31,42,792	12,78,391	86,07,149	13,85,486	2,53,478	11,30,008	15.69
1868-1869 ..	72,01,823	34,20,107	21,31,087	84,90,843	13,85,486	2,53,478	11,30,008	15.69
Triennial average ..	69,72,686	31,47,842	12,72,259	88,48,471	9,29,166	1,74,743	7,54,423	10.85
1869-1870 ..	73,66,311	37,09,422	30,96,413	79,79,320	15,49,006	2,94,366	12,54,641	17.03
1870-1871 ..	74,97,756	40,06,962	41,07,727	73,93,990	16,21,853	3,13,899	13,07,954	17.44
1871-1872 ..	77,18,552	42,41,865	50,90,770	69,09,617	16,51,028	2,92,182	12,58,846	16.31
Triennial average ..	75,27,639	39,89,116	40,98,303	74,26,352	15,73,962	3,00,149	12,73,813	16.92
1872-1873 ..	82,07,783	46,70,777	60,23,840	67,54,720	15,59,178	3,37,196	12,21,982	14.68
1873-1874 ..	85,34,653	48,78,766	69,93,358	64,20,031	16,21,178	3,43,677	12,77,507	14.97
1874-1875 ..	89,76,976	52,02,516	79,33,317	62,45,175	16,40,054	3,76,346	12,63,709	14.60
Triennial average ..	85,72,804	48,84,019	69,83,505	64,73,318	16,06,803	3,52,404	12,54,399	14.63
1875-1876 ..	94,71,187	55,46,788	87,91,460	62,26,516	16,37,821	4,35,406	12,02,415	12.69
1876-1877 ..	97,69,786	59,06,341	96,71,694	63,04,633	16,58,486	4,18,799	12,39,687	12.69
1877-1878 ..	1,00,64,851	62,75,447	1,07,65,151	59,85,147	16,61,408	4,08,745	12,52,663	14.43
Triennial average ..	97,68,608	59,03,525	97,39,402	59,38,731	17,19,238	4,20,883	12,98,355	13.23
1878-1879 ..	1,02,89,138	66,57,217	1,18,03,754	51,42,601	18,81,327	4,30,954	14,30,373	13.91
1879-1880 ..	1,05,04,206	70,16,694	1,28,30,909	47,19,991	19,49,133	5,32,601	14,16,532	13.48
1880-1881 ..	1,06,47,093	74,43,634	1,38,43,835	42,41,891	18,69,313	4,45,446	14,14,867	13.29
Triennial average ..	1,04,80,146	70,49,182	1,28,27,833	47,01,435	18,90,253	4,69,634	14,20,619	13.55
1881-1882 ..	1,07,04,307	76,01,207	1,48,18,570	37,46,944	17,92,540	4,41,841	13,50,699	12.55
1882-1883 ..	1,09,89,216	81,65,184	1,66,85,651	34,88,729	18,59,129	4,48,107	12,11,023	11.02
1883-1884 ..	1,14,39,797	85,42,092	1,69,91,231	33,59,566	17,47,131	5,24,566	12,22,565	10.51
Triennial average ..	1,10,84,449	81,69,483	1,66,81,837	35,42,081	17,86,893	4,71,498	12,54,785	11.34
1884-1885 ..	1,18,34,497	89,35,060	1,72,70,151	34,09,406	17,87,350	6,15,532	11,71,818	9.90
1885-1886 ..	1,21,07,097	92,93,431	1,81,63,494	12,97,034	19,35,754	6,84,040	12,51,714	10.28
1886-1887 ..	1,23,30,479	96,99,257	2,01,28,113	9,01,817	19,81,163	6,10,715	12,70,448	11.11
Triennial average ..	1,21,10,681	95,42,533	1,88,53,931	18,99,353	19,01,426	6,38,761	12,62,665	10.44
1887-1888 ..	1,25,33,814	91,21,395	2,11,18,894	5,36,816	20,59,509	6,45,966	14,13,543	11.27
1888-1889 ..	1,26,40,748	95,50,621	2,21,98,706	7,437	21,68,814	6,60,616	15,08,198	11.93
1889-1890 ..	1,27,19,245	99,82,397	2,33,55,024	6,83,382	22,24,033	6,06,899	16,17,134	12.72
Triennial average ..	1,26,31,269	95,51,638	2,22,34,241	61,334	21,60,819	6,37,500	15,23,319	11.98
1890-1891 ..	1,27,32,033	1,04,15,915	2,46,26,699	13,77,751	22,77,128	7,02,935	15,74,193	12.36
1891-1892 ..	1,28,00,594	1,08,60,959	2,58,04,684	21,53,331	23,75,709	6,61,201	17,14,508	13.39
1892-1893 ..	1,28,04,279	1,12,87,397	2,71,26,429	80,34,783	24,60,606	7,02,652	17,57,953	13.73
Triennial average ..	1,27,78,969	1,08,51,414	2,56,19,004	21,88,621	23,71,147	6,88,929	16,82,218	13.16
1893-1894 ..	1,28,08,662	1,17,23,859	2,84,58,684	39,56,163	24,14,627	6,15,830	17,98,797	14.04
1894-1895 ..	1,28,16,644	1,21,60,604	2,99,16,391	49,39,243	25,04,853	6,40,001	18,64,852	14.55
1895-1896 ..	1,28,30,331	1,25,97,519	3,14,14,519	59,86,469	25,82,055	6,47,612	19,24,443	14.99
Triennial average ..	1,28,18,546	1,21,60,627	2,99,39,798	49,60,626	25,00,512	6,34,498	18,66,014	14.53
1896-1897 ..	1,28,97,345	1,30,35,100	3,30,32,581	71,59,136	25,04,396	6,87,553	21,16,843	16.41
1897-1898 ..	1,29,78,073	1,34,77,566	3,51,36,290	86,89,661	31,60,429	6,75,265	24,85,165	19.14
1898-1899 ..	1,30,65,513	1,39,22,279	3,70,93,763	1,01,10,971	31,78,429	7,71,233	24,07,196	18.42
Triennial average ..	1,29,89,310	1,34,78,645	3,51,09,211	86,50,266	30,47,762	7,11,350	23,36,412	17.99
1899-1900 ..	1,31,32,881	1,43,69,988	3,87,04,627	1,12,00,768	28,14,311	7,61,728	20,52,583	15.63
1900-1901 ..	1,32,13,337	1,48,20,419	4,05,54,600	1,25,50,814	31,84,847	8,63,423	23,21,424	17.64
1901-1902 ..	1,33,08,495	1,52,74,003	4,26,81,965	1,40,99,454	33,67,000	8,16,088	25,50,912	19.16
Triennial average ..	1,32,18,238	1,48,21,481	4,06,50,731	1,26,17,012	31,25,386	8,13,746	23,11,640	17.48

CLASS I.—GODAVARI DELTA SYSTEM—cont.

1. The following table shows the capital outlay :—

Systems.	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	RS.	RS.	RS.	RS.	RS.
IMPERIAL.					
Direct Charges.					
Works ..	82,51,919	54,084	65,672	77,780	84,58,455
Establishment ..	20,13,439	11,633	12,093	9,573	20,46,738
Tools and plant ..	8,85,942	..	..	..	8,85,942
Total ..	1,11,61,290	64,717	77,765	87,353	1,13,91,135
Less—Receipts on Capital Account ..	933	..	..	..	933
Total, Direct Charges ..	1,11,60,357	64,717	77,765	87,353	1,13,90,202
Indirect Charges ..	19,05,146	2,651	2,691	7,805	19,18,293
Total Outlay, Direct and Indirect ..	1,30,65,513	67,368	80,456	95,158	1,33,08,495

Fitting falling shutters to the anicut (estimate Rs. 1,75,500), constructing a combined drainage outfall sluice, aqueduct and canal surplus in the 43rd mile of the Bank canal, and cross drainage works, Ellore canal, and excavation of a short cut on the Yenamadurru drain to Naidupolam Yeru which were started in the previous triennium were completed during the period under review.

The excavation of the Pasalapudi north side channel and the construction of its head sluice, the diversion of the Bank canal from 16 to 17 miles and from 17 miles 4 furlongs to 20 miles 4 furlongs, the Pasumilla channel project, and the excavation of the Billakuru drain were completed.

The under-tunnel in the 5th mile of the Kadali channel, the new Allaram aqueduct on the Bandamrunka canal, the construction of a new under-tunnel in the Narasapur channel and the improvements to the Rustumbada drain were in progress.

2. Lengths of Channels.

	Lengths of channels in miles.				
	At end of March 1899.	Increase or decrease during			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
IMPERIAL.					
Length of main and branch canals (both for irrigation and navigation) ..	503	Nil.	Nil.	Nil.	503
Of the above, navigable ..	493	Nil.	Nil.	Nil.	493
Distributaries (for irrigation only) ..	1,905	Nil.	+ 7	+ 2 1/2	1,914 1/2
Gross area under command ..	1,267,209	Nil.	Nil.	Nil.	1,267,209

There was no change in the lengths of main and branch canals during the triennial period. In the distributaries for irrigation there was an increase of 9 1/2 miles. The system is well equipped for the distribution of water.

CLASS I.—GODAVARI DELTA SYSTEM—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rates (irrigation) ..	Rs. 25,05,925	Rs. 30,69,271	Rs. 28,25,133	Rs. 32,03,325	Rs. 33,80,689	Rs. 31,36,372
2. Navigation ..	97,542	85,499	55,609	97,962	89,815	94,452
3. Miscellaneous ..	21,349	17,055	17,531	17,752	20,566	18,666
Total ..	25,24,816	31,71,825	28,98,273	33,19,039	34,91,070	32,49,500
Less—Refunds of revenue ..	304	164	82	192	70	114
Total ..	25,24,512	31,71,661	28,98,191	33,18,847	34,91,000	32,49,386
Deduct—Share due to old irrigation ..	1,24,000	1,24,000	1,24,000	1,24,000	1,24,000	1,24,000
4. Total, Receipts ..	25,00,512	30,47,661	28,14,311	31,94,847	33,67,000	31,25,386
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	20,477	18,811	27,189	30,042	27,224	28,151
6. Maintenance and repairs ..	2,21,917	2,31,231	2,76,123	3,27,732	2,67,534	2,91,129
7. Establishment (direction and execution) ..	52,872	54,999	67,297	78,276	61,879	69,151
8. Tools and plant ..	41,583	47,180	49,638	49,670	67,888	52,322
Total ..	8,36,849	8,52,221	4,22,607	4,85,729	4,14,025	4,40,753
II. Revenue Management.						
Establishment.						
9. Direction ..	30,597	38,585	34,814	38,471	40,561	37,550
10. Execution ..	1,22,389	1,46,893	1,39,256	1,53,683	1,62,255	1,51,798
11. Civil officers ..	1,19,097	1,47,268	1,34,938	1,53,913	1,62,807	1,50,579
Total ..	2,72,083	3,32,747	3,09,008	3,46,067	3,65,623	3,40,927
12. Total, Direct charges ..	6,08,932	6,85,018	7,31,615	8,32,026	7,79,651	7,81,680
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	34,056	34,832	33,663	39,897	44,937	41,166
Total (Direct and indirect) ..	6,42,988	7,19,850	7,74,278	8,71,923	8,24,588	8,22,846
Deduct—Old maintenance charges ..	8,500	8,500	8,500	8,500	8,500	8,500
14. Total, Working Expenses ..	6,34,488	7,11,350	7,61,778	8,63,423	8,16,088	8,14,346
15. Net revenue ..	18,66,024	23,36,402	20,52,583	23,21,424	25,50,912	23,11,040
16. Capital outlay, direct and indirect.	1,28,18,546	1,29,80,310	1,31,32,381	1,32,13,337	1,33,08,485	1,32,13,233
17. Percentage of net revenue ..	14.53	18.00	15.63	17.64	19.17	17.48
18. Area charged as irrigated .. Acs.	721,459	771,925	749,612	825,519	839,855	804,995
19. Average of water-rate (item 1) per acre charged as irrigated ..	3.47	3.97	3.77	3.88	4.02	3.89
20. Total establishment charges per acre charged as irrigated (items 7 and 9-11) ..	0.45	0.50	0.50	0.50	0.50	0.50
21. Working expenses per acre charged as irrigated ..	0.88	0.90	1.02	1.09	0.97	1.01

The average receipts for the triennial period under review shew an increase as compared with the averages for the two previous periods. There was a falling off in the receipts under water-rates during 1899-1900; this is attributed by the Board of Revenue partly to the unfavourable character of the season which led to a decrease in the cultivation of second crop, and partly to the re-settlement which resulted in a decrease in the revenue attributed to irrigation.

The working expenses during the triennial period shew an increase over the averages of the two previous periods. This excess occurs chiefly under maintenance and repairs and is due to the several drains in the delta having been repaired and put

CLASS I.—GODAVARI DELTA SYSTEM—cont.

in good order. In consequence of the increase in the working expenses the average net revenue for the triennium under review is Rs. 24,762 less than the average for triennial period ending March 1899. The result attained is satisfactory.

4. The interest charges for and up to the end of the triennial period are given below:—

	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Interest charges ..	Rs. 1,39,22,279	Rs. 4,47,709	Rs. 4,50,461	Rs. 4,53,557	Rs. 1,52,74,006

At the end of the triennium under review the net surplus revenue amounted to Rs. 4,26,81,955, or Rs. 2,93,73,460 over and above the capital outlay.

5. Rainfall.

	Average of 14 years ending March 1899.	Period under review.			Average of 17 years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Whole year ..	INCHES. 39.32	INCHES. 33.41	INCHES. 33.94	INCHES. 34.81	INCHES. 38.39

6. Area irrigated.

Years.	Area irrigated.			Area cultivated with sugarcane. (This area is included in the total area shown in column 4.)	Rainfall.
	First crop.	Second crop.	Total.		
1	2	3	4	5	6
1893-94 ..	Acs. 645,997	Acs. 74,525	Acs. 720,524	Acs. 6,358	INCHES. 57.12
1894-95 ..	653,505	93,000	751,535	7,555	38.63
1895-96 ..	566,563	123,486	690,049	7,113	53.64
Triennial average ..	623,722	97,014	720,736	7,009	49.80
1896-97 ..	621,288	130,836	752,124	7,076	25.71
1897-98 ..	629,723	170,561	800,289	5,837	42.64
1898-99 ..	656,729	119,968	776,697	3,327	42.76
Triennial average ..	635,915	140,455	776,370	5,413	37.30
1899-1900 ..	666,140	66,108	732,248	2,764	33.41
1900-1901 ..	674,319	136,527	810,846	2,405	33.94
1901-1902 ..	692,492	130,819	823,311	3,486	34.81
Triennial average ..	677,650	111,152	788,802	2,885	34.05

Note.—The areas shown above do not correspond with those entered in the "table of areas" (page 3) which represent areas charged as irrigated.

The average area irrigated in the triennial period under review is more than the averages for the two previous periods. The decrease in the area irrigated in 1899-1900 was due to the unfavourable character of the season which led to a fall in the area of second crop.

CLASS I.—GODAVARI DELTA SYSTEM—cont.

The average area cultivated with sugarcane shows a steady decrease when compared with the triennial period ending March 1896. This is attributed to the ryots being of opinion that the soil becomes unfit for the cultivation of the cane by constantly growing the crop for a number of years on the same land.

7. Areas irrigated by districts.

Districts.	Areas irrigated.		
	First crop.	Second crop.	Total.
1	2	3	4
Gó dá vá ri ..	ACS.	ACS.	ACS.
	1899-1900 660,866	66,108	726,974
	1900-1901 668,600	136,521	805,021
	1901-1902 686,722	130,819	817,541
Triennial average ..	672,029	111,149	783,178
Kistna ..	1899-1900 5,274	1	5,276
	1900-1901 5,819	6	5,825
	1901-1902 5,770	..	5,770
	Triennial average ..	5,621	2	5,623

8. The subjoined statement gives the figures relating to duty of water in this delta :—

Duty of water.

Year and crop.	Area irrigated.	Number of days the canal was open.	Average supply.		Duty.		Cubic feet of water supplied at head for each acre irrigated during the year.
			At head.	Utilized.	At head.	Utilized.	
1	2	3	4	5	6	7	8
1899-1900—	ACS.	NO.	C. FT. PER SECOND.	C. FT.	ACS.	ACS.	ACS.
First crop	266,140	..	4,620	..	144-18	..	137,314
Second crop	68,108	..	1,371	..	48-15	..	
1900-1901—							
First crop	674,319	..	5,327	..	110-00	..	244,374
Second crop	136,527	..	..	..	..	..	
1901-1902—							
First crop	692,492	..	6,394	..	108-30	..	177,950
Second crop	130,819	..	3,301	..	39-63	..	

In calculating the duty of water for each crop it has been usual to assume the areas under first and second crops to be the areas cultivated between the 1st May and 30th November and between the 1st December and 31st March respectively. The figures arrived at by this method are not at all satisfactory owing to the overlapping of crops, and to the fact that the areas reported as irrigated under first crop by the Revenue authorities represent the areas of land irrigated for the first time in the revenue year or "fasli" which commences on the 1st July, and does not relate to the crop raised during any particular period. It is therefore impossible in this Presidency to give any useful information as to the duty of water during two separate crops. An idea of the quantity of water required for irrigation can best be obtained by comparing, when possible, the supply and irrigation during short periods in the middle of the season when the demand is greatest or by taking the total quantity of water supplied per acre of crop during the whole period the canals are open. The latter information has been given in the table above, but it must be noted that the quantity of water passed off through drainages has not in any case been measured, and this omission must give a wholly false idea of the quantity of water used.

Before accurate figures of the duty of water in this delta can be arrived at a special officer will have to be employed.

CLASS I.—GODAVARI DELTA SYSTEM—cont.

9. Assessments, Collections and Remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year.	RS. ..	RS. ..	RS. ..	RS. ..	RS. ..	RS. ..
2	Assessment (Irrigation revenue and Public Works receipts).	27,01,295	33,21,698	30,91,347	34,71,130	35,23,708	33,62,062
3	Surplus and excess recoveries.	..	..	..	..	..	..
	Total ..	27,01,295	33,21,698	30,91,347	34,71,130	35,23,708	33,62,062
4	Deduct remissions and refunds ..	76,733	1,49,946	1,53,036	1,52,283	32,703	1,12,676
5	Actual collections ..	26,24,512	31,71,752	29,38,311	33,18,847	34,91,000	32,49,386
6	Outstanding balance ..	..	..	..	..	..	..

During the first two years of the triennial period under review large remissions had to be granted on account of the unfavourable character of the season, but the average for the triennium was less than that of the triennial period ending March 1899.

10. Navigation.

	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Number of miles open ..	No. 493	493	493	493	493	493
Receipts ..	Rs. 97,542	85,490	95,609	97,982	89,815	94,462
Rate per mile ..	198	172	194	191	182	189
Tonnage of cargo and passenger boats ..	Tons. 299,740	316,837	385,419	413,328	364,075	387,617
Estimated value of cargo including rafts ..	Rs. 2,39,76,672	2,47,05,623	2,59,33,007	2,80,56,782	3,02,95,797	2,80,97,195
Approximate charges on account of navigation ..	Rs. 76,511	71,472	61,747	60,149	72,539	71,473

The decrease in the receipts in 1901-1902 is attributed to railway competition.

11. Miscellaneous revenue.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Sale of water ..	RS. ..	RS. ..	RS. ..	RS. 20	RS. 120	RS. 47
Water supply of towns ..	60	60	60	..	120	60
Plantations ..	8,320	5,559	4,738	5,978	7,172	5,962
Other canal produce ..	9,808	10,860	10,962	8,984	11,333	10,426
Water power ..	..	..	..	..	252	231
Rents of buildings ..	265	252	184	258	349	720
Fines ..	33	4	..	1,812	..	..
Miscellaneous ..	2,863	320	1,737	702	1,220	1,220
Total ..	21,349	17,055	17,681	17,752	20,536	18,666

Name of river.	1899-1900.		1900-1901.		1901-1902.		Highest recorded flood.	
	Date.	Reading	Date.	Reading	Date.	Reading	Date.	Reading.
	2	3	4	5	6	7	8	9
The Godavari	23rd Sept. 1899.	FEET. 2-5	22nd Sept 1900.	FEET. 15-8	11th Aug. 1901.	FEET. 6-8	3rd Oct. 1891.	FEET. 17-00 †

In 1900-1901 there were two high floods, one in August and the other in September. The flood in September which occurred on the 22nd of that month was the highest flood of the year when 15.8 feet of water passed over the crest (level + 38.75). The embankment above Rajahmundry breached in several places.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	RS. 20,477	RS. 18,811	RS. 27,189	RS. 30,042	RS. 27,224	RS. 28,151
<i>Repairs.</i>						
Dead works	23,721	18,250	37,151	37,438	46,201	40,263
Main and branch canals	1,09,322	1,16,648	1,09,645	1,49,674	1,17,314	1,25,544
Distributaries	61,421	66,370	67,697	57,359	44,777	56,611
Drainage and protective works ..	27,453	30,013	63,430	83,261	59,242	68,711
Total ..	2,42,394	2,50,092	3,05,312	3,67,774	2,94,768	3,19,280

[illegible]

CLASS I.

Major Works.

KISTNA DELTA SYSTEM.

STATEMENT showing the areas charged as irrigated.

Year.	Area in acres.			Remarks.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1866-1867	ACRES. 188,123	ACRES.	ACRES. 188,123	
1867-1868	200,874		200,874	
1868-1869	194,415		194,415	
Triennial average ..	194,474		194,474	
1869-1870	199,775		199,775	
1870-1871	204,982		204,982	
1871-1872	211,102		211,102	
Triennial average ..	205,286		205,286	
1872-1873	228,532		228,532	
1873-1874	235,842		235,842	
1874-1875	255,118		255,118	
Triennial average ..	239,164		239,164	
1875-1876	264,256		264,256	
1876-1877	263,553	2,507	266,060	
1877-1878	277,194	2,834	280,028	
Triennial average ..	268,434	1,780	270,214	
1878-1879	275,231	934	276,165	
1879-1880	302,814	649	303,463	
1880-1881	291,618	143	291,761	
Triennial average ..	289,897	552	290,449	
1881-1882	287,027	47	287,074	
1882-1883	281,158	79	281,237	
1883-1884	298,097	129	298,226	
Triennial average ..	282,034	85	282,179	
1884-1885	309,395	84	309,479	
1885-1886	320,159	54	320,213	
1886-1887	337,229	90	337,319	
Triennial average ..	325,627	76	325,703	
1887-1888	337,414	91	337,505	
1888-1889	416,064	124	416,205	
1889-1890	433,922	53	433,975	
Triennial average ..	412,473	88	412,561	
1890-1891	463,032	39	463,071	
1891-1892	480,331	397	480,728	
1892-1893	471,114	287	471,401	
Triennial average ..	471,492	241	471,765	
1893-1894	512,430	148	512,578	
1894-1895	519,367	109	519,976	
1895-1896	481,114	261	481,375	
Triennial average ..	504,470	172	504,643	
1896-1897	482,017	616	482,633	
1897-1898	519,922	451	520,373	
1898-1899	566,129	148	566,277	
Triennial average ..	522,689	405	523,094	
1899-1900	558,301	553	558,354	
1900-1901	568,730	222	568,952	
1901-1902	629,388	192	629,580	
Triennial average ..	605,959	322	606,311	

CLASS I.—KISTNA DELTA SYSTEM—*cont.*

STATEMENT showing the capital outlay, interest charges, sum at charge, gross revenue, working expenses and net revenue.

Year.	Capital outlay—direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge to end of year (columns 2 + 3 + 4).	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
1866-1867 ..	Rs. 37,09,857	Rs. 13,96,126	Rs. 36,614	Rs. 50,53,389	Rs. 5,22,507	Rs. 1,27,318	Rs. 4,54,539	11.34
1867-1868 ..	40,06,452	15,07,229	3,19,100	52,04,581	5,46,537	1,44,038	4,02,499	9.40
1868-1869 ..	42,81,671	17,53,775	5,56,253	64,99,893	5,46,537	1,44,038	4,02,499	9.40
Triennial average ..	39,99,293	15,71,976	2,96,089	52,74,281	3,73,548	90,652	2,85,696	7.14
1869-1870 ..	44,78,952	19,52,923	7,78,586	56,18,219	6,16,879	1,74,088	4,42,781	9.82
1870-1871 ..	45,24,737	21,60,885	10,51,731	57,39,891	6,48,320	1,82,293	4,81,027	10.40
1871-1872 ..	47,57,535	23,56,364	18,40,720	57,83,279	6,56,305	1,71,857	4,84,448	10.16
Triennial average ..	43,22,116	21,56,784	10,57,035	57,21,796	6,39,834	1,69,416	4,39,418	10.16
1872-1873 ..	48,93,569	25,57,267	16,03,458	68,47,368	6,59,754	1,90,112	4,68,642	9.47
1873-1874 ..	50,44,849	27,63,782	19,03,890	69,04,781	7,77,194	2,70,248	5,06,946	10.04
1874-1875 ..	51,55,748	29,77,471	22,17,161	69,56,055	8,20,772	2,93,509	5,26,963	10.14
Triennial average ..	50,44,732	27,66,175	19,08,170	69,02,734	7,62,572	2,53,389	4,99,183	9.89
1875-1876 ..	53,26,449	31,97,209	25,33,593	69,90,665	8,42,220	3,06,124	5,36,166	10.06
1876-1877 ..	53,22,138	34,20,134	28,81,629	69,30,733	8,40,391	2,78,529	5,70,862	10.58
1877-1878 ..	54,65,919	36,45,348	33,55,289	67,36,276	9,68,953	2,61,661	7,07,272	12.96
Triennial average ..	53,91,493	34,20,986	29,26,803	66,85,691	8,87,544	2,82,111	6,05,433	11.23
1878-1879 ..	54,93,057	38,74,751	38,28,619	65,38,189	9,47,845	2,55,911	6,91,436	12.68
1879-1880 ..	57,38,066	41,07,344	45,45,613	64,99,787	10,73,826	3,23,239	7,50,587	13.08
1880-1881 ..	59,42,352	43,50,665	47,26,841	65,66,079	10,49,147	4,24,035	6,24,462	10.50
Triennial average ..	57,24,488	41,10,554	43,00,357	65,24,685	10,33,439	3,34,615	6,88,824	12.05
1881-1882 ..	60,52,624	45,73,020	52,17,498	61,18,146	10,43,762	3,30,533	7,13,169	11.76
1882-1883 ..	62,76,473	48,01,785	55,73,995	65,03,263	9,3,295	3,48,033	5,85,262	9.32
1883-1884 ..	66,82,250	50,42,516	60,24,984	66,99,791	10,57,595	3,65,876	6,91,719	10.85
Triennial average ..	63,40,119	48,05,773	56,05,452	65,40,400	10,11,550	3,48,187	6,53,363	10.46
1884-1885 ..	71,64,479	53,00,493	65,25,496	53,39,474	11,02,571	3,44,079	7,58,492	10.58
1885-1886 ..	76,55,905	59,83,994	76,74,261	48,66,739	11,99,347	3,87,093	8,32,254	11.01
1886-1887 ..	79,21,264	62,72,901	82,20,328	49,78,837	12,34,197	4,00,223	8,34,184	10.53
Triennial average ..	75,47,242	51,85,796	74,73,359	52,59,693	11,78,775	3,70,165	8,08,610	10.71
1887-1888 ..	84,09,280	65,77,201	89,38,467	50,48,114	14,36,237	4,13,048	10,23,239	12.16
1888-1889 ..	89,71,944	69,00,332	97,43,484	51,28,792	15,55,248	4,27,065	11,28,148	12.57
1889-1890 ..	94,26,842	62,43,938	1,05,66,183	51,74,597	16,30,471	4,64,165	11,66,305	12.28
Triennial average ..	89,50,388	59,07,157	97,49,378	51,17,167	15,40,659	4,34,769	11,05,897	12.34
1890-1891 ..	1,00,10,516	68,06,868	1,15,19,885	50,97,498	18,18,224	4,96,591	13,16,633	13.15
1891-1892 ..	1,04,67,292	69,87,796	1,25,81,870	48,73,218	18,79,577	5,36,695	13,42,912	12.83
1892-1893 ..	1,07,95,104	73,83,433	1,34,39,016	47,39,521	18,93,462	5,40,679	13,52,783	12.63
Triennial average ..	1,04,24,304	69,92,699	1,25,13,590	49,03,412	18,62,087	5,24,945	13,37,442	12.83
1893-1894 ..	1,11,35,907	77,92,839	1,44,49,779	45,38,967	20,09,088	5,88,919	14,20,169	12.68
1894-1895 ..	1,16,25,104	82,18,038	1,55,06,148	43,36,994	20,18,883	5,87,315	14,31,568	12.74
1895-1896 ..	1,21,81,403	86,62,251	1,65,67,113	42,76,641	22,22,070	7,16,692	16,05,178	12.35
Triennial average ..	1,16,67,471	82,24,376	1,55,07,650	43,84,187	20,83,347	6,14,376	14,68,971	12.69
1896-1897 ..	1,27,84,247	91,29,021	1,74,42,480	44,70,788	21,85,058	8,42,931	13,42,127	10.49
1897-1898 ..	1,31,21,665	96,16,269	1,86,94,608	41,12,426	24,74,795	7,36,519	17,38,276	13.17
1898-1899 ..	1,33,06,625	1,01,12,450	2,02,11,515	22,97,560	27,00,904	6,86,717	20,14,188	15.03
Triennial average ..	1,31,24,179	96,18,913	1,87,83,834	39,60,258	24,53,579	7,55,378	16,98,201	12.94
1899-1900 ..	1,38,05,531	1,06,16,435	2,17,54,988	24,66,978	27,35,313	6,87,855	20,47,458	15.04
1900-1901 ..	1,37,55,726	1,11,26,606	2,34,29,593	14,52,738	28,59,363	6,74,583	21,84,775	15.88
1901-1902 ..	1,40,10,725	1,16,43,933	2,51,81,377	4,73,286	29,56,913	6,86,925	22,69,117	16.19
Triennial average ..	1,37,90,650	1,11,28,992	2,34,55,319	43,93,002	28,50,239	6,83,122	21,67,117	15.71

CLASS I.—KISTNA DELTA SYSTEM—*cont.*

1. The following table shows the capital outlay :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900	1900-1901	1901-1902	
1	2	3	4	5	6
<i>Direct Charges.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Works ..	96,14,718	1,53,323	1,14,093	2,01,961	1,09,84,095
Establishment ..	22,39,047	29,134	21,630	36,395	23,26,205
Tools and Plant ..	6,69,985	192	—332	9,654	6,79,319
Loss by exchange ..	..	..	..	..	..
Total ..	1,25,23,750	1,82,559	1,35,391	2,47,910	1,39,80,620
Less—Receipts on Capital Account ..	15,400	..	301	965	16,667
Total, Direct Charges ..	1,25,08,350	1,82,559	1,35,090	2,46,944	1,39,72,953
<i>Indirect Charges</i> ..	8,88,265	26,847	15,05	8,655	9,37,772
Total Outlay, Direct and Indirect ..	1,33,96,615	2,08,905	1,50,195	2,54,999	1,40,10,725

The construction estimate of this system was closed on the 31st March 1898.

The following important works were undertaken :—

Head works.—New head sluice at Bezvada was started in 1901-1902.*Eastern Section—Masulipatam Canal.*—Widening the canal 2nd reach, excavating Urutur and Mallavole main channels, constructing a head sluice to Mallavole main channel, a surplus weir at 22nd mile of canal, and an under-tunnel at 5 furlongs of Gundapad branch of Medur channel.*Ellore canal.*—Constructing an outlet from 8 miles, 2 furlongs, 530 feet to 8 miles, 3 furlongs, an inlet from 11 miles, 1 furlong, 330 feet to 11 miles, 2 furlongs of canal, and excavating Gogunta channel, and Ponukumadu left side channel extension.*Pulleru canal.*—Strengthening the banks of Mamilla Codu, excavating Penjendra channel and Padane branch of Lingayya Codu, and extending Nakkala Codu branch of Gudivada channel.*Polraz canal.*—Constructing a siding basin on the canal below Madanapalle bridge, and excavating Rudravaram channel.*Peddalanka channel.*—Excavating Tumma Codu right side channel and constructing a head sluice to the same.*Drains.*—Constructing an under-tunnel on Dosapad channel, and a drop at head of Pedapadu escape drain, and excavating Yedavalli drain, Vinnacotta Codu now turned into a drain, Munjalaur and Amudalapalli affluents.*Western section—Bank canal.*—Excavating Kollur side channel, Ipur and Anantavaram branches, Rayakampad affluent and Vellatur channel and its branches.*Commamur canal.*—Constructing a masonry inlet wall, two head sluices, ten pipe sluices, six bridges, one tail escape and a drop in the Bapatla tank, east and west branch channels, excavating Tungabhadra side channel and its branches and constructing an aqueduct, a head sluice, an under-tunnel and a drop connected with it, as also regulator for Armanda and Alavala tank channels, and excavating Bapatla tank, east and west drains.

2. Lengths of channels.

	Lengths of channels in miles.				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900	1900-1901.	1901-1902	
1	2	3	4	5	6
Length of main and branch canals (both for irrigation and navigation) Miles.	372	Nil.	Nil.	Nil.	372
Of the above, navigable "	307	Nil.	Nil.	Nil.	307
Distributaries (for irrigation only) "	1,625	Nil.	Nil.	+ 5	1,630
Gross area under command Acres.	1,350,400	Nil.	Nil.	Nil.	1,350,400

CLASS I.—KISTNA DELTA SYSTEM—*cont.*

There was no change in the lengths of the main and branch canals during the triennium under review. Five miles were added to the length of the distributaries in 1901-1902. The system is well equipped for the distribution of water.

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
	RS.	RS.	RS.	RS.	RS.	RS.
1. Water-rates (irrigation) ..	21,01,412	24,67,065	27,44,052	28,43,587	29,57,022	28,48,520
2. Navigation ..	36,205	36,830	38,029	43,788	39,224	40,340
3. Miscellaneous ..	16,756	20,639	22,638	42,298	31,626	32,820
Total ..	21,54,373	25,24,794	28,06,517	29,30,653	30,27,872	29,21,680
Less—Refunds of revenue ..	26	215	204	232	220	441
Total ..	21,54,347	25,24,579	28,06,313	29,30,381	30,27,652	29,21,239
Deduct—Share due to old irrigation.	71,000	71,000	71,000	71,000	71,000	71,000
4. Total, Receipts ..	20,83,347	24,53,579	27,25,313	28,59,381	29,56,652	28,50,239
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	15,407	13,163	12,652	10,494	28,135	20,093
6. Maintenance and repairs ..	2,15,321	3,22,653	2,68,613	2,36,642	2,21,530	2,43,262
7. Establishment (direction and execution) ..	58,577	75,366	62,359	57,115	57,832	59,112
8. Tools and plant ..	51,424	53,086	22,832	26,545	31,653	27,912
Total ..	3,70,749	4,64,668	3,66,456	3,30,796	3,42,152	3,49,479
II. Revenue Management.						
Establishment—						
9. Direction ..	24,323	28,945	32,143	33,798	34,685	33,525
10. Execution ..	97,282	1,15,779	1,38,570	1,35,194	1,38,538	1,34,161
11. Civil officers ..	1,91,521	1,19,803	1,33,098	1,38,030	1,45,630	1,38,252
Total ..	2,23,126	2,64,527	2,93,811	3,07,022	3,16,853	3,05,878
12. Total, Direct charges ..	5,93,875	7,29,195	6,60,267	6,46,821	6,58,955	6,55,357
INDIRECT.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	25,391	31,183	32,458	32,665	32,871	32,665
Total (Direct and Indirect) ..	6,19,276	7,60,278	6,92,725	6,79,486	6,91,826	6,88,022
Deduct—Old maintenance charges ..	4,900	4,900	4,900	4,900	4,900	4,900
14. Total, Working Expenses ..	6,14,376	7,55,378	6,87,825	6,74,586	6,86,926	6,83,122
15. Net revenue ..	14,68,971	16,98,201	20,47,488	21,84,775	22,69,117	21,67,117
16. Capital outlay, direct and indirect.	1,16,67,471	1,31,24,179	1,36,05,531	1,37,55,726	1,40,10,725	1,37,90,660
17. Percentage of net revenue ..	12.59	12.94	15.45	15.88	16.00	15.71
18. Area charged as irrigated, acres ..	504,643	523,094	539,354	600,092	629,650	606,311
19. Average of water-rates (item 1) per acre charged as irrigated ..	4.16	4.71	4.66	4.74	4.68	4.70
20. Total establishment charges per acre charged as irrigated (items 7 and 9-11) ..	0.56	0.65	0.60	0.60	0.60	0.60
21. Working expenses per acre charged as irrigated ..	1.21	1.44	1.16	1.12	1.09	1.12

During the three years under review there was a steady increase in the receipts and a considerable falling off in the working expenses. The increase in the receipts was due to the extension of irrigation and to the favourable character of the season. The reduction in the working expenses was mainly effected under the head of "maintenance and repairs." The increase in the average working expenses of the triennial period

CLASS I.—KISTNA DELTA SYSTEM—*cont.*

ending March 1899, as compared with the averages of the other two periods, was due to extensive repairs carried out during 1896-97 in restoring damages to works caused by the abnormal floods in the river during August 1896. The average net revenue for the triennium under review is more than the averages for the previous periods ending March 1896 and 1899 by Rs. 6,98,146 and Rs. 4,68,916, respectively. The result is highly satisfactory.

4. The interest charges for, and up to the end of, the triennial period under review are given below:—

—	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	RS.	RS.	RS.	RS.	RS.
Interest charges ..	1,01,12,450	5,03,985	5,10,170	5,17,333	1,16,43,938

At the end of the triennium under review the accumulated net surplus revenue realized after paying interest charges amounted to Rs. 2,51,81,377 against a capital outlay of Rs. 1,40,10,725.

5. Rainfall.

—	Average of fourteen years ending March 1899.	Period under review.			Average of seventeen years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	INCHES.	INCHES.	INCHES.	INCHES.	INCHES.
Whole year ..	33.13	13.43	31.36	24.17	31.34

6. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
	ACS.	ACS.	ACS.	INCHES.
1893-94 ..	480,902	1,741	482,643	33.42
1894-95 ..	493,476	2,470	495,946	33.80
1895-96 ..	500,196	261	500,457	41.07
Triennial average ..	491,525	1,990	493,515	36.09
1896-97 ..	479,711	654	480,365	30.87
1897-98 ..	537,016	357	537,373	27.40
1898-99 ..	535,399	101	535,500	27.40
Triennial average ..	517,709	370	518,079	29.56
1899-1900 ..	575,029	545	575,574	13.43
1900-1901 ..	590,752	218	590,970	31.86
1901-1902 ..	622,295	158	622,453	24.17
Triennial average ..	596,025	307	596,332	22.99

NOTE.—The areas shown above do not correspond with those entered in the "table of areas" (page 11) which represent areas charged as irrigated.

There was a steady increase in the area irrigated during the three years under review, the average extent during the triennium being 78,253 acres more than that of the previous period and 103,315 acres more than the average of the period ending March

CLASS I.—KISTNA DELTA SYSTEM—*cont.*

1896. The increase is due to the gradual extension of irrigation. The area under second crop is only a small fraction of that under first crop owing to the small quantity of water available in the river during November, December and January.

7. Areas irrigated by districts.

Districts.	Areas irrigated.		
	First crop.	Second crop.	Total.
1	2	3	4
<i>Godavari district.</i>			
1899-1900	27,369	7	27,376
1900-1901	30,838	15	30,853
1901-1902	32,113	38	32,151
Triennial average ..	30,106	20	30,126
<i>Kistna district.</i>			
1899-1900	546,215	538	546,753
1900-1901	558,683	203	558,886
1901-1902	588,958	120	589,078
Triennial average ..	564,620	267	564,907
<i>Nellore district.</i>			
1899-1900	1,445	..	1,445
1900-1901	1,226	..	1,226
1901-1902	1,224	..	1,224
Triennial average ..	1,298	..	1,298

8. Duty of water.

NOTE.—Please see remarks under paragraph 8 of the Godavari delta system.

An Executive Engineer has been on special duty since 1899 in investigating the ultimate area of irrigation under each canal of the system, in gauging the discharge of canals with water at different levels and the concurrent discharge into distributaries and over lock weirs and escapes in order to ascertain the duty of water at different periods of the irrigation season, and in determining, with the results of the gaugings, the co-efficients of discharge of the sluices of different types and weirs for as large a range of heads as possible. This work was in progress during the triennium under review, but owing to the paucity of officers available for divisional charges the special officer was also given an executive charge to the detriment of his special work.

9. Assessments, collections and remissions.

No. of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		RS.	RS.	RS.	RS.	RS.	RS.
1	Opening balance of the year.	..	..	..	..	..	..
2	Assessment (Irrigation revenue and Public Works receipts)	22,13,713	25,81,295	28,37,491	29,42,318	30,37,660	29,39,156
3	Surplus and excess recoveries.	..	..	..	..	..	..
	Total	22,13,713	25,81,295	28,37,491	29,42,318	30,37,660	29,39,156
4	Deduct remissions and refunds	69,371	58,716	31,178	11,957	10,617	17,917
5	Actual collections	21,64,347	25,24,579	28,06,313	29,30,361	30,27,043	29,21,239
6	Outstanding balance	..	..	..	..	..	..

CLASS I.—KISTNA DELTA SYSTEM—*cont.*

10. Navigation.

	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Number of railes open .. No.	303	307	307	307	307	307
Receipts Ra.	36,205	36,830	38,029	43,768	39,224	40,340
Rate per mile	119	120	134	142	128	131
Tonnage of cargo and passenger boats Tons.	368,235	195,496	924,901	543,546	425,308	631,252
Estimated value of cargo including rafts Ra.	1,45,29,988	1,36,88,317	98,03,907	1,17,56,947	1,11,60,290	1,10,73,715

The receipts in 1901-1902 are less than those in the previous year. This is due to the railway competition. The average receipts for the triennium under review are more than those for the two previous periods ending March 1896 and 1899 by Rs. 3,847 and Rs. 3,212, respectively.

11. Miscellaneous Revenue.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Sale of water	..	..	..	12	..	4
Water supply of towns	1,364	1,364	1,364	1,364	..	999
Plantations	4,413	5,995	10,907	26,225	3,776	13,637
Other canal produce	8,667	10,963	8,468	13,311	25,537	15,802
Water power	..	..	..	..	..	..
Rents of buildings	1,819	1,723	2,004	1,836	1,804	1,881
Fines	70	32	..	..	3	1
Miscellaneous	423	762	803	550	406	586
Total	16,756	20,839	23,536	43,298	31,626	32,826

The average receipts during the triennial period under review was Rs. 11,981 more than that of the previous period, and nearly double that of the period ending March 1896. The increase in the receipts of 1900-1901 over those of the previous year was due to the sale of tumma (babool) trees of over 3 feet girth along drains and canals.

12. Maximum floods.

Name of river.	1899-1900.		1900-1901.		1901-1902.		Highest recorded flood.	
	Date.	Reading.*	Date.	Reading.*	Date.	Reading.*	Date.	Reading.
1	2	3	4	5	6	7	8	9
		FEET.		FEET.		FEET.		FEET.
The Kistna	16th Sept. 1899.	10-50	20th July 1900.	15-50	16th Aug. 1901.	11-70	6th Aug. 1896.	15-30

* Above the crest of anicut + 47-50.

NOTE.—When the highest recorded flood occurred on the 6th August 1896 the crest level was + 49-25.

In 1900-1901 the highest flood in the Kistna occurred on the 20th July 1901 when 15-50 feet of water passed over the crest of the anicut. It subsided slowly to 4-8 feet on the 1st August, and rose steadily again to 14 feet and remained at that level for 13 days, and then subsided to 4-7 feet on the 28th August. This is the longest substantial flood on record. No damage was done to any of the irrigation works.

CLASS I.—KISTNA DELTA SYSTEM—cont.

13. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1896-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and Improvements ..	Rs. 16,407	Rs. 13,463	Rs. 12,552	Rs. 19,494	Rs. 23,135	Rs. 20,093
REPAIRS.						
Head works	18,513	29,753	21,649	10,933	11,218	14,529
Main and branch canals	1,51,816	1,63,945	1,41,075	1,22,921	1,27,810	1,32,936
Distributaries	63,864	1,05,833	78,974	84,368	68,615	76,386
Drainage and protective works ..	11,038	23,122	27,815	11,420	16,989	18,741
Total ..	2,60,738	3,36,118	2,81,255	2,56,136	2,82,665	2,63,365

The large increase under repairs during the triennial period ending 31st March 1899 was due to extensive repairs carried out in 1896-97 on account of damages caused by the abnormal flood in the Kistna during August 1896.

RE			
	RIVER		
	CANAL		
	DRAIN		
	TANK		
	RAILWAY		
14			
30			
IRRIGATION WORKS IN THE KISTNA SYSTEM. (CONTINUED)			
No.	Particulars	M. Feet	Remarks.
	CHANNEL		
	Regulator	5 2310	
	Drop & Regulator	6 4092	
	do.	8 792	
	do.	10 3762	
	do.	12 1650	Now added
	MAIN CANAL		
	Regulator (Item 52)	" "	
	Drop & Regulator	7 4290	
1	Main Head Sluice	7 4290	
2	Auxiliary Head Sluice	7 4290	
3	Drainage Inlet No. 1	8 4390	
	Sluice	9 4490	
	Drop	9 2550	
4	Jaffer Sahib Regulator	9 2550	
5	Nabobpett Bridge	9 2550	
6	Navalaka Synch. Chl.	9 5130	
7	Atipuram Regulator No. 2	9 5130	
8	Kudithipalem Regulator	9 5130	
	CHANNEL		
9	Narainreddipalem		
	HEAD SLUICE		
10	Drainage Inlet	5 1488	do.
10A	East coast Rail Bridge	6 1433	
11	Ranganakulapalem	6 4429	
	Regulator	9 4456	
12	Stone housepot	10 4672	do.
13	Iron Aqueduct	10 4672	
14	Do. do.	13 1949	do.
15	Do. do.	13 2638	
16	Work shop Regulator		
17	Iron Aqueduct		
18	Kristnapatnam	5 2394	
19	Drainage Inlet No. 1	5 3573	do.
20	Iron Aqueduct	5 3791	do.
21	Iron Girder Bridge No. 1	6 3821	
	do. 2	7 1320	do.
22	Surplus Sluice	7 4005	
	do. 2	8 1890	do.
	do. 3	8 4495	do.
23	Kristnapatnam	9 829	do.
	do. 3	10 2750	
24	Iron aqueduct		
25	Gundamatem		
26	Kakunalli Drop	5 2394	
27	Synon for Vary	5 3573	do.
28	Bramhadevam	5 3791	do.
29	Pannampuram	6 3821	
30	Drainage Synch. No. 1	7 1320	do.
31	Tallapudi Bridge	7 4005	
32	Muttukur Drop	8 1890	do.
	do. 3	9 4495	do.
	Jaffer Sahib	9 829	do.
	KODUR CH	10 2750	
	Ball Tank	11 5252	
33	Walker's Bridge	12 2260	
34	Cherukur Regulator		
35	Do. Bridge		
36	Macheravaripalem	17 2666	
	Sluice	18 2322	
37	Pedur Regulator	20 3311	
38	Amalar Regulator	20 2616	
39	Venampudi Drop	22 2559	
40	Narukur Regulator	22 2170	
41	Narigonda Channel		
42	Chinna Cherukur		
43	Papireddipalem	9 614	
	Head Sluice	9 1435	
	Jaffer Sahib		
	KUDITHIPALEM		
44	Lebur Regulator	10 308	
45	Palipad	10 3229	do.
46	Nidimuchli	10 3455	do.
	GANGAPATNA	12 749	
47	Drop No. 1	14 642	
48	Panner Regulator		
49	Drop No. 2	13 265	
50	Iron Aqueduct		
51	Synon		
51A	Kalavamoota		
51B	Pine Sluice		
51C	Regulator		

CLASS I.
Major Works.
PENNER RIVER CANALS SYSTEM.
STATEMENT showing the areas charged as irrigated.

Year.	Area in acres.			Remarks.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1860-1861	ACRES. 32,867	ACRES. 18	ACRES. 32,915	
1861-1862	32,901	203	33,104	
1862-1863	34,846	84	..	
Triennial average	33,548	101	..	
1863-1864	38,291	125	38,416	
1864-1865	39,909	121	40,090	
1865-1866	40,412	242	40,654	
Triennial average	39,557	169	39,720	
1866-1867	54,967	203	55,170	
1867-1868	56,027	192	56,219	
1868-1869	61,139	331	61,520	
Triennial average	57,377	256	57,636	
1869-1870	62,656	233	62,889	
1870-1871	61,983	206	62,189	
1871-1872	58,509	86	58,594	
Triennial average	61,049	174	61,190	
1872-1873	58,498	355	58,854	
1873-1874	59,154	336	59,490	
1874-1875	56,962	819	57,781	
Triennial average	56,204	503	56,708	
1875-1876	57,779	321	58,100	
1876-1877	19,677	62	19,759	A year of scanty rainfall and drought.
1877-1878	58,501	5,527	64,028	
Triennial average	45,319	1,976	47,295	
1878-1879	52,373	913	53,286	
1879-1880	62,137	872	63,009	
1880-1881	63,973	595	64,568	
Triennial average	62,161	793	62,954	
1881-1882	63,243	701	63,944	
1882-1883	63,553	625	64,178	
1883-1884	62,832	887	63,719	
Triennial average	63,243	736	63,981	
1884-1885	61,905	1,138	63,043	
1885-1886	106,723	2,521	109,244	
1886-1887	108,933	1,968	110,901	* Increase due to the addition of the Sangam anicut project.
Triennial average	92,520	1,876	94,396	
1887-1888	112,249	4,631	116,880	
1888-1889	111,057	4,534	115,591	
1889-1890	124,496	6,601	131,097	
Triennial average	115,934	5,255	121,189	
1890-1891	127,971	5,323	133,304	
1891-1892	74,185	676	74,861	
1892-1893	186,710	12,328	199,038	
Triennial average	112,955	6,112	119,067	Decrease due to very insufficient supply of water in the river on account of unfavourable season.
1893-1894	128,279	7,026	135,305	
1894-1895	140,791	7,445	148,237	
1895-1896	141,449	6,026	147,475	
Triennial average	140,173	6,833	146,673	
1896-1897	137,583	10,356	147,939	
1897-1898	138,276	8,466	146,741	
1898-1899	142,470	7,983	150,453	
Triennial average	139,443	8,935	148,378	Decrease due to the unfavourable character of the season.
1899-1900	136,070	4,613	140,683	
1900-1901	145,387	12,349	157,736	
1901-1902	147,874	12,652	160,526	
Triennial average	143,110	9,938	153,048	Decrease due to inadequate freshes in the river.

CLASS I.—PENNER RIVER CANALS SYSTEM—cont.

STATEMENT showing the capital outlay, interest charges, sum at charge, gross revenue, working expenses and net revenue.

Years.	Capital outlay, direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year (columns 2 + 3 — 4).	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1860-1861 ..	4,44,133	52,968	— 46,359	5,43,430	2,181	— 4,448	6,329	1.49
1861-1862 ..	5,30,439	71,240	— 36,920	6,38,599	11,497	— 16,194	27,691	5.22
1862-1863 ..	6,05,011	92,507	— 16,966	7,14,554	25,440	— 15,791	41,231	6.81
Triennial average ..	5,26,539	72,245	— 33,411	6,32,194	13,039	— 12,146	25,184	4.78
1863-1864 ..	6,54,053	1,18,295	5,111	7,66,237	38,795	— 7,060	45,855	7.01
1864-1865 ..	6,83,455	1,41,470	42,401	7,82,124	48,604	— 14,861	62,865	9.19
1865-1866 ..	6,93,297	1,67,357	72,819	7,87,835	51,043	— 4,862	55,905	8.06
Triennial average ..	6,76,935	1,41,707	40,244	7,78,308	45,947	— 8,923	54,875	8.10
1866-1867 ..	6,99,865	1,92,533	1,18,947	7,74,451	65,423	— 6,881	72,304	10.33
1867-1868 ..	7,82,242	2,21,400	1,52,699	8,51,043	69,291	— 1,225	61,519	7.86
1868-1869 ..	8,84,598	2,52,657	1,87,423	9,49,832	79,652	— 13,581	66,081	7.47
Triennial average ..	7,88,902	2,22,530	1,52,990	8,58,442	68,459	— 1,524	66,935	8.44
1869-1870 ..	10,03,533	2,87,233	2,47,541	10,43,225	89,231	— 5,463	94,694	9.43
1870-1871 ..	11,24,237	3,25,012	2,78,225	11,71,024	87,550	— 19,087	68,463	8.09
1871-1872 ..	12,45,882	3,66,511	2,87,189	13,25,254	72,861	— 22,443	50,413	4.04
Triennial average ..	11,24,550	3,26,252	2,70,968	11,79,834	83,214	— 12,024	71,190	6.33
1872-1873 ..	12,64,331	4,10,425	2,89,241	14,05,585	73,964	— 27,878	46,086	3.58
1873-1874 ..	13,26,354	4,55,571	2,87,707	14,94,218	69,624	— 25,232	44,392	3.28
1874-1875 ..	14,02,733	5,02,355	2,47,186	16,67,603	52,723	— 46,162	6,561	0.46
Triennial average ..	13,37,806	4,66,140	2,74,811	15,19,135	65,503	— 39,441	26,064	2.39
1875-1876 ..	15,94,884	5,53,557	2,57,671	18,96,770	55,289	— 28,913	26,376	3.84
1876-1877 ..	16,41,838	6,08,955	98,249	21,52,544	89,222	— 14,802	74,420	6.33
1877-1878 ..	16,47,725	6,66,333	1,50,007	21,83,051	1,17,740	— 9,604	1,08,136	6.65
Triennial average ..	16,28,149	6,09,281	1,63,642	20,69,783	87,939	— 16,106	71,833	1.34
1878-1879 ..	16,49,172	7,21,851	1,88,938	21,84,085	1,18,624	— 25,175	93,449	5.63
1879-1880 ..	16,57,078	7,78,540	2,14,214	22,21,404	1,21,931	— 37,965	83,965	5.06
1880-1881 ..	17,08,208	8,35,371	2,67,417	22,76,152	1,30,577	— 20,543	1,10,034	6.44
Triennial average ..	16,71,486	7,78,587	2,22,856	22,27,217	1,28,711	— 27,895	1,00,816	5.73
1881-1882 ..	18,94,151	8,92,202	3,11,294	24,75,059	1,27,510	— 26,502	1,00,708	5.31
1882-1883 ..	24,69,151	9,74,443	3,32,322	31,01,272	1,30,122	— 26,853	1,03,269	4.19
1883-1884 ..	30,76,132	10,73,431	3,27,749	38,21,814	1,30,401	— 39,986	90,415	3.07
Triennial average ..	24,76,478	9,80,025	3,33,783	31,32,715	1,29,344	— 29,880	99,464	4.02
1884-1885 ..	37,06,771	11,96,614	3,11,072	45,92,313	1,27,928	— 21,422	1,06,506	2.87
1885-1886 ..	46,69,383	13,42,428	2,78,987	57,32,824	1,70,194	— 25,502	1,44,692	3.09
1886-1887 ..	50,98,236	15,04,931	2,93,775	63,09,392	1,95,162	— 48,734	1,46,428	2.87
Triennial average ..	44,91,463	13,47,991	2,94,611	55,44,843	1,64,428	— 31,886	1,32,542	2.95
1887-1888 ..	53,01,872	16,77,655	2,83,079	66,96,448	2,24,273	— 62,347	1,61,928	3.05
1888-1889 ..	54,25,599	18,56,517	2,42,389	70,39,727	2,04,435	— 66,271	1,38,164	2.55
1889-1890 ..	54,87,847	20,38,797	2,72,635	72,64,069	2,74,624	— 77,090	1,97,534	3.59
Triennial average ..	54,05,106	18,57,655	2,66,034	69,99,728	2,34,444	— 68,568	1,65,875	3.07
1890-1891 ..	55,15,412	22,32,730	2,56,305	74,81,837	2,79,888	— 97,295	1,82,593	3.31
1891-1892 ..	55,51,745	24,07,557	28,994	79,33,305	13,174	— 56,658	— 42,484	— 0.77
1892-1893 ..	55,74,037	25,93,102	98,628	80,68,511	3,41,597	— 89,418	2,52,179	4.57
Triennial average ..	55,49,065	24,07,766	1,27,976	78,27,885	2,11,556	— 79,700	1,31,756	2.37
1893-1894 ..	56,38,592	27,80,125	1,70,879	82,46,238	3,38,940	— 79,665	2,59,274	4.59
1894-1895 ..	59,71,052	29,68,895	2,50,654	83,80,233	3,52,541	— 74,998	2,77,543	4.53
1895-1896 ..	57,00,148	31,58,720	3,40,837	85,18,001	3,80,644	— 89,666	2,71,038	4.66
Triennial average ..	58,09,397	29,69,247	2,57,133	83,61,511	3,50,708	— 81,423	2,69,285	4.75

CLASS I.—PENNER RIVER CANALS SYSTEM—cont.

Statement showing the capital outlay, interest charges, sum at charge, gross revenue, working expenses and net revenue—cont.

Years.	Capital outlay, direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year (columns 2 + 3 — 4).	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1896-1897 ..	57,24,788	33,49,438	4,24,456	86,49,770	3,51,596	— 77,316	2,74,280	4.79
1897-1898 ..	57,55,200	35,41,009	5,19,016	87,77,193	3,51,872	— 65,741	2,86,131	4.95
1898-1899 ..	57,77,606	37,33,388	6,39,408	88,71,786	3,71,979	— 59,208	3,12,771	5.39
Triennial average ..	57,52,398	35,41,278	5,27,627	87,66,249	3,58,482	— 67,412	2,91,070	5.05
1899-1900 ..	58,54,227	39,27,695	6,68,782	91,13,140	2,76,281	— 52,600	2,23,681	3.52
1900-1901 ..	69,59,738	41,25,419	7,95,378	92,89,779	3,76,418	— 64,097	3,24,320	5.44
1901-1902 ..	60,90,130	43,27,557	9,17,806	94,99,881	3,91,795	— 67,329	3,24,466	5.32
Triennial average ..	59,68,032	41,26,890	7,93,989	93,00,933	3,46,831	— 58,068	2,90,823	4.87

CLASS I.—PENNER RIVER CANALS SYSTEM—cont.

1. The following table shows the capital outlay :—

Systems.	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
IMPERIAL.					
<i>Direct Charges.</i>					
Works	Rs. 38,53,615	Rs. 60,609	Rs. 83,793	Rs. 1,03,928	Rs. 41,01,845
Establishment	8,23,826	13,870	19,051	23,214	8,79,691
Tools and Plant	1,43,047	..	..	..	1,43,047
Loss by exchange	..	..	..	..	..
Total	48,20,488	74,479	1,02,844	1,27,142	51,24,958
Less—Receipts on Capital Account	55	..	..	..	55
Total, Direct Charges	48,20,433	74,479	1,02,844	1,27,142	51,24,893
Indirect Charges	9,57,373	1,942	2,667	3,250	9,65,232
Total Outlay, Direct and Indirect	57,77,806	76,421	1,05,511	1,30,392	60,90,130

Previous to 1899-1900, these canals formed two separate systems, viz., the Sangam anicut and the Penner anicut systems. The capital outlay on the former was charged to Provincial 43. Minor Works and Navigation pending the submission of the completion report of the system. On the submission of this report, the Government of India in their letter No. 738 C. W. I., dated 20th July 1899, sanctioned the amalgamation of the accounts of the two systems and directed that the capital outlay from 1899-1900 on the combined projects known as the "Penner river canals" should be met from Imperial funds under "49. Capital expenditure not charged to Revenue"—Open capital account.

The following are the important works carried out during the period under review :—

Diverting the surplus of the Kanigiri reservoir into the Pydern, improvements to Nellore tank supply channel; widening the Mudiverti drain, and diverting the drain from rear of Kanigiri reservoir bund.

2. Lengths of channels.

	Lengths of channels in miles				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
PENNER RIVER CANALS SYSTEM.					
	ACS.				ACS.
Length of main and branch canals (both for irrigation and navigation) Miles.	31	..	..	..	31
Of the above navigable "	Nil.	..	..	..	Nil.
Distributaries (for irrigation only) "	415	..	..	..	416
Gross area under command Acres.	258,600	..	..	..	258,600

There was no change in the length of main or branch canals or distributaries.

CLASS I.—PENNER RIVER CANALS SYSTEM—cont.

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1892.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (irrigation)	Rs. 6,05,601	Rs. 6,12,919	Rs. 5,30,589	Rs. 6,32,031	Rs. 6,44,308	Rs. 6,02,309
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	1,143	1,672	1,595	2,387	3,612	2,531
Total	6,06,744	6,14,491	5,32,284	6,34,418	6,47,920	6,04,840
Less—Refunds of revenue	36	9	3	1	25	9
Total	6,06,708	6,14,482	5,32,281	6,34,417	6,47,795	6,04,831
Deduct—Share due to old irrigation	2,56,000	2,56,000	2,56,000	2,56,000	2,56,000	2,56,000
4. Total, Receipts	3,50,708	3,58,482	2,76,281	3,78,417	3,91,795	3,48,831
WORKING EXPENSES.						
DIRECT CHARGES.						
<i>I. Works.</i>						
5. Extensions and improvements	7,492	5,644	5,065	6,328	14,637	6,743
6. Maintenance and repairs	55,608	44,935	42,879	52,589	32,540	36,035
7. Establishment (direction and execution)	14,218	11,312	10,997	9,001	10,894	10,264
8. Tools and plant	68	384	257	223	1,183	556
Total	77,446	62,225	59,198	48,441	59,169	55,602
<i>II. Revenue Management.</i>						
<i>Establishment.</i>						
9. Direction	6,796	6,857	5,876	7,114	7,269	6,753
10. Execution	27,185	27,430	23,505	28,459	29,075	27,013
11. Civil Officers	17,480	17,841	13,843	18,490	19,103	16,979
Total	51,461	52,128	42,724	54,063	55,447	50,745
12. Total, Direct Charges	1,28,907	1,14,353	1,01,922	1,02,504	1,14,616	1,06,347
INDIRECT CHARGES.						
13. Capitalized abatement of Land revenue and leave and pension allowances	7,516	8,059	5,678	6,593	7,713	6,661
Total (Direct and Indirect)	1,36,423	1,22,412	1,07,600	1,09,097	1,22,329	1,13,008
Deduct—Old maintenance charges	55,000	55,000	55,000	55,000	55,000	55,000
14. Total, Working Expenses	81,423	67,412	52,600	54,097	67,329	58,003
15. Net revenue	2,69,285	2,91,070	2,23,681	3,24,320	3,24,466	2,90,823
16. Capital outlay, direct and indirect	58,69,397	57,52,598	58,54,227	59,59,738	60,90,130	59,58,032
17. Percentage of net revenue	4.75	5.06	3.82	5.44	5.33	4.87
18. Area charged as irrigated, acres	146,673	149,373	140,683	157,736	160,726	153,048
19. Average water-rate (item No. 1) per acre charged as irrigated	4.13	4.13	3.77	4.00	4.00	3.93
20. Total establishment charges per acre irrigated (items 7 and 9-11)	0.45	0.43	0.38	0.40	0.41	0.39
21. Working expenses (per acre charged as irrigated)	0.56	0.45	0.37	0.34	0.42	0.38

The decrease in the average receipts of the triennial period under review as compared with the two previous periods was due to large remissions granted in 1899-1900 owing to late and inadequate freshes in the Penner. There has been a steady decrease in the working expenses. The average net revenue of the triennial period under review is nearly equal to that of the previous period ending March 1899 and more than that of the triennium ending March 1896 by Rs. 21,538.

CLASS I.—PENNER RIVER CANALS SYSTEM—cont.

4. Interest charges.

1	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	
Interest charges	Rs. 37,33,338	Rs. 1,94,307	Rs. 1,97,724	Rs. 2,02,038	Rs. 43,27,457

5. Rainfall.

1	Average of fourteen years ending March 1899.	Period under review.			Average of seventeen years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	
Whole year	INCHES. 31.81	INCHES. 22.21	INCHES. 49.95	INCHES. 68.07	INCHES. 34.48

6. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-1894	ACS. 102,166	ACS. 34,737	ACS. 136,903	INCHES. 40.94
1894-1895	119,684	21,086	140,770	30.12
1895-1896	117,664	19,819	137,483	31.56
Triennial average ..	113,171	25,234	138,405	34.21
1896-1897	128,338	10,525	138,864	35.23
1897-1898	130,333	8,459	138,792	17.16
1898-1899	135,371	7,981	143,352	29.63
Triennial average ..	130,681	8,985	139,666	28.34
1899-1900	126,148	4,613	130,761	22.21
1900-1901	138,997	12,340	151,337	49.96
1901-1902	142,022	12,552	154,574	68.07
Triennial average ..	135,722	9,335	145,057	46.95

NOTE.—The areas shown here do not correspond with those entered in the "table of areas" (page 19) which represent areas charged as irrigated.

There was a steady increase in the area irrigated except in the year 1899-1900. The decrease in this year is, as already noticed in the remarks under paragraph 3, due to low and inadequate freshes in the Pennér.

7. Duty of water.

Year and crop.	Area irrigated.	Number of days the canal was open.	Average supply.		Duty.	
			At head.	Utilised.	At head.	Utilised.
1	2	3	4	5	6	7
1899-1900—	ACS.		C FT. PER SECOND.		ACS.	
1st crop	126,148	..	719	..	175.44	..
2nd crop	4,613	..	75	..	61.51	..
1900-1901—						
1st crop	138,997	..	1,021	..	59.37	..
2nd crop	12,340	..	452	..	13.80	..
1901-1902—						
1st crop	142,022	..	819	..	173.30	..
2nd crop	12,552	..	414	..	31.31	..

NOTE.—Please see remarks under paragraph 8 of the Godavari delta system.

CLASS I.—PENNER RIVER CANALS SYSTEM—cont.

8.—Assessments, collections and remissions.

No. of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Opening balance of the year ..	..	..	..	..	..	..
2	Assessment (Irrigation revenue and Public Works receipts) ..	6,21,938	5,33,220	6,04,357	6,44,484	6,61,111	6,36,651
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	6,21,938	5,33,220	6,04,357	6,44,484	6,61,111	6,36,651
4	Deduct remissions and refunds ..	15,250	18,738	72,076	10,067	13,316	31,820
5	Actual collections	6,06,708	5,14,482	5,32,281	6,34,417	6,47,795	6,04,831
6	Outstanding balance	..	..	..	..	..	..

NOTE.—For explanation of variations in the figures please see remarks under paragraph III.

9.—Miscellaneous revenue.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sale of water	..	..	..	..	..	..
Water supply of towns	..	..	..	..	..	..
Plantations	..	97	..	..	..	..
Other canal produce	932	1,358	1,472	2,059	3,245	2,259
Water-power	..	..	..	..	..	..
Rents of buildings	202	217	222	235	267	258
Fines	..	..	..	..	..	..
Miscellaneous	9	..	1	43	..	14
Total	1,143	1,672	1,695	2,587	3,512	2,531

10.—Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Extensions and Improvements ..	7,492	5,644	6,065	6,028	14,527	8,743
REPAIRS.						
Head works	7,301	5,212	3,593	5,643	3,740	4,327
Main and branch canals	18,383	17,423	17,796	11,404	13,843	14,345
Distributaries	29,741	21,932	21,304	15,614	14,232	17,947
Drainage and protective works ..	243	368	162	13	775	316
Total	65,160	50,579	47,944	39,217	47,177	44,778

CLASS I.

Major Works.

KURNOOL-CUDDAPAH CANAL.

STATEMENT showing the areas charged as irrigated.

Year.				Area in acres.		
				First crop.	Second crop.	Total.
1	2	3	4	5	6	7
1882-1883	..	..	..	ACS.	ACS.	ACS.
1883-1884	..	..	..	Details not available.	Details not available.	17,834
1884-1885	..	..	..			19,674
1885-1886	..	..	..			25,551
1886-1887	..	..	..			22,801
1887-1888	..	..	..			22,676
Triennial average	..	..	..			23,703
1887-1888	..	..	..			21,927
1888-1889	..	..	..			34,999
1889-1890	..	..	..	18,722	3,129	21,851
Triennial average	..	..	..			23,259
1890-1891	..	..	..	20,588	4,160	24,748
1891-1892	..	..	..	66,223	7,194	73,417
1892-1893	..	..	..	24,760	5,986	30,746
Triennial average	..	..	..	37,197	5,780	42,977
1893-1894	..	..	..	25,500	5,924	31,424
1894-1895	..	..	..	23,594	6,346	33,540
1895-1896	..	..	..	23,616	6,287	32,903
Triennial average	..	..	..	23,987	6,405	32,622
1896-1897	..	..	..	79,077	8,149	87,226
1897-1898	..	..	..	39,262	7,682	47,134
1898-1899	..	..	..	38,074	10,136	48,610
Triennial average	..	..	..	52,344	8,723	61,068
1899-1900	..	..	..	70,871	8,345	77,216
1900-1901	..	..	..	43,528	12,531	62,158
1901-1902	..	..	..	53,718	9,814	68,532
Triennial average	..	..	..	56,739	9,563	69,302

CLASS I.—KURNOOL-CUNDAPAH CANAL—*cont.*

STATEMENT showing the Capital outlay, Interest charges, Sum at charge, Gross revenue, Working expenses, and Net revenue.

Year.	Capital outlay direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge to end of year (column 2 + 3 - 4).	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1883-1884	2,17,04,172	13,00,843	— 15,34,994	4,45,30,012	39,544	1,90,984	— 1,50,440	— 0.73
1884-1885	2,16,36,624	21,67,662	— 24,74,109	2,62,78,395	1,32,286	2,14,585	— 82,299	— 0.38
1885-1886	2,16,59,353	30,33,582	— 32,61,449	2,81,44,284	85,000	1,96,420	— 1,11,420	— 0.51
1886-1887	2,16,66,457	28,99,878	— 44,41,516	2,92,96,860	65,944	1,89,734	— 1,23,770	— 0.67
Triennial average ..	2,16,60,478	30,33,707	— 34,65,681	2,81,59,876	94,417	2,00,246	— 1,05,830	— 0.48
1887-1888	2,16,44,790	47,66,883	— 53,66,944	3,17,97,622	55,518	1,44,942	— 79,424	— 0.36
1888-1889	2,16,42,845	56,31,632	— 63,22,344	3,86,96,521	77,860	1,47,411	— 69,551	— 0.31
1889-1890	2,16,41,679	64,97,318	— 72,96,766	3,58,75,763	75,861	1,24,777	— 48,916	— 0.22
Triennial average ..	2,16,43,039	66,31,011	— 63,15,315	3,35,83,965	73,110	1,39,043	— 65,934	— 0.30
1890-1891	2,16,41,806	73,62,976	— 81,40,095	3,71,44,376	1,19,768	1,57,437	— 37,670	— 0.17
1891-1892	2,16,40,775	82,28,619	— 89,97,463	3,88,66,806	1,37,613	1,29,333	— 8,280	— 0.03
1892-1893	2,16,65,849	90,04,738	— 98,34,581	4,06,45,168	1,41,956	1,62,982	— 21,026	— 0.09
Triennial average ..	2,16,49,293	82,28,778	— 90,07,377	3,89,66,449	1,33,109	1,49,911	— 16,802	— 0.07
1893-1894	2,16,93,029	99,61,876	— 1,07,66,121	4,24,20,028	1,29,440	1,42,842	— 13,402	— 0.06
1894-1895	2,16,95,111	1,08,29,584	— 1,16,29,453	4,41,54,148	1,13,056	1,09,680	— 3,376	— 0.01
1895-1896	2,17,00,660	1,16,97,431	— 1,24,66,879	4,68,64,860	1,39,731	1,09,316	— 30,415	— 0.14
Triennial average ..	2,16,96,230	1,08,29,680	— 1,16,20,484	4,41,46,345	1,27,409	1,20,611	— 6,798	— 0.03
1896-1897	2,17,13,494	1,26,65,627	— 1,32,98,332	4,75,67,453	1,43,040	96,355	— 46,743	— 0.21
1897-1898	2,17,17,739	1,34,34,155	— 1,41,24,682	4,92,76,576	1,56,320	1,24,042	— 32,778	— 0.14
1898-1899	2,17,24,490	1,42,02,898	— 1,49,49,094	5,09,76,422	1,62,315	1,17,924	— 44,391	— 0.20
Triennial average ..	2,17,18,574	1,34,34,227	— 1,41,20,693	4,92,73,484	1,53,878	1,13,774	— 40,104	— 0.18
1899-1900	2,17,25,572	1,51,71,818	— 1,57,54,507	5,26,53,197	1,66,339	1,28,492	— 37,847	— 0.29
1900-1901	2,17,32,994	1,60,40,895	— 1,66,55,930	5,43,29,819	1,77,647	1,09,993	— 67,654	— 0.31
1901-1902	2,17,34,414	1,69,10,109	— 1,73,12,006	5,59,57,429	2,20,279	1,08,041	— 1,12,238	— 0.52
Triennial average ..	2,17,31,427	1,60,40,941	— 1,66,41,114	5,43,13,483	1,94,955	1,13,842	— 81,113	— 0.37

CLASS I.—KURNOOL-CUDDAPAH CANAL—cont.

1. The capital outlay of this canal is shown below :—

1	Outlay to end of March 1899	Outlay during			Outlay to end of March 1902
		1899-1900.	1900-1901.	1901-1902.	
	RS.	RS.	RS.	RS.	RS.
<i>Direct Charges.</i>					
Works	1,78,49,894	1,977	4,872	1,125	1,78,57,768
Establishment	16,159	399	1,067	259	18,884
Tools and Plant	40,80,918	..	..	..	40,80,918
Loss by exchange	..	..	..	..	..
Total	2,10,45,971	2,376	5,939	1,384	2,19,55,670
<i>Less—Receipts on Capital Account</i>	2,24,115	..	..	..	2,24,115
Total, Direct Charges	2,17,21,856	2,376	5,939	1,384	2,17,31,555
<i>Indirect Charges</i>	2,634	100	183	86	2,999
Total, Direct and Indirect	2,17,24,490	2,382	6,122	1,470	2,17,34,414

The canal was purchased from the late Madras Irrigation Canal Company by Government in July 1882. As it has not fulfilled the conditions of a Productive Public Work, the current capital outlay thereon is met from Provincial funds under the open Capital rules.

The outlay during the triennial period under review was incurred chiefly on constructing a new sluice and channel for the Pushpagherry lands in Kutur village, for constructing the Duganapally channel and for improving the Kamanoor channel.

2. Lengths of Channels.

Description of channel.	Lengths of channels in miles.				
	At end of March 1899.	Increase or decrease during			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of main and branch canals (both for irrigation and navigation) Miles.	190	..	..	..	190
Of the above, navigable	190	..	..	..	190
Distributaries (for irrigation only)	313	..	..	..	313
Gross area under command Acres.	821,515	..	..	..	821,515

There was no change in the lengths of the channels and area commanded during the triennial period under review.

CLASS I.—KURNOOL-CUDDAPAH CANAL—cont.

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
RECEIPTS.						
1. Water-rates (Irrigation)	1,18,094	1,46,713	1,79,121	1,70,783	2,09,718	1,86,541
2. Navigation	1,498	1,382	1,577	1,308	1,042	1,275
3. Miscellaneous	8,265	6,854	6,358	5,706	10,024	7,863
Total	1,27,855	1,53,979	1,87,056	1,77,897	2,20,784	1,95,179
<i>Less—Refunds of revenue</i>	445	191	117	50	505	224
4. Total Receipts	1,27,409	1,53,878	1,86,939	1,77,847	2,20,279	1,94,955
WORKING EXPENSES.						
<i>DIRECT CHARGES.</i>						
<i>I.—Works.</i>						
5. Extensions and Improvements	7,352	8,793	6,428	8,054	4,754	6,445
6. Maintenance and Repairs	75,282	64,118	72,526	61,502	57,967	63,999
7. Establishment (Direction and Execution)	18,753	17,898	18,096	15,679	14,387	16,147
8. Tools and Plant	1,509	1,274	1,697	1,335	2,819	1,917
Total	1,02,896	92,083	98,847	86,750	79,927	88,508
<i>II.—Revenue Management.</i>						
<i>Establishment.</i>						
9. Direction	1,552	1,904	2,308	2,188	2,738	2,412
10. Execution	6,364	7,613	9,232	8,750	10,052	9,544
11. Civil officers	5,838	7,336	8,066	8,539	10,486	9,327
Total	13,844	16,853	20,496	19,477	24,176	21,363
12. Total Direct Charges	1,16,740	1,08,936	1,19,343	1,06,227	1,04,103	1,09,871
<i>INDIRECT CHARGES.</i>						
13. Capitalized abatement of land revenue and leave and pension allowances	3,930	3,838	4,149	3,766	3,938	3,951
14. Total Working Expenses (Direct and Indirect)	1,20,611	1,12,774	1,23,492	1,09,993	1,08,041	1,13,842
15. Net revenue	6,798	41,104	63,447	67,654	1,12,238	81,113
16. Old irrigation revenue less old maintenance charges	..	..	..	..	..	..
17. Net revenue	6,798	41,104	63,447	67,654	1,12,238	81,113
18. Capital outlay, direct and indirect	2,16,96,230	2,17,18,574	2,17,26,872	2,17,32,994	2,17,34,414	2,17,31,427
19. Percentage of net revenue	0.03	0.18	0.29	0.31	0.52	0.37
20. Area charged as irrigated, acres.	32,822	61,066	77,216	62,159	68,532	69,302
21. Average water-rate (item 1) per acre charged as irrigated	3.62	2.40	2.32	2.75	3.06	2.69
22. Total establishment charges per acre irrigated (items 7 and 9 to 11)	1.00	0.57	0.50	0.57	0.56	0.54
23. Working expenses (direct and indirect) per acre charged as irrigated	3.70	1.85	1.60	1.77	1.64	1.67

The total receipts from water rates and miscellaneous revenue show a steady increase from the triennial period ending March 1896, except that, in 1900-1901, there was a falling off owing to the favourable character of the season, while the average cost of maintaining the canal during the triennium under review was less than that in the two preceding triennia, so that there was some improvement in the financial results as shown in the last triennial period.

CLASS I.—KURNOOL-CUDDAPAH CANAL—cont.

4. Interest charges.

1	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Interest charges	RS. 1,43,02,299	RS. 8,68,929	RS. 8,99,077	RS. 8,69,214	RS. 1,69,10,109

5. Rainfall.

1	Average of 14 years ending March 1899.	Period under review.			Average of 17 years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Whole year	INCHES. 25.90	INCHES. 13.42	INCHES. 24.69	INCHES. 18.56	INCHES. 24.67

In 1899-1900 in the districts traversed by the canal, there was a partial failure of the north-east monsoon in five taluks of the Cuddapah district which caused some distress, while in the Kurnool district the rainfall was below the average by 11.79 inches.

In 1900-1901 also the rainfall in parts of the Cuddapah district was deficient in consequence of which test-works had to be opened, but in the Kurnool district it was good.

In 1901-1902 both the districts suffered from scanty rainfall.

6. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First Crop.	Second Crop.	Total.	
1	2	3	4	5
1893-1894	ACS. 25,182	ACS. 5,967	ACS. 31,149	INCHES. 28.44
1894-1895	22,095	6,963	29,058	28.74
1895-1896	21,299	6,304	27,604	26.27
Triennial average ..	22,859	6,418	29,277	27.82
1896-1897	77,999	8,164	86,163	14.81
1897-1898	38,016	7,847	45,863	14.84
1898-1899	37,819	9,751	47,570	25.21
Triennial average ..	51,278	5,587	56,865	18.28
1899-1900	70,325	6,345	76,670	13.42
1900-1901	48,926	12,530	61,456	24.69
1901-1902	58,300	9,427	67,727	18.56
Triennial average ..	59,183	9,434	68,617	18.89

Note.—The areas shown here do not correspond with those entered in the table of areas (page 26) which represent areas charged as irrigated.

The average for the triennial period under review is more than that for any of the two preceding triennia. The increase shown in 1899-1900 is due to deficient rainfall which caused a brisk demand for canal water. The decrease in

CLASS I.—KURNOOL-CUDDAPAH CANAL—cont.

1900-1901 is attributed to the more favourable character of the season in the Kurnool district. The increase in 1901-1902 is the net result of an increase of 10,007 acres in the Kurnool district and of a decrease of 3,634 acres in the Cuddapah district. The increase in the Kurnool district was due to deficient rainfall which resulted in increasing the demand for canal water. The decrease in the Cuddapah district was partly due to interruption in the canal supply owing to accidents.

7. Areas irrigated by districts.

Districts.	Areas irrigated.		
	First crop.	Second crop.	Total.
1	2	3	4
<i>Kurnool.</i>	ACS.	ACS.	ACS.
1899-1900	53,826	3,379	57,205
1900-1901	30,114	4,169	34,283
1901-1902	38,433	5,708	44,141
Triennial average ..	40,791	4,398	45,189
<i>Cuddapah.</i>			
1899-1900	16,433	2,966	19,465
1900-1901	18,812	5,421	24,233
1901-1902	19,867	3,719	23,586
Triennial average ..	18,393	4,398	22,791

8. Assessments, collections and remissions.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
1. Opening balance of the year ..	RS. 41,057	RS. 61,152	RS. 89,044	RS. 93,025	RS. 1,14,113	RS. 98,727
2. Assessments (Irrigation revenue and Public Works receipts) ..	1,26,808	1,75,381	1,92,313	2,00,463	2,19,447	2,04,074
3. Surplus and excess recoveries ..	..	..	..	..	..	..
Total ..	1,67,865	2,36,533	2,81,357	2,93,488	3,33,560	3,02,801
4. Deduct remissions and refunds ..	2,382	1,432	1,393	1,829	2,383	1,868
Not	1,65,483	2,35,101	2,79,964	2,91,659	3,31,177	3,00,933
5. Actual collections	1,27,409	1,53,878	1,88,939	1,77,647	2,20,279	1,94,965
6. Outstanding balance	38,074	81,223	93,025	1,14,012	1,10,898	1,05,978

There was steady increase under collections during the last three triennial periods, except that in the year 1900-1901 there was a small decrease which did not, however, affect the average for the triennium under review.

9. Navigation.

	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Miles open	No. 120	120	120	120	120	120
Receipts	Rs. 1,496	1,382	1,577	1,208	1,042	1,276
Rate per mile	7.87	7.27	8.30	6.36	8.48	6.71
Tonnage of cargo and passenger boats	Tons. 1,933	2,083	1,608	4,939	2,454	3,003
Estimated value of cargo including rafts	Rs. 1,59,487	1,32,108	1,21,916	3,09,139	1,41,178	1,90,778

10. Miscellaneous Revenue.

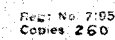
The average for the last triennial period is more than that in any of the two preceding periods, the increase being due chiefly to the sale of wood on the canal bank to the Kurnool municipality.

Name of river.	Locality.	1899-1900.		1900-1901.		1901-1902.		Highest recorded flood.	
		Date.	Reading.*	Date.	Reading.*	Date.	Reading.*	Date.	Reading.*
1	2	3	4	5	6	7	8	9	10
Tungabhadra ..	Sankesala Anicut.	20th Sept. 1899	4 10	19th July 1900	6 60	15th July 1901	5 78	6th Oct. 1885	10 00

12. Maintenance and repairs.

The variations in the averages for the triennial periods shown above are small and need no explanation.

The variations in the averages for the triennial periods shown above are small and need no explanation.



CLASS I.

Major Works.

BARUR TANK PROJECT.

STATEMENT showing the areas charged as irrigated.

Year.	Area in acres.		Total.	Remarks.
	First crop.	Second crop.		
1	2	3	4	5
1888-89	ACS. 722	ACS. 615	ACS. 1,337	
1889-90	1,061	661	1,712	
1890-91	1,581	1,122	2,703	
1891-92	1,743	1,014	2,757	
1892-93	2,127	1,457	3,584	
Triennial average ..	1,817	1,521	3,338	
1893-94	2,406	1,318	3,724	
1894-95	2,653	1,324	3,977	
1895-96	2,536	1,693	4,229	
Triennial average ..	2,533	1,812	4,345	
1896-97	2,609	1,511	4,120	
1897-98	2,654	1,757	4,411	
1898-99	2,887	2,014	4,901	
Triennial average ..	2,720	1,867	4,587	
1899-1900	2,113	2,451	4,564	
1900-1901	3,023	2,119	5,142	
1901-1902	3,078	2,393	5,471	
Triennial average ..	3,007	2,355	5,362	

STATEMENT showing the Capital outlay, Interest charges, Sum at charge, Gross revenue, Working expenses, and Net revenue.

Year.	Capital outlay, direct, and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year (columns 2 + 3 - 4).	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1888-1889	3,65,636	50,268	— 50,535	4,66,439	1,289	1,296	— 7	..
1889-1890	3,98,553	64,801	— 65,661	5,29,017	2,663	3,266	— 593	— 0.16
1890-1891	4,11,328	80,175	— 80,449	5,71,952	5,397	4,811	586	0.15
1891-1892	4,15,719	93,854	— 98,664	6,10,237	5,483	8,019	— 2,536	— 0.60
1892-1893	4,18,590	1,11,059	— 1,12,067	6,42,816	7,263	4,661	2,402	0.67
Triennial average ..	4,15,212	95,896	— 97,330	6,08,168	6,048	5,897	151	0.01
1893-1894	4,19,244	1,27,529	— 1,23,620	6,76,393	9,079	4,762	4,317	1.03
1894-1895	4,19,713	1,43,408	— 1,34,343	6,97,464	9,868	4,712	5,156	1.23
1895-1896	4,23,461	1,59,360	— 1,44,897	7,27,718	9,091	3,683	5,398	1.27
Triennial average ..	4,20,806	1,43,432	— 1,34,283	6,99,624	9,346	4,389	4,957	1.09
1896-1897	4,25,045	1,75,416	— 1,58,579	7,56,040	9,533	4,162	5,371	.26
1897-1898	4,25,045	1,91,593	— 1,65,744	7,82,292	9,624	3,702	5,922	1.39
1898-1899	4,25,045	2,07,590	— 1,75,321	8,07,956	10,195	2,595	7,510	1.77
Triennial average ..	4,25,045	1,91,593	— 1,65,548	7,82,096	9,755	3,488	6,267	1.47
1899-1900	4,25,541	2,23,687	— 1,82,062	8,31,230	11,530	3,114	8,416	1.98
1900-1901	4,26,848	2,34,517	— 1,92,461	8,59,166	10,747	5,066	5,681	1.33
1901-1902	4,31,223	2,66,050	— 2,02,973	8,90,246	11,402	5,711	5,691	1.32
Triennial average ..	4,27,867	2,39,851	— 1,92,475	8,60,193	11,235	4,630	6,596	1.54

CLASS I.—BARUR TANK PROJECT—*cont.*

1. The capital outlay on this project to the end of the triennium ending March 1902 is as shown below:—

Capital outlay.

1	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Direct Charges.</i>					
Works	3,21,432	394	1,335	3,424	3,26,581
Establishment	73,883	56	233	891	75,007
Tools and Plant	6,883	..	..	48	6,931
Less by exchange	..	..	..	..	..
Total	4,02,198	450	1,568	4,273	4,08,219
Less—Receipts on Capital Account	22	..	..	..	22
Total, Direct Charges	4,02,176	450	1,568	4,273	4,08,197
Indirect Charges	22,639	18	32	112	23,026
Total Outlay, Direct and Indirect	4,24,815	468	1,600	4,385	4,31,223

This project not having fulfilled the conditions of a Productive Public Work, the outlay thereon is being met from "Provincial funds". The works carried out during the triennial period under review were not of sufficient importance to need mention here.

2. Lengths of channels.

1	At end of March 1899.	Lengths of channels in miles.			At end of March 1902.
		Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	
Length of main and branch canals (both for irrigation and navigation) Miles.	7	..	..	..	7
Of the above, navigable "	Nil.	..	..	..	Nil.
Distributaries (for irrigation only) "	21½	..	..	..	21½
Gross area under command Acres.	10,735	..	..	..	10,735

There was no increase in the lengths of the channels and area commanded during the triennial period under review.

CLASS I.—BARUR TANK PROJECT—*cont.*

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1900.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Water-rates (irrigation)	11,313	11,693	12,472	12,781	13,304	13,169
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	..	..	..	..	..	..
Total	11,313	11,693	12,472	12,781	13,304	13,169
Less—Refunds of revenue	..	..	..	..	..	..
Total	11,313	11,693	12,472	12,781	13,304	13,169
Deduct—Share due to old irrigation	2,000	2,000	2,000	2,000	2,000	2,000
* 4. Total, Receipts	9,313	9,693	10,472	10,781	11,304	11,169
WORKING EXPENSES.						
DIRECT CHARGES.						
I.—Works.						
5. Extensions and Improvements	723	522	249	1,005	1,800	1,402
6. Maintenance and Repairs	1,933	1,368	1,187	2,002	1,702	1,630
7. Establishment (Direction and Execution)	560	390	217	892	759	599
8. Tools and Plant	..	8	..	..	..	..
Total	3,216	2,288	1,653	3,899	4,261	3,631
II.—Revenue Management.						
Establishment—						
9. Direction	136	141	162	153	161	159
10. Execution	645	566	650	611	643	634
11. Civil officers	486	485	571	536	564	553
Total	1,267	1,192	1,383	1,300	1,368	1,346
12. Total, Direct Charges	4,483	3,480	3,036	5,199	5,629	4,977
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	186	166	172	217	232	207
Total (Direct and Indirect)	4,669	3,646	3,208	5,416	5,861	5,184
Deduct—Old maintenance charges	150	150	150	150	150	150
14. Total, Working Expenses	4,519	3,496	3,058	5,266	5,711	5,034
15. Net revenue	4,854	6,197	7,414	5,515	5,593	6,135
16. Capital outlay, direct and indirect	4,20,806	4,25,045	4,25,541	4,26,338	4,31,223	4,27,867
17. Percentage of net revenue	1.09	1.47	1.98	1.33	1.32	1.54
18. Area charged as irrigated, acres.	4,344	4,587	6,564	5,128	5,371	5,351
19. Average water-rate (item 1) per acre charged as irrigated	2.60	2.55	2.42	2.43	2.48	2.46
20. Total establishment charges per acre charged as irrigated (items 7 and 9 to 11)	0.39	0.34	0.31	0.39	0.39	0.36
21. Working expenses per acre charged as irrigated	1.01	0.80	0.58	1.01	1.09	0.89

In the triennium under review there was an increase in the total receipts, water-rates and miscellaneous revenue over those of any of the previous two triennia, which raised the percentage of net revenue from 1.09 in the triennial period ending March 1899 to 1.54 in the last triennial period. The increase was chiefly due to the extension of irrigation under the project.

CLASS I.—BARUR TANK PROJECT—*cont.*

4. The interest charges for and up to the end of the triennial period are given below—

	To end of March 1899.	During			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	RS.	RS.	RS.	RS.	RS.
Interest charges	2,67,530	16,697	16,130	16,333	2,56,050

5. Rainfall.

	Average of 12 years ending March 1899.	Period under review.			Average of 16 years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	INCHES.	INCHES.	INCHES.	INCHES.	INCHES.
Whole year	31.97	34.23	34.63	34.63	32.50

6. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
	ACRES.	ACRES.	ACRES.	INCHES.
1893-1894	2,327	1,433	3,760	32.26
1894-1895	2,360	1,121	3,481	38.00
1895-1896	2,425	960	3,385	32.50
Triennial average ..	2,371	1,171	3,542	34.59
1896-1897	2,459	1,059	3,518	33.50
1897-1898	2,652	887	3,539	33.50
1898-1899	2,560	906	3,556	34.63
Triennial average ..	2,557	951	3,536	32.64
1899-1900	2,872	1,402	4,281	34.63
1900-1901	2,841	997	3,838	34.63
1901-1902	2,951	1,382	4,333	34.63
Triennial average ..	2,888	1,263	4,151	34.63

NOTE.—The areas shown above do not correspond with those given in the "Table of areas" (page 33) which represent areas charged as irrigated.

The average for the last triennial period is more than that for any of the two preceding triennial terms which is due to expansion of irrigation under the project.

CLASS I.—BARUR TANK PROJECT—*cont.*

7. Assessments, remissions and collections.

Number of items.	Heads.	Average of triennial period of		Period under review.			Average of triennial period ending March 1902.
		March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		RS.	RS.	RS.	RS.	RS.	RS.
1	Opening balance of the year ..	..	..	..	..	..	..
2	Assessment (Irrigation revenue and Public Works receipts)	11,359	11,235	13,538	12,747	13,402	13,229
3	Surplus and excess recoveries. Total ..	11,359	11,235	13,538	12,747	13,402	13,229
4	Deduct—Remissions and refunds	15	81	8	..	..	2
5	Actual collections	11,344	11,154	13,530	12,747	13,402	13,227
6	Outstanding balance ..	..	..	..	..	..	..

8. Maintenance and repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	723	522	200	1,005	1,800	1,002
Repairs—						
Head works	87	85	46	..	222	89
Main and branch canals	1,806	1,272	1,141	2,002	1,480	1,541
Distributaries	40	1	..	..	..	..
Drainage and protective works ..	..	..	..	..	..	..
Total ..	2,656	1,880	1,387	3,007	3,502	2,632

Under "Extensions and improvements" the chief works executed during the triennium were the construction of an inspection bungalow at Nedungal, four glazed pipe sluices on the western main channel, a regulator across the tank supply channel and its outlet, and diversion of the surplus channel. Under "Maintenance and repairs", clearance of silt from the supply channel and ordinary annual repairs to the Barur tank were carried out.

CLASS I.

Major Works.

CAUVERY DELTA SYSTEM.

STATEMENT showing the areas charged as irrigated.

Year.					Areas in acres.			Remarks.
					First crop.	Second crop.	Total.	
1					2	3	4	5
					ACS.	ACS.	ACS.	
1866-1867	..	..	..	..	844,046	52,088	896,134	
1867-1868	..	..	..	..	851,637	57,067	908,704	
1868-1869	..	..	..	..	855,632	57,514	913,146	
Triennial average ..					850,438	56,558	906,996	
1869-1870	..	..	..	..	853,168	61,227	914,395	
1870-1871	..	..	..	..	857,929	61,652	919,581	
1871-1872	..	..	..	..	870,659	63,470	934,129	
Triennial average ..					860,919	63,116	924,035	
1872-1873	..	..	..	..	872,978	64,588	937,566	
1873-1874	..	..	..	..	876,211	70,688	946,899	
1874-1875	..	..	..	..	880,191	72,479	952,670	
Triennial average ..					876,447	69,351	945,798	
1875-1876	..	..	..	..	882,363	75,471	957,834	
1876-1877	..	..	..	..	882,773	73,014	955,787	
1877-1878	..	..	..	..	887,937	91,160	979,097	
Triennial average ..					887,388	80,185	967,573	
1878-1879	..	..	..	..	892,418	93,982	986,400	
1879-1880	..	..	..	..	896,818	108,347	1,005,165	
1880-1881	..	..	..	..	899,642	115,534	1,015,176	
Triennial average ..					896,292	105,943	1,002,235	
1881-1882	..	..	..	..	895,719	108,238	1,003,957	
1882-1883	..	..	..	..	892,871	106,344	999,215	
1883-1884	..	..	..	..	891,903	109,946	1,001,849	
Triennial average ..					893,497	108,196	1,001,693	
1884-1885	..	..	..	..	* 729,376	84,820	814,196	* The decrease is due to the serious damages caused by the extraordinary floods of December 1884.
1885-1886	..	..	..	..	905,284	100,095	1,005,379	
1886-1887	..	..	..	..	906,801	99,825	1,006,626	
Triennial average ..					847,154	94,915	942,069	
1887-1888	..	..	..	..	903,803	104,387	1,008,190	
1888-1889	..	..	..	..	907,368	99,768	1,007,136	
1889-1890	..	..	..	..	908,385	102,313	1,010,698	
Triennial average ..					906,519	102,156	1,008,675	
1890-1891	..	..	..	..	911,401	101,943	1,013,344	
1891-1892	..	..	..	..	908,616	99,443	1,008,059	
1892-1893	..	..	..	..	912,785	99,254	1,012,039	
Triennial average ..					910,934	100,217	1,011,151	
1893-1894	..	..	..	..	893,465	107,570	999,035	
1894-1895	..	..	..	..	895,461	103,430	998,891	
1895-1896	..	..	..	..	896,330	100,773	997,103	
Triennial average ..					896,092	103,924	999,016	
1896-1897	..	..	..	..	882,536	94,387	976,923	
1897-1898	..	..	..	..	886,920	102,588	989,508	
1898-1899	..	..	..	..	894,869	100,249	995,118	
Triennial average ..					891,775	102,241	994,016	
1899-1900	..	..	..	..	859,268	94,856	954,124	
1900-1901	..	..	..	..	894,414	99,175	993,589	
1901-1902	..	..	..	..	894,072	100,148	994,220	
Triennial average ..					882,585	98,059	980,644	

CLASS I.—CAUVERY DELTA SYSTEM—*cont.*

STATEMENT showing the Capital outlay, Interest charges, Sum at charge, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year (column 2 + 3 - 4).	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1866-1867 ..	6,08,712	4,38,048	42,20,218	- 31,73,460				
1867-1868 ..	6,47,170	4,60,351	46,69,724	- 35,62,203	4,32,250	- 38,461	4,70,711	72.73
1868-1869 ..	7,23,750	4,81,736	51,43,488	- 39,35,002	4,59,304	- 38,846	4,98,149	68.53
Triennial average ..	6,59,877	4,61,044	46,77,810	- 35,56,889	2,97,184	- 25,763	3,22,953	48.94
1869-1870 ..	7,27,505	5,10,670	56,77,182	- 44,39,307	5,10,873	- 42,655	5,63,528	76.10
1870-1871 ..	7,60,130	5,37,470	61,15,883	- 50,48,783	5,30,859	- 40,742	5,71,601	73.27
1871-1872 ..	9,09,431	6,67,865	67,78,050	- 58,60,754	5,29,143	- 68,419	5,92,562	65.16
Triennial average ..	8,05,622	5,38,635	62,90,372	- 49,40,116	5,23,625	- 48,939	5,72,564	71.07
1872-1873 ..	9,68,261	6,01,890	73,46,622	- 57,76,481	5,46,364	- 56,224	5,92,588	62.23
1873-1874 ..	10,19,922	6,37,999	79,19,517	- 62,61,585	5,46,001	- 63,012	6,09,013	59.71
1874-1875 ..	10,35,456	6,75,387	84,64,098	- 67,54,255	5,96,308	- 8,339	5,81,969	56.20
Triennial average ..	10,07,880	6,38,422	79,10,079	- 62,63,777	5,60,661	- 36,963	5,97,657	59.32
1875-1876 ..	10,64,673	7,13,556	89,78,656	- 72,00,427	5,16,050	- 3,363	5,52,727	51.92
1876-1877 ..	10,64,673	7,52,214	94,42,408	- 76,27,321	5,24,615	- 22,205	5,02,410	47.19
1877-1878 ..	10,78,148	7,91,126	99,77,829	- 81,08,055	6,02,360	- 28,467	5,73,893	53.22
Triennial average ..	10,62,165	7,52,298	94,66,131	- 76,44,658	5,60,982	- 17,982	5,42,999	50.78
1878-1879 ..	10,89,471	8,36,509	1,06,09,972	- 86,89,997	6,87,117	- 15,091	6,72,026	61.68
1879-1880 ..	11,29,309	8,70,823	1,12,22,866	- 93,22,734	7,50,420	- 2,788	7,53,208	66.69
1880-1881 ..	10,91,320	9,11,182	1,18,28,382	- 98,21,880	5,14,130	- 68,255	5,45,875	49.88
Triennial average ..	11,04,367	8,70,838	1,19,53,740	- 92,78,537	6,83,889	- 26,853	6,57,036	59.49
1881-1882 ..	10,94,320	9,50,871	1,25,55,241	- 1,05,10,050	7,16,058	- 49,510	6,66,548	60.00
1882-1883 ..	11,25,291	9,91,169	1,30,37,215	- 1,09,20,765	7,06,633	- 84,261	6,22,272	55.30
1883-1884 ..	12,62,509	10,34,713	1,36,30,881	- 1,13,38,359	7,32,518	- 96,808	6,37,210	50.58
Triennial average ..	11,59,803	9,92,251	1,30,74,445	- 1,09,22,391	7,18,369	- 76,359	6,42,010	56.25
1884-1885 ..	14,25,513	10,84,137	1,37,41,880	- 1,12,32,230	1,56,333	- 4,090	1,60,423	11.25
1885-1886 ..	16,69,254	11,41,360	1,43,41,479	- 1,15,30,835	7,33,005	- 86,183	6,46,822	38.98
1886-1887 ..	17,75,829	12,05,303	1,49,64,295	- 1,19,83,163	7,38,212	- 41,453	6,96,759	39.23
Triennial average ..	16,20,199	11,43,600	1,43,45,885	- 1,15,52,056	6,42,517	- 41,182	5,91,335	30.94
1887-1888 ..	17,80,545	12,71,500	1,55,02,225	- 1,24,50,180	6,68,853	- 54,496	6,02,857	33.91
1888-1889 ..	17,79,474	13,37,765	1,63,20,468	- 1,32,08,229	6,84,327	- 99,619	5,84,508	49.70
1889-1890 ..	17,79,443	14,04,008	1,69,76,898	- 1,37,93,437	8,21,728	- 99,055	7,22,673	40.61
Triennial average ..	17,79,824	13,37,758	1,62,66,530	- 1,31,48,948	8,21,803	- 84,790	7,37,013	41.40
1890-1891 ..	17,79,453	14,70,250	1,75,72,196	- 1,43,22,493	7,48,840	- 87,390	6,61,540	37.17
1891-1892 ..	17,79,450	15,36,492	1,81,59,046	- 1,48,43,104	7,30,963	- 77,871	6,53,092	36.70
1892-1893 ..	17,79,450	16,02,734	1,87,89,797	- 1,54,04,613	7,44,867	- 69,874	6,99,993	39.09
Triennial average ..	17,79,451	15,36,492	1,81,72,679	- 1,48,56,736	7,41,557	- 72,015	6,69,542	37.62
1893-1894 ..	17,77,557	16,68,939	1,95,33,982	- 1,60,87,486	8,72,595	- 59,265	8,13,330	45.75
1894-1895 ..	17,84,268	17,35,238	2,02,71,596	- 1,67,52,109	8,70,182	- 66,269	8,03,913	45.05
1895-1896 ..	18,11,489	18,02,199	2,11,32,052	- 1,75,18,364	10,04,306	- 76,859	9,27,447	51.19
Triennial average ..	17,91,101	17,35,459	2,02,12,543	- 1,67,85,933	9,15,694	- 67,454	8,48,240	47.36
1896-1897 ..	18,65,198	18,70,543	2,19,14,485	- 1,81,88,744	9,63,076	- 1,02,288	8,56,777	45.85
1897-1898 ..	19,94,578	19,42,460	2,27,37,453	- 1,88,00,415	9,63,395	- 68,510	8,94,585	44.66
1898-1899 ..	21,12,338	20,19,394	2,35,38,320	- 1,94,06,388	9,66,405	- 88,604	8,77,801	41.65
Triennial average ..	19,87,371	19,44,132	2,27,30,086	- 1,87,98,583	9,60,958	- 86,471	8,74,487	44.00
1899-1900 ..	22,86,760	21,02,038	2,42,17,829	- 1,99,29,031	8,58,971	- 98,818	7,62,153	33.33
1900-1901 ..	27,69,774	21,96,741	2,49,73,437	- 2,00,16,922	9,70,635	- 1,20,324	8,50,311	30.81
1901-1902 ..	29,61,916	23,62,618	2,57,50,195	- 2,04,84,461	9,76,396	- 92,661	8,83,535	29.84
Triennial average ..	26,69,483	22,00,638	2,49,60,487	- 2,01,10,132	9,35,334	- 1,03,234	8,32,100	31.17

CLASS I.—CAUVERY DELTA SYSTEM—cont.

1. The capital account of this system is shown below :—

Systems.	Outlay to end of Mar. 1899.	Outlay during			Outlay to end of Mar. 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct charges.</i>					
	RS.	RS.	RS.	RS.	RS.
Works	15,56,639	1,15,719	3,70,399	1,70,583	22,30,370
Establishment	3,88,374	28,737	85,192	19,651	4,97,984
Tools and plant	49,692	27,223	5,195	2,659	85,670
Loss by Exchange	..	..	..	..	..
Total	19,92,735	1,70,679	4,61,087	1,98,923	28,13,424
Less—Receipts on Capital Account	1,985	..	..	..	1,985
Total, Direct Charges	19,80,750	1,70,679	4,61,087	1,98,923	28,11,439
Indirect Charges	1,31,588	3,743	11,927	3,219	1,50,477
Total Outlay, Direct and Indirect	21,12,338	1,74,422	4,73,014	2,02,142	29,61,916

During the triennium under review the principal works carried out and chargeable to the open Capital Account were:—Fitting lift shutters to the grand anicut, remodelling the Upper Coleroon anicut, conversion of the Cauvery-Kodamurti open dam into a regulator, construction of regulators across Puthar-Solasudamanian and Puthar-Velappar.

Estimates amounting to Rs. 22 lakhs for drainage improvements in the delta, have been prepared but await a revenue note for submission to the Government of India. Proposals for improving distributaries have been projected but await the sanction of the drainage estimates.

2. Lengths of channels.

	Lengths of channels in miles.				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of main and branch canals (both* for irrigation and navigation) Miles.	844	..	..	..	844
Of the above, navigable "	NIL.	..	..	..	NIL.
Distributaries (for irrigation only) "	1,250	..	..	..	1,250
Gross area under command Acres.	1,768,400	..	..	..	1,768,400

There was no change in the lengths of channels and the area commanded.

CLASS I.—CAUVERY DELTA SYSTEM—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1898.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
	RS.	RS.	RS.	RS.	RS.	RS.
1. Water-rates (Irrigation)	41,05,538	43,26,705	38,16,796	43,57,984	43,86,752	41,97,177
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	2,786	2,784	3,154	1,733	1,661	2,184
Total	41,08,334	43,29,469	38,19,950	43,59,717	43,88,416	41,99,361
Less refunds of revenue	25	111	..	27	..	9
Total	41,08,309	43,29,358	38,19,950	43,59,690	43,88,416	41,99,352
Deduct share due to old irrigation	31,83,615	33,68,490	29,60,979	33,89,055	34,12,020	32,54,018
4. Total, Receipts	9,15,694	9,60,958	8,58,971	9,70,635	9,76,396	9,35,334
WORKING EXPENSES.						
DIRECT CHARGES.						
<i>I. Works.</i>						
5. Extensions and improvements	10,501	17,299	18,911	15,220	12,575	14,603
6. Maintenance and repairs	71,168	75,992	54,010	1,03,953	84,037	94,060
7. Establishment (Direction and Execution)	15,636	19,164	23,186	24,954	19,375	22,508
8. Tools and plant	550	79	370	662	668	577
Total	99,165	1,12,534	1,31,497	1,44,789	1,16,688	1,31,988
<i>Establishment.</i>						
9. Direction	48,004	50,638	44,519	50,818	51,262	48,500
10. Execution	1,32,016	2,02,513	1,78,076	2,03,672	2,03,050	1,95,599
11. Civil officers	43,645	47,915	42,791	48,446	48,737	45,658
Total	2,85,565	3,01,056	2,65,386	3,03,036	3,05,049	2,91,157
12. Total Direct Charges	3,84,820	4,13,590	3,99,873	4,47,825	4,21,737	4,23,145
INDIRECT CHARGES.						
13. Capitalized abatement of Land Revenue and leave and pension allowances	86,838	38,214	34,410	39,244	39,140	87,598
Total, (Direct and Indirect)	4,70,308	4,51,804	4,34,283	4,87,069	4,60,877	4,60,743
Deduct old maintenance charges	3,53,334	3,65,323	3,37,455	3,66,745	3,68,316	3,57,609
14. Total, Working Expenses	67,454	86,471	98,818	1,20,324	99,561	1,03,134
15. Net revenue	8,48,240	8,74,487	7,62,153	8,50,311	8,83,835	8,32,100
16. Capital outlay, direct and indirect	17,91,101	19,87,371	22,86,760	27,59,774	29,61,916	28,69,483
17. Percentage of net revenue	47.36	44.00	33.33	30.81	29.84	31.17
18. Area charged as irrigated .. Acs.	991,016	987,016	954,123	993,589	994,220	980,644
19. Average water-rate (item 1) per acre charged as irrigated ..	4.14	4.38	4.00	4.38	4.40	4.26
20. Total establishment charges per acre irrigated (items 7 and 9-11) ..	0.40	0.32	0.20	0.32	0.32	0.31
21. Working expenses per acre charged as irrigated ..	0.07	0.09	0.10	0.12	0.09	0.10

The average of the total receipts for the triennium under review is less than that for the preceding triennial period, the decrease being chiefly due to large remissions having been granted in 1899-1900 owing to the unfavourable character of the season which resulted in restricting cultivation to a great extent.

The working expenses show an increase over those of any of the two preceding triennia. Under "Extensions and improvements" the outlay in the triennium was less than that in the preceding triennial period, but under "Maintenance and Repairs" a larger expenditure was found necessary for the proper upkeep of works.

CLASS I.—CAUVERY DELTA SYSTEM—cont.

4. Interest charges.

	To end of March 1899.	Period under review.				To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.		
1	2	3	4	5	6	
	RS.	RS.	RS.	RS.	RS.	
Interest charges	20,19,394	82,644	94,703	1,07,077	23,03,818	

Up to the end of the triennial period under review the surplus revenue, after deducting interest charges, amounted to Rs. 2,57,50,195 against a capital outlay of Rs. 20,61,916; but it must be remembered that the circumstances of this system are peculiar as irrigation under it is carried out to a large extent through the agency of natural channels.

5. Rainfall.

	Average of 14 years ending March 1899.	Period under review.			Average of 17 years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	INCHES.	INCHES.	INCHES.	INCHES.	INCHES.
Whole year	42.73	30.57	31.68	43.65	41.42

6. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
	ACS.	ACS.	ACS.	INCHES.
1893-1894	856,358	100,559	956,917	44.72
1894-1895	856,258	101,087	956,345	32.37
1895-1896	852,543	105,072	957,625	50.20
Triennial average ..	854,723	102,239	956,962	42.43
1896-1897	852,505	89,555	942,060	40.73
1897-1898	852,358	97,173	949,530	40.73
1898-1899	853,093	105,428	958,521	62.33
Triennial average ..	852,652	97,386	950,037	44.59
1899-1900	788,094	89,639	877,733	30.57
1900-1901	851,775	93,479	945,254	31.68
1901-1902	860,505	95,411	955,916	43.65
Triennial average ..	833,458	92,843	926,301	35.10

NOTE.—The areas shown above do not correspond with those given in the "table of areas" (page 38) which represent areas charged as irrigated.

The average for the triennium under review is less than that in any of the two preceding triennia, the decrease being due to the causes explained under paragraph 3 above.

CLASS I.—CAUVERY DELTA SYSTEM—cont.

7. Areas irrigated by districts.

Districts.	Areas irrigated.		
	First crop.	Second crop.	Total.
1	2	3	4
	ACS.	ACS.	ACS.
Tanjore.			
1899-1900	748,353	73,605	819,958
1900-1901	808,689	74,554	883,243
1901-1902	817,233	76,864	894,097
Triennial average ..	790,755	74,674	865,429
Trichinopoly.			
1899-1900	41,766	16,034	57,800
1900-1901	43,076	18,925	62,001
1901-1902	43,272	18,547	61,819
Triennial average ..	42,708	18,169	60,877

The area irrigated in both the districts in 1899-1900 shows a decrease when compared with that in any two subsequent years. This is attributed to the Cauvery having been abnormally low in August 1899 and to the consequent restriction of cultivation.

8. Duty of water.

Year and crop.	Area irrigated.	Number of days the canal was open.	Average supply		Duty	
			at head.	Utilised.	at head.	Utilised.
1	2	3	4	5	6	7
	ACS.					
1899-1900—						
First crop	788,094	..	10,290	..	75.00	..
Second crop	89,639	..	609	..	176.11	..
1900-1901—						
First crop	851,775	..	20,755	..	36.43	..
Second crop	93,479	..	596	..	62.02	..
1901-1902—						
First crop	860,505	..	15,829	..	54.37	..
Second crop	95,411	..	2,329	..	40.66	..

NOTE.—Please see remarks under paragraph 8 of the Gôdâvari delta system.

9. Assessments, remissions and collections.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		RS.	RS.	RS.	RS.	RS.	RS.
1	Opening balance of the year ..	..	..	..	..	..	..
2	Assessment (Irrigation revenue and Public Works receipts).	41,22,229	43,51,788	43,48,532	43,74,540	43,96,491	43,73,188
3	Surplus and excess recoveries.	..	..	..	..	..	..
	Total ..	41,22,229	43,51,788	43,48,532	43,74,540	43,96,491	43,73,188
4	Deduct—Remissions and refunds	12,920	22,439	5,28,582	14,850	8,075	1,83,835
5	Actual collections ..	41,09,309	43,29,353	38,19,950	43,59,690	43,88,416	41,89,352
6	Outstanding balance ..	..	..	..	..	..	..

CLASS I.—CAUVERY DELTA SYSTEM—*cont.*

The large remissions granted in 1899-1900 were due to damage done to crops over large tracts near the coast owing to excessive rainfall during the north-east monsoon.

10. Miscellaneous revenue.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Sale of water	..	..	..	..	..	..
Water-supply of towns	..	..	..	..	..	..
Plantations	1,195	321	974	665	814	818
Other canal produce	1,495	1,929	2,001	837	592	1,143
Water-power	..	..	..	..	..	..
Rents of buildings	78	98	119	148	156	141
Fines	..	7	..	..	..	..
Miscellaneous	27	209	68	83	102	82
Total	2,786	2,764	3,154	1,723	1,664	2,184

The small decrease in the triennium under revenue calls for no remark.

11. Maximum floods.

Name.	Locality.	1899-1900.		1900-1901.		1901-1902.	
		Date.	Reading.	Date.	Reading.	Date.	Reading.
Cauvery	Mathur near grand anicut.	4th July 1899.	5.40	15th Aug. 1900.	7.50	9th July 1901.	7.45
Vennar		4th July 1899.	8.25	15th Aug. 1900.	9.30	9th July 1901.	8.90

12. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	10,501	17,229	16,911	16,220	12,578	14,903
Repairs.						
Head works	5,289	10,630	14,908	7,214	11,533	11,452
Main and branch canals	25,933	21,496	33,474	46,167	30,547	36,730
Distributaries	30,269	28,982	28,832	31,146	26,396	28,521
Drainage and protective works ..	11,074	16,477	17,293	16,736	15,861	17,394
Total	81,969	83,291	1,10,921	1,10,173	86,615	1,06,903

As regards the increase in "working expenses" during the last triennium, explanation is given under paragraph 3 above.

General remarks.—At the end of the triennium under report 33 lift-shutters on the south and two on the north branch of the Upper Coleroon anicut were fitted against 45 and 10 shutters, respectively, provided in the sanctioned estimate. The result of the partial improvements carried out up to the end of 1901-1902 was a reduction in the flood level at the Cauvery dam of 0.80 foot and a decrease in the afflux at the south branch of the anicut of 1.30 feet.

CLASS I.

Major Works.

SRIVAİKUNTAM ANICUT SYSTEM.

STATEMENT showing the areas charged as irrigated.

Year.					Area in acres.			Remarks.
					First crop.	Second crop.	Total.	
1					2	3	4	5
1870-1871	..	..	..	..	ACS. 11,335	ACS. 5,515	ACS. 17,550	
1871-1872	..	..	..	..	12,727	7,160	19,887	
1872-1873	..	..	..	..	12,626	3,957	16,583	
1873-1874	..	..	..	..	12,545	9,383	21,928	
1874-1875	..	..	..	..	15,259	11,575	26,834	
Triennial average ..					13,477	8,305	21,782	
1875-1876	..	..	..	..	14,425	13,149	27,574	
1876-1877	..	..	..	..	13,140	12,056	25,196	
1877-1878	..	..	..	..	15,273	13,994	29,267	
Triennial average ..					14,279	13,066	27,345	
1878-1879	..	..	..	..	16,041	15,157	31,198	
1879-1880	..	..	..	..	17,908	15,891	33,799	
1880-1881	..	..	..	..	17,855	15,705	33,561	
Triennial average ..					17,268	15,584	32,852	
1881-1882	..	..	..	..	18,770	15,680	34,450	
1882-1883	..	..	..	..	19,546	17,647	37,193	
1883-1884	..	..	..	..	20,951	19,420	40,371	
Triennial average ..					19,756	17,582	37,338	
1884-1885	..	..	..	..	19,747	16,107	35,854	
1885-1886	..	..	..	..	22,150	20,055	42,205	
1886-1887	..	..	..	..	21,250	18,828	40,078	
Triennial average ..					21,049	18,330	39,379	
1887-1888	..	..	..	..	22,458	18,174	40,632	
1888-1889	..	..	..	..	21,508	18,814	40,322	
1889-1890	..	..	..	..	21,815	17,970	39,785	
Triennial average ..					21,926	18,353	40,279	
1890-1891	..	..	..	..	16,224	12,672	28,896	Decrease due to the unfavourable character of the season.
1891-1892	..	..	..	..	22,219	19,103	41,322	Do. do.
1892-1893	..	..	..	..	15,531	13,580	29,111	
Triennial average ..					17,931	15,113	33,109	
1893-1894	..	..	..	..	21,392	19,178	40,570	
1894-1895	..	..	..	..	21,155	17,387	38,542	
1895-1896	..	..	..	..	18,914	15,043	33,957	Decrease due to very heavy rains in December 1895.
Triennial average ..					20,497	17,204	37,702	
1896-1897	..	..	..	..	21,512	18,635	40,147	
1897-1898	..	..	..	..	21,580	20,038	41,618	
1898-1899	..	..	..	..	22,052	20,688	42,740	
Triennial average ..					21,715	19,803	41,518	
1899-1900	..	..	..	..	22,152	18,938	41,090	
1900-1901	..	..	..	..	23,044	22,671	45,715	
1901-1902	..	..	..	..	23,511	20,650	44,161	
Triennial average ..					22,902	20,753	43,655	

CLASS I.—SRIVAİKUNTAM ANICUT SYSTEM—cont.

STATEMENT showing the capital outlay, interest charges, sum at charge, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year (columns 2 + 3 - 4).	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1870-1871 ..	Rs. 6,41,219	Rs. 36,814	Rs. — 40,410	Rs. 7,18,443	Rs. — 3,839	Rs. — 273	Rs. — 3,566	— 6.56
1871-1872 ..	7,80,089	53,938	— 53,912	8,96,739	12,911	— 2,211	9,800	0.12
1872-1873 ..	9,75,395	96,715	— 1,06,574	11,78,634	— 15,223	5,552	— 20,785	— 2.13
1873-1874 ..	10,52,480	1,34,993	— 1,26,812	13,14,285	19,423	1,396	18,040	1.71
1874-1875 ..	11,21,963	1,76,990	— 1,61,092	14,49,140	56,627	49,110	15,817	1.49
Triennial average ..	10,49,944	1,36,932	— 1,28,159	13,14,035	29,376	15,686	4,690	0.44
1876-1876 ..	11,71,303	2,19,456	— 1,65,985	15,66,744	56,673	38,105	18,573	1.98
1876-1877 ..	12,13,965	2,64,673	— 1,92,260	16,76,398	45,833	17,214	28,612	2.34
1877-1878 ..	12,34,213	3,11,054	— 2,06,856	17,52,127	62,716	30,937	31,789	2.78
Triennial average ..	12,08,493	2,65,062	— 1,88,367	16,61,922	55,103	28,768	26,335	2.17
1878-1879 ..	12,49,595	3,67,979	— 2,48,406	18,55,930	72,955	66,404	6,551	0.45
1879-1880 ..	12,86,343	4,05,840	— 2,43,826	19,36,009	86,039	33,793	52,246	4.06
1880-1881 ..	12,97,092	4,54,569	— 2,49,786	19,56,457	81,552	33,193	48,759	3.75
Triennial average ..	12,77,076	4,06,129	— 2,46,342	19,29,147	80,022	44,466	35,557	2.78
1881-1882 ..	12,98,151	5,03,524	— 2,29,462	20,31,139	85,321	21,020	64,301	4.55
1882-1883 ..	13,12,183	5,52,776	— 2,05,694	20,70,605	98,201	25,183	73,018	5.66
1883-1884 ..	13,88,199	6,03,367	— 1,68,673	21,57,239	1,07,891	17,189	90,612	6.52
Triennial average ..	13,32,823	5,53,223	— 2,09,276	20,86,327	97,107	21,130	75,977	5.70
1884-1885 ..	14,03,058	6,55,302	— 1,45,914	22,04,274	89,580	17,886	71,694	5.10
1885-1886 ..	14,12,187	7,07,642	— 1,07,404	22,27,233	1,15,813	24,763	90,860	6.43
1886-1887 ..	14,29,508	7,60,488	— 70,331	22,60,330	1,13,150	23,538	89,612	6.29
Triennial average ..	14,14,917	7,07,810	— 1,07,884	22,30,611	1,06,814	22,062	84,152	5.94
1887-1888 ..	14,43,504	8,13,943	— 37,458	22,94,405	1,09,102	22,771	86,331	5.98
1888-1889 ..	14,51,541	8,67,827	— 9,552	23,28,720	1,06,588	24,598	81,990	5.65
1889-1890 ..	14,51,541	9,21,868	— 16,420	23,66,989	1,04,562	24,769	79,793	5.49
Triennial average ..	14,48,862	8,67,879	— 30,390	23,47,131	1,06,750	24,916	82,704	5.70
1890-1891 ..	14,51,541	9,75,909	— 11,118	24,38,568	67,538	30,875	26,523	1.82
1891-1892 ..	14,51,541	10,21,650	— 18,246	24,63,246	1,10,109	26,716	83,384	5.74
1892-1893 ..	14,51,541	10,30,991	— 1,780	25,33,752	58,997	21,421	37,576	2.68
Triennial average ..	14,51,541	10,29,950	— 8,907	24,72,584	75,498	26,337	49,161	3.58
1893-1894 ..	14,57,209	11,38,140	— 26,818	25,68,531	1,04,594	25,407	79,187	5.43
1894-1895 ..	14,61,028	11,32,470	— 48,618	26,04,880	99,549	25,819	76,130	5.21
1895-1896 ..	14,62,798	12,46,909	— 47,429	26,62,278	80,653	27,403	53,250	3.64
Triennial average ..	14,60,345	11,92,506	— 40,355	26,11,896	95,035	25,543	69,522	4.76
1896-1897 ..	14,63,483	13,01,396	— 25,203	27,39,676	1,08,315	76,054	32,261	2.20
1897-1898 ..	14,71,924	15,56,061	— 50,730	27,77,255	1,14,433	34,296	80,132	5.44
1898-1899 ..	14,77,427	14,10,936	— 77,711	28,10,762	1,12,502	30,596	81,906	5.54
Triennial average ..	14,70,945	13,55,147	— 51,214	27,75,827	1,11,768	46,982	64,786	4.40
1899-1900 ..	14,84,889	14,66,152	— 1,07,401	28,43,640	1,14,158	29,362	84,856	5.71
1900-1901 ..	14,91,079	15,21,577	— 1,57,143	28,55,508	1,26,340	51,168	1,05,172	7.05
1901-1902 ..	14,98,004	15,77,242	— 1,97,506	28,77,740	1,23,267	27,214	96,023	6.41
Triennial average ..	14,91,324	15,21,657	— 1,54,018	28,68,962	1,21,255	25,904	95,351	6.39

CLASS I.—SRIVAİKUNTAM ANICUT SYSTEM—cont.

1. The capital outlay on this system is shown below :—

	Outlay to end of March 1899.	Period under review.			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Direct Charges.</i>					
Works	16,70,590	5,912	4,904	5,486	16,86,882
Establishment	2,94,771	1,360	1,128	1,262	2,98,521
Tools and plant	10,524	..	..	..	10,524
Loss by exchange	..	..	..	..	..
Total	13,75,885	7,272	6,032	6,748	13,95,937
Less—Receipts on Capital Account	369	..	..	..	369
Total, Direct Charges	13,75,516	7,272	6,032	6,748	13,95,568
Indirect Charges	1,01,911	190	158	177	1,02,436
Total Outlay, Direct and Indirect	14,77,427	7,462	6,190	6,925	14,98,004

The chief works executed under the open Capital Account during the triennium were—

- (1) Providing screw-gearing shutters to scouring sluices in Srivaikuntam anicut;
- (2) forming new cross bank in the bed of Korampolliem tank;
- (3) improvements to Authur tank; and
- (4) providing revetment to Kiranur tank.

2. Lengths of channels.

	Lengths of channels.				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of main and branch canals (both for irrigation and navigation) Miles.	28	...	..	..	28
(Of the above, navigable Nil.	Nil.	..	..	..	Nil.
Distributaries (for irrigation only)	62	..	..	..	62
Gross area commanded Acres.	80,000	..	..	..	80,000

There was no change either in the lengths of channels or in the area commanded.

CLASS I.—SRIVAİKUNTAM ANICUT SYSTEM—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rates (Irrigation) ..	Rs. 1,72,860	Rs. 1,89,274	Rs. 1,91,610	Rs. 2,03,373	Rs. 2,00,701	Rs. 1,98,561
2. Navigation ..	..	..	..	..	..	..
3. Miscellaneous ..	1,408	1,464	1,548	1,967	1,555	1,694
Total ..	1,74,068	1,90,738	1,93,158	2,05,340	2,02,257	2,00,255
Less refunds of revenue ..	3	..	..	..	..	..
Total ..	1,74,065	1,90,738	1,93,158	2,05,340	2,02,257	2,00,255
Deduct share due to old irrigation ..	79,000	79,000	79,000	79,000	79,000	79,000
4. Total Receipts ..	95,065	1,11,738	1,14,158	1,26,340	1,23,257	1,21,255
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	1,170	899	349	1,344	100	193
6. Maintenance and repairs ..	15,879	31,752	18,127	9,541	15,874	14,514
7. Establishment (Direction and Execution) ..	3,918	7,300	3,972	2,242	3,461	3,210
8. Tools and plant ..	..	..	..	..	..	..
Total ..	20,967	39,951	22,448	13,127	19,390	18,222
II. Revenue Management.						
Establishment.						
9. Direction ..	2,078	2,289	2,310	2,457	2,419	2,395
10. Execution ..	8,313	9,119	9,240	8,830	9,678	9,583
11. Civil officers ..	4,683	5,514	5,631	6,219	6,085	5,978
Total ..	15,074	16,913	17,181	18,506	18,182	17,956
12. Total Direct Charges ..	36,041	56,864	39,629	31,633	37,572	36,178
INDIRECT CHARGES.						
13. Capitalized abatement of Land Revenue and Leave and Pension Allowances ..	2,504	2,618	2,173	2,035	2,172	2,126
Total (Direct and Indirect) ..	38,545	59,482	41,802	33,668	39,744	38,304
Deduct old Maintenance charges ..	12,500	12,500	12,500	12,500	12,500	12,500
14. Total working expenses ..	26,045	46,982	29,302	21,168	27,244	25,804
15. Net revenue ..	69,020	64,756	84,856	1,05,172	96,013	95,451
16. Capital outlay direct and indirect ..	14,60,345	14,70,945	14,84,889	14,91,079	14,98,004	14,91,324
17. Percentage of net revenue ..	4.76	4.40	5.71	7.05	6.41	6.39
18. Area charged as irrigated. Acres ..	37,702	41,518	41,990	45,115	44,161	43,655
19. Average of water-rate (Item 1) per acre charged as irrigated ..	4.58	4.56	4.56	4.56	4.54	4.72
20. Total establishment charges per acre charged as irrigated (Items 7 and 9 to 11) ..	.50	.59	.51	.50	.49	.50
21. Working expenses per acre charged as irrigated ..	.67	1.13	.71	.51	.63	.61

The total receipts from water-rate, &c., show a steady increase during the past three triennial. The increase in the last triennium over the two preceding ones is attributed partly to the increase of area under second crop and partly to smaller remissions granted during the triennium. One noteworthy feature of this system is that the extent of second-crop cultivation is almost equal to that of the first crop.

CLASS I.—SRIVAİKUNTAM ANICUT SYSTEM—cont.

The "Working expenses" during the triennium under review show a decrease over those of the last two triennial periods. The large increase under this head during the triennium ending March 1899 is due to the heavy expenditure incurred in restoring works of the system damaged by the floods of 1896-97.

4. Interest Charges.

	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Interest charges ..	Rs. 14,10,886	Rs. 55,166	Rs. 55,425	Rs. 55,665	Rs. 15,77,242

5. Rainfall.

	Average of 14 years ending March 1899.	Period under review.			Average of 17 years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Whole year ..	INCHES. 32.34	INCHES. 25.48	INCHES. 43.14	INCHES. 36.04	INCHES. 32.84

6. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-94 ..	ACS. 19,414	ACS. 14,722	ACS. 34,136	INCHES. 25.49
1894-95 ..	18,638	13,646	32,284	20.96
1895-96 ..	18,552	9,281	27,833	41.94
Triennial average ..	18,888	12,499	31,387	29.46
1896-97 ..	18,812	15,433	34,245	42.89
1897-98 ..	19,421	18,725	38,146	28.87
1898-99 ..	20,970	13,844	34,814	34.66
Triennial average ..	19,734	15,001	34,735	35.44
1899-1900 ..	20,698	14,765	35,463	25.48
1900-1901 ..	21,654	20,691	42,345	43.14
1901-1902 ..	21,097	17,912	39,009	36.04
Triennial average ..	20,850	17,789	38,639	35.22

NOTE.—The areas shown above do not correspond with those given in the "table of areas" (page 45) which represent areas charged as irrigated.

The triennial average for the period under review shows an increase over that of the two preceding triennial averages which is due to the favourable character of the season during the years 1900-1901 and 1901-1902.

CLASS I.—SRIVAİKUNTAM ANICUT SYSTEM—*cont.*

7. Assessments, Collections and Remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		RS.	RS.	RS.	RS.	RS.	RS.
1	Opening balance of the year.	..	..	..	..	..	..
2	Assessment (Irrigation revenue and Public Works receipts).	1,95,577	2,02,028	2,11,122	2,12,649	2,07,311	2,10,361
3	Surplus and excess recoveries.	..	..	..	..	..	..
	Total ..	1,95,577	2,02,028	2,11,122	2,12,649	2,07,311	2,10,361
4	Deduct remissions and refunds ..	21,512	14,265	17,864	7,309	5,044	10,165
5	Actual collections ..	1,74,065	1,87,763	1,93,158	2,05,340	2,02,267	2,00,256
6	Outstanding balance ..	..	..	..	..	..	..

The above figures call for no special remark.

8. Miscellaneous Revenue.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Sale of water ..	..	..	..	..	..	..
Water-supply of towns ..	637	632	737	774	794	768
Plantations ..	..	78	..	8	..	3
Other canal produce ..	547	655	535	938	484	653
Water power ..	..	..	..	..	..	..
Rents of buildings ..	210	226	267	255	238	270
Fines ..	..	..	..	..	..	..
Miscellaneous ..	14	5	..	..	..	..
Total ..	1,406	1,494	1,548	1,967	1,566	1,644

9. Maximum floods.

Name of river.	Locality.	1899-1900.		1900-1901.		1901-1902.	
		Date.	Reading.*	Date.	Reading.*	Date.	Reading.*
1	2	3	4	5	6	7	8
The Tambraparni ..	Srivaikuntam anicut.	30th Nov. 1899.	4.30	23rd Nov. 1900.	4.50	8th Jan. 1902.	6.20

* Above crest of anicut which is at M.S.L. + 59.46.

CLASS I.—SRIVAİKUNTAM ANICUT SYSTEM—*cont.*

10. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	1,170	899	349	1,344	100	598
Repairs.						
Head works ..	321	8,480	2,277	945	3,006	2,076
Main and branch canals ..	13,384	15,068	9,107	4,752	4,218	6,026
Distributaries ..	2,172	8,002	6,743	3,843	8,650	6,412
Drainage and protective works ..	..	262	..	..	..	..
Total ..	17,047	32,651	18,476	10,885	15,974	15,112

As regards the heavy expenditure in the triennium ended March 1899, explanation has been given under paragraph 3 above.

CLASS I.

Major Works.

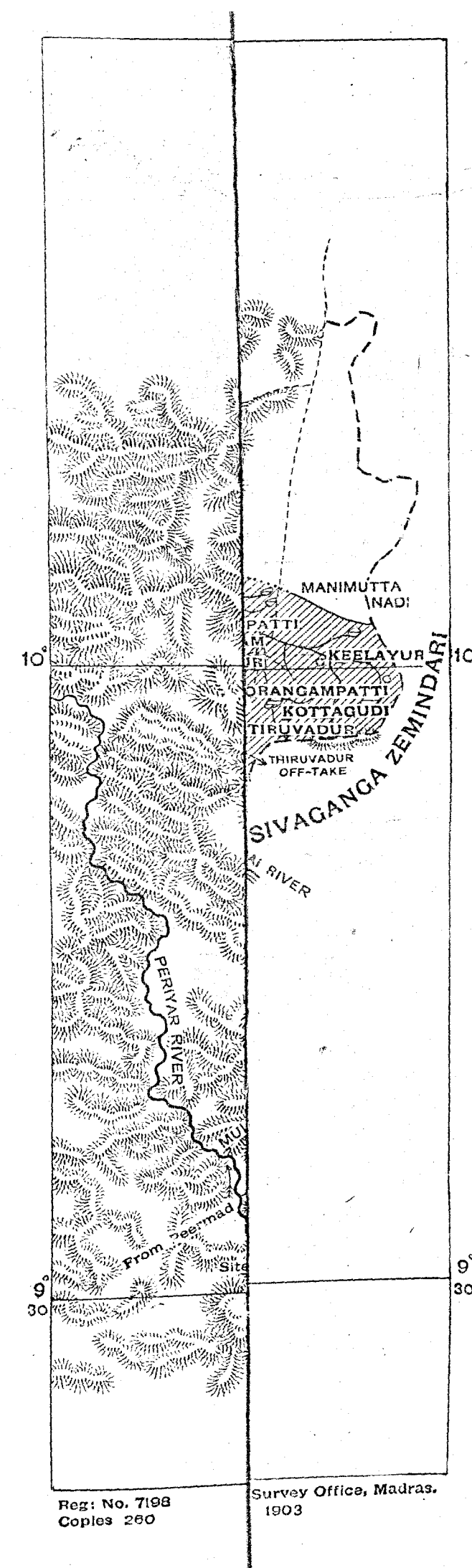
PERIYAR PROJECT.

STATEMENT showing the areas charged as irrigated.

Year.	Areas in acres.			Remarks.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1896-1897	ACS. 53,953	ACS. 13,098	ACS. 67,051	
1897-1898	72,325	22,040	94,465	
1898-1899	79,377	29,548	109,025	
Triennial average ..	69,555	21,585	90,160	
1899-1900	93,373	35,859	129,232	
1900-1901	104,352	38,517	142,869	
1901-1902	110,799	48,963	159,762	
Triennial average ..	102,841	39,146	141,987	

STATEMENT showing the capital outlay, interest charges, sum at charge, gross revenue, Working expenses and net revenue.

Year.	Capital outlay, direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge to end of year (columns 2 + 3 - 4)	For the year			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1896-1897	RS. 83,53,144	RS. 16,06,402	RS. -15,40,187	RS. 1,14,99,733	RS. 1,10,395	RS. 44,180	RS. 66,215	RS. 0.80
1897-1898	85,29,138	19,34,859	-17,46,631	1,33,10,628	2,11,678	89,565	1,22,013	1.42
1898-1899	86,81,605	22,69,275	-19,37,417	1,28,88,397	2,77,283	1,32,553	1,43,730	1.65
Triennial average ..	85,21,296	19,38,879	-17,41,411	1,22,32,919	1,99,752	89,099	1,10,653	1.29
1899-1900	87,71,278	26,08,199	-22,32,855	1,38,12,332	3,42,270	1,25,337	2,16,933	2.47
1900-1901	88,36,679	29,48,467	-22,71,385	1,40,57,522	4,09,349	1,06,511	3,02,738	3.43
1901-1902	88,93,689	32,92,454	-22,72,060	1,44,58,293	4,67,279	1,24,957	3,42,312	3.84
Triennial average ..	88,33,879	29,50,040	-22,58,767	1,40,42,655	4,06,296	1,18,937	2,37,329	3.24



CLASS I.—PERIYAR PROJECT—*cont.*

1. The capital outlay on the Periyar project is shown below :—

1	2	Outlay during			To end of March 1889.
		1889-1900.	1900-1901.	1901-1902.	
	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Direct Charges.</i>					
Works	62,23,727	62,379	41,060	35,017	64,62,183
Establishment	13,99,447	12,935	8,979	6,822	14,28,223
Tools and Plant	7,23,931	..	..	..	7,23,931
Loss by Exchange	..	..	..	..	..
Total	84,47,145	75,314	50,039	41,839	86,14,937
Less—Receipts on Capital Account	14,203	..	..	213	14,416
Total, Direct Charges	84,32,942	75,314	50,039	41,626	85,99,921
Indirect Charges	2,48,662	14,359	15,353	15,393	2,93,768
Total Outlay, Direct and Indirect	86,81,605	89,673	65,392	57,019	88,93,689

The construction estimate of this project was closed on the 31st March 1897. Its completion report has not yet been forwarded to the Government of India, but as the revised forecast has now been received from the Revenue Department, the report will be submitted at an early date. The important works carried out during the triennium in addition to excavating several branch and distributary channels were the improvements and fitting falling shutters to the Peranai anicut, banking Thandalai offtake, improvements to Vadakarai Konmoy and excavating the tail-end of the Papagudi offtake.

2. Lengths of Channels.

1	Lengths of channels.				At end of March 1902.
	At end of March 1889.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
	2	3	4	5	6
Length of main and branch canals (both for irrigation and navigation) Miles.	Rs. 36	Rs. Nil.	Rs. ..	Rs. ..	Rs. 36
Do, navigable "	126	..	..	..	Nil.
Canals (for irrigation only) "	768,000	+ 38	+ 10	+ 8	182
Area under command Acres.		..	..	..	768,000

During the triennium there was an increase to the extent of 56 miles in the navigable channels.

CLASS I.—PERIYAR PROJECT—*cont.*

execution of annual repairs to the main and branch channels. The expenditure under this head includes the annual payment made to the Travancore Darbar on account of compensation for land taken up.

4. Interest Charges.

1	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	Rs.	Rs.	Rs.	Rs.	Rs.
Interest charges	22,69,375	3,38,324	3,41,268	3,42,987	32,92,454

5. Rainfall.

1	Average of 11 years ending March 1899.	Period under review.			Average of 14 years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
		2	3	4	5
		INCHES.	INCHES.	INCHES.	INCHES.
Whole year	75.49	75.57	74.57	75.57	75.43

6. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
	ACS.	ACS.	ACS.	INCHES.
1893-1894	..	..	..	..
1894-1895	..	..	..	..
1895-1896	..	..	..	..
Triennial average	..	..	..	..
1896-1897	53,337	13,447	66,784	75.57
1897-1898	69,692	20,370	90,062	75.57
1898-1899	75,391	24,822	100,213	75.57
Triennial average	66,140	19,549	85,689	75.57
1899-1900	88,721	29,712	118,433	75.57
1900-1901	100,153	31,455	131,613	74.57
1901-1902	106,933	36,237	143,170	75.57
Triennial average	98,604	32,468	131,072	75.27

NOTE—The areas shown above do not correspond with those given in the "table of areas" (page 52) which represent areas charged as irrigated.

The increase is, as already explained under paragraph 3, due to extension of irrigation under the project.

CLASS I.—PERIYAR PROJECT—cont.

7. Assessments, Collections and Remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
			RS.	RS.	RS.	RS.	RS.
1	Opening balance of the year ..	..	..	..	..	..	..
2	Assessment (irrigation revenue and Public Works receipts) ..	..	3,81,238	5,64,501	6,28,411	6,82,743	6,25,215
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	..	3,81,238	5,64,501	6,28,411	6,82,743	6,25,215
4	Deduct—remissions and refunds ..	..	10,518	29,165	15,304	8,434	17,634
5	Actual collections ..	..	3,70,720	5,35,336	6,13,107	6,74,309	6,07,581
6	Outstanding balance ..	..	..	..	..	..	..

The remissions granted during the triennium under review show an increase due to large remissions having been granted in 1899-1900 in consequence of partial failure of crops.

8. Miscellaneous Revenue.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
		RS.	RS.	RS.	RS.	RS.
Sale of water ..	..	..	..	..	..	..
Water-supply of towns ..	..	..	..	645	..	215
Plantations ..	..	14	..	..	..	..
Other canal produce ..	..	4	920	448	1,379	882
Rents of buildings ..	..	51	92	94	95	94
Fines ..	..	2	7	2	..	3
Miscellaneous ..	..	15	62	70	71	68
Total ..	..	86	1,081	1,257	1,445	1,262

9. Maximum Floods.

Name of river.	Locality.	1899-1900.		1900-1901.		1901-1902.		Highest recorded flood.	
		Date.	Reading.*	Date.	Reading.*	Date.	Reading.*		
1	2	3	4	5	6	7	8	9	10
Vaigai	Peranai anicut.	14th Apr. 1899.	2.15	12th Jan. 1900.	1.5	8th Jan. 1901.	1.5	8th Nov. 1884.	5.15

* Above crest of Peranai anicut which is at M.S.L. + 623.62.

CLASS I.—PERIYAR PROJECT—cont.

10. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
		RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	..	2,393	8,145	8,365	15,264	10,591
Repairs—	..	..	..	..	..	..
Head works ..	..	* 55,189	52,281	57,082	46,364	51,969
Main and branch canals ..	..	4,586	5,815	11,489	3,676	6,993
Distributaries ..	..	4,395	10,944	6,959	24,087	13,937
Drainages and protective works ..	..	..	..	110	2,267	792
Total ..	..	66,563	77,185	84,005	91,658	84,282

* Inclusive of "3 compensation."

CLASS I.

Major Protective Works.

RUSHIKULYA PROJECT.

STATEMENT showing the areas charged as irrigated.

Year.	Areas in acres.			Remarks.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-1894	ACS. 8,195	ACS. ..	ACS. 8,195	
1894-1895	27,380	9	27,389	
1895-1896	35,806	112	35,917	
Triennial average ..	28,793	40	28,833	
1896-1897	62,901	426	63,327	
1897-1898	65,985	1,333	67,318	
1898-1899	79,949	3,616	82,565	
Triennial average ..	69,612	1,591	71,203	
1899-1900	78,608	3,186	81,794	
1900-1901	80,316	2,239	82,554	
1901-1902	83,221	2,144	85,365	
Triennial average ..	80,714	2,523	83,237	

STATEMENT showing the Capital Outlay, Interest Charges, Sum at charge, Gross Revenue, Working Expenses and Net Revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year (columns 2 + 3 + 4.)	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
1892-1893	RS. 32,45,259	RS. 4,03,380	RS. 4,13,314	RS. 40,61,933	RS. ..	RS. 9,954	RS. 9,954	RS. 0-30
1893-1894	35,74,456	5,30,185	5,39,547	47,38,158	17,571	10,919	6,652	0-18
1894-1895	40,10,884	6,71,217	6,62,852	53,44,953	27,333	15,666	11,667	0-22
1895-1896	42,55,088	8,22,974	8,28,643	58,96,105	35,284	31,718	3,566	0-15
Triennial average ..	39,83,476	6,74,792	6,68,147	53,26,415	27,729	19,434	8,295	0-20
1896-1897	44,79,371	9,82,841	9,48,667	64,11,269	62,772	32,949	29,823	0-44
1897-1898	46,14,423	11,50,573	12,20,823	68,55,752	64,288	36,773	27,515	0-44
1898-1899	46,99,229	13,21,946	12,18,198	72,39,372	87,320	44,666	42,654	0-58
Triennial average ..	46,07,674	11,51,866	10,85,807	68,45,467	71,183	41,537	29,646	0-44
1899-1900	47,46,149	14,55,138	12,49,316	74,50,602	87,506	53,521	33,985	0-45
1900-1901	47,87,142	16,63,901	15,13,182	79,70,175	93,729	62,783	30,946	0-39
1901-1902	48,38,030	18,46,316	16,54,551	83,39,197	1,05,954	71,258	34,696	0-41
Triennial average ..	47,90,440	16,70,432	14,72,433	79,33,525	99,093	69,253	29,840	0-37

CLASS I.—RUSHIKULYA PROJECT—*cont.*

1. The capital cost of this project is as shown below :—

Systems.	Outlay to end of Mar. 1899.	Outlay during			Outlay to end of Mar. 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
PROTECTIVE.	RS.	RS.	RS.	RS.	RS.
RUSHIKULYA PROJECT.					
Direct Charges.					
Works	34,56,420	34,728	31,542	40,691	35,63,381
Establishment	7,32,753	7,888	7,093	8,807	7,56,571
Tools and Plant	1,27,108	—168	3	80	1,27,021
Loss by Exchange	..	..	..	..	..
Total	43,16,309	42,448	38,638	49,578	44,44,973
Less—Receipts on Capital Account	7,738	..	113	1	7,852
Total, Direct Charges	43,08,571	42,445	38,525	49,577	44,39,121
Indirect charges	3,90,657	4,473	2,468	1,311	3,98,909
Total Outlay, Direct and Indirect	46,99,228	46,921	40,993	50,888	48,38,030

The construction estimate of this project was closed on the 31st March 1901. The principal works carried out during the triennium chargeable to the Open Capital account were —

- (1) Making up the large slips in the Suradā reservoir dam.
- (2) Constructing masonry works of B branch of Ichehāpuram channel.
- (3) Extension of Nos. 13, 14 and 15 distributaries.
- (4) Providing shutters to the Janamalli anicut.
- (5) Constructing head sluice to Mangalapur channel of the Mahanadi section.
- (6) Excavating A branch of No. 13 distributary.
- (7) Improvements to Suradā reservoir head sluice and the Janamalli anicut.

2. Lengths of Channels.

—	At end of March 1899.	Lengths of channels.			At end of March 1902.
		Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	RS.	RS.	RS.	RS.	RS.
Length of main and branch canals (both for irrigation and navigation) Miles.	80	..	..	..	80
Of the above, navigable "	Nil.	..	..	..	Nil.
Distributaries (for irrigation only) "	120	..	+ 6	+ 4	130
Gross area under command Acres.	230,830	..	..	..	230,830

There was an increase to the extent of 10 miles in the lengths of distributaries only during the past triennium.

CLASS I.—RUSHIKULYA PROJECT—*cont.*

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rates (irrigation) ..	Rs. 44,526	Rs. 1,20,537	Rs. 1,49,054	Rs. 1,46,193	Rs. 1,66,405	Rs. 1,50,554
2. Navigation ..	..	..	..	..	..	..
3. Miscellaneous ..	.. 518	.. 1,024	.. 1,789	.. 2,027	.. 5,075	.. 2,963
Total ..	45,044	1,21,565	1,50,853	1,48,220	1,61,489	1,53,520
Less—Refunds of revenue ..	..	..	..	..	..	..
Total ..	45,044	1,21,565	1,50,853	1,48,220	1,61,489	1,53,520
Deduct—Share due to old irrigation.	17,315	50,472	53,257	54,438	55,534	54,426
4. Total Receipts ..	27,729	71,193	97,596	93,782	1,05,955	99,093
WORKING EXPENSES.						
DIRECT CHARGES.						
<i>I. Works.</i>						
5. Extensions and improvements ..	..	.. 59	.. 955	.. 7,505	.. 11,401	.. 6,629
6. Maintenance and repairs ..	12,313	29,577	38,051	53,956	39,999	44,212
7. Establishment (direction and execution) ..	3,058	6,791	9,116	14,029	11,765	11,637
8. Tools and plant ..	1,215	685	528	524	703	585
Total ..	17,586	37,012	49,250	76,014	63,868	63,054
<i>II. Revenue Management.</i>						
Establishment—						
9. Direction ..	10	20	36	41	102	59
10. Execution ..	41	82	144	162	406	237
11. Civil officers ..	1,892	3,508	4,748	4,574	5,027	4,783
Total ..	1,943	3,610	4,928	4,777	5,535	5,079
12. Total, Direct charges ..	19,529	40,622	54,207	80,791	69,403	68,133
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	435	935	1,514	1,992	1,855	1,729
Total (Direct and Indirect) ..	19,964	41,557	55,721	82,783	71,258	69,863
Deduct—Old maintenance charges ..	..	..	..	..	..	..
14. Total, Working Expenses ..	19,964	41,557	55,721	82,783	71,258	69,863
15. Net revenue ..	8,295	29,606	42,075	10,916	34,696	29,240
16. Capital outlay, direct and indirect.	39,534	46,043	47,461	47,871	48,383	47,903
17. Percentage of net revenue ..	0.20	0.64	0.89	0.23	0.72	0.61
18. Area charged as irrigated, Acres.	23,833	71,203	81,794	82,554	85,365	83,237
19. Average of water-rate (item 1) per acre charged as irrigated ..	1.87	1.70	1.61	1.77	1.84	1.81
20. Total establishment charges per acre charged as irrigated (items 7 and 9-11) ..	0.14	0.14	0.17	0.22	0.20	0.20
21. Working expenses per acre charged as irrigated ..	0.61	0.63	0.68	1.02	0.83	0.84

The total receipts from water-rates, etc., have steadily increased during the last three triennia owing to the gradual extension of irrigation under the project.

The working expenses for the triennium ending March 1902 have exceeded those for each of the two preceding triennia. The increase under "Extensions and Improvements" in 1900-1901 and 1901-1902 is due to more works having been undertaken and that under "Repairs" is chiefly owing to the special repairs executed to the

CLASS I.—RUSHIKULYA PROJECT—*cont.*

Janamalli and Gumsur anicuts. This increase in the "Working Expenses" has reduced the percentage of net revenue for the triennium under review when compared with that for the period preceding it.

4. Interest charges.

	To end of March 1899.	Period under review.			To end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Interest charges ..	Rs. 13,21,945	Rs. 1,73,192	Rs. 1,74,763	Rs. 1,76,415	Rs. 18,46,316

5. Rainfall.

	Average of 14 years ending March 1899.	Period under review.			Average of 17 years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	INCHES.	INCHES.	INCHES.	INCHES.	INCHES.
South-west monsoon ..	46.42	31.05	39.80	28.14	46.17
North-east monsoon ..	..	11.21	13.96	12.52	..

The rainfall during 1899-1900 was fair but not uniform, but in 1900-1901 it was greater so that there was a good deal of water in the channels available for the second crop also. In the Russellkonda Sub-division it was very heavy, and very heavy floods came down the rivers. The south-west monsoon during 1901-1902 was generally a failure. There was a cyclone in September and November 1901, but no crops were lost.

6. Area irrigated.

Years.	Area irrigated.		
	First crop.	Second crop.	Total.
1	2	3	4
	ACS.	ACS.	ACS.
1893-1894 ..	8,877	3	8,880
1894-1895 ..	26,163	2	26,165
1895-1896 ..	34,439	40	34,479
Triennial average ..	22,823	15	22,838
1896-1897 ..	60,721	473	61,194
1897-1898 ..	63,123	1,285	64,408
1898-1899 ..	74,046	2,738	76,784
Triennial average ..	65,963	1,499	67,462
1899-1900 ..	78,445	3,181	81,626
1900-1901 ..	80,204	2,164	82,368
1901-1902 ..	82,534	2,144	84,678
Triennial average ..	80,401	2,496	82,897

NOTE.—The areas shown above do not correspond with those given in the "table of areas" (page 58) which represent areas charged as irrigated.

There was steady growth of irrigation during the past three triennial periods owing to the gradual development of the project.

CLASS I.—RUSHIKULYA PROJECT—cont.

7. Assessments, Remissions and Collections.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2	Irrigation assessment (irrigation revenue and Public Works receipts) ..	46,321	1,26,993	1,52,079	1,48,618	1,63,728	1,54,808
3	Surplus and excess recoveries.	..	..	..	..	..	..
	Total ..	46,321	1,26,993	1,52,079	1,48,618	1,63,728	1,54,808
4	Deduct remissions and refunds ..	277	5,328	1,226	401	2,240	1,269
5	Actual collections ..	46,044	1,21,665	1,50,853	1,48,217	1,61,488	1,53,519
6	Outstanding balance ..	..	..	..	..	..	..

8. Miscellaneous Revenue.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sale of water ..	..	..	..	..	..	..
Water-supply of towns ..	..	250	250	500	..	250
Plantations ..	14	52	299	220	12	177
Other canal produce ..	125	218	116	283	97	165
Rents of buildings ..	359	..	..	..	..	..
Fines ..	..	..	3	..	..	1
Miscellaneous ..	17	604	1,121	1,924	4,966	2,379
Total ..	518	1,024	1,789	2,027	5,075	2,963

The average of remissions for the triennium under review was less than that for the preceding period, the increase in which was due to the unfavourable character of the season.

9. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Extensions and improvements ..	..	59	955	7,505	11,401	6,620
Repairs.						
Head works ..	3,955	7,967	15,237	21,662	11,894	16,664
Main and branch canals ..	8,578	13,854	13,151	20,191	21,501	18,261
Distributaries ..	786	7,750	10,293	12,703	6,504	9,867
Drainage and protective works ..	..	..	..	..	..	..
Total ..	13,318	29,633	39,636	61,461	51,400	60,832

The increase in the triennial average under review under "Repairs" is explained in the remarks under paragraph 3.

CLASS II.

Minor Works.

GANJAM MINOR RIVERS SYSTEM.

STATEMENT showing areas charged as irrigated.

	Area in acres.		
	First crop.	Second crop.	Total.
1	2	3	4
	ACS.	ACS.	ACS.
1896-1897 ..	53,234	10,767	64,001
1897-1898 ..	56,271	6,270	62,541
1898-1899 ..	55,862	4,955	60,817
Triennial average ..	55,106	7,344	62,450
1899-1900 ..	56,385	9,614	66,299
1900-1901 ..	59,321	13,363	73,284
1901-1902 ..	60,024	22,445	82,469
Triennial average ..	58,876	15,141	74,017

STATEMENT showing Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1896-1897 ..	Rs. 5,018	..	Rs. 6,40,445	..	Rs. 41,142	Rs. 13,531	Rs. 27,611	Rs. 550.24
1897-1898 ..	44,486	..	4,37,165	..	34,123	27,610	6,513	14.64
1898-1899 ..	89,916	..	4,41,455	..	33,180	26,890	7,290	8.69
Triennial average ..	44,473	..	5,07,365	..	38,148	22,844	15,304	..
1899-1900 ..	1,29,453	..	4,61,847	..	35,537	18,145	17,392	13.43
1900-1901 ..	1,67,330	..	4,65,432	..	40,276	36,691	3,585	2.14
1901-1902 ..	1,76,625	..	4,63,225	..	59,618	62,815	2,197	1.23
Triennial average ..	1,58,586	..	4,63,506	..	42,143	35,883	6,260	3.95

CLASS II.—GANJAM MINOR RIVERS SYSTEM—cont.

1. The capital outlay on this system is shown below :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct charges.</i>	RS.	RS.	RS.	RS.	RS.
Works	66,682	36,215	30,312	8,742	1,41,861
Establishment	16,205	9,177	6,943	1,776	32,101
Tools and plant	..	..	..	139	139
Total	81,787	44,392	37,255	10,657	1,74,091
<i>Less—Receipts on Capital account</i>	..	..	..	..	..
Total, Direct charges	81,787	44,392	37,255	10,657	1,74,091
Indirect charges	2,129	1,145	972	288	4,534
Total outlay, Direct and Indirect	83,916	45,537	38,227	10,945	1,78,625

The principal works carried out during the triennium were—

- (1) constructing a scouring surplus sluice in the banks of the Bhairi and Polaki channels ;
- (2) constructing a head sluice to Dusi channel ;
- (3) diverting the Wadada main channel ; and
- (4) fitting screw-gearing shutters to Polaki channel head sluice.

2. Lengths of channels—

	Lengths of channels in miles.				
	At end of March 1899.	Increase or decrease during			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of channels (both for irrigation and navigation)	100	..	..	..	100
Of the above navigable	..	..	..	..	..
Distributaries for irrigation only	..	..	..	..	..
Gross area commanded acres.	64,000	..	..	..	64,000

CLASS II.—GANJAM MINOR RIVERS SYSTEM—cont.

3. Financial results—

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.	RS.	RS.	RS.	RS.	RS.	RS.
1. Water-rate (irrigation)	..	1,27,899	1,39,292	1,36,116	1,45,739	1,37,382
2. Navigation	..	..	..	..	445	..
3. Miscellaneous	..	331	425	481	..	460
Total	..	1,28,230	1,39,717	1,36,597	1,46,184	1,37,832
<i>Less—Refunds of revenue</i>	..	..	..	..	..	..
Total	..	1,28,230	1,39,717	1,36,597	1,46,184	1,37,832
<i>Deduct—Share due to old irrigation</i>	..	92,082	25,189	96,321	96,566	95,689
4. Total Receipts	..	36,148	55,537	40,276	50,618	42,143
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements	..	..	..	7,156	18,706	8,621
6. Maintenance and repairs	..	16,253	12,945	20,290	21,104	18,113
7. Establishment (direction and execution)	..	3,788	2,978	6,816	9,035	6,109
8. Tools and plant	..	..	..	..	..	..
Total	..	19,991	15,923	33,762	48,845	32,843
II. Revenue Management.						
Establishment.						
9. Direction	..	7	9	10	9	9
10. Execution	..	26	34	38	35	36
11. Civil officers	..	1,791	1,756	1,990	2,509	2,085
Total	..	1,824	1,799	2,038	2,553	2,130
12. Total, Direct charges	..	21,815	17,722	35,800	51,398	34,973
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	..	528	423	891	1,417	910
Total, Direct and Indirect	..	22,343	18,145	36,691	52,815	35,883
<i>Deduct—Old maintenance charges</i>	..	..	..	..	..	..
14. Total, Working expenses	..	22,343	18,145	36,691	52,815	35,883
15. Net revenue	..	13,804	17,392	3,565	2,197	6,260
16. Capital outlay, direct and indirect	..	..	1,26,179	1,67,680	1,78,625	1,57,435
17. Percentage of net revenue	..	..	13.78	2.13	1.23	8.97
18. Area charged as irrigated Acres	..	62,450	66,299	73,284	82,469	74,017
19. Average of water-rate (item 1) per acre charged as irrigated	..	2.04	1.96	1.85	1.76	1.85
20. Total establishment charges per acre charged as irrigated (items 7 and 9 to 11)	..	0.08	0.07	0.11	0.14	0.11
21. Working expenses per acre charged as irrigated	..	0.35	0.27	0.50	0.64	0.48

The receipts show a steady increase which is due to the efficient state in which the works are maintained necessitating large outlay.

CLASS II.—GANJAM MINOR RIVERS SYSTEM—cont.

4. Area irrigated.

		First crop.	Second crop.	Total.
		ACS.	ACS.	ACS.
1896-1897	.. .. .	52,113	11,036	63,149
1897-1898	.. .. .	51,359	7,458	58,897
1898-1899	.. .. .	59,745	5,345	65,090
Triennial average	..	54,419	7,959	62,378
1899-1900	.. .. .	55,845	9,514	65,459
1900-1901	.. .. .	59,406	13,263	72,799
1901-1902	.. .. .	58,174	22,445	80,619
Triennial average	..	57,808	15,141	72,949

5. Assessments, collections and remissions :—

Number of item.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year.	..	RS.	RS.	RS.	RS.	RS.
2	Assessments (Irrigation and Public Works receipts) ..	..	1,34,622	1,32,726	1,37,781	1,47,495	1,39,337
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	..	1,34,622	1,32,726	1,37,781	1,47,495	1,39,337
4	Deduct—Remissions and refunds ..	..	6,392	2,009	1,194	1,311	1,505
5	Actual collections ..	..	1,28,230	1,30,717	1,36,597	1,46,184	1,37,832
6	Outstanding balance ..	..	..	..	..	..	..

6. Maintenance and repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	..	RS.	RS.	RS.	RS.	RS.
	..	..	..	7,156	18,706	8,621
Repairs.						
Head works	..	..	325	304	..	210
Main canals and branches ..	..	9,036	4,677	9,757	13,392	9,275
Distributaries	..	7,217	7,943	10,229	7,712	8,628
Drainage and protective works ..	..	..	..	..	..	..
Total ..	..	16,253	12,945	27,446	39,810	26,734

The heavy expenditure under this head was necessary to save revenue.

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CLASS II.

Minor Works.

MUNIYERU PROJECT.

STATEMENT showing areas charged as irrigated.

		Area in acres.		Total.
		First crop.	Second crop.	
		ACRES.	ACRES.	ACRES.
1896-1899	.. .. .	2,777	146	2,923
1899-1900	.. .. .	911	..	911
1900-1901	.. .. .	2,359	..	2,359
1901-1902	.. .. .	3,237	..	3,237
Triennial average	..	2,169	..	2,169

STATEMENT showing the Capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.		RS.		RS.	RS.	RS.	
1898-1899	.. .. .	5,20,940	..	2,910	..	3,437	5,527	2,910
1899-1900	.. .. .	5,55,927	..	1,465	..	2,515	3,990	1,445
1900-1901	.. .. .	5,64,644	..	6,531	..	9,772	4,706	5,066
1901-1902	.. .. .	5,68,909	..	13,412	..	11,902	5,021	6,881
Triennial average	..	5,63,160	..	7,136	..	8,063	4,562	3,501

The capital outlay on this project is shown below :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Direct Charges.	RS.	RS.	RS.	RS.	RS.
Works	4,04,990	26,344	4,305	3,091	4,38,730
Establishment	91,662	5,455	741	711	98,579
Tools and plant	3,638	75	..	..	3,713
Total ..	5,00,290	31,884	5,046	3,802	5,41,022
Less receipts on Capital account ..	656	..	..	..	656
Total, Direct Charges ..	4,99,634	31,884	5,046	3,802	5,40,366
Indirect Charges ..	21,306	3,103	3,671	463	28,543
Total outlay (Direct and Indirect) ..	5,20,940	34,987	8,717	4,265	5,68,809

The construction estimate of the project has not yet been closed. The project was brought into operation in 1897-98. During the triennial period under review the chief works carried out were—

- (1) Excavating and banking the main channel.
- (2) Constructing drops on distributaries.
- (3) Excavating Penuganchiprole distributary and constructing inlets and outlets in the main channel.

CLASS II—MUNIYERU PROJECT—cont.

2. Lengths of channel.

	Lengths of channels in miles.				
	At end of March 1899.	Increase or decrease during			Length at end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Muniyeru project.</i>					
	RS.				RS.
Length of canals (both for irrigation and navigation)	50½	..	..	..	50½
Of the above navigable	6½	..	..	..	..
Distributaries for irrigation only	14,471	..	..	..	3½
Gross area commanded		..	..	..	14,471

There was no change in the length of channels and the area commanded.

3. Financial results.

1	Period under review.			Average of triennial period ending March 1902.
	1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	
(1) Water-rates (Irrigation)	Rs. 2,615	Rs. 10,155	Rs. 12,266	Rs. 8,312
(2) Miscellaneous	..	27	47	25
Total	2,515	10,182	12,313	8,337
Deduct—share due to old irrigation	..	410	411	274
(3) Total receipts	2,515	9,772	11,902	8,063
<i>Working expenses.</i>				
(4) Direct	3,863	4,598	4,909	4,529
(5) Indirect	97	108	112	105
(6) Total working expenses	3,960	4,706	5,021	4,634
(7) Net revenue	1,445	5,066	6,881	3,429
(8) Capital outlay (direct and indirect)	5,55,927	5,64,644	5,68,909	5,63,160
(9) Percentage of net revenue	0.26	0.90	1.21	0.62
(10) Area charged as irrigated acres.	961	2,359	3,237	2,169
(11) Average water-rate (item No. 1) per acre charged as irrigated	2.83	4.31	4.09	3.83
(12) Working expenses per acre charged as irrigated	4.12	2.00	1.55	2.14

4. Area irrigated.

1	First crop.	Second crop.	Total.	Rainfall.
	2	3	4	5
1898-99	ACS. 878	..	ACS. 878	INCHES. 29.15
1899-1900	2,351	..	2,351	31.64
1900-1901	2,211	..	2,211	27.00
Triennial average	2,146	..	2,146	29.26

CLASS II—MUNIYERU PROJECT—cont.

The slow growth of irrigation under this project is due to uncertain supply and to want of complete control over that supply owing to the anicut being partially in His Highness the Nizam's dominions. Negotiations are now in progress to acquire from His Highness the land required for the proposed extension of the anicut.

5. Assessments, collections and remissions.

1	Period under review.			Average of triennial period ending March 1902.
	1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	
1. Opening balance of the year	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2. Assessment (Irrigation and Public Works receipts)	3,711	9,772	13,240	8,908
3. Surplus and excess recoveries	..	..	..	..
Total	3,711	9,772	13,240	8,908
4. Deduct remissions and refunds	1,196	..	1,328	845
5. Actual collections	2,515	9,772	11,902	8,063
6. Outstanding balance	..	..	..	..

6. Maintenance and Repairs.

1	Period under review.			Average of triennial period ending March 1902.
	1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	
Extensions and improvements	Rs. ..	Rs. ..	Rs. ..	Rs. ..
Repairs	..	..	..	..
Head works	764	871	1,446	1,027
Main canals and branches	2,150	1,935	1,372	1,822
Distributaries	84	632	654	423
Drainage and protective works	..	..	..	..
Total	3,008	3,338	3,472	3,272

CLASS II—Minor Works.
DONDAPAD TANK PROJECT.
 STATEMENT showing areas charged as irrigated.

	Area in acres		
	First crop.	Second crop.	Total.
	ACRES.	ACRES.	ACRES.
1898-1899	109	..	109
1899-1900	118	..	118
1900-1901	125	..	125
1901-1902	136	..	136
Triennial average ..	123	..	123

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			Percentage on capital.
					Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.		RS.		RS.	RS.	RS.	
1898-1899	1,47,227	..	415	..	454	226	228	0.15
1899-1900	1,59,441	..	436	..	461	452	9	..
1900-1901	1,27,375	..	280	..	367	211	156	0.12
1901-1902	1,27,375	..	70	..	412	202	210	0.16
Triennial average ..	1,28,464	..	232	..	413	288	125	0.03

The Capital outlay on the project is shown below :—

Systems.	Net revenue.				
	Average of the triennial period ending March 1899.	For the year.			Average of the triennial period ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	RS.	RS.	RS.	RS.	RS.
<i>Direct charges.</i>					
Works	1,22,150	22	25,651	..	96,521
Establishment	22,118	..	5,191	..	17,017
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	1,44,268	22	30,752	..	1,13,531
<i>Less—Receipts on capital account</i>	7	..	..	..	7
Total, Direct charges	1,44,261	22	30,752	..	1,13,531
Indirect charges	4,966	10,192	714	..	14,144
Total outlay, Direct and indirect	1,49,227	10,114	31,466	..	1,27,375

There was no Capital outlay during the triennium. The project was brought into operation in 1898-99 and its construction estimate has not yet been closed.

The minus figures represent the outlay on the Nedigedda tank which was first included in the project estimates, but since eliminated therefrom, the original proposal to supply this tank from the Dondapad tank having been found impracticable.

The average area irrigated during the triennium is only 123 acres with average receipts from water-rate, etc., amounting to Rs. 413. The project has so far been a failure. The water-supply has always been very deficient and the tank has never been full. The ryots have been backward in availing themselves of even the available supply.

CLASS II.
Minor Works.
SAGILERU PROJECT.
 STATEMENT showing areas charged as irrigated.

	Area in acres.		
	First crop.	Second crop.	Total.
	ACRES.	ACRES.	ACRES.
1898-1899	4,392	2,623	7,015
1899-1900	3,983	295	4,278
1900-1901	4,107	605	4,712
1901-1902	4,312	928	5,240
Triennial average ..	4,134	608	4,743

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.		RS.		RS.	RS.	RS.	RS.
1898-1899	4,47,529	..	4,557	..	7,282	2,325	4,957	1.11
1899-1900	4,56,349	..	3,418	..	34	8,409	8,375	1.84
1900-1901	4,67,269	..	6,534	..	620	3,636	3,116	0.68
1901-1902	4,57,273	..	7,708	..	1,847	3,024	1,174	0.26
Triennial average ..	4,58,964	..	5,567	..	801	5,023	4,223	0.92

1. The capital outlay on the project is shown below :—

Head of account.	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	RS.	RS.	RS.	RS.	RS.
<i>Direct Charges.</i>					
Works	3,40,710	6,974	835	3	3,48,522
Establishment	77,332	1,604	75	1	79,012
Tools and plant	12,307	..	..	..	12,307
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	4,30,349	8,578	910	4	4,39,841
<i>Less—Receipts on Capital account</i>	1	..	..	..	1
Total, Direct charges	4,30,348	8,578	910	4	4,39,841
Indirect charges	17,181	242	10	..	17,433
Total outlay, Direct and Indirect	4,47,529	8,820	920	4	4,67,273

The construction estimate of this project has not yet been closed. The project came into operation in 1898-99.

The chief works executed were the improvements to the Sagileru anicut and the waterway of the regulator at the diversion of the Gumbum road.

CLASS II.—SAGILERU PROJECT—*cont.*

2. Lengths of channels.

Description of channels.	Lengths of channels in miles.			
	At end of March 1899.	Increase or decrease during		
		1899-1900.	1900-1901.	1901-1902.
Length of canals (both for irrigation and Navigation).	14	..	..	..
Length of the above navigable Distributaries for irrigation only	..	..	..	..
Gross area commanded	33,576	..	..	..

3. Financial results.

	Period under review.			Average of triennial period ending March 1902.
	1899-1900.	1900-1901.	1901-1902.	
<i>Receipts.</i>				
1. Water-rate (irrigation)	Rs. 8,735	Rs. 15,683	Rs. 17,283	13,901
2. Miscellaneous	..	..	19	6
Total ..	8,735	15,683	17,302	13,907
Deduct—Share due to old irrigation ..	5,701	15,163	15,453	13,166
3. Total receipts	34	520	1,849	801
<i>Working expenses.</i>				
4. Direct charges	8,198	3,547	2,253	4,599
5. Indirect charges	211	89	70	123
6. Total working expenses	8,409	3,636	3,023	5,023
7. Net revenue	— 8,375	— 3,116	— 1,174	— 4,222
8. Capital outlay (direct and indirect) ..	4,56,340	4,57,269	4,57,273	4,56,964
9. Percentage of net revenue	— 1.83	— 0.68	— 0.25	— 0.92
10. Area charged as irrigated acres	4,278	4,712	5,240	4,743
11. Water-rate (item 1) per acre charged as irrigated ..	2.04	3.33	3.30	2.93
12. Working expenses per acre charged as irrigated ..	1.96	0.77	0.58	1.10

4. Area irrigated.

	First crop.	Second crop.	Total.	Rainfall.
1899-1900	ACS. 3,665	ACS. 234	ACS. 3,919	27.66
1900-1901	4,047	546	4,593	25.68
1901-1902	4,269	903	5,172	25.69
Triennial average	3,994	561	4,555	26.27

CLASS II.—SAGILERU PROJECT—*cont.*

5. Assessments, collections and remissions.

	Period under review.			Average of triennial period ending March 1902.
	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5
1. Opening balance of the year	Rs. 15,862	Rs. 15,971	Rs. 17,736	Rs. 16,813
2. Assessments (Irrigation and Public Works Receipts).	..	..	..	..
3. Surplus and excess recoveries	..	..	..	..
Total	15,862	15,971	17,736	16,813
4. Deduct remissions and refunds	6,927	288	4	2,406
5. Actual collections	8,735	15,683	17,302	13,907
6. Outstanding balance	..	..	..	..

The heavy remissions granted in 1899-1900 were necessitated by the unfavourable character of the season.

6. Maintenance and repairs.

	Period under review.			Average of triennial period ending March 1902.
	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5
Extensions and improvements	Rs. 951	Rs. 98	Rs. 525	Rs. 525
<i>Repairs.</i>				
Head works	..	..	..	..
Main canals and branches	4,217	2,812	1,787	2,939
Distributaries	1,524	25	53	517
Drainage and protective works	..	..	..	..
Total	6,692	2,885	2,365	3,981

CLASS II.

Minor Works.

CUMBUM TANK SYSTEM.

STATEMENT showing the area charged as irrigated.

					Areas in acres.			Remarks.
					First crop.	Second crop.	Total.	
					ACRES.	ACRES.	ACRES.	
1890-1891	..	..	..	..	5,289	4,208	9,497	
1891-1892	..	..	..	..	4,596	1,847	6,443	
1892-1893	..	..	..	..	5,379	4,501	9,880	
Triennial average ..					5,088	3,352	8,440	
1893-1894	..	..	..	..	5,476	4,576	10,052	
1894-1895	..	..	..	..	5,615	4,765	10,414	
1895-1896	..	..	..	..	5,546	4,452	9,998	
Triennial average ..					5,557	4,598	10,154	
1896-1897	..	..	..	..	5,533	2,583	8,116	
1897-1898	..	..	..	..	5,736	2,455	8,192	
1898-1899	..	..	..	..	5,639	4,987	10,626	
Triennial average ..					5,636	3,343	8,979	
1899-1900	..	..	..	..	4,850	1,855	6,705	Due to unfavourable character of the season.
1900-1901	..	..	..	..	5,532	2,578	8,108	
1901-1902	..	..	..	..	5,571	2,650	8,151	
Triennial average ..					5,318	2,210	7,528	

CLASS II.—CUMBUM TANK—cont.

1. The Capital outlay on this tank is given below :—

		Outlay to end of March 1899.	Outlay during:			Outlay to end of March 1902.
		RS.	RS.	RS.	RS.	RS.
Direct Charges.						
Works	..	51,092	1,444	..	..	52,536
Establishment ..	..	11,554	332	..	..	11,886
Tools and plant ..	..	..	..	..	..	..
Suspense account ..	..	..	..	..	..	..
Loss by exchange ..	..	..	..	..	..	..
Total ..		62,766	1,776	..	..	64,542
Less—Receipts on Capital account ..		..	..	..	..	..
Total, Direct charges ..		62,766	1,776	..	..	64,542
Indirect charges ..		1,677	46	..	..	1,723
Total outlay, Direct and Indirect ..		64,433	1,822	..	..	66,255

The expenditure incurred in 1899-1900 was on constructing a combined scoring ridge at the site of the Sekrail Kuthva.

STATEMENT showing the Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1893-1894	Rs. 47,677	Rs. ..	Rs. 80,521	Rs. ..	Rs. 10,795	Rs. 1,360	Rs. 9,415	19.75
1894-1895	55,375	..	89,378	..	12,702	3,846	8,857	15.99
1895-1896	62,271	..	99,316	..	11,432	1,494	9,938	16.96
Triennial average ..	55,108	..	89,738	..	11,643	2,239	9,404	17.06
1896-1897	63,540	..	1,01,844	..	3,729	1,201	2,528	3.98
1897-1898	64,191	..	1,07,634	..	6,648	856	5,790	9.02
1898-1899	64,433	..	1,18,838	..	12,650	1,446	11,204	17.39
Triennial average ..	64,054	..	1,09,439	..	7,675	1,168	6,507	10.15
1899-1900	66,255	..	1,15,737	..	2,316	725	1,591	4.50
1900-1901	66,255	..	1,15,975	..	397	219	178	0.27
1901-1902	66,255	..	1,17,153	..	1,614	438	1,176	1.78
Triennial average ..	66,255	..	1,16,308	..	102	460	562	0.57

CLASS II.—CUMBUM TANK—cont.

2. Financial Results.

Particulars	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rates (Irrigation) ..	Rs. 40,872	Rs. 37,834	Rs. 19,888	Rs. 31,285	Rs. 31,721	Rs. 27,631
2. Navigation .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
3. Miscellaneous .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total	40,872	37,834	19,888	31,285	31,721	27,631
Less—Refunds of revenue .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total	40,872	37,834	19,888	31,285	31,721	27,631
Deduct—Share due to old irrigation	29,229	30,169	22,204	30,683	30,107	27,783
4. Total receipts	11,643	7,675	— 2,316	397	1,614	— 102
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	84	8*	..	227	552	282
6. Maintenance and repairs	1,249	629	607	732	624	641
7. Establishment (direction and execution)	302	321	153	321	249	208
8. Tools and plant .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total	1,615	783	820	1,180	1,333	1,111
II. Revenue Management.						
9. Direction .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
10. Execution .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
11. City officers	582	383	116	20	81	5
Total	582	383	116	20	81	5
12. Other direct charges	2,187	1,151	704	1,260	1,413	1,156
INDIRECT CHARGES.						
13. Capitalized statement of land revenue and leave and pension allowances	42	17	21	31	35	29
Total (direct and indirect)	2,239	1,168	725	1,291	1,448	1,185
Deduct—Old maintenance charges ..	.. ..	.. ..	.. ..	1,012	1,012	675
14. Total Working expenses	2,239	1,168	— 725	219	436	460
15. Net revenue	9,404	6,507	— 3,041	178	1,178	— 642
16. Capital outlay, direct and indirect ..	55,108	64,054	66,255	66,255	66,255	66,255
17. Percentage of net revenue	17.05	10.15	— 4.59	0.26	1.77	— 0.85
18. Area charged as irrigated Acres ..	10,154	8,979	6,505	8,108	8,161	7,583
19. Average of water-rate per acre charged on irrigated (item 1) ..	4.02	4.21	3.05	3.88	3.89	3.61
20. Total establishment charges per acre charged as irrigated (items 7 and 9 to 11)	0.03	0.06	0.01	0.03	0.04	0.03
21. Working expenses per acre charged as irrigated	0.22	0.13	0.11	0.02	0.05	0.06

The large decrease in the average of total receipts from water-rate, etc., for the triennium under review is due to the unfavourable character of the season throughout the triennial period. This decrease has affected the percentage of revenue thus reducing it to a *minus* figure.

CLASS II.—CUMBUM TANK—cont.

3. Rainfall.

	Average of nine years ending March 1899.	Period under review.			Average of twelve years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	INCHES.	INCHES.	INCHES.	INCHES.	INCHES.
Whole year	25.44	23.71	14.49	15.49	23.55

4. Area irrigated.

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1896-97	ACRES. 5,473	ACRES. 4,578	ACRES. 10,051	INCHES. 27.50
1897-98	5,658	4,426	10,084	27.50
1898-99	5,636	4,471	10,107	26.50
Triennial average	5,556	4,491	10,147	27.16
1899-00	5,482	2,587	8,069	27.39
1900-01	5,495	3,871	9,366	27.39
1901-02	5,583	4,872	10,455	23.71
Triennial average	5,553	3,776	9,329	26.16
1899-1900	4,240	117	4,357	14.49
1900-1901	5,473	1,525	6,998	15.49
1901-1902	5,517	1,137	6,654	53.69
Triennial average	5,077	926	6,003	27.69

The reason for the decrease in the area irrigated is given under paragraph 2.

5. Assessments, Collections and Remissions.

Number of items.	Heads.	Average of the triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2	Assessment (Irrigation, revenue and Public Works receipts) ..	51,072	41,274	38,271	39,263	38,895	38,809
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total	51,072	41,274	38,271	39,263	38,895	38,809
4	Deduct Remissions and refunds ..	200	3,420	18,383	7,978	7,174	11,178
5	Actual collections	40,872	37,834	19,888	31,285	31,721	27,631
6	Outstanding balance	..	..	..	..	..	..

The cause of the large remissions granted successively in the three years forming the triennium is explained under paragraph 2 Financial results.

CLASS II.—CUMBUM TANK—*cont.*

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	64	8	..	227	559	262
Repairs.						
Head works ..	..	..	..	..	..	..
Main canals and branches ..	..	..	..	..	..	..
Distributaries ..	..	..	..	..	..	..
Drainage and protective works ..	..	..	..	..	..	..
Total ..	1,313	647	667	959	1,663	903

CLASS II.

Minor works.

CHAPAD PROJECT.

The estimate for this project amounts to Rs. 5,55,000, including direct and indirect charges, against which the outlay incurred up to the end of March 1902 was Rs. 3,09,870 as shown in the following statement :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	RS.	RS.	RS.	RS.	RS.
<i>Direct charges.</i>					
Works ..	79,373	3,874	60,772	1,06,186	2,50,205
Establishment ..	13,628	691	18,977	23,941	57,337
Tools and plant ..	..	..	..	..	..
Suspense account ..	..	..	..	..	..
Loss by exchange ..	..	..	..	..	..
Total ..	92,601	4,765	74,749	1,30,127	3,02,262
Less—Receipts on Capital account ..	..	..	..	..	..
Total, Direct charges ..	92,601	4,765	74,749	1,30,127	3,02,262
Indirect charges ..	1,894	125	1,967	8,352	7,828
Total outlay, Direct and Indirect ..	94,795	4,890	76,716	1,38,479	3,09,870

The outlay incurred during the triennium was chiefly on head works, the excavation of the main channel and drainage works.

CLASS II.

Minor Works.

THADAPALLI CHANNEL SYSTEM.

STATEMENT showing the areas charged as irrigated.

		Areas in acres.		
		First crop.	Second crop.	Total.
		ACRES.	ACRES.	ACRES.
1890-1891	.. .. .	13,995	462	14,457
1891-1892	.. .. .	13,975	482	14,457
1892-1893	.. .. .	14,098	609	14,707
Triennial average	.. .. .	14,023	517	14,540
1893-1894	.. .. .	14,164	465	14,629
1894-1895	.. .. .	14,042	603	14,645
1895-1896	.. .. .	14,149	598	14,746
Triennial average	.. .. .	14,118	555	14,673
1896-1897	.. .. .	14,530	401	14,931
1897-1898	.. .. .	14,320	557	14,877
1898-1899	.. .. .	14,264	720	14,984
Triennial average	.. .. .	14,358	559	14,917
1899-1900	.. .. .	14,300	590	14,890
1900-1901	.. .. .	14,378	693	15,071
1901-1902	.. .. .	14,531	1,227	15,758
Triennial average	.. .. .	14,403	627	15,030

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1890-1891	89,486	..	3,44,430	..	28,402	13,302	15,100	16.76
1891-1892	89,486	..	3,59,290	..	28,772	13,928	14,844	16.69
1892-1893	89,486	..	3,84,814	..	30,425	4,891	25,534	28.63
Triennial average	89,486	..	3,62,847	..	29,200	10,707	18,493	20.66
1893-1894	89,486	..	4,08,104	..	29,230	5,940	23,290	26.02
1894-1895	93,532	..	4,34,895	..	30,180	3,389	26,791	28.64
1895-1896	1,11,570	..	4,69,806	..	29,508	6,097	23,411	21.08
Triennial average	98,203	..	4,34,102	..	29,639	4,808	24,831	25.25
1896-1897	1,22,919	..	4,75,965	..	30,174	10,575	19,599	16.94
1897-1898	1,25,486	..	5,00,829	..	29,518	7,694	21,824	17.47
1898-1899	1,25,664	..	5,29,859	..	30,750	10,720	20,030	16.94
Triennial average	1,24,879	..	5,00,198	..	30,180	9,662	20,518	16.45
1899-1900	1,30,623	..	5,39,431	..	31,684	13,652	18,032	14.26
1900-1901	1,35,229	..	5,62,008	..	31,456	8,239	23,217	16.64
1901-1902	1,47,230	..	5,86,442	..	34,201	9,767	24,434	16.69
Triennial average	1,37,712	..	5,62,647	..	32,446	10,566	21,880	16.87

CLASS II.—THADAPALLI CHANNEL SYSTEM—cont.

1. The capital outlay on this system is shown below :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	RS.	RS.	RS.	RS.	RS.
Direct Charges.					
Works	85,358	3,941	3,701	9,976	1,12,976
Establishment	20,948	906	851	1,715	24,420
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	1,16,306	4,847	4,552	11,691	1,37,396
Less—Receipts on capital account	..	..	..	..	..
Total, Direct charges	1,16,306	4,847	4,552	11,691	1,37,396
Indirect charges	5,348	127	119	240	5,834
Total outlay, Direct and Indirect	1,21,654	4,974	4,671	11,931	1,43,230

The outlay incurred during the triennium was on account of the following works :—

- (1) Resluicing the channel.
- (2) Improving the main channel.
- (3) Constructing drains and out-houses for the rest-house at Gobichettipalem.

2. Lengths of Channels—

	At end of March 1899.	Lengths of channels in miles.			At end of March 1902.
		Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of canals Miles.	70	..	..	..	76
Of the above, navigable	Nil.	..	..	..	Nil.
Distributaries	..	..	..	..	..
Gross area commanded Acres.	13,738	..	..	..	15,738

CLASS II.—THADAPALLI CHANNEL SYSTEM—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.	RS.	RS.	RS.	RS.	RS.	RS.
1. Water-rate (Irrigation) ..	1,05,507	1,06,255	1,06,730	1,07,386	1,10,000	1,08,038
2. Navigation ..	74	258	843	145	299	429
3. Miscellaneous ..	..	..	..	..	..	..
Total ..	1,05,581	1,06,513	1,07,573	1,07,531	1,10,299	1,08,467
Less—Refunds of Revenue ..	..	1	..	..	..	..
Total ..	1,05,581	1,06,513	1,07,573	1,07,531	1,10,299	1,08,467
Deduct—Share due to old irrigation ..	76,942	76,832	76,889	76,075	76,038	76,021
4. Total, Receipts ..	29,639	30,180	31,684	31,456	34,261	32,446
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
1. Extensions and improvements ..	339	1,815	1,500	1,564	653	1,221
2. Maintenance and repairs ..	2,230	4,822	7,523	4,337	5,721	5,860
3. Establishment (direction and execution) ..	593	1,316	2,061	1,330	1,454	1,615
4. Tools and plant ..	..	..	42	..	..	14
Total ..	3,212	7,953	11,126	7,171	7,834	8,710
II. Revenue Management.						
Establishment—						
5. Direction ..	6	5	17	3	6	9
10. Execution ..	25	20	67	71	24	34
11. Civil officers ..	1,418	1,496	1,642	1,566	1,695	1,601
Total ..	1,509	1,521	1,626	1,580	1,725	1,644
12. Total, Direct charges ..	4,721	9,474	12,752	8,751	9,559	10,354
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	87	163	300	188	206	232
Total (Direct and Indirect) ..	4,808	9,637	13,052	8,939	9,765	10,586
Deduct—Old Maintenance Charges ..	..	..	..	..	..	..
14. Total, Working Expenses ..	4,808	9,637	13,052	8,939	9,765	10,586
15. Net revenue ..	24,831	20,518	18,632	22,517	24,434	21,860
16. Capital outlay, Direct and Indirect ..	98,203	1,24,679	1,30,628	1,35,299	1,47,230	1,37,719
17. Percentage of net revenue ..	25.28	16.45	14.26	16.54	16.59	15.87
18. Area charged as irrigated, acres ..	14,673	14,897	14,860	15,071	15,758	15,230
19. Average of water-rate (item 1) per acre charged as irrigated ..	7.19	7.13	7.12	7.12	7.04	7.09
20. Total establishment charges per acre charged as irrigated (items 7 and 8-11) ..	0.15	0.19	0.25	0.19	0.20	0.21
21. Working expenses per acre charged as irrigated ..	0.32	0.65	0.88	0.59	0.62	0.69

There is an increase both in the "receipts" and working expenses. That under the latter head is due to special repairs executed during 1899-1900 and 1901-1902.

CLASS II.—THADAPALLI CHANNEL SYSTEM—cont.

4. Area irrigated—

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-1894 ..	ACRES. 15,942	ACRES. 316	ACRES. 16,258	INCHES. 34.98
1894-1895 ..	13,469	463	13,932	28.60
1895-1896 ..	13,452	589	14,041	26.55
Triennial average ..	14,291	456	14,747	30.01
1896-1897 ..	13,821	167	13,988	44.18
1897-1898 ..	13,451	502	13,953	44.18
1898-1899 ..	13,562	932	14,494	44.18
Triennial average ..	13,545	533	14,078	44.18
1899-1900 ..	14,318	566	14,778	21.46
1900-1901 ..	14,282	693	14,975	29.72
1901-1902 ..	14,414	1,327	15,741	24.94
Triennial average ..	14,291	827	15,118	28.37

5. Assessments, remissions and collections—

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		RS.	RS.	RS.	RS.	RS.	RS.
1. Opening balance of the year ..	..	..	..	..	..	..	..
2. Assessment (Irrigation Revenue and Public Works receipts) ..	..	1,06,257	1,06,965	1,07,782	1,07,558	1,10,302	1,08,547
3. Surplus and excess recoveries ..	..	..	..	..	..	..	..
Total ..	..	1,06,257	1,06,965	1,07,782	1,07,558	1,10,302	1,08,547
4. Deduct—Remissions and refunds ..	..	676	453	209	27	3	80
5. Actual collections ..	..	1,05,581	1,06,512	1,07,573	1,07,531	1,10,299	1,08,467
6. Outstanding balance ..	..	..	..	..	..	..	..

6. Maintenance and repairs—

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	389	1,315	1,500	1,504	659	1,221
Repairs.						
Head works ..	169	216	231	..	..	77
Main canals and branches ..	2,012	4,337	6,499	4,227	5,347	5,358
Distributaries ..	48	268	793	110	374	425
Drainage and Protective works ..	..	..	..	..	..	..
Total ..	7,562	6,635	9,023	5,841	6,380	7,081

The large outlay on "repairs" is explained under paragraph 3.

CLASS II.

Minor Works.

ARZENKOTTA CHANNEL SYSTEM.

STATEMENT showing areas charged as irrigated.

		Areas in acres.		
		First crop.	Second crop.	Total.
1893-1894	.. .. .	4,070	48	4,116
1894-1895	.. .. .	4,075	91	4,166
1895-1896	.. .. .	4,099	44	4,144
Triennial average	.. .. .	4,078	60	4,138
1896-1897	.. .. .	4,053	43	4,126
1897-1898	.. .. .	4,105	29	4,134
1898-1899	.. .. .	4,144	51	4,195
Triennial average	.. .. .	4,111	41	4,152
1899-1900	.. .. .	4,258	65	4,323
1900-1901	.. .. .	4,262	31	4,293
1901-1902	.. .. .	4,297	58	4,355
Triennial average	.. .. .	4,272	51	4,323

STATEMENT showing Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1893-1894	Rs. 1,02,261	..	Rs. 24,859	..	Rs. 8,372	1,481	6,891	6.69
1894-1895	1,02,964	..	17,576	..	8,967	1,684	7,283	7.07
1895-1896	1,02,964	..	10,131	..	8,836	1,961	6,875	6.65
Triennial average	1,02,969	..	17,718	..	8,724	1,715	7,009	6.80
1896-1897	1,02,964	..	4,972	..	8,773	3,024	5,749	5.58
1897-1898	1,02,964	..	1,382	..	9,147	5,507	3,640	3.53
1898-1899	1,02,964	..	2,566	..	8,963	5,055	3,908	3.78
Triennial average	1,02,964	..	1,246	..	8,961	4,592	4,429	4.30
1899-1900	1,02,964	..	5,008	..	9,095	5,553	3,442	3.34
1900-1901	1,02,964	..	10,537	..	9,869	5,320	4,549	4.42
1901-1902	1,03,790	..	13,753	..	9,720	6,624	3,196	3.08
Triennial average	1,03,242	..	10,106	..	9,561	5,832	3,729	3.61

CLASS II.—ARZENKOTTA CHANNEL SYSTEM—cont.

1. The capital outlay on this system is shown below :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct Charges.</i>					
	Rs.			Rs.	Rs.
Works	81,578	..	..	661	82,239
Establishment	18,760	..	..	153	18,913
Tools and plant	..	..	..	..	..
Surplus account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	1,00,338	..	..	814	1,01,152
Less—Receipts on capital account	..	..	..	..	..
Total, direct charges	1,00,338	..	..	814	1,01,152
Indirect charges	2,626	..	..	21	2,647
Total outlay, direct and indirect	1,02,964	..	..	835	1,03,799

No work of any importance was carried out under the open capital account of this system during the triennium.

2. Lengths of channels.

Description of channel.	Lengths of channel in miles.				
	At end of March 1899.	Increase or decrease during			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of canals Miles.	24	..	..	..	24
Of the above, navigable	..	..	..	..	Nil.
Distributaries	..	..	..	..	Nil.
Gross area commanded Acres.	4,118	..	..	..	4,118

CLASS II.—ARKENKOTTA CHANNEL SYSTEM—*cont.*

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (Irrigation) ..	Rs. 27,843	Rs. 28,060	Rs. 28,700	Rs. 29,579	Rs. 29,444	Rs. 29,244
2. Navigation ..	.. 2	.. 36	.. 129	.. 99	.. 19	.. 82
3. Miscellaneous ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total ..	27,845	28,096	28,838	29,678	29,463	29,326
Less—Refunds of Revenue ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total ..	27,845	28,096	28,838	29,678	29,463	29,326
Deduct—Share due to old irrigation ..	19,121	19,136	19,743	19,809	19,743	19,765
4. Total Receipts ..	8,724	8,961	9,095	9,869	9,720	9,561
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	120	629	595	300	271	389
6. Maintenance and repairs ..	894	2,657	3,517	3,519	4,645	3,560
7. Establishment (Direction and Execution) ..	233	698	945	878	1,071	965
8. Tools and plant ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total ..	1,247	3,984	5,058	4,697	5,987	5,214
II. Revenue Management.						
9. Direction ..	.. ..	1	3	2	..	2
10. Execution ..	.. ..	2	10	8	2	5
11. Civil Officers ..	486	446	448	469	435	474
Total ..	486	449	461	499	487	482
12. Total, Direct charges ..	1,683	4,433	5,519	5,196	6,374	5,696
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	32	99	134	124	150	136
Total (Direct and Indirect) ..	1,715	4,532	5,653	5,320	6,524	5,832
Deduct—Old maintenance charges ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
14. Total Working Expenses ..	1,715	4,532	5,653	5,320	6,524	5,832
15. Net revenue ..	7,009	4,429	3,442	4,549	3,196	3,729
16. Capital outlay, direct and indirect ..	1,02,959	1,02,964	1,02,964	1,02,954	1,03,799	1,03,242
17. Percentage of net revenue ..	6.80	4.30	3.84	4.41	3.07	3.61
18. Area charged as irrigated Acres ..	4,136	4,152	4,323	4,293	4,353	4,323
19. Average of water-rate (item 1) per acre charged as irrigated ..	6.72	6.75	6.64	6.92	6.76	6.77
20. Total establishment charges per acre charged as irrigated (items 7 and 9-11) ..	0.16	0.27	0.22	0.32	0.24	0.23
21. Working expenses per acre charged as irrigated ..	0.41	1.09	1.30	1.23	1.45	1.35

The average of receipts shows a steady increase. The average working expenses for the triennial period under review are in excess of those for the past triennium, the increase being due to the heavy expenditure rendered necessary chiefly on annual repairs required for the proper upkeep of works.

CLASS II.—ARKENKOTTA CHANNEL SYSTEM—*cont.*

4. Area irrigated.

		Area irrigated.			Rainfall.
		First crop.	Second crop.	Total.	
		ACRES.	ACRES.	ACRES.	INCHES.
1893-1894 ..	.. ..	4,056	244	4,300	34.98
1894-1895 ..	.. ..	3,915	157	4,072	28.60
1895-1896 ..	.. ..	3,849	174	4,023	26.56
Triennial average ..	.. ..	3,953	192	4,145	30.01
1896-1897 ..	.. ..	4,050	19	4,069	44.18
1897-1898 ..	.. ..	3,840	252	4,092	44.18
1898-1899 ..	.. ..	3,756	315	4,101	44.18
Triennial average ..	.. ..	3,883	205	4,088	44.18
1899-1900 ..	.. ..	4,216	66	4,281	24.46
1900-1901 ..	.. ..	4,233	31	4,264	29.72
1901-1902 ..	.. ..	4,268	68	4,336	24.94
Triennial average ..	.. ..	4,239	61	4,300	26.87

5. Assessments, Collections and Remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Opening balance of the year ..							
2. Assessment (Irrigation revenue and Public Works receipts) ..		28,179	28,207	28,983	29,681	29,464	29,378
3. Surplus and excess recoveries ..							
Total ..		28,179	28,207	28,983	29,681	29,464	29,378
4. Deduct—Remissions and refunds ..		324	111	146	3	3	60
5. Actual collections ..		27,845	28,096	28,838	29,678	29,463	29,326
6. Outstanding balance ..							

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Extensions and improvements ..	120	629	595	300	271	389
Repairs.						
Head works ..	62	12	..	..	..	..
Main canals and branches ..	833	2,910	2,914	3,519	4,409	3,611
Distributaries ..	..	235	603	..	145	249
Drainage and protective works ..	..	..	..	..	..	..
Total ..	1,015	3,236	4,113	3,819	4,816	4,249

The increase in the outlay on "repairs" is explained under paragraph 3.

CLASS II.

Minor Works.

KALINGAROYAN CHANNEL SYSTEM.

STATEMENT showing the areas charged as irrigated.

	Areas in acres.		
	First crop.	Second crop.	Total.
	ACRES.	ACRES.	ACRES.
1890-1891	11,113	10,322	21,435
1891-1892	11,260	10,505	21,765
1892-1893	11,373	10,270	21,643
Triennial average ..	11,212	10,366	21,578
1893-1894	11,383	10,176	21,559
1894-1895	11,346	10,278	21,624
1895-1896	11,268	10,416	21,684
Triennial average ..	11,346	10,289	21,635
1896-1897	11,272	10,244	21,516
1897-1898	11,319	10,197	21,516
1898-1899	11,372	10,129	21,501
Triennial average ..	11,321	10,190	21,511
1899-1900	11,379	9,994	21,373
1900-1901	11,447	10,414	21,861
1901-1902	11,576	10,406	21,982
Triennial average ..	11,454	10,271	21,725

STATEMENT showing the Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1890-1891	55,263	..	1,33,341	..	17,705	6,827	10,878	19.69
1891-1892	55, 55	..	1,60,288	..	18,164	15,211	2,953	5.84
1892-1893	55,263	..	1,42,030	..	21,110	2,912	18,198	32.94
Triennial average ..	55,263	..	1,55,206	..	18,993	8,317	10,676	19.32
1893-1894	60,278	..	1,26,279	..	21,455	5,644	15,811	26.23
1894-1895	60,278	..	1,07,150	..	21,728	2,699	19,029	31.78
1895-1896	60,278	..	91,668	..	20,708	5,221	15,487	25.69
Triennial average ..	60,278	..	1,08,364	..	21,297	4,458	16,839	27.98
1896-1897	60,278	..	79,984	..	20,487	7,803	12,679	21.03
1897-1898	63,686	..	65,843	..	20,662	7,526	13,136	20.63
1898-1899	79,991	..	55,673	..	21,563	11,338	10,225	12.72
Triennial average ..	67,585	..	65,633	..	20,904	8,907	11,997	17.63
1899-1900	92,381	..	46,322	..	20,504	11,153	9,351	10.12
1900-1901	93,455	..	39,451	..	21,810	14,739	6,871	7.85
1901-1902	91,855	..	29,151	..	22,974	12,974	10,000	11.21
Triennial average ..	92,570	..	38,308	..	21,906	12,856	8,841	9.46

CLASS II.—KALINGAROYAN CHANNEL SYSTEM—cont.

1. The Capital outlay on this system is shown below :—

Direct charges.	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	RS.	RS.	RS.	RS.	RS.
Works	63,374	9,800	898	1,299	72,773
Establishment	14,575	2,254	207	299	16,738
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	77,950	12,054	1,105	1,598	89,511
Less receipts on capital account	..	..	..	..	..
Total, Direct charges	77,950	12,054	1,105	1,598	89,511
Indirect charges	2,041	316	29	42	2,344
Total outlay, indirect and direct	79,991	12,370	1,134	1,640	91,855

The expenditure incurred under the open capital account during the triennium was mainly on improving and resluicing the channel from the head to the 22nd mile.

2. Lengths of Channels.

Description of channel.	Lengths of channels in miles.				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
Length of canals Miles.	61	..	..	..	61
Of the above, navigable	..	..	..	..	..
Distributaries	..	..	..	..	..
Gross area commanded Acres.	9,026	..	..	..	9,026

CLASS II.—KALINGAROYAN CHANNEL SYSTEM—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1898.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (irrigation) ..	Rs. 1,05,431	Rs. 1,06,008	Rs. 1,05,687	Rs. 1,06,322	Rs. 1,06,987	Rs. 1,06,325
2. Navigation ..	.. 225	.. 386	.. 351	.. 529	.. 1,535	.. 905
3. Miscellaneous ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total ..	1,05,656	1,06,394	1,06,038	1,07,161	1,08,523	1,07,240
Less—Refunds of revenue ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total ..	1,05,656	1,06,394	1,06,038	1,07,161	1,08,523	1,07,240
Deduct—Share due to old irrigation.	84,359	85,490	85,534	85,551	85,549	85,544
4. Total Receipts ..	21,297	20,904	20,504	21,610	22,974	21,696
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	101	268	200	1,047	155	488
6. Maintenance and repairs ..	2,659	5,965	7,805	9,732	8,898	8,811
7. Establishment (direction and execution) ..	663	1,407	1,842	2,479	2,081	2,134
8. Tools and plant ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total ..	3,423	7,640	9,847	13,258	11,135	11,413
II. Revenue Management.						
9. Direction ..	4	5	7	17	31	13
10. Execution ..	18	31	25	14	123	72
11. Civil officers ..	1,064	1,023	1,063	1,039	1,072	1,040
Total ..	1,076	1,065	1,043	1,122	1,226	1,125
12. Total Direct charges ..	4,499	8,705	10,890	14,380	12,361	12,538
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	84	202	253	359	319	312
Total (Direct and Indirect) ..	4,488	8,907	11,153	14,739	12,674	12,855
Deduct—Old maintenance charges ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
14. Total Working Expenses ..	4,488	8,907	11,153	14,739	12,674	12,855
15. Net revenue ..	16,809	11,997	9,351	6,871	10,300	8,841
16. Capital outlay, direct and indirect.	30,278	67,985	92,361	83,495	61,855	92,570
17. Percentage of net revenue ..	27.24	17.55	10.12	7.84	11.21	9.55
18. Area charged as irrigated acres ..	21,535	21,511	21,373	21,861	21,984	21,735
19. Average of water-rate (item 1) per acre charged as irrigated ..	4.89	4.92	4.94	4.93	4.87	4.91
20. Total establishment charges per acre charged as irrigated (from 7 and 9 and 11) ..	.09	.11	.13	.17	.15	.13
21. Working expenses per acre charged as irrigated ..	.21	.41	.52	.65	.58	.50

The increase in the average of receipts from water-rate for the triennium under review is small, but that under "working expenses" is large and is due chiefly to the improvements and special repairs carried out to the channel and head works respectively, provision of roughstone revetment to the left bank and strengthening the banks of the channel. This increase in working expenses has reduced the percentage of net revenue by 8.09.

CLASS II.—KALINGAROYAN CHANNEL SYSTEM—cont.

4. Area irrigated.

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-1894 ..	ACS. 11,278	ACS. 9,476	ACS. 20,754	INCHES. 34.76
1894-1895 ..	11,227	10,267	21,494	27.10
1895-1896 ..	11,412	9,772	21,184	33.65
Triennial average ..	11,305	9,835	21,141	31.84
1896-1897 ..	11,185	9,359	20,544	20.75
1897-1898 ..	11,230	9,130	20,360	20.75
1898-1899 ..	11,289	9,178	20,467	20.75
Triennial average ..	11,235	9,169	20,424	20.75
1899-1900 ..	11,335	8,795	20,130	22.12
1900-1901 ..	11,400	8,842	20,242	25.36
1901-1902 ..	11,539	9,061	20,600	30.52
Triennial average ..	11,425	8,899	20,324	26.00

5. Assessments, Collections and Remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1898.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	..	..	..	..	..	..
2	Assessment (irrigation revenue and Public Works receipts).	1,05,716	1,06,467	1,03,748	1,07,196	1,08,560	1,07,501
3	Surplus and excess recoveries.	..	..	..	..	..	..
4	Total ..	1,05,716	1,06,467	1,03,748	1,07,196	1,08,560	1,07,501
5	Deduct remissions and refunds ..	60	73	710	85	37	261
6	Actual collections ..	1,05,656	1,06,394	1,03,038	1,07,161	1,08,523	1,07,240
7	Outstanding balance ..	..	..	..	..	..	..

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1898.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	Rs. 126	Rs. 268	Rs. 200	Rs. 1,047	Rs. 155	Rs. 488
Repairs.						
Head works ..	433	2,057	840	512	1,066	896
Main canals and branches ..	2,226	3,508	6,905	9,220	7,812	5,006
Distributaries ..	..	..	..	..	..	..
Drainage and protective works ..	..	..	..	..	..	..
Total ..	2,760	5,282	8,065	10,779	9,094	6,280

The increase of expenditure under "Repairs" during the triennial period is explained under paragraph 3.

CLASS II.

Minor Works.

PALAR ANICUT SYSTEM.

STATEMENT showing the area charged as irrigated.

	Area in acres.			Remarks.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1866-1867	ACS. 43,148	ACS. 15,604	58,752	
1867-1868	25,478	10,518	35,996	
1868-1869	36,281	13,052	49,333	
Triennial average	34,971	13,056	48,029	
1869-1870	39,667	15,812	55,479	
1870-1871	48,538	18,655	67,193	
1871-1872	51,439	18,718	70,157	
Triennial average	46,548	17,692	64,240	
1872-1873	51,661	20,182	71,843	
1873-1874	47,502	17,665	65,167	
1874-1875	60,225	25,173	85,398	
Triennial average	53,143	21,337	74,480	
1875-1876	56,584	15,063	71,647	Decrease due to famine.
1876-1877	21,344	9,641	30,985	
1877-1878	55,935	23,992	79,927	
Triennial average	37,658	15,968	53,627	
1878-1879	59,458	24,105	83,563	
1879-1880	61,675	28,429	90,104	
1880-1881	62,471	25,253	87,724	
Triennial average	61,212	25,931	87,143	
1881-1882	64,560	26,221	90,781	
1882-1883	66,212	20,594	86,806	
1883-1884	66,178	23,512	89,690	
Triennial average	65,650	23,539	89,189	
1884-1885	66,083	22,138	88,221	
1885-1886	65,587	23,401	88,988	
1886-1887	65,758	23,925	89,683	
Triennial average	65,739	23,178	88,917	
1887-1888	68,160	23,319	91,479	
1888-1889	70,244	26,779	97,023	
1889-1890	69,414	24,434	93,848	
Triennial average	69,273	24,944	94,217	
1890-1891	70,946	26,135	97,081	
1891-1892	48,799	17,827	66,626	Decrease due to scanty rainfall.
1892-1893	76,998	25,397	1,02,395	
Triennial average	63,914	21,120	85,034	
1893-1894	74,726	28,545	1,03,271	
1894-1895	74,947	28,428	1,03,375	
1895-1896	75,726	28,429	1,04,155	
Triennial average	75,133	28,666	1,03,799	
1896-1897	70,386	23,321	93,707	
1897-1898	74,684	23,182	97,866	
1898-1899	76,813	25,919	1,02,732	
Triennial average	73,944	25,482	99,426	
1899-1900	68,211	17,547	85,758	Decrease due to insufficient rainfall.
1900-1901	62,062	15,593	77,655	
1901-1902	74,726	27,565	1,02,291	
Triennial average	68,330	19,688	88,018	

CLASS II.—PALAR ANICUT SYSTEM—cont.

STATEMENT showing the Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay direct and indirect, to end of year.	Net revenue to end of year.	For the year.			Percentage on Capital.
			Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	7
1866-1867	Rs. 11,52,088	Rs. 2,55,585	Rs. —	Rs. 24,721	Rs. 27,612	2.33
1867-1868	11,86,062	2,56,083	2,191	23,768	7,422	0.62
1868-1869	11,85,226	2,55,505	30,578	—	—	—
Triennial average	11,72,758	2,57,727	9,162	15,859	6,697	0.67
1869-1870	11,88,148	2,80,289	44,702	27,218	16,784	1.41
1870-1871	11,88,849	3,18,660	74,626	33,956	38,671	3.26
1871-1872	11,88,949	3,71,753	75,213	23,420	62,793	5.34
Triennial average	11,88,682	3,23,667	65,180	28,087	36,093	3.03
1872-1873	11,89,662	4,27,289	81,162	24,826	56,286	4.72
1873-1874	11,89,662	4,17,989	67,753	27,714	39,991	3.34
1874-1875	12,10,076	4,37,607	97,682	28,053	69,629	5.72
Triennial average	11,96,466	4,27,634	78,859	26,907	51,952	4.33
1875-1876	13,71,992	3,73,656	9,076	68,628	59,552	4.34
1876-1877	13,73,662	2,56,607	59,449	68,629	1,19,448	8.69
1877-1878	13,85,468	2,52,841	79,897	47,564	32,333	2.33
Triennial average	13,77,020	3,06,354	9,874	61,630	51,758	3.76
1878-1879	13,87,442	3,62,667	61,718	11,386	70,622	5.06
1879-1880	13,84,691	4,09,395	98,666	41,835	56,733	4.07
1880-1881	17,42,933	4,39,666	93,111	65,140	27,971	1.68
Triennial average	15,21,691	4,00,574	91,266	38,823	52,442	3.44
1881-1882	18,23,627	5,10,697	1,06,725	35,694	71,031	3.89
1882-1883	16,80,365	6,81,755	1,18,396	47,338	71,058	4.22
1883-1884	19,50,665	6,70,884	1,32,291	48,062	84,229	4.31
Triennial average	17,88,285	6,27,812	1,19,187	42,681	76,506	4.26
1884-1885	16,69,932	7,50,207	1,21,745	42,622	79,123	4.68
1885-1886	17,40,398	8,08,446	1,23,755	65,616	58,139	3.34
1886-1887	17,88,379	8,87,323	1,29,158	55,321	73,837	4.11
Triennial average	17,39,569	8,15,325	1,24,639	52,786	71,853	4.14
1887-1888	16,34,996	9,47,739	1,27,959	67,653	60,306	3.69
1888-1889	18,04,206	10,47,028	1,30,743	70,446	60,297	3.33
1889-1890	18,66,632	10,58,219	1,28,602	1,07,572	21,030	1.12
Triennial average	18,06,276	10,00,992	1,29,134	61,590	67,544	3.79
1890-1891	19,29,868	10,70,661	1,39,463	1,07,611	31,852	1.65
1891-1892	19,63,557	9,89,671	1,318	90,793	89,390	0.55
1892-1893	19,78,831	10,59,366	1,61,478	82,781	78,697	3.97
Triennial average	19,57,419	10,33,639	1,00,747	68,038	32,709	1.68
1893-1894	20,12,579	11,59,115	1,61,578	52,824	1,08,754	5.39
1894-1895	20,35,378	12,56,842	1,44,811	66,084	78,727	3.86
1895-1896	20,55,988	13,43,195	1,59,396	53,043	1,06,353	5.17
Triennial average	20,34,648	12,44,050	1,51,927	57,347	94,580	4.65
1896-1897	20,65,236	14,11,102	1,81,851	63,854	1,17,997	5.69
1897-1898	20,71,959	15,14,237	1,47,829	44,684	1,03,145	4.95
1898-1899	20,78,195	15,37,286	1,68,285	46,226	1,22,059	5.82
Triennial average	20,71,738	15,20,971	1,43,322	51,256	92,066	4.43
1899-1900	20,66,021	16,44,331	76,349	68,901	7,448	0.35
1900-1901	20,90,357	16,21,679	38,370	38,370	—	—
1901-1902	21,00,385	17,10,945	1,56,117	68,651	87,466	4.16
Triennial average	20,92,251	16,59,151	90,279	65,758	24,521	1.17

CLASS II.—PALAR ANICUT SYSTEM—*cont.*

1. The Capital outlay on this system is shown below:—

Heads of Account.	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Direct charges—	Rs.	Rs.	Rs.	Rs.	Rs.
Works	15,35,887	6,077	3,424	8,088	15,56,476
Establishment	4,01,552	1,622	771	1,719	4,09,764
Tools and plant	29,875	..	..	..	29,875
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	19,70,414	7,699	4,195	9,807	19,92,115
Less—Receipts on capital account	..	..	..	..	..
Total, Direct charges	19,70,414	7,699	4,195	9,807	19,92,115
Indirect charges	1,07,891	227	111	241	1,08,270
Total outlay, direct and indirect	20,78,105	7,926	4,306	10,048	21,00,385

The outlay in the triennium under review was incurred chiefly in providing screw-gearing shutters to the regulator in Pundi tank, constructing quarters for the lascars and superintendents at Valluwambakkam and Dusi and at the diversion sluice of Govindavadi and Cauveripak main channels, improving Pudupot surplus channel and improving Nallur and Pennar tanks.

2. Lengths of Channels.

Description of channel.	Lengths of channel in miles.				
	At end of March 1899.	Increase or decrease during			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of canals .. Miles.	133	..	..	..	133
Of the above, navigable	..	..	..	..	..
Distributaries	133	..	..	..	133
Gross areas commanded .. Acres.	26,329	..	..	..	26,329

CLASS II.—PALAR ANICUT SYSTEM—*cont.*

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rates (Irrigation)	Rs. 2,75,142	Rs. 2,72,457	Rs. 2,50,025	Rs. 1,52,801	Rs. 2,50,041	Rs. 2,14,289
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	1,817	1,940	1,336	672	1,075	995
Total	2,76,959	2,74,397	2,51,361	1,53,473	2,51,117	2,15,284
Less—Refund of revenue	32	75	15	..	..	5
Total	2,76,927	2,74,322	2,51,346	1,53,373	2,51,117	2,15,279
Deduct—Share due to old irrigation	1,25,000	1,25,000	1,25,000	1,25,000	1,25,000	1,25,000
4. Total, Receipts	1,51,927	1,49,322	76,346	38,373	1,26,117	90,279
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements	7,791	8,582	17,226	17,939	18,318	16,161
6. Maintenance and repairs	24,520	29,150	37,681	32,475	36,505	33,657
7. Establishment (direction and extension)	9,387	8,634	12,273	11,448	11,355	11,588
8. Tools and plant	..	6	..	10	25	12
Total	51,698	46,352	67,171	61,872	61,304	59,448
II. Revenue Management.						
9. Direction	36	39	27	11	22	20
10. Execution	149	155	107	46	86	60
11. Civil officers	7,507	7,873	3,742	1,888	7,712	4,449
Total	7,689	7,567	3,876	1,946	7,820	4,549
12. Total, Direct charges	59,387	53,920	71,047	63,818	69,124	63,997
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	1,830	1,238	1,747	1,510	1,627	1,661
Total (Direct and Indirect)	61,217	55,158	72,801	65,328	70,751	65,658
Usages—Old maintenance charges	3,900	3,900	3,900	3,900	3,900	3,900
14. Total, Working Expenses	57,317	51,258	68,901	61,428	66,851	61,758
15. Net revenue	94,610	98,064	7,445	23,152	69,266	24,521
16. Capital outlay, direct and indirect	20,34,703	20,71,796	20,86,031	20,90,337	21,00,385	20,92,251
17. Percentage of net revenue	4.85	4.73	0.35	1.10	4.24	1.17
18. Area charged as irrigated, acres	101,099	99,425	85,758	75,928	102,311	88,919
19. Average of water-rate (item 1) per acre charged as irrigated	2.72	2.74	2.33	2.14	2.73	2.43
20. Total establishment charges per acre charged as irrigated (items 7 and 9 and 11)	.13	.16	.18	.17	.16	.18
21. Working expenses per acre irrigated	.56	.51	.80	.80	.66	.74

The falling off under "Receipts" in the triennial average under notice is due to the very large remissions granted successively during the first two years of the triennium, owing to very scanty rainfall, which necessitated the opening of test works. The fall in the receipts and the corresponding rise in the working expenses have reduced the percentage of net revenue by 3.56.

CLASS II.—PALAR ANICUT SYSTEM—*cont.*

4. Area irrigated.

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
	ACRES.	ACRES.	ACRES.	INCHES.
1893-1894	55,012	37,933	92,945	42.29
1894-1895	60,185	24,692	84,877	42.85
1895-1896	60,269	25,820	86,089	40.90
Triennial average ..	58,605	29,165	87,770	41.98
1896-1897	58,351	16,192	74,543	43.76
1897-1898	61,495	13,393	74,888	43.76
1898-1899	67,503	17,553	85,056	39.64
Triennial average ..	62,449	15,743	78,192	42.36
1899-1900	60,651	15,012	75,663	39.95
1900-1901	54,331	10,845	65,176	35.99
1901-1902	67,455	25,546	93,001	38.04
Triennial average ..	60,780	16,468	77,248	31.98

The reason for the decrease in the area irrigated is explained under paragraph 3.

5. Areas irrigated by districts.

Districts.	Areas in acres.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
	ACRES.	ACRES.	ACRES.	INCHES.
<i>North Arcot.</i>				
1899-1900	41,793	13,374	55,167	..
1900-1901	36,892	9,880	46,772	..
1901-1902	46,606	17,192	63,798	..
<i>Chingleput.</i>				
1899-1900	18,948	1,638	20,586	..
1900-1901	17,339	1,165	18,504	..
1901-1902	20,489	6,347	26,836	..
	..	..	..	..

CLASS II.—PALAR ANICUT SYSTEM—*cont.*

6. Assessments, remissions and collections.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
		RS.	RS.	RS.	RS.	RS.	RS.
1	Opening balance of the year..	..	..	..	..	..	..
2	Assessment (irrigation revenue and public works receipts) ..	2,81,947	2,85,497	2,75,405	2,64,691	2,89,072	2,76,823
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	2,81,947	2,85,497	2,76,405	2,64,691	2,89,072	2,76,823
4	Deduct—Remissions and refunds ..	5,020	11,175	75,350	1,01,318	7,955	61,644
5	Actual collections ..	2,76,927	2,74,322	2,01,055	1,63,373	2,81,117	2,15,179
6	Outstanding balance ..	..	..	..	..	..	..

The reason for the large remissions granted in 1899-1900 and 1900-1901 is stated under paragraph 3.

7. Miscellaneous revenue.

	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Sale of water	..	..	..	..	..	..
Water-supply of towns ..	..	..	..	..	..	..
Plantations	97	11	..	..	..	..
Other canal produce ..	1,667	1,885	1,294	563	1,049	969
Rents of buildings ..	..	27	4	8	1	4
Fines	..	..	..	..	..	..
Miscellaneous	53	17	38	1	27	23
Total ..	1,817	1,946	1,336	572	1,076	995

8. Maintenance and repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	7,791	8,563	17,225	17,939	13,318	16,161
Repairs—						
Head works	2,440	2,201	2,029	783	1,141	1,313
Main canals and branches ..	8,584	7,396	12,883	9,862	9,585	11,105
Distributaries	23,496	19,053	21,764	21,830	26,899	23,164
Drainage and protective works ..	..	..	..	..	..	..
Total ..	42,311	37,713	54,906	50,414	49,923	51,743

CLASS II.

Minor Works.

POINEY ANICUT SYSTEM.

STATEMENT showing the area charged as irrigated.

		Area in acres.		
		First crop.	Second crop.	Total.
		ACS.	ACS.	ACS.
1890-1891	..	21,701	5,861	27,562
1891-1892	..	17,392	1,647	19,039
1892-1893	..	21,939	5,961	27,900
Triennial average		20,344	4,483	24,827
1893-1894	..	23,480	5,620	29,100
1894-1895	..	23,061	4,820	27,881
1895-1896	..	21,781	4,969	26,750
Triennial average		22,774	5,136	27,910
1896-1897	..	19,503	3,865	23,368
1897-1898	..	22,416	5,791	28,207
1898-1899	..	23,294	6,933	30,227
Triennial average		21,871	5,509	27,380
1899-1900	..	16,193	3,348	19,541
1900-1901	..	14,342	2,444	16,786
1901-1902	..	22,010	5,353	27,363
Triennial average		17,515	3,675	21,190

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	
93-1894	2,31,119	..	5,77,938	..	49,311	23,866	25,445	11.01
94-1895	2,31,528	..	5,92,023	..	44,283	30,198	14,085	6.07
95-1896	2,31,779	..	6,11,922	..	46,075	26,178	19,897	8.58
Triennial average	2,31,675	..	5,93,961	..	46,556	26,713	19,843	8.58
96-1897	2,31,779	..	6,39,401	..	41,204	13,725	27,479	11.86
97-1898	2,31,696	..	6,77,840	..	49,123	10,634	38,489	16.69
98-1899	2,31,696	..	7,24,044	..	55,162	8,958	46,204	19.96
Triennial average	2,31,723	..	6,80,429	..	48,496	11,122	37,374	16.13
99-1900	2,33,598	..	7,38,609	..	30,425	15,861	14,565	6.24
00-1901	2,36,290	..	7,46,767	..	24,611	16,463	8,148	3.46
01-1902	2,36,290	..	7,74,234	..	43,692	16,215	27,477	11.63
Triennial average	2,35,323	..	7,52,200	..	32,909	16,179	16,730	7.11

CLASS II.—POINEY ANICUT SYSTEM—cont.

1. The Capital outlay on this system is given below :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct Charges.</i>					
	RS.	RS.	RS.	RS.	RS.
Works	1,53,435	1,349	2,287	..	1,57,071
Establishment	42,169	310	427	..	42,906
Tools and plant	..	..	38	..	38
Expense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	2,25,624	1,659	2,822	..	2,30,105
<i>Less—Receipts on Capital account</i>					
	..	..	..	..	..
Total, Direct charges	2,25,624	1,659	2,822	..	2,30,105
Indirect Charges	6,072	43	70	..	6,185
Total outlay, Direct and Indirect	2,31,696	1,702	2,892	..	2,36,290

The expenditure incurred during the triennium under review was on constructing an inspection bungalow and out-houses at Minnal.

2. Lengths of Channels.

Description of channel.	Lengths of channel in miles.				
	At end of March 1899.	Increase or decrease during			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of channels Miles.	104	..	..	..	104
Of the above navigable	Nil.	..	..	..	Nil.
Distributaries for irrigation only	78	..	..	..	78
Gross area commanded Acres.	42,560	..	..	..	42,560

CLASS II.—POINEY ANICUT SYSTEM—cont.

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (Irrigation) ..	90,294	90,213	43,538	32,931	89,686	55,385
2. Navigation ..	567	276	190	111	100	133
3. Miscellaneous ..	..	..	..	..	..	..
Total ..	90,861	90,489	43,728	33,042	89,786	55,518
Less—Refunds of Revenue ..	..	..	..	..	..	..
Total ..	90,861	90,489	43,728	33,042	89,786	55,518
Deduct—Share due to old irrigation.	41,306	41,993	13,302	8,431	46,094	22,609
4. Total Receipts ..	49,555	48,496	30,426	24,611	43,692	32,909
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	2,881	1,598	3,754	1,817	1,123	2,231
6. Maintenance and repairs ..	15,422	5,276	7,645	10,248	9,911	9,268
7. Establishment (Direction and Execution) ..	4,429	1,581	2,571	2,775	2,515	2,520
8. Tools and plant ..	..	..	..	..	..	..
Total ..	23,715	8,455	13,970	14,840	13,549	14,119
II. Revenue Management.						
Establishment.						
9. Direction ..	11	6	4	2	2	3
10. Execution ..	46	22	15	9	8	11
11. Civil officers ..	2,299	2,419	1,509	1,222	2,178	1,638
Total ..	2,356	2,438	1,523	1,233	2,188	1,650
12. Total, Direct Charges ..	26,071	10,893	15,493	16,073	15,737	15,769
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	542	229	363	390	478	410
Total (Direct and Indirect) ..	26,713	11,122	15,856	16,463	16,215	16,179
Deduct—Old maintenance charges ..	..	..	..	..	..	..
14. Total, Working Expenses ..	26,713	11,122	15,856	16,463	16,215	16,179
15. Net revenue ..	19,243	37,374	14,565	8,148	27,477	18,730
16. Capital outlay, direct and indirect.	2,31,575	2,31,723	2,33,393	2,36,290	2,36,290	2,35,323
17. Percentage of net revenue ..	8.50	16.13	6.24	3.45	11.63	7.11
18. Area charged as irrigated Acres ..	27,910	27,381	19,541	16,585	27,263	21,130
19. Average of water-rate (item 1) per acre charged as irrigated.	3.23	3.29	2.22	1.98	3.29	1.67
20. Total, establishment charges per acre charged as irrigated (items 7 and 9 to 11) ..	0.24	0.14	0.20	0.24	0.17	0.20
21. Working expenses per acre charged as irrigated ..	0.95	0.40	0.51	0.99	0.59	0.76

The considerable falling off in the average total receipts from water-rate, etc., during the triennium under review is due to the very large remissions granted in 1899-1900 and 1900-1901 owing to deficient rainfall and consequent failure of crops.

CLASS II.—POINEY ANICUT SYSTEM—cont.

4. Area irrigated.

Years.	Area irrigated.			Rainfall.
	First-crop.	Second-crop.	Total.	
1	2	3	4	5
1893-94 ..	ACS. 15,972	ACS. 9,570	ACS. 25,542	INCHES. 35.52
1894-95 ..	17,414	7,360	24,774	35.08
1895-96 ..	16,890	8,150	25,040	32.40
Triennial average ..	15,426	8,360	24,785	34.33
1896-97 ..	15,069	5,444	20,513	32.90
1897-98 ..	18,774	3,023	21,797	32.80
1898-99 ..	21,474	8,703	30,177	45.59
Triennial average ..	18,739	5,723	24,462	38.39
1899-1900 ..	13,934	3,357	17,291	16.63
1900-1901 ..	12,280	2,041	14,321	31.61
1901-1902 ..	19,921	5,065	24,986	32.18
Triennial average ..	15,380	3,471	18,851	29.62

For decrease in the average area irrigated for the triennial period—*vide* remarks under paragraph 3.

5. Assessments, Remissions and Collections.

Number of items.	Heads.	Average of the triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1. Opening balance of the year ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2. Assessment (Irrigation Revenue and Public Works receipts) ..	99,198	93,638	66,320	61,537	90,656	86,188	86,188
3. Surplus and excess recoveries ..	..	..	..	..	..	..	..
Total ..	99,198	93,638	66,320	61,537	90,656	86,188	86,188
4. Deduct—remissions and refunds ..	8,337	3,149	42,592	48,645	..	..	..
5. Actual collections ..	90,861	90,489	23,728	12,892	80,726	86,188	86,188
6. Outstanding balance ..	..	..	..	..	..	..	..

The reason for the heavy remissions granted in 1899-1900 and 1900-1901 is explained under paragraph 3.

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	Rs. 2,884	Rs. 1,598	Rs. 3,754	Rs. 1,817	Rs. 1,123	Rs. 2,231
Repairs.						
Head works ..	1,854	1,114	527	592	733	621
Main canals and branches ..	2,877	2,391	1,693	410	2,086	1,396
Distributaries ..	11,679	1,771	5,415	9,246	7,092	7,251
Drainage and protective works ..	..	..	..	..	..	..
Total ..	19,280	6,874	11,299	12,065	11,034	11,499

The average for the triennial period under review exceeds that for the preceding triennium, the increase being due to the extensive repairs carried out during the period.

CLASS II.

Minor Works.

CHEYAR ANICUT SYSTEM.

STATEMENT showing the area charged as irrigated.

	Area in acres.		
	First crop.	Second crop.	Total.
	ACS.	ACS.	ACS.
1890-1891	16,771	11,194	27,965
1891-1892	14,194	9,381	23,575
1892-1893	20,674	13,764	34,438
Triennial average ..	17,180	11,410	28,590
1893-1894	21,158	14,039	35,197
1894-1895	20,872	12,853	33,725
1895-1896	21,950	15,126	37,076
Triennial average ..	21,160	14,006	35,166
1896-1897	22,104	14,598	36,702
1897-1898	19,703	12,852	32,555
1898-1899	22,382	15,159	37,541
Triennial average ..	21,363	14,236	35,599
1899-1900	18,365	12,680	31,045
1900-1901	17,975	11,708	29,683
1901-1902	19,316	12,735	32,051
Triennial average ..	18,552	12,156	30,707

STATEMENT showing the Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1893-1894	8,53,852	..	2,49,943	..	45,829	62,187	1,97,816	50.23
1894-1895	8,86,042	..	2,68,050	..	37,445	21,533	15,912	4.16
1895-1896	4,90,174	..	2,84,811	..	50,909	31,239	19,670	4.68
Triennial average ..	3,80,192	..	2,65,935	..	44,726	3,186	41,540	13.06
1896-1897	4,66,416	..	3,04,784	..	60,627	30,574	30,053	4.92
1897-1898	4,66,447	..	3,28,877	..	52,807	16,184	36,623	6.52
1898-1899	4,66,447	..	3,59,238	..	61,495	20,666	40,829	7.60
Triennial average ..	4,66,436	..	3,30,783	..	47,277	22,478	24,799	6.11
1899-1900	4,05,447	..	3,77,686	..	36,200	17,748	18,452	4.65
1900-1901	4,08,151	..	4,08,185	..	33,801	8,276	25,525	6.25
1901-1902	4,08,271	..	4,25,715	..	39,783	17,258	22,525	5.62
Triennial average ..	4,07,289	..	4,03,188	..	36,593	14,427	22,166	5.44

CLASS II.—CHEYAR ANICUT SYSTEM—cont.

1. The capital cost of this system is as shown below :—

	Outlay to end of March 1893.	Outlay during			Outlay to end of March 1903.
		1893-1900.	1900-1901.	1901-1902.	
	RS.	RS.	RS.	RS.	RS.
Work	3,20,855	..	2,143	96	3,23,193
Establishment	73,442	..	492	22	74,066
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	3,94,407	..	2,635	117	3,97,159
Less—Receipts on Capital account	..	..	..	..	..
Total, Direct charges	3,94,407	..	2,635	117	3,97,159
Indirect charges	11,040	..	99	3	11,142
Total, Outlay (Direct and Indirect) ..	4,05,447	..	2,734	120	4,08,271

7. The outlay shown under the open capital account of this system during 1900-1901 and 1901-1902 was incurred in constructing an Inspection bungalow and outhouse at Verambakam.

2. Lengths of channels.

Description of channel.	Lengths of channel in miles.				
	To end of March 1899.	Increase or decrease.			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of canal (main and branch) .. Miles.	61	..	..	..	61
Of the above navigable	..	..	..	..	..
Distributaries	120	..	..	..	120
Gross area commanded Acres.	18,903	..	..	..	18,903

There was no change during the triennium either in the lengths of channels or in the area commanded.

CLASS II.—CHEYAR ANICUT SYSTEM—*cont.*

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1899.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (Irrigation) ..	87,184	88,485	68,500	63,585	80,228	70,823
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	171	350	934	358	231	297
Total ..	87,355	88,835	69,434	64,053	80,529	71,126
Less—Refunds of revenue ..	..	..	..	..	..	..
Total ..	87,355	88,835	69,434	64,053	80,529	71,126
Deduct—Share due to old irrigation ..	42,930	41,658	32,694	30,252	40,741	34,529
4. Total, Receipts	44,375	47,277	36,200	33,801	39,788	36,606
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	19,034	2,610	3,213	291	2,005	1,876
6. Maintenance and repairs ..	15,643	13,314	8,709	5,453	16,116	8,922
7. Establishment (direction and execution)	987	3,366	2,902	1,189	2,749	2,230
8. Tools and plant	..	..	..	16	..	16
Total ..	35,668	19,580	15,616	6,549	14,870	12,269
II. Revenue Management.						
Establishment.						
9. Direction	4	7	6	7	5	6
10. Execution	13	28	23	30	18	24
11. Civil officers	2,210	2,345	1,794	1,671	1,977	1,814
Total ..	2,227	2,381	1,823	1,708	2,000	1,844
12. Total, Direct charges	3,050	21,961	17,338	8,104	16,870	14,114
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	136	517	410	172	358	323
Total (Direct and Indirect) ..	3,186	22,478	17,748	8,276	17,228	14,437
Deduct—Old maintenance charges ..	..	..	..	..	..	..
14. Total, Working expenses ..	3,186	22,478	17,748	8,276	17,228	14,437
15. Net revenue	27,551	24,799	18,452	25,525	22,560	22,169
16. Capital outlay (direct and indirect)	3,50,192	4,05,436	4,95,447	4,08,151	4,08,271	4,07,289
17. Percentage of net revenue ..	12.50	6.11	1.55	6.25	5.51	5.44
18. Area charged as irrigated Acres	35,166	32,642	39,446	29,681	32,061	30,727
19. Average of water-rate (Item 1) per acre charged as irrigated ..	2.47	2.45	2.24	2.14	2.50	2.30
20. Total, Establishment charges per acre charged as irrigated (Items 7 and 9-11)	0.03	0.16	0.15	0.09	0.14	0.13
21. Working expenses per acre charged as irrigated	0.09	0.63	0.53	0.27	0.53	0.46

CLASS II.—CHEYAR ANICUT SYSTEM—*cont.*

The average of the total receipts from water-rate, &c., for the triennium under review shows a decrease when compared with that of the two preceding periods which is due to the large remissions granted during the triennium owing to the unfavourable character of the season. This decrease has, in spite of the reduction in working expenses during the triennial period, affected the percentage of net revenue.

4. Rainfall.

	Average of three years ending March 1899.	Period under review.			Average of twelve years ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	INCHES.	INCHES.	INCHES.	INCHES.	INCHES.
Rainfall	41.51	25.24	36.79	55.69	39.27

5. Area irrigated.

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-94	ACS. 16,158	ACS. 8,831	ACS. 27,019	INCHES. 43.69
1894-95	17,768	4,945	22,713	42.06
1895-96	18,310	10,151	28,461	38.86
Triennial average ..	18,039	7,975	26,064	41.37
1896-97	19,020	8,161	27,181	40.29
1897-98	18,273	3,848	22,121	40.29
1898-99	16,314	12,519	31,833	40.36
Triennial average ..	18,869	8,176	27,045	40.31
1899-1900	17,466	6,498	23,964	25.34
1900-1901	16,284	6,830	23,114	36.79
1901-1902	18,332	8,700	26,732	36.69
Triennial average ..	17,494	7,343	24,837	32.57

The decrease in the average area irrigated during the triennium is due to the unfavourable character of the season.

6. Areas irrigated by districts.

Districts.	Area irrigated in acres.		
	First crop.	Second crop.	Total.
<i>North Arcot district.</i>			
1899-1900	ACS. 17,050	ACS. 6,403	ACS. 23,453
1900-1901	16,567	6,724	23,291
1901-1902	17,530	8,504	26,034
Triennial average ..	17,055	7,212	24,277
<i>Chingleput district.</i>			
1899-1900	415	90	506
1900-1901	417	106	523
1901-1902	432	196	628
Triennial average ..	428	131	559

CLASS II.—CHEYAR ANICUT SYSTEM—cont.

7. Assessments, collections and remissions.

Number of Rems.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1899.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2	Assessment (irrigation revenue and Public Works receipts) ..	88,932	92,968	89,633	79,394	81,375	80,567
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	88,932	92,968	89,633	79,394	81,375	80,567
4	Deduct remissions and refunds ..	1,837	4,132	11,839	15,341	1,146	9,442
5	Actual collections ..	87,095	88,835	69,794	64,053	80,229	71,125
6	Outstanding balance ..	..	..	..	..	..	..

The heavy remissions granted during the triennium were necessitated by the unfavourable character of the season.

8. Maintenance and repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	Rs. 19,935	Rs. 2,310	Rs. 2,913	Rs. 291	Rs. 2,305	Rs. 1,976
<i>Repairs.</i>						
Head works ..	1,286	146	..	..	..	..
Main canals and branches ..	4,510	4,009	3,234	3,082	4,050	3,455
Distributaries ..	5,727	9,158	5,166	2,370	6,666	4,634
Drainage and protective works ..	4,121	..	..	..	..	..
Total ..	4,291	15,923	12,643	5,162	12,121	9,975

CLASS II.

Minor Works.

CHEMBRAMBAKAM TANK.

STATEMENT showing the area charged as irrigated.

Area in acres.	Area in acres.			Remarks.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1870-1871 ..	ACS. 10,632	ACS. 1,495	ACS. 11,565	Decrease due to famine.
1871-1872 ..	11,398	2,380	13,778	
1872-1873 ..	11,429	2,287	14,416	
1873-1874 ..	8,145	3,114	11,259	
1874-1875 ..	11,672	1,530	13,402	
Triennial average ..	10,382	2,644	13,026	
1875-1876 ..	5,354	708	6,062	
1876-1877 ..	2,671	390	3,061	
1877-1878 ..	12,267	3,057	15,324	
Triennial average ..	6,764	1,335	8,149	
1878-1879 ..	12,555	5,610	18,165	Decrease due to scanty rainfall.
1879-1880 ..	12,559	5,836	18,395	
1880-1881 ..	12,025	4,961	17,586	
Triennial average ..	12,580	5,469	18,049	
1881-1882 ..	12,623	5,296	17,919	
1882-1883 ..	12,768	3,216	15,979	
1883-1884 ..	12,868	5,552	18,520	
Triennial average ..	12,751	4,721	17,472	
1884-1885 ..	12,732	5,815	18,547	
1885-1886 ..	12,843	4,780	17,623	
1886-1887 ..	12,938	6,464	19,402	
Triennial average ..	12,838	5,686	18,524	
1887-1888 ..	12,848	3,338	16,186	Decrease due to scanty rainfall.
1888-1889 ..	12,875	6,541	19,416	
1889-1890 ..	12,286	4,183	14,469	
Triennial average ..	12,003	4,687	16,690	
1890-1891 ..	6,953	1,528	7,581	
1891-1892 ..	7,264	2,476	10,180	
1892-1893 ..	12,222	3,808	16,530	
Triennial average ..	8,953	2,604	11,557	
1893-1894 ..	12,954	6,111	19,065	
1894-1895 ..	11,565	3,885	15,450	
1895-1896 ..	11,424	1,967	13,391	
Triennial average ..	11,981	3,988	15,969	
1896-1897 ..	13,057	2,206	15,237	Decrease due to scanty rainfall.
1897-1898 ..	11,765	3,685	15,691	
1898-1899 ..	12,952	2,780	15,732	
Triennial average ..	12,555	2,858	15,553	
1899-1900 ..	12,113	5,414	17,527	
1900-1901 ..	11,043	957	11,965	
1901-1902 ..	13,000	2,942	15,942	
Triennial average ..	12,040	3,104	15,145	

CLASS II.—CHAMBRAMBAKAM TANK SYSTEM—cont.

STATEMENT showing the Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1870-1871	3,31,301	..	..	..	..	..	..	..
1871-1872	3,77,641	..	53,115	..	53,354	4,123	27,992	3.44
1872-1873	4,12,773	..	31,543	..	25,155	3,063	28,598	6.79
1873-1874	5,29,161	..	65,835	..	16,489	32,297	15,808	2.93
1874-1875	5,68,324	..	31,919	..	22,936	6,912	16,084	2.83
Triennial average ..	5,05,753	..	76,465	..	21,559	12,049	9,501	1.89
1875-1876	6,19,550	..	65,892	..	2,361	13,388	16,027	2.58
1876-1877	6,18,814	..	51,438	..	6,335	8,119	14,454	2.33
1877-1878	6,52,917	..	83,570	..	29,860	2,272	32,132	4.92
Triennial average ..	6,30,230	..	63,566	..	8,629	8,079	550	0.08
1878-1879	6,55,938	..	1,12,347	..	37,848	2,571	35,277	5.37
1879-1880	6,59,977	..	1,59,718	..	28,713	2,158	40,371	6.19
1880-1881	7,24,783	..	1,96,082	..	35,368	56	35,364	5.01
Triennial average ..	6,80,566	..	1,55,215	..	37,623	119	37,504	5.51
1881-1882	7,36,860	..	2,32,370	..	37,218	930	36,288	4.93
1882-1883	7,36,589	..	2,65,672	..	32,734	568	33,302	4.53
1883-1884	7,36,589	..	2,90,212	..	39,222	14,598	24,640	3.33
Triennial average ..	7,33,559	..	2,62,751	..	36,396	5,020	31,376	4.25
1884-1885	7,33,589	..	3,22,356	..	38,601	6,457	32,144	4.36
1885-1886	7,36,589	..	3,40,821	..	36,784	13,319	18,465	2.50
1886-1887	7,36,589	..	3,76,716	..	41,263	5,368	35,895	4.87
Triennial average ..	7,36,589	..	3,46,631	..	38,333	10,048	28,284	3.91
1887-1888	7,33,589	..	4,11,788	..	32,559	2,513	35,072	4.76
1888-1889	7,36,589	..	4,53,490	..	41,358	344	41,702	5.63
1889-1890	7,36,589	..	4,57,442	..	22,204	18,252	3,952	0.53
Triennial average ..	7,36,589	..	4,40,905	..	32,040	5,132	26,908	3.65
1890-1891	7,36,589	..	4,57,138	..	5,211	5,515	304	0.04
1891-1892	7,36,589	..	4,12,779	..	635	9,033	8,398	1.15
1892-1893	7,36,589	..	4,83,550	..	33,984	596	34,580	4.69
Triennial average ..	7,36,589	..	4,50,686	..	13,286	4,550	8,735	1.17
1893-1894	7,36,589	..	5,25,660	..	40,634	1,576	42,310	5.74
1894-1895	7,41,038	..	5,49,002	..	23,080	262	23,342	3.13
1895-1896	7,41,038	..	5,72,335	..	20,931	2,403	23,334	3.12
Triennial average ..	7,41,555	..	5,48,999	..	28,215	1,447	26,768	3.66
1896-1897	7,41,038	..	6,03,812	..	20,891	615	21,506	4.23
1897-1898	7,49,926	..	6,32,617	..	28,523	249	28,775	3.85
1898-1899	7,47,099	..	6,63,703	..	31,007	29	31,036	4.16
Triennial average ..	7,45,021	..	6,33,357	..	30,159	293	30,456	4.09
1899-1900	7,47,107	..	7,01,408	..	37,535	170	37,705	5.01
1900-1901	7,47,107	..	7,02,557	..	377	772	1,149	0.15
1901-1902	7,47,107	..	7,37,968	..	33,342	2,069	35,411	4.74
Triennial average ..	7,47,107	..	7,13,978	..	23,751	1,034	24,785	3.31

CLASS II.—CHAMBRAMBAKAM TANK SYSTEM—cont.

The capital outlay is as shown below:—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	Rs.
Works	5,00,164	..	..	..	5,00,172
Establishment	1,26,417	..	..	..	1,26,417
Tools and plant	8,204	..	..	..	8,204
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	6,34,785	..	..	..	6,34,793
Less—Receipts on Capital account	114	..	..	..	114
Total, Direct charges	6,34,671	..	..	..	6,34,679
Indirect charges	1,12,425	..	..	..	1,12,428
Total, Outlay (Direct and Indirect)	7,47,099	..	..	..	7,47,107

No expenditure was incurred under the open capital account of this system during the triennium.

CLASS II.—CHAMBRAMBAKAM TANK SYSTEM—*cont.*

2. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water rate (irrigation)	Rs. 44,148	Rs. 46,077	Rs. 53,515	Rs. 16,373	Rs. 49,290	Rs. 39,729
2. Navigation .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
3. Miscellaneous	 67	 81	 20	 4	 52	 25
Total	44,215	46,158	53,535	16,377	49,342	39,751
<i>Less—Refunds of revenue</i> .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total	44,215	46,158	53,535	16,377	49,342	39,751
<i>Deduct—Share due to old irrigation</i> ..	16,060	16,000	16,000	16,000	16,000	16,000
4. Total, Receipts	28,155	30,158	37,535	377	33,342	23,751
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	611	450	.. ..	317	2	106
6. Maintenance and repairs	2,599	3,584	3,843	4,522	2,501	3,692
7. Establishment (direction and execution)	726	926	855	1,144	577	869
8. Tools and plant .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total	3,936	4,960	4,743	5,953	3,080	4,597
II. Revenue Management.						
Establishment						
9. Direction	2	2	.. ..	.. ..	1	.. ..
10. Execution	5	6	.. ..	.. ..	.. ..	.. ..
11. Civil officers	1,407	1,504	1,816	19	1,665	1,167
Total	1,414	1,512	1,818	19	1,670	1,169
12. Total, direct charges	5,350	6,472	6,561	5,972	4,750	5,766
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	103	130	124	156	81	120
Total (Direct and Indirect)	5,453	6,602	6,730	6,128	4,831	5,886
<i>Deduct—Old maintenance charges.</i> ..	6,900	6,900	6,900	6,900	6,900	6,900
14. Total, Working expenses	1,447	298	170	772	2,063	1,004
15. Net revenue	26,708	29,860	37,705	1,149	35,441	24,747
16. Capital outlay (direct and indirect)	7,44,038	7,46,031	7,47,107	7,47,107	7,47,107	7,47,107
17. Percentage of net revenue	3.93	4.08	5.04	0.15	4.74	3.31
18. Area charged as irrigated Acres ..	75,968	15,553	17,527	11,265	15,942	15,145
19. Average of water-rate (item 1) per acre charged as irrigated	2.78	2.96	3.06	1.86	3.09	2.59
20. Total, Establishment charges per acre charged as irrigated (items 7 and 9 to 11)	0.13	0.16	0.15	0.09	0.14	0.13
21. Working expenses per acre charged as irrigated	0.09	0.01	0.01	0.06	0.13	0.07

The total receipts from water-rate, etc., during the triennium under review show a falling off when compared with those of the previous two triennial periods. This is due to the large remissions granted during 1900-1901 consequent on the insufficient supply of water under the system.

CLASS II.—CHAMBRAMBAKAM TANK SYSTEM—*cont.*

3. Area irrigated.

1	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-1894	Acres 11,378	Acres 6,875	Acres 18,253	Inches 36.40
1894-1895	11,695	8,116	19,811	31.67
1895-1896	10,864	3,716	14,580	38.02
Triennial average	11,312	4,669	15,981	38.16
1896-1897	12,002	4,468	16,470	51.94
1897-1898	10,879	3,897	14,776	51.94
1898-1899	12,766	3,611	16,377	47.01
Triennial average	11,882	3,958	15,840	50.29
1899-1900	11,373	5,319	16,692	28.50
1900-1901	10,845	738	11,583	28.60
1901-1902	12,282	2,683	14,965	35.11
Triennial average	11,333	2,914	14,247	33.37

The decrease in the area irrigated is due to the unfavourable character of the season.

4. Assessments, remissions and collections.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
Chambrambakam tank.							
1	Opening balance of the year .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
2	Assessments (irrigation revenue and Public Works receipts)	52,364	48,962	68,535	45,379	49,468	51,155
3	Surplus and excess recoveries .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
	Total	52,364	48,962	68,535	45,379	49,468	51,155
4	<i>Deduct—Remissions and refunds</i>	8,149	2,804	5,085	29,002	126	11,404
5	Actual collections	44,215	46,158	63,535	16,377	49,342	39,751
6	Outstanding balance .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..

The heavy remissions granted in 1900-1901 were due to the unfavourable character of the season.

5. Maintenance and repairs.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements	Rs. 611	Rs. 450	.. ..	Rs. 317	Rs. 2	Rs. 106
Repairs.						
Head works .. ..	.. ..	16	804	2,007	.. ..	970
Main canals and branches	2,333	3,489	2,918	2,381	1,386	2,222
Distributaries .. ..	.. ..	78	21	134	1,115	430
Drainage and protective works .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..
Total	3,210	4,033	3,843	4,539	2,503	3,728

CLASS II.

Minor Works.

MADRAS WATER-SUPPLY AND IRRIGATION EXTENSION PROJECT.

STATEMENT showing the area charged as irrigated.

1	Area in acres.			Remarks.
	First crop.	Second crop.	Total.	
2	3	4	5	
1870-1871	ACS. 4,836	ACS. 1,643	ACS. 6,379	
1871-1872	5,329	963	6,292	
1872-1873	6,129	1,235	7,364	
1873-1874	5,987	1,486	7,473	
1874-1875	6,123	1,321	7,444	
Triennial average ..	6,080	1,447	7,527	
1875-1876	6,373	2,031	8,404	Decrease due to very scanty rainfall.
1876-1877	3,077	1,165	4,242	
1877-1878	6,565	1,024	7,589	
Triennial average ..	5,339	1,417	6,756	
1878-1879	7,214	2,618	10,032	
1879-1880	7,380	3,571	10,951	
1880-1881	7,421	3,549	10,970	
Triennial average ..	7,338	3,313	10,651	
1881-1882	7,441	3,379	10,820	
1882-1883	7,454	2,870	10,324	
1883-1884	7,436	3,118	10,554	
Triennial average ..	7,444	3,122	10,566	
1884-1885	6,033	2,771	8,804	
1885-1886	7,057	1,697	8,754	
1886-1887	7,332	2,362	9,694	
Triennial average ..	6,807	2,273	9,080	
1887-1888	7,232	2,603	9,835	
1888-1889	7,275	2,973	10,248	
1889-1890	7,492	3,197	10,689	
Triennial average ..	7,334	2,724	10,058	
1890-1891	7,262	3,523	10,785	
1891-1892	8,929	1,342	10,271	
1892-1893	7,454	1,727	9,181	
Triennial average ..	7,162	2,197	9,359	
1893-1894	7,463	1,995	9,459	
1894-1895	7,418	2,630	10,048	
1895-1896	7,434	2,260	9,694	
Triennial average ..	7,436	2,295	9,733	
1896-1897	7,402	2,341	9,743	
1897-1898	7,541	2,846	10,387	
1898-1899	7,450	2,371	9,821	
Triennial average ..	7,464	2,510	9,973	
1899-1900	7,550	2,983	10,533	
1900-1901	7,253	1,385	8,638	
1901-1902	7,426	1,771	9,197	
Triennial average ..	7,414	2,046	9,460	

CLASS II.—MADRAS WATER-SUPPLY AND IRRIGATION EXTENSION PROJECT—cont.

STATEMENT showing capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			Percentage on capital.
					Gross revenue.	Working expense.	Net revenue.	
1	2	3	4	5	6	7	8	9
	RS.		RS.		RS.	RS.	RS.	RS.
1870-1871	11,41,373	..	1,734	..	3,911	5,645	1,734	0.15
1871-1872	14,15,661	..	24,067	..	949	23,272	22,323	1.57
1872-1873	15,26,825	..	25,345	..	3,815	6,103	1,288	0.08
1873-1874	15,90,512	..	69,728	..	3,874	43,255	44,331	2.79
1874-1875	15,98,536	..	71,961	..	5,743	7,978	2,235	0.14
Triennial average ..	15,70,291	..	55,877	..	4,477	20,445	15,968	1.00
1875-1876	16,02,979	..	59,522	..	17,449	5,010	12,439	0.77
1876-1877	16,23,424	..	72,778	..	2,195	11,061	13,256	0.81
1877-1878	16,26,740	..	68,512	..	3,756	400	4,156	0.25
Triennial average ..	16,17,714	..	66,571	..	6,340	5,224	1,116	0.61
1878-1879	16,58,906	..	54,722	..	14,564	735	13,829	0.83
1879-1880	16,70,885	..	46,334	..	12,722	4,273	8,449	0.50
1880-1881	16,85,287	..	36,277	..	18,889	2,823	16,067	0.95
Triennial average ..	16,71,686	..	43,728	..	15,387	2,610	12,778	0.76
1881-1882	16,91,944	..	20,268	..	16,981	6,970	10,011	0.59
1882-1883	17,09,997	..	43,694	..	12,947	12,947	30,747	1.79
1883-1884	17,48,049	..	22,395	..	18,374	7,569	11,014	0.68
Triennial average ..	17,16,663	..	42,03	..	26,549	8,992	17,557	1.02
1884-1885	17,53,981	..	28,177	..	13,164	58,735	50,572	2.88
1885-1886	17,54,045	..	1,87,319	..	12,465	1,71,547	1,59,142	9.07
1886-1887	17,54,045	..	2,07,120	..	22,998	42,799	19,801	1.13
Triennial average ..	17,54,024	..	1,40,872	..	16,189	92,694	76,505	4.36
1887-1888	17,54,045	..	2,05,523	..	13,560	16,963	1,527	0.09
1888-1889	17,54,045	..	1,91,683	..	23,348	9,511	13,837	0.79
1889-1890	17,54,045	..	1,73,669	..	23,707	5,690	18,017	1.02
Triennial average ..	17,54,045	..	1,90,293	..	21,871	10,721	11,150	0.63
1890-1891	17,54,045	..	1,56,025	..	22,619	5,575	17,044	0.97
1891-1892	17,54,045	..	1,51,048	..	19,997	14,420	5,577	0.31
1892-1893	17,54,045	..	1,38,554	..	20,917	8,523	11,494	0.65
Triennial average ..	17,54,045	..	1,48,742	..	20,678	9,506	11,172	0.64
1893-1894	17,54,045	..	1,20,666	..	21,845	3,897	17,948	1.02
1894-1895	17,54,045	..	1,01,669	..	24,450	5,513	18,937	1.08
1895-1896	17,54,045	..	82,331	..	20,085	1,750	18,335	1.04
Triennial average ..	17,54,045	..	1,01,689	..	22,126	3,720	18,406	1.05
1896-1897	17,54,045	..	58,069	..	30,086	5,721	24,365	1.39
1897-1898	17,54,045	..	33,408	..	28,270	2,783	25,487	1.45
1898-1899	17,54,045	..	12,567	..	28,721	7,600	21,121	1.20
Triennial average ..	17,54,045	..	34,915	..	29,038	5,370	23,668	1.35
1899-1900	17,54,045	..	14,552	..	32,446	5,527	26,919	1.53
1900-1901	17,54,045	..	39,547	..	27,771	2,776	24,995	1.42
1901-1902	17,54,045	..	66,071	..	29,332	2,808	26,524	1.51
Triennial average ..	17,54,045	..	40,057	..	29,850	3,704	26,146	1.49

CLASS II.—MADRAS WATER-SUPPLY AND IRRIGATION EXTENSION PROJECT—*cont.*

1. The Capital outlay on this project is as shown below :—

Direct charges.	Outlay to end of March 1899.	Outlay during			—
		1899-1900.	1900-1901.	1901-1902.	
	Rs.				Rs.
Works	12,97,799	..	..	..	12,97,799
Establishment	2,12,647	..	..	..	2,12,647
Tools and plant	6,648	..	..	..	6,648
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	15,16,994	..	..	..	15,16,994
Less receipts on Capital Account	1,167	..	..	..	1,167
Total, Direct charges	15,15,827	..	..	..	15,15,827
Indirect charges	2,38,218	..	..	..	2,38,218
Total outlay Direct, and Indirect	17,54,045	..	..	..	17,54,045

CLASS II.—MADRAS WATER-SUPPLY AND IRRIGATION EXTENSION PROJECT—*cont.*

No outlay under the open Capital account of this project was incurred during the triennium.

2. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Water-rate (irrigation)	21,188	21,841	24,000	8,918	..	21,033
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	11,938	18,185	..	1	20,214	19,817
Total	33,126	40,026	..	..	40,332	40,850
Less—Refunds of revenue	..	..	..	..	..	..
Total	33,126	..	..	28,771	40,332	40,850
Deduct—Share due to old irrigation	11,000	..	..	11,000	11,000	11,000
4. Total, Receipts	22,126	..	32,446	27,771	29,332	29,850
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements	410	106	..	323	384	236
6. Maintenance and repairs	4,86	5,710	5,919	3,574	3,515	4,335
7. Establishment (direction and execution)	1,209	1,232	1,357	892	834	1,028
8. Tools and plant	..	..	..	4	..	1
Total	6,485	7,048	7,276	4,793	4,733	5,301
II. Revenue Management.						
Establishment.						
9. Direction	239	353	380	398	404	394
10. Execution	955	1,455	1,558	1,588	1,617	1,587
11. Civil	509	542	553	396	456	502
Total	1,703	2,351	2,491	2,382	2,477	2,483
12. Total charges	8,184	9,409	9,867	7,175	7,210	8,084
NET CHARGES.						
13. Estimated abatement of land revenue and leave and pension allowances	336	761	460	401	398	420
Total (Direct and Indirect)	8,520	10,170	10,327	7,576	7,608	8,504
Deduct—Old maintenance charges	4,800	4,800	4,800	4,800	4,800	4,800
14. Total Working Expenses	3,720	5,370	5,527	2,776	2,808	3,704
15. Net revenue	18,406	23,656	26,919	24,995	26,524	26,146
16. Capital outlay—direct and indirect	17,54,045	17,54,045	17,54,045	17,54,045	17,54,045	17,54,045
17. Percentage of net revenue	1.64	1.35	1.53	1.42	1.51	1.49
18. Area charged as irrigated	9,733	9,983	11,543	8,649	9,197	9,430
19. Average of water-rate (item 1) per acre irrigated	2.17	2.18	2.28	2.18	2.18	2.22
20. Total establishment charges per acre irrigated (items 7 + 9 to 11)	0.29	0.35	0.37	0.37	0.36	0.37
21. Working expenses per acre charged as irrigated	0.38	0.53	0.52	0.32	0.30	0.39

The average of the total receipts from water-rate, &c., for the triennium under review exceeds that for any of the two preceding triennia. There was, however, a falling off in the receipts during 1900-1901 due to insufficient supply of water in the Red Hills tank.

CLASS II.—MADRAS WATER-SUPPLY AND IRRIGATION EXTENSION PROJECT—cont.

The working expenses during the period under review show a decrease which has raised the percentage of net revenue from 1.34 in the preceding period to 1.49.

3. Area irrigated.

1	Area irrigated.			
	First crop.	Second crop.	Total.	Rainfall.
2	3	4	5	
1893-1894	ACS. 6,239	ACS. 1,250	ACS. 7,489	INCHES. 41.37
1894-1895	6,622	2,565	9,187	41.38
1895-1896	6,079	2,675	8,754	47.95
Triennial average	6,513	2,163	8,676	43.57
1896-1897	8,463	2,513	11,076	56.46
1897-1898	7,434	3,024	10,458	56.46
1898-1899	7,330	2,711	10,041	58.51
Triennial average	7,742	2,763	10,505	57.14
1899-1900	7,527	2,963	10,490	31.95
1900-1901	6,638	970	7,608	31.96
1901-1902	6,866	1,375	8,241	63.50
Triennial average	6,876	1,773	8,652	42.47

The decrease in the triennial average is due to the unfavourable character of the season in 1900-1901.

4. Assessments, remissions and collections.

No. of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1895.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year	RS.	RS.	RS.	RS.	RS.	RS.
2	Assessment (Irrigation revenue and Public Works receipts)	33,501	40,382	43,501	40,338	40,689	41,609
3	Surplus and excess recoveries	..	..	..	..	..	..
	Total	33,501	40,382	43,501	40,338	40,689	41,609
4	Deduct remissions and refunds.	375	356	355	1,567	357	759
5	Actual collections	33,126	40,026	43,146	38,771	40,332	40,850
6	Outstanding balance	..	..	..	..	..	..

The large remissions granted in 1900-1901 are due to a failure of crops consequent on the insufficiency of water in the tank.

5. Miscellaneous revenue.

1	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1895.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	7	
Sale of water	RS.	RS.	RS.	RS.	RS.	RS.
Water-supply of towns	11,903	18,148	19,296	19,609	19,765	19,558
Plantations	1	34	83	243	..	28
Other canal produce	25	3	..	..	445	229
Rent of buildings	1	..	..	..	..	..
Fines	..	..	..	1	4	2
Miscellaneous	2	..	..	1	..	..
Total	11,938	18,185	19,382	19,853	20,214	19,817

CLASS II.—MADRAS WATER-SUPPLY AND IRRIGATION EXTENSION PROJECT—cont.

The increase in the triennial average under review is due to the increased quantity of water supplied to the Madras Municipality which is charged at the rate of 1 Rupee per 1,000 cubic feet water.

6. Maintenance and Repairs.

1	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1895.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	7	
Extensions and Improvements	RS. 410	RS. 106	RS. ..	RS. 323	RS. 384	RS. 235
Repairs.						
Head works	1,111	274	2,525	192	..	906
Main canals and branches	3,279	5,160	3,394	3,332	3,515	3,430
Distributaries	471	336	..	..	..	..
Drainage and protective works	..	..	..	..	..	..
Total	5,271	5,816	5,919	3,897	3,899	4,572

CLASS II.

Minor Works.

VALLURU ANICUT SYSTEM.

STATEMENT showing areas charged as irrigated.

	Area in acres.		Total.
	First crop.	Second crop.	
1893-1894	ACS. 4,243	ACS. 189	ACS. 4,437
1894-1895	4,961	128	5,149
1895-1896	5,137	131	5,293
Triennial average ..	4,792	169	4,961
1896-1897	5,149	94	5,243
1897-1898	5,050	247	5,297
1898-1899	5,176	242	5,418
Triennial average ..	5,125	194	5,319
1899-1900	4,979	209	5,188
1900-1901	4,697	210	4,907
1901-1902	5,033	170	5,203
Triennial average ..	4,903	196	5,099

STATEMENT showing Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.		RS.		RS.	RS.	RS.	RS.
1893-1894	63,805	..	22,635	..	2,555	1,343	1,212	1.89
1894-1895	63,805	..	25,392	..	3,961	1,225	2,736	4.32
1895-1896	63,805	..	28,890	..	4,210	712	3,498	5.48
Triennial average ..	63,805	..	25,939	..	3,562	1,093	2,469	3.90
1896-1897	63,805	..	32,232	..	4,296	954	3,342	5.24
1897-1898	64,664	..	35,557	..	4,380	1,065	3,315	5.15
1898-1899	65,636	..	39,090	..	4,623	1,100	3,523	5.39
Triennial average ..	64,635	..	35,626	..	4,440	1,040	3,400	5.28
1899-1900	65,521	..	42,036	..	3,738	792	2,946	4.49
1900-1901	65,619	..	44,050	..	1,504	— 1,010	2,514	3.83
1901-1902	65,425	..	49,694	..	4,103	— 1,041	5,144	7.87
Triennial average ..	65,488	..	45,427	..	3,115	— 420	3,535	5.33

CLASS II.—VALLURU ANICUT SYSTEM—cont.

1. The capital outlay on this system is as shown below :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct Charges.</i>					
	RS.	RS.	RS.	RS.	RS.
Works	51,922	— 12	— 2	— 75	51,833
Establishment	11,942	— 3	..	— 17	11,922
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	63,864	— 15	— 2	— 92	63,755
Less—Receipts on Capital Account	..	..	..	..	..
Total, Direct Charges	63,864	— 15	— 2	— 92	63,755
Indirect charges	1,672	..	..	— 2	1,670
Total, Outlay, Direct and Indirect	65,536	— 15	— 2	— 94	65,425

No works were carried out under the open capital account during the triennial period under review.

2. Lengths of Channels.

Description of channel.	Lengths of channels in miles.				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of channel Miles.	3	..	..	..	3
Of the above, navigable "	..	..	..	..	..
Distributaries "	8	..	..	..	8
Gross area commanded Acs.	10,124	..	..	..	10,124

CLASS II.—VALLURU ANICUT SYSTEM—*cont.*

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
	RS.	RS.	RS.	RS.	RS.	RS.
1. Water-rate (irrigation) ..	8,205	9,552	8,661	5,750	9,281	7,897
2. Navigation ..	..	..	..	..	..	..
3. Miscellaneous ..	8	20	4	1	3	3
Total ..	8,213	9,572	8,665	5,751	9,284	7,900
Less—Refunds of revenue ..	..	..	..	..	..	..
Total ..	8,213	9,572	8,665	5,751	9,284	7,900
Deduct—Share due to old irrigation ..	4,631	5,132	4,927	4,247	5,181	4,786
4. Total Receipts ..	3,582	4,440	3,738	1,504	4,103	3,115
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	224	106	..	458	361	413
6. Maintenance and repairs ..	590	541	480	..	..	..
7. Establishment (direction and execution) ..	165	149	110	105	69	95
8. Tools and plant ..	..	..	..	..	37	12
Total ..	889	795	590	563	467	520
II. Revenue Management.						
Establishment.						
9. Direction ..	..	..	..	..	..	..
10. Execution ..	2	2	..	..	..	..
11. Civil officers ..	179	221	187	75	205	155
Total ..	181	223	187	75	205	155
12. Total, Direct charges ..	1,070	1,019	777	638	672	675
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue, leave and pension allowance ..	23	21	15	15	10	13
Total (Direct and Indirect) ..	1,093	1,040	792	653	682	689
Deduct—Old maintenance charges ..	..	..	..	1,663	1,663	1,109
14. Total, Working Expenses ..	1,093	1,040	792	1,010	1,041	420
15. Net revenue ..	2,489	3,400	2,946	2,514	5,144	3,535
16. Capital outlay, direct and indirect ..	63,805	64,635	65,521	65,519	65,425	65,488
17. Percentage of net revenue ..	3.90	5.28	4.49	3.83	7.87	5.39
18. Area charged as irrigated, Acres ..	4,961	5,319	5,188	4,907	5,203	5,029
19. Average of water-rate (item 1) per acre charged as irrigated ..	1.64	1.79	1.67	1.17	1.78	1.54
20. Total establishment charges per acre irrigated (items 7 and 9-11) ..	0.07	0.07	0.05	0.03	0.05	0.04
21. Working expenses per acre charged as irrigated ..	0.21	0.19	0.15	0.20	0.20	0.08

The falling off in the average of receipts from water-rate for the last triennium is due to the insufficiency of water in the system during 1900-1901 which resulted in a decrease in the area irrigated. The working expenses during the triennium under review when compared with the two preceding triennial periods show a decrease which has consequently raised the percentage of net revenue.

CLASS II.—VALLURU ANICUT SYSTEM—*cont.*

4. Area irrigated.

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
	ACS.	ACS.	ACS.	INCHES.
1893-1894 ..	4,253	184	4,437	34.75
1894-1895 ..	4,784	198	4,982	46.45
1895-1896 ..	4,356	250	4,606	52.70
Triennial average ..	4,434	211	4,675	44.63
1896-1897 ..	4,230	459	4,699	68.30
1897-1898 ..	4,357	248	4,605	68.20
1898-1899 ..	4,374	459	4,833	52.20
Triennial average ..	4,320	392	4,712	62.93
1899-1900 ..	4,401	203	4,610	43.00
1900-1901 ..	3,629	210	3,839	43.35
1901-1902 ..	4,123	170	4,293	53.40
Triennial average ..	4,051	193	4,247	46.58

The decrease in the average area irrigated during the triennial period is due to deficient rainfall.

5. Assessments, Remissions and Collections.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	RS.	RS.	RS.	RS.	RS.	RS.
2	Assessment (Irrigation revenue and Public Works receipts) ..	9,674	10,046	10,211	9,841	9,627	9,893
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	9,674	10,046	10,211	9,841	9,627	9,893
4	Deduct—remissions and refunds ..	1,461	474	1,546	4,090	342	1,993
5	Actual collections ..	8,213	9,572	8,665	5,751	9,284	7,900
6	Outstanding balance ..	..	..	..	..	..	..

The cause of the large remissions granted in 1900-1901 is explained under paragraph 3.

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	224	106	..	..	..	..
Repairs.						
Head works ..	405	541	450	458	301	413
Main canals and branches ..	95	..	..	..	..	..
Distributaries ..	..	..	..	..	..	..
Drainage and protective works ..	..	..	..	..	..	..
Total ..	724	647	480	458	301	413

CLASS II.

Minor Works.

TIRUKKOYILUR ANICUT SYSTEM.

STATEMENT showing the area charged as irrigated.

Year.	Area in acres.		
	First crop.	Second crop.	Total.
1	2	3	4
1890-1891	ACS. 21,527	ACS. 2,712	ACS. 24,239
1891-1892	22,414	1,947	24,361
1892-1893	21,838	2,537	24,375
Triennial average ..	21,926	2,395	24,321
1893-1894	23,644	4,354	27,998
1894-1895	22,796	3,636	26,432
1895-1896	23,140	2,056	25,196
Triennial average ..	23,193	3,315	26,508
1896-1897	22,893	2,358	25,251
1897-1898	22,911	3,111	26,022
1898-1899	22,879	2,897	25,776
Triennial average ..	22,894	2,785	25,679
1899-1900	22,325	4,132	26,457
1900-1901	22,415	2,525	24,941
1901-1902	23,262	4,039	27,301
Triennial average ..	22,667	3,565	26,233

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1893-1894	Rs. 2,52,090	Rs. ..	Rs. 2,81,144	Rs. ..	Rs. 40,507	Rs. 12,453	Rs. 28,054	Rs. 11.13
1894-1895	2,54,461	..	3,04,023	..	39,013	16,134	22,879	8.99
1895-1896	2,54,470	..	3,19,069	..	35,667	20,500	15,987	6.22
Triennial average ..	2,53,670	..	3,01,419	..	38,362	16,362	22,000	8.32
1896-1897	2,54,470	..	3,43,689	..	35,443	10,844	24,599	9.67
1897-1898	2,54,470	..	3,66,688	..	38,974	15,375	23,599	9.04
1898-1899	2,54,470	..	3,82,514	..	37,467	21,641	15,826	6.22
Triennial average ..	2,54,470	..	3,64,297	..	37,294	16,153	21,141	8.30
1899-1900	2,63,688	..	3,29,465	..	38,286	21,335	16,951	6.42
1900-1901	2,63,671	..	4,10,325	..	31,592	20,732	10,860	4.12
1901-1902	2,59,223	..	4,33,245	..	39,269	16,349	22,920	8.61
Triennial average ..	2,65,661	..	4,14,345	..	36,382	19,472	16,910	6.36

CLASS II.—TIRUKKOYILUR ANICUT SYSTEM—cont.

1. The capital outlay on the system is shown below :—

	Outlay to end of March 1899.	Outlay during			To end of March 1902.
		1899-1900.	1899-1900.	1900-1901.	
<i>Direct Charges.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Works	2,01,591	7,462	— 14	4,241	2,13,280
Establishment	46,361	1,716	— 8	975	49,049
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	2,47,952	9,178	— 17	5,216	2,62,329
<i>Less—Receipts on Capital account</i>	..	..	..	..	..
Total, Direct charges	2,47,952	9,178	— 17	5,216	2,62,329
Indirect charges	6,518	340	..	136	6,994
Total, Outlay (Direct and Indirect) ..	2,54,470	9,518	— 17	5,352	2,69,223

The works carried out under the open capital account during the triennium were—

- (1) Improving the anicut.
- (2) Improving the Kolathur tank.
- (3) Constructing a weir and a regulator and reconstructing No. 2 sluice in Mettathur tank.
- (4) Constructing an anicut across the Pambiyar for improving the supply to certain tanks dependent on the system.

2. Lengths of channels.

Description of channel.	At end of March 1899.	Lengths of channel in miles			Length at end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of canals (main and branch) .. Miles.	137	..	..	..	137
Of the above navigable	..	..	..	..	..
Distributaries for irrigation only	36	..	..	..	36
Drainage channels	..	..	..	..	..
Gross area commanded	54,147	..	..	..	54,147

CLASS II.—TIRUKKOTILUR ANICUT SYSTEM—*cont.*

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (irrigation) ..	Rs. 98,044	Rs. 96,021	Rs. 85,590	Rs. 92,569	Rs. 93,968	Rs. 92,709
2. Navigation ..	..	..	..	..	..	..
3. Miscellaneous ..	473	444	1,187	851	1,288	842
Total ..	98,517	96,565	87,777	92,920	1,00,256	93,651
Less—Refunds of revenue ..	..	..	..	..	..	..
Total ..	98,517	96,565	87,777	92,920	1,00,256	93,651
Deduct—Share due to old irrigation ..	60,155	59,271	49,491	61,328	60,987	67,269
4. Total, Receipts ..	38,362	37,294	38,286	31,592	39,269	36,382
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
6. Extensions and improvements ..	2,806	3,615	5,199	6,816	1,585	4,530
6. Maintenance and repairs ..	8,610	7,685	10,137	8,340	9,747	9,198
7. Establishment (direction and execution) ..	2,624	2,690	3,524	3,486	2,606	3,268
8. Tools and plant ..	7	1	..	..	..	..
Total ..	14,047	13,991	18,861	18,642	13,938	17,144
II. Revenue Management.						
9. Direction ..	10	11	24	7	26	19
10. Execution ..	37	44	95	23	103	75
11. Civil officers ..	1,894	1,837	1,855	1,562	1,899	1,772
Total ..	1,941	1,892	1,974	1,597	2,028	1,866
12. Total, Direct charges ..	15,988	15,783	20,835	20,239	15,966	19,010
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	374	379	510	493	388	462
Total (Direct and Indirect) ..	16,362	16,163	21,345	20,732	16,349	19,472
Deduct—Old maintenance charges ..	..	..	..	..	..	..
14. Total, Working expenses ..	16,362	16,163	21,345	20,732	16,349	19,472
15. Net revenue ..	22,000	21,141	16,941	10,860	22,920	16,910
16. Capital outlay (direct and indirect) ..	2,53,670	2,54,470	2,65,588	2,63,871	2,69,223	2,65,661
17. Percentage of net revenue ..	8.62	8.30	6.42	4.11	8.51	6.36
18. Area charged as irrigated, acres ..	28,508	25,679	25,457	24,241	27,301	26,233
19. Average of water-rate (item 1) per acre charged as irrigated ..	3.69	3.73	3.27	3.71	3.62	3.43
20. Total establishment charges per acre charged as irrigated (items 7 and 9-11) ..	0.17	0.17	0.20	0.20	0.16	0.19
21. Working expenses per acre charged as irrigated ..	0.61	0.62	0.80	0.83	0.59	0.74

The decrease in the triennial average receipts from water-rate, etc., is due chiefly to the very large remissions granted during 1899-1900 owing to the unfavourable character of the season. The increase in working expenses during the triennium under review which was due to extensive repairs carried out during the triennium has reduced the percentage of revenue from 8.30 in the triennial period ending March 1899 to 6.36 in the period under review.

CLASS II.—TIRUKKOTILUR ANICUT SYSTEM—*cont.*

4. Area irrigated.

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
	ACS.	ACS.	ACS.	INCHES.
1892-94 ..	24,779	12,341	37,120	40.11
1894-95 ..	27,181	6,913	34,094	40.11
1895-96 ..	23,232	11,114	34,346	44.04
Triennial average ..	25,034	10,789	35,823	41.42
1896-97 ..	20,256	2,061	22,317	31.98
1897-98 ..	22,398	2,854	25,252	31.98
1898-99 ..	22,237	2,861	25,098	62.07
Triennial average ..	21,963	2,599	24,562	42.31
1899-1900 ..	21,307	4,132	25,439	25.00
1900-1901 ..	21,500	2,524	24,024	40.99
1901-1902 ..	22,617	4,037	26,654	43.94
Triennial average ..	21,775	3,564	25,339	36.65

The decrease in the average area irrigated during the last two triennial periods is due to insufficient rainfall.

5. Assessments, collections and remission.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2	Assessment (Irrigation Revenue and Public Works Receipts) ..	98,764	97,681	99,708	93,050	1,00,257	97,692
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	98,764	97,681	99,708	93,050	1,00,257	97,692
4	Deduct remission and refunds ..	247	1,116	11,991	130	1	4,941
5	Actual Collections ..	98,517	96,565	87,777	92,920	1,00,256	93,651
6	Outstanding balance ..	..	..	..	..	..	..

The cause of the large remissions granted during the last triennial period is explained under paragraph 3.

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	Rs. 2,806	Rs. 3,615	Rs. 5,199	Rs. 6,816	Rs. 1,585	Rs. 4,530
Repairs.						
Head works ..	982	1,283	1,182	987	469	845
Main canals and branches ..	1,547	2,124	2,012	1,841	3,774	2,543
Distributaries ..	3,187	4,801	6,943	6,612	5,604	6,020
Drainage and protective works ..	2,893	..	..	..	..	..
Total ..	11,415	11,299	15,327	15,156	11,332	13,933

The increase in the average of the working expenses during the last triennium is explained under paragraph 3.

CLASS II.

Minor Works.

MEHAMATTUR ANICUT.

STATEMENT showing areas charged as irrigated.

	Area in acres.		Total.
	First crop.	Second crop.	
	ACRES.	ACRES.	ACRES.
1893-1894	2,533	94	2,627
1894-1895	2,852	55	2,907
1895-1896	3,380	76	3,456
Triennial average ..	2,922	75	2,997
1896-1897	3,490	59	3,549
1897-1898	3,915	106	4,020
1898-1899	3,767	155	3,922
Triennial average ..	3,724	106	3,830
1899-1900	3,705	294	4,000
1900-1901	3,715	367	4,142
1901-1902	2,765	122	3,827
Triennial average ..	3,725	261	4,013

STATEMENT showing Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1893-1894	Rs. 71,047	..	Rs. 34,573	..	Rs. 8,866	7,079	1,787	2.51
1894-1895	71,047	..	41,316	..	10,314	3,871	6,443	9.35
1895-1896	71,047	..	49,267	..	12,301	4,860	7,441	11.19
Triennial average ..	71,047	..	41,752	..	10,621	5,200	5,421	7.63
1896-1897	71,047	..	58,256	..	13,123	4,133	8,990	12.66
1897-1898	71,047	..	69,694	..	14,327	2,382	11,945	16.69
1898-1899	71,047	..	72,183	..	11,968	2,473	9,495	13.50
Triennial average ..	71,047	..	63,711	..	13,139	5,500	7,639	10.75
1899-1900	71,047	..	74,250	..	11,530	3,763	7,767	11.00
1900-1901	71,047	..	84,875	..	13,543	2,918	10,625	15.00
1901-1902	71,047	..	92,779	..	12,083	4,031	8,052	11.30
Triennial average ..	71,047	..	83,908	..	12,719	5,921	6,798	10.00

CLASS II.—MEHMATTUR ANICUT SYSTEM—cont.

1. The capital outlay on this system is given below :—

	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct Charges.</i>					
	Rs.			Rs.	Rs.
Works	56,289	..	..	678	56,967
Establishment	12,946	..	..	166	13,112
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	69,235	..	..	844	70,079
Less—receipts on capital account	..	..	..	..	..
Total, Direct charges	69,235	..	..	844	70,079
Indirect charges	1,812	..	..	22	1,834
Total outlay, Direct and Indirect	71,047	..	..	866	71,913

The expenditure incurred during the year was on constructing a head sluice to Sathukodal channel and a weir and supply channel to Mukkundanallur tank.

2. Lengths of channels.

Description of channel.	At end of March 1899.	Lengths of channel in miles.			Length at end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of channels Miles.	15	..	..	..	15
Of the above, navigable	Nil.	..	..	..	Nil.
Distributaries for irrigation only	9	..	..	..	9
Gross area commanded Acres.	13,792	..	..	..	13,792

CLASS II.—MEHMATTUR ANICUT SYSTEM—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (irrigation) ..	12,708	15,810	16,749	17,700	17,032	16,827
2. Navigation ..	..	..	..	..	..	..
3. Miscellaneous ..	25	38	21	56	163	80
Total ..	12,733	15,848	16,770	17,756	17,195	16,907
Less—Refunds of revenue ..	..	..	..	..	..	..
Total ..	12,733	15,848	16,770	17,756	17,195	16,907
Deduct—Share due to old irrigation ..	2,072	2,709	3,940	4,213	4,210	4,121
4. Total Receipts ..	10,661	13,139	12,830	13,543	12,985	12,786
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	737	504	2,171	958	838	1,322
6. Maintenance and Repairs ..	2,942	2,532	5,098	1,443	3,560	3,297
7. Establishment (direction and execution) ..	861	861	1,668	544	898	1,037
8. Tools and plant ..	..	..	..	..	..	..
Total ..	4,540	4,717	8,937	2,945	5,096	5,656
II. Revenue Management.						
9. Direction ..	..	1	..	1	3	1
10. Execution ..	..	3	..	5	13	7
11. Civil officers ..	532	655	590	674	641	635
Total ..	534	659	592	680	657	643
12. Total direct charges ..	5,074	5,376	9,529	3,625	5,743	6,299
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue, leave and pension allowances ..	135	124	234	105	150	163
Total (Direct and indirect) ..	5,209	5,500	9,763	3,730	5,893	6,462
Deduct—Old maintenance charges ..	..	..	..	812	812	511
14. Total Working Expenses ..	5,209	5,500	9,763	2,918	5,081	5,951
15. Net Revenue ..	5,452	7,639	2,067	10,625	7,904	6,835
16. Capital outlay, direct and indirect ..	71,047	71,047	71,047	71,047	71,903	71,332
17. Percentage of net revenue ..	7.88	10.75	2.91	14.95	11.08	9.62
18. Area charged as irrigated ..	2,927	3,330	4,089	4,142	3,327	4,019
19. Average of water-rate (item 1) per acre irrigated ..	4.24	4.12	3.85	4.27	4.23	4.12
20. Total establishment charges per acre irrigated (7 + 9 to 12) ..	0.46	0.40	0.55	0.29	0.38	0.41
21. Working expenses per acre charged as irrigated ..	1.73	1.43	2.38	0.70	1.26	1.45

The total receipts from water-rate, etc., during the triennium under review shew an increase over those of the preceding triennium owing to the favourable character of the season during 1900-1901 and 1901-1902.

The average of the working expenses during the last triennial period exceeds that for the preceding period, which is due to large repairs having been carried out to the

CLASS II.—MEHMATTUR ANICUT SYSTEM—cont.

Alachigudi tank and the right flood bank of the anicut. This increase in the working expenses has reduced the percentage of net revenue during the triennium under notice by 1.10.

4. Area irrigated.

	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1893-1894 ..	ACRES. 2,121	ACRES. 565	ACRES. 3,637	INCHES. 39.15
1894-1895 ..	2,611	648	3,259	39.15
1895-1896 ..	2,672	696	3,368	62.81
Triennial average ..	2,801	637	3,438	43.70
1896-1897 ..	3,648	68	3,610	25.80
1897-1898 ..	3,470	112	3,582	25.60
1898-1899 ..	3,782	136	3,916	62.95
Triennial average ..	3,594	105	3,703	39.13
1899-1900 ..	3,771	294	4,065	24.65
1900-1901 ..	3,749	367	4,116	32.16
1901-1902 ..	3,687	122	3,809	48.19
Triennial average ..	3,736	261	3,997	31.45

The increase in the average area irrigated during the triennium is explained under paragraph 3.

5. Assessments, Remissions and Collections

No. of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2	Assessment (Irrigation revenue and Public Works receipts) ..	12,751	15,989	16,403	17,798	17,195	17,132
3	Surplus and excess recoveries ..	..	..	..	..	..	..
4	Total ..	12,751	15,989	16,403	17,798	17,195	17,132
5	Deduct—Remissions and refunds ..	18	141	633	42	225	225
6	Actual collections ..	12,733	15,848	15,770	17,756	17,195	16,907
7	Outstanding balance ..	..	..	..	..	..	..

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	Rs. 737	Rs. 504	Rs. 2,171	Rs. 958	Rs. 838	Rs. 1,322
Repairs.						
Head works ..	1,295	880	2,836	743	561	1,380
Main canals and branches ..	1,035	1,026	1,293	493	375	720
Distributaries ..	612	1,425	969	207	2,114	1,197
Drainage and protective works ..	..	..	..	..	..	..
Total ..	3,679	3,836	7,289	2,401	4,138	4,619

The increase in working expenses during the triennium under review is explained under paragraph 3.

CLASS II.

Minor Works.

VRIDDHACHALLAM ANICUT SYSTEM.

STATEMENT showing the area charged as irrigated.

1	Area in acres.		
	First crop.	Second crop.	Total.
2	3	4	
1890-1891	5,345	272	5,617
1891-1892	5,850	265	6,115
1892-1893	4,649	207	4,856
Triennial average ..	5,281	248	5,529
1893-1894	6,002	357	6,359
1894-1895	6,368	247	6,615
1895-1896	5,910	204	6,114
Triennial average ..	6,093	269	6,361
1896-1897	6,157	225	6,382
1897-1898	6,117	405	6,522
1898-1899	6,617	677	7,294
Triennial average ..	6,297	435	6,732
1899-1900	6,378	387	6,765
1900-1901	6,613	579	7,192
1901-1902	7,011	342	7,353
Triennial average ..	6,637	438	7,103

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1893-1894	Rs. 49,737	Rs. ..	Rs. 1,52,690	Rs. ..	Rs. 16,705	Rs. 5,628	Rs. 11,079	22.27
1894-1895	49,737	..	1,64,480	..	16,956	5,169	11,786	23.70
1895-1896	49,737	..	1,73,390	..	15,437	6,527	8,910	17.91
Triennial average ..	49,737	..	1,63,520	..	16,366	5,773	10,593	21.29
1896-1897	49,737	..	1,83,648	..	16,265	6,007	10,258	20.62
1897-1898	49,737	..	1,96,043	..	16,201	3,806	12,395	24.92
1898-1899	49,737	..	2,08,708	..	18,657	5,992	12,665	25.46
Triennial average ..	49,737	..	1,96,133	..	17,041	5,209	11,772	23.67
1899-1900	62,152	..	2,11,192	..	15,147	12,653	2,484	4.76
1900-1901	67,975	..	2,19,160	..	16,328	8,330	7,998	11.73
1901-1902	75,900	..	2,32,208	..	19,428	6,385	13,043	17.18
Triennial average ..	65,326	..	2,20,852	..	16,967	9,138	7,831	11.93

CLASS II.—VRIDDHACHALLAM ANICUT SYSTEM—cont.

1. The capital outlay on this system is shown below :—

Direct charges.	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Works	Rs. 39,405	Rs. 1,918	Rs. 12,534	Rs. 6,355	Rs. 60,107
Establishment	9,068	440	2,841	1,439	12,788
Tools and plant	..	..	..	..	..
Expense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	48,468	2,358	15,375	7,694	73,890
Less—receipts on Capital account	..	..	..	..	..
Total, Direct charges	48,468	2,358	15,375	7,694	73,890
Indirect charges	1,269	62	398	281	2,010
Total Outlay, Direct and Indirect	49,737	2,415	15,773	7,975	75,900

The expenditure during the triennium was incurred in constructing an undertunnel in the north main channel, constructing the Sudamani and Mukkondam dams and improving the anicut.

2. Lengths of channels.

Description of channel.	Lengths of channel in miles.				
	At end of March 1899.	Increase or decrease during.			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of channels Miles.	33	..	..	..	38
Of the above navigable Miles.	Nil.	..	..	..	Nil.
Distributaries for irrigation only. Miles.	16	..	..	..	16
Gross area commanded Acres.	19,993	..	..	..	19,993

CLASS II.—VRIDDHACHALAM ANICUT SYSTEM—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (irrigation) ..	Rs. 24,737	Rs. 25,365	Rs. 21,918	Rs. 25,332	Rs. 28,052	Rs. 25,101
2. Navigation ..	..	..	..	..	..	..
3. Miscellaneous ..	79	233	2,120	61	434	173
Total ..	24,815	25,598	21,938	25,393	28,486	25,272
Less—Refunds of revenue ..	..	..	..	..	..	..
Total ..	24,815	25,598	21,938	25,393	28,486	25,272
Deduct—Share due to old irrigation.	8,449	8,527	6,791	9,965	9,058	8,595
4. Total Receipts ..	16,365	17,071	15,147	15,428	19,428	16,677
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	447	900	3,935	1,833	1,098	2,319
6. Maintenance and repairs ..	3,469	2,578	5,437	4,111	3,171	4,229
7. Establishment (direction and execution) ..	900	799	2,159	1,374	980	1,507
8. Tools and plant ..	..	15	..	..	..	..
Total ..	4,815	4,292	11,601	7,348	6,249	8,055
II. Revenue Management.						
9. Direction ..	2	4	..	1	9	3
10. Execution ..	6	15	2	5	24	14
11. Civil officers ..	814	842	755	813	950	810
Total ..	822	861	757	819	973	827
12. Total Direct charges ..	5,637	5,153	12,358	8,167	7,222	8,882
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	135	115	304	195	143	213
Total (Direct and Indirect) ..	5,772	5,268	12,662	8,362	7,365	9,095
Deduct—Old maintenance charges ..	..	..	..	..	..	..
14. Total Working Expenses ..	5,772	5,268	12,662	8,362	7,365	9,095
15. Net revenue ..	10,593	11,772	2,484	7,066	12,063	7,582
16. Capital outlay (direct and indirect) ..	49,737	49,737	52,152	57,925	75,900	65,325
17. Percentage of net revenue ..	21.29	23.67	4.76	11.73	17.18	11.09
18. Area charged as irrigated, acres ..	6,361	6,732	6,765	7,192	7,353	7,193
19. Average of water-rate (item 1) per acre charged as irrigated ..	3.88	3.76	3.24	3.52	3.91	3.53
20. Total establishment charges per acre charged as irrigated (items 7 and 9 to 11) ..	0.27	0.24	0.33	0.30	0.27	0.23
21. Working expenses per acre charged as irrigated ..	0.90	0.78	1.87	1.16	0.87	1.23

The decrease in the average of total receipts from water rate, &c., during the triennium under review is due to large remissions granted in 1899-1900 owing to the partial failure of crops.

The average of working expenses during the triennium shows an increase which is due to a large outlay having been incurred both on "Extensions and Improvements and Repairs." The amount spent on the former head was chiefly on constructing dams across the Nellikollai supply channel and in extending the left revetment below Vriddhachalam anicut. The outlay under "Repairs" was necessary for the proper upkeep of works.

CLASS II.—VRIDDHACHALAM ANICUT SYSTEM—cont.

4. Area irrigated.

1	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
2	3	4	5	6
1893-1894 ..	ACRES. 5,004	ACRES. 2,034	ACRES. 7,038	INCHES. 52.85
1894-1895 ..	4,699	1,955	6,654	52.85
1895-1896 ..	4,687	1,839	6,525	70.13
Triennial average ..	4,797	1,942	6,739	58.61
1896-1897 ..	6,599	213	6,812	51.79
1897-1898 ..	6,204	310	6,514	51.79
1898-1899 ..	6,224	433	6,657	78.70
Triennial average ..	6,342	319	6,661	60.76
1899-1900 ..	6,068	387	6,455	45.22
1900-1901 ..	6,508	579	7,087	38.00
1901-1902 ..	6,075	342	6,417	48.79
Triennial average ..	6,354	436	6,790	43.34

5. Assessments, collections and remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	Rs. 24,320	Rs. 25,793	Rs. 25,748	Rs. 25,393	Rs. 28,486	Rs. 26,542
2	Assessment (Irrigation Revenue and Public Works receipts) ..	..	..	..	..	..	..
3	Surplus and excess recoveries ..	..	..	..	..	..	..
Total ..	..	24,320	25,793	25,748	25,393	28,486	26,542
4	Deduct—Remissions and refunds ..	5	225	3,510	..	..	1,270
5	Actual Collections ..	24,315	25,568	21,938	25,393	28,486	25,272
6	Outstanding balance ..	..	..	..	..	..	..

The reason for the large remissions granted in 1899-1900 is explained under paragraph 3.

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	Rs. 447	Rs. 900	Rs. 3,935	Rs. 1,863	Rs. 1,098	Rs. 2,319
Repairs.						
Head works ..	1,141	1,170	1,501	1,544	1,596	1,530
Main canals and branches ..	1,244	..	2,284	59	..	781
Distributaries ..	721	1,407	1,652	2,508	1,475	1,678
Drainage and protective works ..	333	..	..	..	..	..
Total ..	3,816	3,477	9,432	6,974	4,269	6,558

For an explanation of the increase in the average for the triennial period ending March 1902—*vide* remarks under paragraph 3.

CLASS II.

Minor Works.

SHATIATOPE ANICUT SYSTEM.

STATEMENT showing areas charged as irrigated.

1	Area in acres.		
	First Crop.	Second Crop.	Total.
2	3	4	
1890-1891	26,907	3,711	30,618
1891-1892	27,651	1,955	29,606
1892-1893	28,620	2,920	31,540
Triennial average ..	27,726	2,878	30,604
1893-1894	28,267	3,647	31,914
1894-1895	28,608	3,613	32,221
1895-1896	29,239	3,748	32,987
Triennial average ..	28,701	3,638	32,339
1896-1897	29,948	3,350	33,298
1897-1898	29,022	4,090	33,112
1898-1899	28,176	5,775	33,951
Triennial average ..	29,014	4,535	33,549
1899-1900	29,737	5,612	35,349
1900-1901	28,155	4,392	32,547
1901-1902	28,778	6,444	35,222
Triennial average ..	28,890	5,483	34,373

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1892-1894	1,16,609	..	16,61,127	..	1,06,452	15,736	90,716	78.17
1894-1895	1,35,047	..	17,71,843	..	1,01,728	14,012	87,716	64.47
1895-1896	1,37,579	..	18,60,036	..	1,04,645	16,453	88,193	64.10
Triennial average ..	1,29,745	..	17,78,003	..	1,04,275	15,397	88,878	69.50
1896-1897	1,38,769	..	19,44,469	..	1,06,462	22,028	84,433	60.84
1897-1898	1,68,029	..	20,32,562	..	1,06,455	18,333	90,093	53.33
1898-1899	2,28,688	..	21,27,074	..	1,07,669	14,547	93,122	49.73
Triennial average ..	1,78,780	..	20,35,569	..	1,07,526	18,313	89,213	49.90
1899-1900	2,33,191	..	22,06,954	..	97,775	19,495	78,280	33.53
1900-1901	2,30,161	..	22,86,149	..	1,00,200	20,065	80,135	34.84
1901-1902	2,35,205	..	23,76,402	..	1,05,380	16,127	89,253	37.95
Triennial average ..	2,32,552	..	22,89,169	..	1,01,118	18,542	82,576	36.45

CLASS II.—SHATIATOPE ANICUT SYSTEM—cont.

1. The Capital outlay is shown below :—

1	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	
<i>Direct Charges.</i>					
Works	Rs. 1,78,561	Rs. 6,831	Rs. 2,633	Rs. 3,926	Rs. 1,86,750
Establishment	40,622	1,571	607	919	42,505
Tools and plant	3,714	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	2,22,897	4,688	3,245	4,915	2,29,255
Less Receipts on capital account	..	..	..	..	..
Total, Direct Charges	2,22,897	4,688	3,245	4,915	2,29,255
Indirect Charges	5,686	220	85	129	5,950
Total Outlay, Direct and Indirect	2,28,583	4,908	3,330	5,044	2,35,205

The work of constructing an apron in front of the anicut and increasing the thickness of the lower apron which was started during the triennium ended March 1899 was completed during 1899-1900. The *minus* outlay under Tools and plant in 1899-1900 was due to the value of certain tools debited to the anicut improvements having been written back to Provincial—Tools and Plant.

The other important works carried out during the triennium under review were, reconstruction of three sluices in Perumal tank and improvements to the Chockankollai and Sathapadi tanks. The value of the three old sluices in Perumal tank referred to was written back to the Revenue account in 1900-1901.

2. Lengths of channels.

	Lengths of channels in miles.				At end of March 1902
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
		RS.	RS.	RS.	RS.
Length of canals Miles.	41	..	..	..	41
Of the above, navigable "	Nil.	..	..	..	Nil.
Distributaries "	149	..	..	..	149
Gross area commanded Acres.	1,08,069	1,08,069	77,938	..	1,08,069

CLASS II.—SHATIATOPE ANICUT SYSTEM—cont.

3. Financial Results.

Particulars	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1898.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (Irrigation) ..	Rs. 1,24,241	Rs. 1,26,870	Rs. 1,15,199	Rs. 1,20,225	Rs. 1,25,305	Rs. 1,20,242
2. Navigation ..	..	..	..	..	..	..
3. Miscellaneous ..	253	364	255	333	461	350
Total ..	1,24,494	1,27,234	1,15,454	1,20,558	1,25,766	1,20,592
Less—Refunds of Revenue ..	..	..	..	..	..	..
Total ..	1,24,494	1,27,234	1,15,454	1,20,558	1,25,766	1,20,592
Deduct—Share due to old irrigation ..	20,219	19,708	17,579	20,356	20,386	19,474
4. Total, Receipts ..	1,04,275	1,07,526	97,875	1,00,202	1,05,380	1,01,118
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	1,362	1,208	1,547	5,872	2,501	3,368
6. Maintenance and repairs ..	6,710	9,019	10,911	6,001	5,988	7,317
7. Establishment (Direction and Execution) ..	1,837	2,344	2,659	2,716	1,928	2,435
8. Tools and plant ..	..	14	..	..	99	83
Total ..	9,909	12,585	14,217	14,594	10,467	13,063
II. Revenue Management.						
9. Direction ..	6	7	5	7	9	7
10. Execution ..	21	29	21	26	27	28
11. Civil officers ..	5,261	5,558	4,678	4,993	5,244	5,038
Total ..	5,287	5,594	4,902	5,026	5,292	5,073
12. Total, Direct Charges ..	15,196	17,979	19,119	19,620	15,759	18,136
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	261	334	375	385	368	375
Total (Direct and Indirect) ..	15,457	18,313	19,494	20,005	16,127	18,511
Deduct—Old maintenance charges ..	..	..	..	..	..	..
14. Total, Working Expenses ..	15,457	18,313	19,494	20,005	16,127	18,511
15. Net revenue ..	88,818	89,213	78,381	80,197	89,253	82,607
16. Capital outlay (direct and indirect) ..	1,22,746	1,78,769	2,33,491	2,30,161	2,35,205	2,32,952
17. Percentage of net revenue ..	68.60	69.60	53.52	54.84	57.84	55.45
18. Area charged as irrigated, acres ..	22,139	33,630	33,749	32,647	33,822	33,466
19. Average of water-rate (item 1) per acre charged as irrigated ..	3.86	3.77	3.41	3.68	3.70	3.59
20. Total, establishment charges per acre charged as irrigated (items 7 and 8—11) ..	0.21	0.23	0.22	0.23	0.21	0.22
21. Working expenses per acre charged as irrigated ..	0.47	0.51	0.57	0.61	0.47	0.55

The average receipts for the triennium under review are less than the averages for the two previous periods.

In 1899-1900 large remissions were granted owing to the unfavourable character of the season. In 1901-1902, the increase in receipts was due to a rise in the area cultivated both under the first and the second crop.

CLASS II.—SHATIATOPE ANICUT SYSTEM—cont.

4. Area irrigated.

1	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
2	3	4	5	
1893-1894 ..	ACS. 27,431	ACS. 2,974	ACS. 30,405	INCHES. 52.85
1894-1895 ..	28,524	3,178	31,702	52.85
1895-1896 ..	28,766	3,213	31,979	70.13
Triennial average ..	28,240	3,122	31,362	58.61
1896-1897 ..	28,167	2,950	31,117	51.79
1897-1898 ..	29,418	4,205	33,623	51.79
1898-1899 ..	29,442	4,804	34,246	78.70
Triennial average ..	29,019	4,027	33,046	60.76
1899-1900 ..	26,441	5,009	31,450	45.22
1900-1901 ..	26,330	4,492	30,822	38.00
1901-1902 ..	27,490	5,044	32,534	46.79
Triennial average ..	26,754	4,828	31,582	43.34

5. Assessments, Collections and Remissions.

No. of items.	Heads.	Average of the triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1898.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2	Assessment (irrigation revenue and Public Works receipts) ..	1,24,895	1,39,299	1,28,073	1,20,637	1,25,766	1,24,825
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	1,24,895	1,39,299	1,28,073	1,20,637	1,25,766	1,24,825
4	Deduct—Remissions and refunds ..	401	3,065	12,619	81	..	4,233
5	Actual collections ..	1,24,494	1,27,234	1,15,454	1,20,556	1,25,766	1,20,592
6	Outstanding balance ..	..	..	..	..	..	..

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1898.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Extensions and improvements ..	1,362	1,208	1,547	5,877	2,501	3,368
Repairs.						
Head works ..	1,359	2,494	2,868	1,767	850	1,838
Main canals and branches ..	2,103	2,106	2,113	1,779	2,641	1,973
Distributaries ..	3,218	3,419	5,030	2,925	2,447	3,601
Drainage and protective works ..	..	..	..	..	..	..
Total ..	8,072	10,227	11,558	11,873	3,439	10,325

The increase in the working expenses is due to a large expenditure having been incurred under "Maintenance and Repairs" during the triennium.

CLASS II.

Minor Works.

PELANDORAI ANICUT SYSTEM.

STATEMENT showing the areas charged as irrigated.

Year.	Areas in acres.		
	First crop.	Second crop.	Total.
1	2	3	4
1875-1876	2,497	82	2,579
1876-1877	1,879	110	1,989
1877-1878	2,187	194	2,381
Triennial average ..	2,187	125	2,312
1878-1879	2,739	189	2,928
1879-1880	3,752	93	3,845
1880-1881	3,948	76	4,024
Triennial average ..	3,490	119	3,599
1881-1882	2,155	31	2,186
1882-1883	3,356	174	3,530
1883-1884	6,087	100	6,187
Triennial average ..	3,513	101	3,614
1884-1885	4,032	145	4,177
1885-1886	5,012	163	5,175
1886-1887	5,533	99	5,632
Triennial average ..	3,546	115	3,661
1887-1888	3,578	85	3,663
1888-1889	4,438	71	4,509
1889-1890	6,251	143	6,394
Triennial average ..	4,668	100	4,768
1890-1891	6,574	82	6,656
1891-1892	7,872	91	7,963
1892-1893	8,377	101	8,478
Triennial average ..	7,641	91	7,732
1893-1894	8,345	222	8,567
1894-1895	8,760	188	8,948
1895-1896	8,751	113	8,864
Triennial average ..	8,619	174	8,793
1896-1897	9,133	373	9,506
1897-1898	9,860	329	10,189
1898-1899	9,531	371	9,902
Triennial average ..	9,541	359	9,900
1899-1900	10,145	497	10,642
1900-1901	9,566	445	10,011
1901-1902	10,037	298	10,335
Triennial average ..	9,916	450	10,366

CLASS II.—PELANDORAI ANICUT SYSTEM—cont.

STATEMENT showing the Capital outlay, Gross revenue, Working expenses and Net revenue.

Year.	Capital outlay, direct and indirect, to end of year.	Net revenue to end of year.	For the year.			Perc of a.
			Gross revenue.	Working expenses.	Net revenue.	
1	2	3	4	5	6	
	RS.	RS.	RS.	RS.	RS.	
1875-1876	3,02,779	+ 547	1,827	1,280	+ 547	—
1876-1877	2,98,280	— 11,403	823	12,778	— 11,955	—
1877-1878	2,97,643	— 31,762	911	21,277	— 20,366	—
Triennial average ..	2,99,567	— 14,208	1,189	11,778	— 10,589	—
1878-1879	3,01,287	— 62,627	2,837	23,595	— 20,758	—
1879-1880	3,01,816	— 74,964	6,393	13,736	— 12,337	—
1880-1881	3,21,222	— 83,485	7,060	15,531	— 11,521	—
Triennial average ..	3,09,111	— 74,009	5,433	23,671	— 18,239	—
1881-1882	3,04,334	— 1,53,377	52	66,945	— 66,892	—
1882-1883	3,97,028	— 1,95,803	5,378	48,169	— 42,491	—
1883-1884	3,90,213	— 2,13,875	10,782	28,569	— 17,807	—
Triennial average ..	3,90,625	— 1,87,640	5,504	47,901	— 42,397	—
1884-1885	3,94,142	— 2,24,470	8,115	18,910	— 10,795	—
1885-1886	4,16,899	— 2,54,695	3,938	54,063	— 50,125	—
1886-1887	4,31,869	— 2,63,138	6,097	14,840	— 8,743	—
Triennial average ..	4,14,303	— 2,47,401	6,050	22,632	— 16,583	—
1887-1888	4,38,563	— 2,70,271	6,458	13,691	— 7,133	—
1888-1889	4,44,876	— 2,77,999	8,887	16,706	— 7,719	—
1889-1890	4,45,303	— 2,82,584	14,273	18,667	— 4,394	—
Triennial average ..	4,42,314	— 2,76,348	9,393	15,388	— 6,482	—
1890-1891	4,50,160	— 2,79,423	17,391	14,431	— 2,961	—
1891-1892	4,51,336	— 2,96,112	199	16,698	— 16,499	—
1892-1893	4,51,336	— 2,71,929	47,901	23,718	— 24,183	—
Triennial average ..	4,51,044	— 2,82,584	21,861	18,349	— 3,512	—
1893-1894	4,51,467	— 2,66,351	25,966	20,383	— 5,578	—
1894-1895	4,53,931	— 2,47,403	29,296	10,348	— 18,948	—
1895-1896	4,53,331	— 2,23,327	30,034	6,953	— 24,078	—
Triennial average ..	4,52,109	— 2,45,694	28,432	12,231	— 16,201	—
1896-1897	5,01,193	— 2,10,846	31,560	19,119	— 12,441	—
1897-1898	5,52,029	— 1,92,692	32,920	14,926	— 17,994	—
1898-1899	5,55,639	— 1,73,668	33,334	14,103	— 19,224	—
Triennial average ..	5,46,255	— 1,92,482	32,601	16,048	— 16,553	—
1899-1900	5,94,078	— 1,54,632	35,149	16,120	— 19,029	—
1900-1901	5,94,644	— 1,35,514	32,981	13,836	— 19,145	—
1901-1902	5,94,644	— 1,14,362	34,497	13,275	— 21,192	—
Triennial average ..	5,94,388	— 1,34,549	34,169	14,420	— 19,769	—

CLASS-II.—PELANDORAI ANICUT SYSTEM—*cont.*

1. The Capital outlay on the system is shown below :—

Heads of account.	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct Charges.</i>	RS.	RS.	RS.		RS.
Works	4,38,646	5,210	— 107	..	4,44,149
Establishment	98,294	1,429	— 24	..	99,699
Tools and plant	4,438	1,600	..	..	5,938
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	5,40,778	9,139	— 131	..	5,49,786
Less—Receipts on Capital Account	798	..	..	..	798
Total, Direct Charges	5,39,980	9,139	— 131	..	5,48,988
Indirect Charges	46,659	200	— 3	..	46,856
Total outlay, Direct and Indirect	5,86,639	9,339	— 134	..	5,94,844

The outlay in the triennium was incurred chiefly in lowering the crest of the anicut and fitting it with 6-ft. girder shutters. The *minus* figures in 1900-1901 represent the value of certain materials which has been written back to the Revenue account.

2. Lengths of Channels.

	Lengths of channels in miles.				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Length of canals Miles.	39	..	..	..	39
Of the above, navigable	Nil.	..	..	..	Nil.
Distributaries	24	..	..	..	24
Gross area commanded Acres.	60,671	..	..	..	60,671

CLASS II.—PELANDORAI ANICUT SYSTEM—*cont.*

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
<i>RECEIPTS.</i>	RS.	RS.	RS.	RS.	RS.	RS.
1. Water-rates (irrigation)	31,200	35,090	27,968	35,766	37,368	37,632
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	223	511	181	195	94	167
Total	31,423	35,601	28,149	35,961	37,467	37,809
Less—Refunds of Revenue	..	..	..	..	..	..
Total	31,423	35,601	28,149	35,961	37,467	37,809
Deduct—Share due to old irrigation	3,000	3,000	3,000	3,000	3,000	3,000
4. Total, Receipts	28,423	32,601	25,149	32,961	34,467	34,809
<i>WORKING EXPENSES.</i>						
<i>DIRECT CHARGES.</i>						
<i>L. Works.</i>						
Extensions and improvements	560	2,503	2,067	2,183	1,050	1,787
Maintenance and repairs	8,114	8,294	9,380	7,804	8,217	8,490
Establishment (Direction and Execution)	1,981	2,586	2,617	2,251	2,131	2,333
Tools and plant	13	..	27	..	..	9
Total	10,668	14,173	14,291	12,038	11,398	12,599
<i>II. Revenue Management.</i>						
Establishment—						
Direction	4	10	4	4	2	3
Execution	18	41	14	18	7	12
Civil officers	1,410	1,606	1,748	1,638	1,718	1,702
Total	1,432	1,656	1,766	1,656	1,727	1,717
Total, Direct Charges	12,100	15,829	16,057	13,694	13,125	14,226
<i>INDIRECT.</i>						
Capitalized statement of land revenue and leave and pension allowances	281	369	413	320	300	344
Total (Direct and Indirect)	12,381	16,198	16,470	14,014	13,425	14,570
Deduct—Old maintenance charges	150	150	150	150	150	150
Total, Working Expenses	12,231	16,048	16,320	13,864	13,275	14,420
Net revenue	16,201	16,553	19,029	19,096	21,192	19,769
Capital outlay (Direct and Indirect)	4,63,109	5,46,385	5,94,978	5,94,844	5,94,844	5,94,868
Percentage of net revenue	3.57	3.03	3.20	3.21	3.56	3.32
Area charged as irrigated, acres	8,738	9,840	10,842	10,011	10,245	10,366
Average of water-rate (item 1) per acre charged as irrigated	3.54	3.56	3.60	3.67	3.64	3.57
Total establishment charges per acre irrigated (items 7 and 8 and 11)	0.29	0.43	0.40	0.36	0.37	0.39
Working expenses (direct and indirect) per acre charged as irrigated	1.39	1.63	1.48	1.38	1.31	1.39

The increase in receipts is due to an increase in the area irrigated under second crop and to some dry lands having been irrigated in 1899-1900. The decrease in working expenses has raised the percentage of net revenue by 0.29 per cent.

CLASS II.—PELANDORAI ANICUT SYSTEM—*cont.*

4. Area irrigated.

—	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
	1	2	3	4
	ACRES.	ACRES.	ACRES.	INCHES.
1893-1894	5,739	2,519	8,258	51.30
1894-1895	5,431	2,591	8,025	51.50
1895-1896	5,294	2,517	7,811	58.85
Triennial average ..	5,155	2,673	7,828	57.15
1896-1897	4,880	170	5,050	46.60
1897-1898	5,645	287	5,932	46.00
1898-1899	5,583	307	5,890	52.90
Triennial average ..	5,303	242	5,545	55.30
1899-1900	5,351	607	5,958	42.30
1900-1901	5,228	545	5,773	43.70
1901-1902	5,724	209	5,933	38.55
Triennial average ..	5,312	447	5,759	41.68

5. Assessments, Collection and Remissions.

Number of Heads.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
		1	2	3	4	5	
1	Opening balance of the year..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2	Assessment (Irrigation revenue and Public Works receipts) ..	31,969	36,382	39,043	36,018	37,457	37,506
3	Surplus and excess recoveries ..	..	..	..	..	..	..
	Total ..	31,969	36,382	39,043	36,018	37,457	37,506
4	Deduct—Remissions and refunds ..	557	781	894	67	..	517
5	Actual Collections ..	31,432	35,601	38,149	35,951	37,457	37,189
6	Outstanding balance ..	..	..	..	..	..	..

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
	1	2	3	4	5	
Extensions and improvements ..	Rs. 550	Rs. 2,523	Rs. 2,067	Rs. 2,183	Rs. 1,950	Rs. 1,767
Repairs ..	..	..	..	..	..	..
Head works ..	3,910	4,103	4,109	2,542	3,477	2,365
Main canals and branches ..	3,461	2,988	3,305	2,359	2,008	2,587
Distributaries ..	743	1,903	1,955	2,703	2,672	2,447
Drainage and protective works ..	..	..	..	..	..	..
Total ..	5,074	11,567	11,447	9,787	9,207	10,167

CLASS II.

Minor Works.

LOWER COLEROON ANICUT SYSTEM.

STATEMENT showing the areas charged as irrigated.

—	Area in acres.		
	First Crop.	Second Crop.	Total.
	1	2	3
	ACRES.	ACRES.	ACRES.
1893-1894	106,445	6,215	112,660
1894-1895	107,017	4,649	111,666
1895-1896	107,946	4,205	112,151
Triennial average ..	107,536	5,023	112,559
1896-1897	106,994	1,332	108,326
1897-1898	105,967	3,971	109,938
1898-1899	107,333	5,640	112,973
Triennial average ..	107,755	3,691	111,446
1899-1900	102,285	5,055	107,340
1900-1901	107,405	3,335	110,740
1901-1902	107,572	3,218	110,790
Triennial average ..	105,754	4,881	110,635

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
					1	2	3	4
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1893-1894	5,64,401	..	81,42,690	..	3,11,126	41,934	2,69,192	47.60
1894-1895	5,73,825	..	83,25,555	..	2,96,039	43,154	2,52,885	44.07
1895-1896	6,12,631	..	86,65,764	..	2,23,948	33,749	2,00,199	42.47
Triennial average ..	5,83,586	..	83,80,606	..	2,00,371	38,615	1,61,756	44.68
1896-1897	7,13,132	..	68,26,744	..	2,84,329	45,849	2,38,480	33.79
1897-1898	8,08,201	..	91,64,919	..	2,38,313	40,138	1,98,175	31.94
1898-1899	9,39,344	..	94,10,951	..	2,94,999	38,977	2,56,022	27.26
Triennial average ..	8,20,226	..	91,54,205	..	2,83,214	41,495	2,41,719	30.69
1899-1900	11,35,195	..	95,91,837	..	2,19,285	39,020	1,80,265	15.93
1900-1901	12,66,503	..	93,39,762	..	2,88,567	49,682	2,38,885	18.88
1901-1902	13,21,729	..	100,67,212	..	2,36,452	50,000	1,86,452	17.50
Triennial average ..	12,40,809	..	96,52,937	..	2,54,981	46,227	2,08,754	17.63

CLASS II.—LOWER COLEROON ANICUT SYSTEM—*cont.*

1. Capital outlay.

Heads of account.	Outlay to to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
<i>Direct Charges.</i>	Rs.	Rs.	Rs.	Rs.	Rs.
Works	7,85,885	1,55,128	1,05,337	43,143	10,39,594
Establishment	1,81,887	55,065	22,110	7,425	2,27,987
Tools and plant	14,866	..	— 807	..	14,559
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	9,12,138	1,90,353	1,27,146	50,574	12,80,710
Less receipts on Capital account	..	..	..	..	..
Total Direct charges	9,12,138	1,90,353	1,27,146	50,574	12,80,710
Indirect charges	27,296	4,903	3,768	5,662	41,919
Total outlay, direct and indirect	9,39,344	1,95,353	1,30,914	56,236	13,21,729

The construction estimate of this system has not yet been closed.

The following were the principal works carried out during the triennium under review :—In the South Arcot division, extension of the Old Coleroon aqueduct and bridge in connection with the Chidambaram drainage scheme was completed; clearing, widening and forming banks of the Old Coleroon drain was in progress as also providing screw-gearing shutters to eighteen sluices in Vadavár.

In the Tanjore division improvements to the anicut by providing lift shutters were nearly completed.

2. Lengths of Channels.

1	Lengths of channels in miles.				
	At end of March 1899.	Increase or decrease during			At end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	
Length of canals (main and branch) Miles	359	..	..	..	359
Of the above navigable	..	..	..	..	..
Distributaries	648	..	..	..	516
Gross area commanded Acres	2,40,862	..	..	..	2,40,862

There was no change in the lengths of the channels and area commanded during the triennial period under review.

CLASS II.—LOWER COLEROON ANICUT SYSTEM—*cont.*

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Water rates (irrigation)	4,43,301	4,45,726	3,47,740	4,45,333	4,43,827	4,12,100
2. Navigation	1,248	1,412	1,830	975	1,286	1,367
3. Miscellaneous	..	..	..	..	..	..
Total	4,44,549	4,47,138	3,49,570	4,46,308	4,45,113	4,13,467
Less—Refunds of revenue	10	..	..	9	5	5
Total	4,44,539	4,47,138	3,49,570	4,46,299	4,45,108	4,13,462
Deduct—Share due to old irrigation	1,44,168	1,53,924	1,28,065	1,50,034	1,58,160	1,58,481
4. Total Receipts	3,00,371	2,93,214	2,19,985	2,88,507	2,86,948	2,54,981
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements	3,256	3,024	865	2,488	3,064	2,272
6. Maintenance and repairs	16,359	18,412	20,748	25,195	24,189	23,577
7. Establishment (direction and execution)	4,270	4,610	4,626	6,169	6,236	5,677
8. Tools and plant	29	40	102	78	6	62
Total	23,914	26,086	25,841	34,230	34,695	31,588
II. Revenue Management.						
Establishment—						
9. Direction	25	28	37	19	26	27
10. Execution	100	113	145	79	104	110
11. Civil officers	14,356	14,590	10,908	14,377	14,268	13,181
Total	15,081	14,731	11,091	14,475	14,388	13,318
12. Total, Direct Charges	38,995	40,817	36,932	48,705	49,083	44,906
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	620	668	2,167	877	919	1,331
Total (Direct and Indirect)	39,615	41,485	39,099	49,582	50,002	46,237
Deduct—Old maintenance charges	..	..	..	..	..	..
14. Total Working Expenses	39,615	41,485	39,099	49,582	50,002	46,237
15. Net revenue	2,60,756	2,51,729	1,80,886	2,38,925	2,36,946	2,18,744
16. Capital outlay, direct and indirect	5,83,586	6,20,226	11,35,195	12,65,502	13,21,720	12,40,866
17. Percentage of net revenue	44.68	39.69	15.93	18.88	17.89	17.83
18. Area charged as irrigated acres	1,11,859	1,11,566	1,07,373	1,13,741	1,10,790	1,10,635
19. Average of water-rate (item 1) per acre charged as irrigated	3.96	3.99	3.24	3.91	4.00	3.72
20. Total establishment charges per acre charged as irrigated (items 7 and 9-11)	0.17	0.17	0.14	0.18	0.18	0.17
21. Working expenses per acre charged as irrigated	0.35	0.37	0.36	0.43	0.45	0.41

The decrease in the revenue in 1899-1900 was due to large remissions amounting to Rs. 98,713 (as compared with Rs. 4,080 in the previous year) having been granted on account of the unfavourable character of the season. This chiefly accounts for the decrease in the triennial average as compared with the averages for the two previous periods ended March 1896 and March 1899. The average working expenses for the period under review show an increase as compared with the averages for the two previous periods. This increase occurs chiefly under maintenance and repairs and is due to the flood damages of November and December 1898 having been repaired in 1899-1900, and to the special repairs carried out in the other two years to the masonry works of the Khan Sahib's canal and the Veeranam tank.

CLASS II.—LOWER COLEROON ANICUT SYSTEM—*cont.*

4. Area irrigated.

1	Area irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
2	3	4	5	
1893-94	ACS. 118,842	ACS. 15,017	ACS. 133,859	INCHES. 59.82
1894-95	165,935*	11,516	116,550	54.89
1895-96	103,494	19,229	113,723	55.40
Triennial average ..	109,557	12,254	121,111	57.32
1896-97	101,865	2,143	104,008	42.00
1897-98	94,172	3,003	97,175	42.00
1898-99	106,428	4,922	111,350	53.60
Triennial average ..	100,822	3,356	104,178	47.86
1899-1900	91,216	5,096	96,301	45.75
1900-1901	104,920	6,336	110,568	40.75
1901-1902	105,468	3,218	108,686	44.05
Triennial average ..	101,305	4,880	106,185	41.85

The average area (first and second crops) irrigated during the triennium under review is slightly in excess of the average for the previous period ended March 1899; but the averages for the two periods quoted above are less than that for the period ended March 1896. This is due to the season in the two later periods not having been as favourable as in the earlier period.

5. Areas irrigated by districts.

District.	Areas irrigated in acres.		
	First crop.	Second crop.	Total.
1	2	3	4
<i>South Arcot.</i>	ACS.	ACS.	ACS.
1899-1900	72,186	3,308	76,394
1900-1901	81,361	5,024	86,385
1901-1902	82,813	2,503	85,116
Triennial average ..	78,820	3,612	82,632
<i>Tanjore.</i>			
1899-1900	21,729	1,178	22,907
1900-1901	22,871	1,312	24,183
1901-1902	22,855	715	23,570
Triennial average ..	22,455	1,068	23,553

6. Assessments, collections and remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1	Opening balance of the year..	RS. ..	RS. ..	RS. ..	RS. ..	RS. ..	RS. ..
2	Assessment (irrigation revenue and Public Works receipts).	4,45,043	4,48,825	4,46,283	4,50,887	4,44,552	4,47,940
3	Surplus and excess recoveries.	..	..	..	..	..	..
	Total ..	4,45,043	4,48,825	4,46,283	4,50,887	4,44,552	4,47,940
4	Deduct remissions and refunds	504	1,687	98,713	4,638	34	34,478
5	Actual collection	4,44,539	4,47,138	3,49,570	4,46,199	4,44,518	4,13,462
6	Outstanding balance	..	..	..	..	..	..

CLASS II.—LOWER COLEROON ANICUT SYSTEM—*cont.*

The decrease in the revenue realized has been explained in the remarks under paragraph 3.

7. Miscellaneous Revenue.

1	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	7	
	RS.	RS.	RS.	RS.	RS.	RS.
Sale of water	..	..	..	..	..	..
Water-supply of towns	..	..	..	..	..	..
Plantations	476	364	211	980	748	499
Other canal produce	707	1,048	1,619	686	290	333
Rents of buildings	..	..	..	..	..	..
Fines	815	..	..	..	..	..
Miscellaneous	..	..	..	20	53	25
Total ..	1,348	1,412	1,830	976	1,296	1,367

8. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
	RS.	RS.	RS.	RS.	RS.	RS.
Extensions and improvements ..	3,256	3,024	365	2,438	3,964	2,272
<i>Repairs.</i>						
Head works	1,594	2,110	2,787	2,324	3,520	2,844
Main canals and branches	7,674	5,681	3,439	5,644	5,683	4,922
Distributaries	7,191	10,764	14,522	15,173	15,173	16,721
Drainage and protective works ..	..	..	..	167	103	90
Total ..	19,615	21,469	21,113	27,988	28,453	25,849

For explanation of increase in the period under review *vide* remarks under paragraph 3.

CLASS II.

Minor Works.

NANDIYAR CHANNEL.

STATEMENT showing areas charged as irrigated.

	Area in acres.		Total.
	First crop.	Second crop.	
1893-1894	..	..	..
1894-1895	..	..	..
1895-1896	3,208	1,526	5,426
Triennial average ..	..	..	..
1896-1897	4,054	1,454	5,508
1897-1898	4,869	2,287	7,176
1898-1899	4,867	2,311	7,198
Triennial average ..	4,600	2,027	6,627
1899-1900	4,709	1,592	6,601
1900-1901	4,962	2,004	6,966
1901-1902	5,096	2,436	7,532
Triennial average ..	4,902	2,111	7,013

STATEMENT showing capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay (direct and indirect) to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
1895-1896	Rs. 50,254	..	Rs. 1,423	..	Rs. 795	628	1,423	..
1896-1897	55,708	..	4,510	..	933	2,164	3,087	5.54
1897-1898	55,708	..	5,344	..	3,484	4,338	854	1.52
1898-1899	55,708	..	6,139	..	2,981	3,766	776	1.39
Triennial average ..	55,708	..	5,333	..	1,844	3,416	1,572	2.82
1899-1900	56,893	..	11,068	..	1,566	6,525	4,929	8.66
1900-1901	57,954	..	14,351	..	1,802	5,085	3,283	5.68
1901-1902	58,838	..	12,479	..	3,472	1,600	1,872	3.18
Triennial average ..	57,895	..	12,533	..	2,890	4,403	2,112	3.65

CLASS II.—NANDIYAR CHANNEL SYSTEM—cont.

1. The capital outlay on this system is shown below :—

Direct charges.	Outlay to end of March 1899.	Outlay.			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
Works	Rs. 43,488	Rs. 939	Rs. 841	Rs. 700	Rs. 45,368
Establishment	10,002	216	193	161	10,572
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	53,490	1,155	1,034	861	56,540
Less—Receipts on Capital account	..	..	..	..	..
Total, Direct charges	53,490	1,155	1,034	861	56,540
Indirect charges	2,213	30	27	23	2,298
Total outlay, Direct and Indirect	55,703	1,185	1,061	884	58,838

The works carried out during the triennium were not of any importance.

2. Lengths of channels.

	Lengths of channels in miles.				At end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
Length of channel (both for Irrigation and Navigation).	14	..	..	..	14
Of the above navigable	..	..	..	..	..
Distributaries for irrigation only	..	..	..	..	..
Gross area commanded in acres	9,480	..	..	..	9,480

CLASS II.—NANDYAR CHANNEL SYSTEM—cont.

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rate (irrigation)	..	Rs. 18,506	Rs. 18,432	Rs. 18,595	Rs. 20,221	Rs. 19,082
2. Navigation	..	..	..	..	..	..
3. Miscellaneous	..	.. 51	.. 49	.. 45	.. 89	.. 61
Total	..	18,557	18,481	18,640	20,310	19,143
Less—Refunds of revenue	..	..	..	..	..	..
Total	..	18,557	18,481	18,640	20,310	19,143
Deduct—Share due to old irrigation.	..	16,713	16,865	16,838	16,838	16,853
4. Total Receipts	..	1,844	1,595	1,802	3,472	2,290
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	..	62	217	..	..	72
6. Maintenance and repairs	..	2,655	5,060	3,987	1,160	3,362
7. Establishment (direction and execution)	..	486	1,042	755	253	683
8. Tools and plant	..	16	37	..	32	23
Total	..	3,253	6,296	4,743	1,385	4,140
II. Revenue Management.						
Establishment—	..	..	..	..	..	..
9. Direction	..	..	1	1	2	1
10. Execution	..	2	4	4	7	5
11. Civil officers	..	93	77	88	169	111
Total	..	95	82	93	178	117
12. Total Direct charges	..	3,347	6,378	4,836	1,563	4,257
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	..	69	147	249	37	144
Total (Direct and Indirect)	..	3,416	6,525	5,085	1,600	4,401
Deduct—Old maintenance charges ..	..	..	..	..	..	..
14. Total Working Expenses	..	3,416	6,525	5,085	1,600	4,401
15. Net revenue	..	1,572	4,929	3,283	1,872	2,113
16. Capital outlay (direct and indirect)	..	55,708	56,703	57,954	58,838	57,925
17. Percentage of net revenue	..	3.42	8.65	5.66	3.18	3.64
18. Area charged as irrigated, acres ..	..	6,327	6,601	6,906	7,532	7,012
19. Average of water-rate (item 1) per acre charged as irrigated	..	2.78	2.79	2.69	2.63	2.72
20. Total establishment charges per acre charged as irrigated (items 7 and 9-11)	..	..	..	..	..	..
21. Working expenses per acre charged as irrigated	..	..	..	..	..	..

CLASS II.—NANDYAR CHANNEL SYSTEM—cont.

4. Area irrigated.

Years.	Area irrigated.		
	First crop.	Second crop.	Total.
1	2	3	4
1896-1897	ACS. 4,205	ACS. 1,729	ACS. 5,934
1897-1898	4,968	2,292	7,260
1898-1899	5,142	2,366	7,508
Triennial average	4,772	2,129	6,901
1899-1900	4,617	1,728	6,345
1900-1901	4,739	1,854	6,593
1901-1902	5,057	2,351	7,408
Triennial average	4,821	1,982	6,803

5. Assessments, collections and remissions.

	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
1. Opening balance of the year ..	..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
2. Assessment (Irrigation and Public Works receipts)	..	10,098	18,542	18,751	20,422	19,239
3. Surplus and excess revenue	..	..	..	..	..	..
Total	..	10,098	18,542	18,751	20,422	19,239
4. Deduct remissions and refunds ..	..	541	61	111	112	96
5. Actual collection	..	18,557	18,481	18,640	20,310	19,143
6. Outstanding balance	..	..	..	..	..	..

6. Maintenance and repairs.

	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements	..	Rs. 62	Rs. 217	Rs. ..	Rs. ..	Rs. 72
Repairs.						
Head works	..	269	67	43	..	37
Main and branch canals	..	1,427	4,933	1,683	956	2,526
Distributaries	..	959	..	2,255	144	799
Drainage and protective works	..	..	..	..	..	..
Total	..	2,717	5,217	3,987	1,100	3,454

CLASS II.

Minor Works.

MARADUR ANICUT SYSTEM.

STATEMENT showing the areas charged as irrigated.

1	Areas in acres.		
	First Crop.	Second Crop.	Total.
2	3	4	
1890-1891	16,946	16,228	33,174
1891-1892	17,426	16,213	33,639
1892-1893	13,820	18,431	32,251
Triennial average ..	16,065	15,279	31,344
1893-1894	17,356	16,946	34,302
1894-1895	17,416	16,185	33,601
1895-1896	16,903	16,669	33,572
Triennial average ..	17,181	16,667	33,848
1896-1897	17,467	16,441	33,908
1897-1898	17,506	16,629	34,135
1898-1899	17,696	17,668	35,364
Triennial average ..	17,503	16,879	34,382
1899-1900	17,694	16,669	34,363
1900-1901	17,694	16,846	34,540
1901-1902	17,595	16,804	34,399
Triennial average ..	17,534	16,663	34,197

STATEMENT showing the capital outlay, gross revenue, working expenses and net revenue.

Year.	Capital outlay, direct and indirect to end of year.	Interest charges to end of year.	Net revenue to end of year.	Sum at charge at end of year.	For the year.			
					Gross revenue.	Working expenses.	Net revenue.	Percentage on capital.
1	2	3	4	5	6	7	8	9
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
1890-1891	41,135	..	9,48,883	..	70,348	24,634	45,714	111.73
1891-1892	41,135	..	10,07,093	..	72,352	14,142	58,210	141.61
1892-1893	41,135	..	10,51,804	..	62,722	16,011	46,711	108.69
Triennial average ..	41,135	..	10,02,693	..	68,474	18,929	49,545	120.44
1893-1894	41,135	..	11,06,128	..	72,333	18,009	54,324	132.06
1894-1895	41,135	..	11,61,094	..	71,824	16,858	54,966	133.62
1895-1896	43,549	..	12,10,212	..	69,085	19,967	49,118	112.78
Triennial average ..	41,940	..	11,58,146	..	71,081	18,278	52,803	125.90
1896-1897	44,789	..	12,56,667	..	71,935	25,926	46,009	103.72
1897-1898	44,805	..	13,14,245	..	72,477	14,890	57,587	128.41
1898-1899	44,805	..	13,65,465	..	72,263	21,035	51,228	114.32
Triennial average ..	44,800	..	13,12,126	..	72,071	20,320	51,751	115.51
1899-1900	44,805	..	14,27,612	..	72,945	10,798	62,147	136.71
1900-1901	44,805	..	14,98,080	..	74,097	8,629	65,468	145.12
1901-1902	44,805	..	15,63,895	..	73,135	12,410	60,725	135.53
Triennial average ..	44,805	..	14,91,499	..	73,382	10,612	62,760	140.11

CLASS II.—MARUDUR ANICUT SYSTEM—cont.

1. The Capital outlay on this system is shown below :—

1	Outlay to end of March 1899.	Outlay during			Outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
2	3	4	5	6	
<i>Direct charges.</i>					
	RS.	RS.	RS.	RS.	RS.
Works	35,497	..	..	..	35,497
Establishment	8,165	..	..	..	8,165
Tools and plant	..	..	..	..	..
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	43,662	..	..	..	43,662
Less—Receipts on Capital Account	..	..	..	..	..
Total, Direct Charges	43,662	..	..	..	43,662
Indirect charges	1,143	..	..	..	1,143
Total Outlay, Direct and Indirect	44,805	..	..	..	44,805

No outlay under the open Capital Account was incurred during the triennium.

2. Lengths of channels.

Description of channel.	Lengths of channels in miles.			
	At end of March 1899.	Increase or decrease.		
1	2	1899-1900.	1900-1901.	1901-1902.
3	4	5	6	
Length of channels Miles.	27	..	..	..
Of the above navigable	Nil.	..	..	..
Distributaries for irrigation only	45	..	..	..
Gross area commanded	35,840	..	..	..
				35,840

CLASS II.—MARUDUR ANICUT SYSTEM—cont.

3. Financial results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rates (irrigation) ..	Rs. 1,84,112	Rs. 1,80,888	Rs. 1,88,425	Rs. 1,88,741	Rs. 1,88,583	Rs. 1,88,583
2. Navigation ..	204	187	84	255	279	439
3. Miscellaneous ..						
Total ..	1,84,316	1,87,075	1,88,509	1,89,096	1,88,862	1,89,022
Less—Refunds of revenue ..						
Total ..	1,84,316	1,87,075	1,88,509	1,89,096	1,88,862	1,89,022
Deduct—Share due to old irrigation ..	1,13,335	1,15,004	1,15,564	1,15,599	1,15,727	1,15,630
4. Total, Receipts ..	71,081	72,071	72,945	74,097	73,135	73,392
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements ..	Rs. 903	Rs. 891	Rs. 647	Rs. 400	Rs. 313	Rs. 453
6. Maintenance and repairs ..	10,751	12,935	5,161	8,346	11,501	8,333
7. Establishment (direction and execution) ..	2,681	2,964	1,182	1,859	2,565	1,869
8. Tools and plant ..						
Total ..	14,335	16,290	6,890	10,605	14,379	10,655
II. Revenue Management.						
Establishment.						
9. Direction ..	4	4	2	19	6	9
10. Execution ..	14	15	6	77	22	35
11. Civil Officers ..	3,544	3,594	3,643	3,667	3,643	3,648
Total ..	3,562	3,613	3,651	3,753	3,671	3,692
12. Total, Direct Charges ..	17,897	19,903	10,541	14,358	18,050	14,347
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances ..	331	417	167	274	363	268
Total (Direct and Indirect) ..	18,228	20,320	10,708	14,632	18,413	14,615
Deduct—Old maintenance charges ..				6,003	6,003	2,601
14. Total, Working Expenses ..	18,228	20,320	10,708	8,629	12,410	10,612
15. Net revenue ..	52,853	51,751	62,147	65,468	60,725	62,780
16. Capital outlay, direct and indirect.	41,940	44,500	44,805	44,805	44,805	44,805
17. Percentage of net revenue ..	125.90	115.51	138.70	146.11	135.63	140.11
18. Area charged as irrigated ..	33,258	34,332	34,173	34,440	34,199	34,270
19. Average of water-rate (item 1) per acre charged as irrigated ..	5.52	5.43	5.51	5.48	5.50	5.50
20. Total establishment charges per acre charged as irrigated (items 7 and 9 to 11) ..	0.18	0.19	0.14	0.16	0.18	0.16
21. Working expenses per acre charged as irrigated ..	0.54	0.59	0.31	0.25	0.36	0.31

There has been a steady increase in the receipts from water-rate, &c., under this system during the past three triennial periods. As there was decrease under working expenses, the net result has increased from 115.51 to 140.11. This is the only system under Class II.—Provincial which pays such a handsome return.

CLASS II.—MARUDUR ANICUT SYSTEM—cont.

4. Area irrigated.

	Areas irrigated.			Rainfall.
	First crop.	Second crop.	Total.	
1	2	3	4	5
1893-1894 ..	ACRES. 17,224	ACRES. 15,224	ACRES. 32,448	INCHES. 25.49
1894-1895 ..	16,992	14,161	31,153	20.96
1895-1896 ..	17,164	12,040	29,224	41.94
Triennial average ..	17,133	13,808	30,941	29.46
1896-1897 ..	16,975	15,020	31,995	48.03
1897-1898 ..	17,092	15,170	32,262	31.34
1898-1899 ..	17,062	14,185	31,237	36.10
Triennial average ..	17,039	14,792	31,831	38.52
1899-1900 ..	17,032	13,241	30,263	29.32
1900-1901 ..	17,225	14,933	32,159	45.26
1901-1902 ..	17,192	14,591	31,783	37.11
Triennial average ..	17,163	14,255	31,405	37.23

The proportionately large area of second-crop cultivation under this system is due to the sufficient supply of water available in the river.

5. Assessments, Collections and Remissions.

Number of items.	Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7	8
1		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
2	Opening balance of the year ..	1,89,076	1,89,422	1,90,400	1,91,478	1,90,578	1,90,821
3	Assessment (Irrigation Revenue and Public Works receipts).						
4	Surplus and excess recoveries ..						
5	Total ..	1,89,076	1,89,422	1,90,400	1,91,478	1,90,578	1,90,821
6	Deduct—Remissions and refunds ..	4,760	2,247	1,891	1,782	1,716	1,799
7	Actual collections ..	1,84,316	1,87,075	1,88,509	1,89,696	1,88,862	1,89,022
8	Outstanding balance ..						

6. Maintenance and Repairs.

Heads.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
Extensions and improvements ..	Rs. 903	Rs. 891	Rs. 647	Rs. 400	Rs. 313	Rs. 453
Repairs ..						
Head works ..	455	181	192	38	439	223
Major canals and branches ..	7,903	4,475	1,887	1,906	3,175	2,323
Distributaries ..	779	8,240	3,072	6,084	7,789	5,648
Drainage and protective works ..	1,503	39		318	98	130
Total ..	11,554	13,325	5,798	8,746	11,814	8,786

CLASS II.

Minor Works.

CHILKA LAKE CANAL.

This is a tidal canal, its capital cost being Rs. 31,027 as shown below :—

Systems.	Net revenue.				
	Average of the triennial period ending March 1899.	For the year			Average of the triennial period ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
DIRECT CHARGES.	RS.				RS.
Works	24,450	..	..	..	24,450
Establishment	5,624	..	..	..	5,624
Tools and plant	166	..	..	..	166
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	30,240	..	..	..	30,240
Less—Receipts on Capital account	..	..	..	..	..
Total, Direct charges	30,240	..	..	..	30,240
Indirect charges	787	..	..	..	787
Total outlay, Direct and Indirect	31,027	..	..	..	31,027

The receipts from navigation are too small to need any mention. There was no capital expenditure on the canal during the triennium.

CLASS II.

Minor Works.

BUCKINGHAM CANAL.

1. The Capital outlay on this canal is shown below :—

	Outlay to end of March 1899.	Outlay during			Total outlay to end of March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
DIRECT CHARGES.	RS.	RS.	RS.	RS.	RS.
Works	67,93,427	10,885	5,077	5,209	67,24,598
Establishment	15,92,861	1,424	1,123	1,187	15,46,594
Tools and plant	1,50,720	42	..	..	1,50,762
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total	84,77,008	12,351	6,199	6,396	85,01,954
Less—Receipts on Capital account	4,502	4,129	66	..	8,697
Total, Direct charges	84,72,506	7,922	6,133	6,396	84,92,957
Indirect charges	4,66,951	199	167	166	4,87,483
Total outlay, Direct and Indirect	89,39,457	8,121	6,300	6,562	89,80,440

The construction estimate of this canal was closed on 31st March 1897. The chief works carried out during the triennium were —

- (1) An outlet of 20 vents in the 89th mile.
- (2) A lock at the Cooum end of the junction canal.

2. Lengths of Channels.

Description of channels.	Lengths of channels in miles.				Total at end of March 1902.
	At end of March 1899.	Increase or decrease during			
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
Buckingham canal Miles.	262	..	..	..	262

NOTE.—The canal being for navigation only, there are no branch channels or distributaries.

CLASS II.—BUCKINGHAM CANAL—cont.

3. Financial Results.

Particulars.	Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
	March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6	7
RECEIPTS.						
1. Water-rates (Irrigation)	Rs. 1,03,922	Rs. 1,05,140	Rs. 78,181	Rs. 70,277	Rs. 68,014	Rs. 72,157
2. Navigation	2,718	1,059	719	933	1,255	979
3. Miscellaneous						
Total	1,06,640	1,06,199	78,900	71,210	69,269	73,136
Less—Befunds of revenue	43	92	11	30	149	63
Total	1,06,697	1,06,107	78,919	71,180	69,120	73,073
Deduct—Share due to old irrigation.						
4. Total Receipts	1,06,697	1,06,107	78,919	71,180	69,120	73,073
WORKING EXPENSES.						
DIRECT CHARGES.						
I. Works.						
5. Extensions and improvements	3,571	1,548	1,139	173	30	447
6. Maintenance and repairs	68,337	65,036	69,243	62,293	67,393	66,311
7. Branches (dredging and excavation)	18,166	15,136	16,188	14,383	15,492	15,349
8. Tools and plant	4,126	3,676	2,524	4,165	5,058	4,128
Total	92,670	85,396	89,104	81,819	87,973	86,235
II. Revenue Management.						
9. Establishment—						
2. Direction	2,175	2,124	1,579	3,424	1,335	1,458
10. Execution	8,399	8,496	6,314	5,397	5,512	5,851
11. Civil officers						
Total	10,574	10,620	7,893	7,121	6,847	7,314
12. Total, Direct charges	1,03,244	96,016	96,997	88,940	94,820	93,549
INDIRECT CHARGES.						
13. Capitalized abatement of land revenue and leave and pension allowances	3,997	3,506	3,271	3,008	2,139	3,173
Total (Direct and Indirect)	1,07,241	99,522	1,00,268	91,948	96,959	96,722
Deduct—Old maintenance charges						
14. Total, Working Expenses	1,07,241	99,522	1,00,268	91,948	96,959	96,722
15. Net revenue	1,346	6,185	21,449	20,679	28,319	23,649
16. Capital outlay, Direct and Indirect	81,81,992	89,42,876	89,67,588	89,73,878	89,80,440	89,72,999
17. Percentage of net revenue	0.01	0.07	0.24	0.23	0.32	0.25
18. Area charged as irrigated, Acres.						
19. Average of water-rate (item 1) per acre charged as irrigated						
20. Total establishment charges per acre charged as irrigated (items 7 and 9 to 11)						
21. Working expenses per acre irrigated						

The receipts from navigation show a gradual decrease since 1899-1900 due to competition with the North-east line of the Madras Railway (East Coast Railway). The question as to the future maintenance of this canal will have to be carefully considered.

CLASS II.—BUCKINGHAM CANAL—cont.

4. Navigation.

		Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6	7
Number of miles open	No.	262	262	262	262	262	261
Receipts	Rs.	1,06,022	1,05,140	78,181	70,277	68,014	72,157
Rate per mile	"						
Tonnage of cargo and passenger boats	Tons.	285,583	202,984	183,365	169,515	200,957	182,979
Estimated value of cargo including rafts	Rs.	1,85,75,877	1,72,64,639	88,10,729	43,81,402	87,40,369	72,44,333

The cause of decrease in the average of navigation receipts for the triennium under review is explained above.

5. Miscellaneous Revenue.

		Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sale of water							
Water-supply of towns							
Plantations							
Other canal produce							
Rents of buildings							
Fines							
Miscellaneous							
Total		2,718	1,059	749	933	1,255	979

6. In 1899-1900, in the northern section of the canal, there were no heavy floods either in local streams or large rivers except the Musi and no damage happened to the canal. In the Swarnamukhi river the flood rose to M.S.L. + 4.8 feet which is 0.4 foot higher than that of 1898 and 3.7 feet below the recorded M.F.L.

In 1901-1902, there was a cyclone accompanied by heavy rainfall in December and floods came down causing some damage. In this year owing to the failure of the monsoons there was difficulty in keeping the canal open for traffic.

7. Maintenance and Repairs.

		Average of triennial period ending		Period under review.			Average of triennial period ending March 1902.
		March 1896.	March 1899.	1899-1900.	1900-1901.	1901-1902.	
1		2	3	4	5	6	7
Extensions and improvements	Rs.	3,571	1,548	1,139	173	30	447
Repairs.							
Head works							
Main canals and branches		68,337	65,036	69,243	62,293	67,393	66,311
Distributaries							
Drainage and protective works							
Total		71,908	66,582	70,382	62,469	67,423	66,758

The large outlay incurred annually on repairs is for keeping the canal in an efficient state.

CLASS II.

Minor Works.

VEDARANNIYAM CANAL.

1. The capital cost of this canal is Rs. 1,36,173 as shown below :—

Systems.	Average of triennial period ending March 1899.	For the year			Average of triennial period ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
DIRECT CHARGES.	RS.				RS.
Works	1,07,885	..	..	..	1,07,885
Establishment	24,814	..	..	..	24,814
Tools and plant	..	..	..	..	..
Expense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total ..	1,32,699	..	..	..	1,32,699
Less—Receipts on Capital account ..	..	..	..	..	..
Total, Direct charges ..	1,32,699	..	..	..	1,32,699
Indirect charges ..	3,474	..	..	..	3,474
Total outlay, Direct and Indirect ..	1,36,173	..	..	..	1,36,173

The canal is maintained chiefly in the interests of the salt traffic, its length being 34½ miles. The average receipts up to the end of the triennium under review were Rs. 16,037, while the working expenses amounted to Rs. 93,032. As the canal is also valuable to the District Board as a means of communication, they contribute equally with Provincial funds to make up the difference between the traffic receipts and the cost of maintenance.

The traffic receipts from the contribution from Provincial funds towards the cost of maintenance of the canal are shown below :—

	Average for the triennium ending March 1899.	Period under review.			Average for the triennium ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
	RS.	RS.	RS.	RS.	RS.
Receipts	1,002	1,242	963	928	1,044
Contribution from Provincial funds towards cost of maintenance	5,612	3,811	3,969	3,973	3,918

Rainfall in inches in 1899-1900.

Rainfall in inches in 1900-1901.

Rainfall in inches in 1901-1902.

H. F. L. of 1852 56.80

REFERENCE

1899-1900

1900-1901

1901-1902

Greatest of weir M. S. L. 57.53

Sill of Head Sluice 50.50

Sill of under Sluice 38.56

1899-1900
Discharge Tons
Head Sluice &c.

Surplus to River

Total Discharge

1900-1901
Discharge Tons
Head Sluice &c.

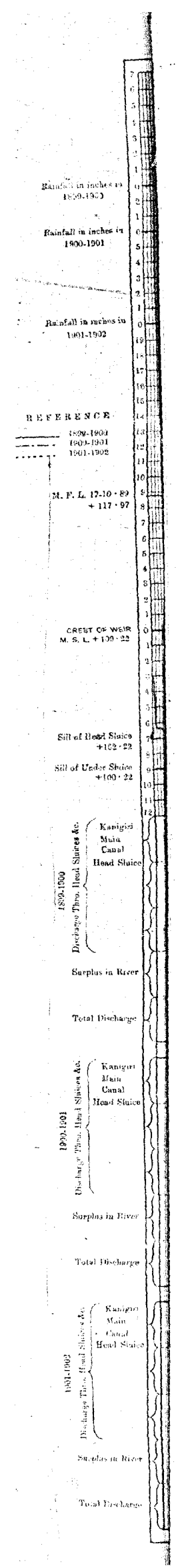
Surplus to River

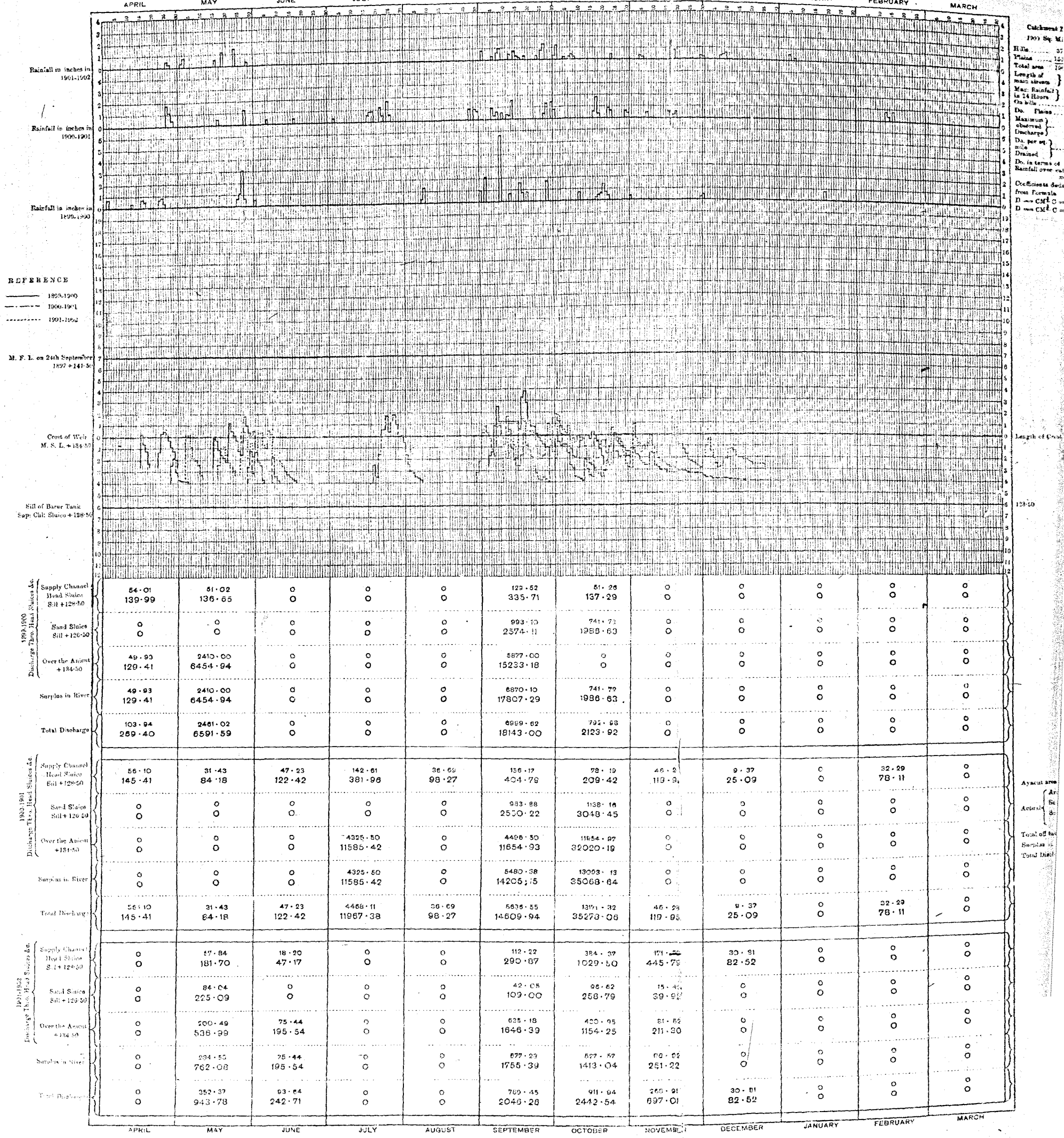
Total Discharge

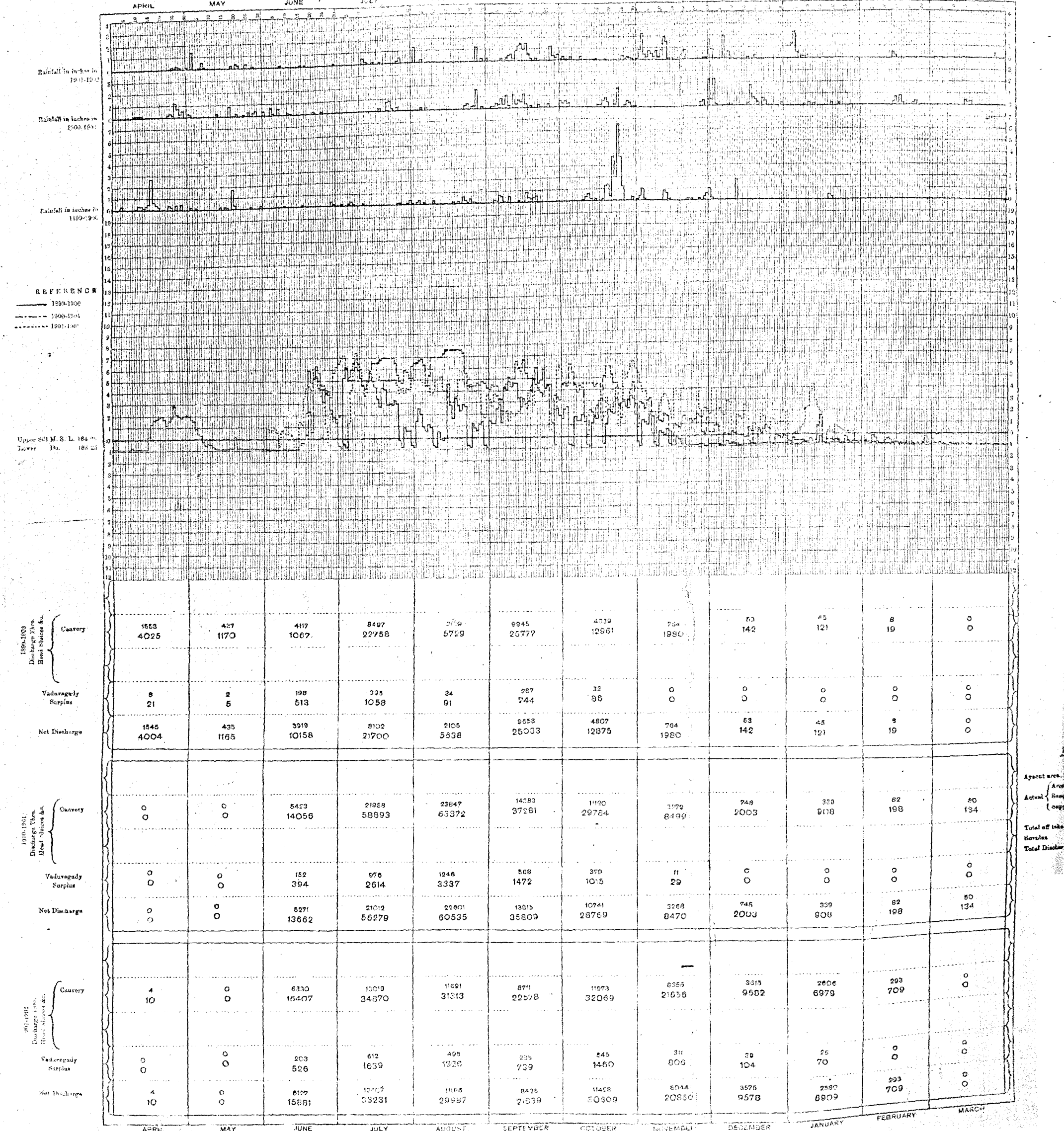
1901-1902
Discharge Tons
Head Sluice &c.

Surplus to River

Total Discharge







AVERAGE RATE OF DISCHARGE FOR THE MONTH IS SHOWN IN CUBIC FEET PER SECOND BY SMALL FIGURES AND THE TOTAL DISCHARGE IN THE MONTH IN MILLION OF CUBIC FEET BY LARGE FIGURES.

CLASS II.

Minor Works.

GANJAM-GOPALPUR CANAL.

This canal was put in hand in January 1889, owing to scarcity in the Ganjam district, but the work was stopped in November 1890, as it was no longer required for famine-relief purposes and as the advantages to be gained from completing it were not commensurate with the probable cost. The canal is nearly filled up with blown sand, and earth washed down from the spoil banks. The total expenditure including indirect charges amounts to Rs. 1,55,493 to the end of the triennium as shown in the following statement :—

Systems.	Average of triennial period ending March 1899.	For the year			Average of triennial period ending March 1902.
		1899-1900.	1900-1901.	1901-1902.	
1	2	3	4	5	6
DIRECT CHARGES.					
	RS.				RS.
Works	1,02,375	..	..	..	1,02,675
Establishment	37,799	..	..	..	37,799
Tools and plant	2,733	..	..	..	2,733
Suspense account	..	..	..	..	..
Loss by exchange	..	..	..	..	..
Total ..	1,43,207	..	..	..	1,43,207
Less—Receipts on Capital account ..	107	..	..	..	107
Total, Direct charges ..	1,43,100	..	..	..	1,43,100
Indirect charges ..	12,393	..	..	..	12,393
Total outlay, Direct and Indirect ..	1,55,493	..	..	..	1,55,493

CLASS II.

Minor Works.

New Works.

The following works were sanctioned but not commenced during the triennium under review :—

- | | |
|--------------------------------------|------------------------|
| 1. Jangamaheswarapuram tank project. | 4. Hajipuram project. |
| 2. Ponnalur tank project. | 5. Yerur tank project. |
| 3. Vamula tank project. | |

CLASSES III AND IV.

Besides the major and minor systems described in the preceding pages, there are a large number of minor works (especially tanks) which, though individually small, yield more than 38 per cent. of the total irrigation revenue of the Presidency, viz., Rs. 222 lakhs.

Appendix I to this report shows the area charged as irrigated under revenue derived from, and the outlay incurred on, Class III Minor Works, for which only a continuous record of expenditure is kept. The areas under first and second crops during the period under review exceed those of the preceding period by 24,487 and 15,216 acres, respectively, with corresponding increase in revenue of Rs. 50,930. The working expenses during the triennium show a decrease of Rs. 1,475 when compared with those for the triennium ending March 1899. The decrease in the acreage charged as irrigated during 1899-1900 is due to the unfavourable character of the season.

Appendix II gives similar information in regard to Class IV Minor Works for which neither Capital nor Revenue nor individual accounts are kept in charge of the Public Works Department. The average area charged as irrigated and the average revenue during the triennium show a decrease when compared with the preceding triennial period. This is due to the very scanty rainfall in the year 1899-1900 during which the remissions granted amounted to Rs. 7,48,797 against Rs. 1,52,476 in the preceding year.

Appendix III relates to Class IV (b) Minor Works in charge of the Revenue Department. During the period under review, there was a decrease of acres 34,842 in the average area charged as irrigated under first and second crops with a corresponding decrease of Rs. 2,35,769 in the revenue due to deficient rainfall in 1899-1900 as stated above. The remissions granted in this year amounted to Rs. 10,09,202 against Rs. 2,54,895 in 1898-99.

APPENDIX I.

STATEMENT showing the area irrigated, under revenue derived from, and outlay incurred on class III, works for which a continuous record of expenditure is kept.

	Area charged as irrigated.						Irrigation revenue.			Outlay including establishment and tools and plant charges.		
	Period under review.						Period under review.			Average of the triennial period ending March 1899.		
	Average of the triennial period ending March 1892.						Average of the triennial period ending March 1902.			Average of the triennial period ending March 1901.		
	First crop.	Second crop.	1899-1900.	1900-1901.	1901-1902.	Average of the triennial period ending March 1902.	First crop.	Second crop.	1899-1900.	1900-1901.	1901-1902.	Average of the triennial period ending March 1902.
Tirupattur District.												
Sarada river (six ariahs)	10,717	8,659	11,880	12,461	18,709	13,238	16,371	13,238	30,904	44,790	33,747	38,510
Varaha river (four ariahs)	6,325	5,203	6,135	19,421	18,861	13,612	14,946	13,612	16,381	57,893	45,183	38,732
Salem District.												
Pennagundapuram tank	274	427	437	381	187	330	335	330	1,467	1,135	..	858
Marudahally tank	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore District.												
Amravati (twenty-two channels)	25,407	20,417	23,655	21,744	26,379	23,909	21,511	21,511	1,33,559	1,50,018	1,51,492	1,45,129
Chingleput District.												
Maduravankam tank	5,893	1,041	6,912	5,939	6,235	6,031	1,272	1,272	13,707	12,639	16,137	13,654
South Arcot District.												
Maduravankam tank	484	72	520	486	523	510	510	510	2,327	2,292	2,247	2,228
Madurai District.												
Kattumallur ariah	6,874	2,190	7,067	6,907	708	4,851	4,851	4,851	37,579	37,800	37,288	37,566
1. Tiruvadi ariah	797	248	816	782	844	812	812	812	4,323	4,323	4,323	4,323
2. Tiruvadi ariah	2,999	768	2,042	2,012	1,943	1,999	1,999	1,999	11,865	11,157	11,674	11,465
3. Tiruvadi ariah	2,298	154	2,425	2,350	2,426	2,414	2,414	2,414	8,897	8,455	8,777	8,710
Tiruvallur District.												
Tambraparni river (six ariahs)	37,119	34,426	37,332	36,704	37,010	37,035	34,958	34,958	4,22,011	4,25,070	4,27,398	4,28,389
Total	80,826	72,881	98,844	92,483	120,710	99,820	113,813	99,820	6,56,321	7,35,014	7,35,935	7,37,473

APPENDIX II.

STATEMENT showing the area irrigated, revenue derived from, and outlay incurred on, Minor Works for which neither Capital nor Revenue nor individual accounts are kept—IV (a) In charge of the Public Works Department.

		Area charged as irrigated.										
		Period under review.						Average of triennial period ending March 1902.				
		1899-1900.			1900-1901.			1901-1902.				
		First crop.	Second crop.	ACRES.	First crop.	Second crop.	ACRES.	First crop.	Second crop.	ACRES.	First crop.	Second crop.
1		2	3	4	5	6	7	8	9	10	11	12
Ganjam	..	48,004	1,474	49,005	1,854	50,457	1,645	49,759	2,041	49,737	1,818	1,818
Virajpatnam	..	28,473	28,109	7,361	7,119	10,042	5,764	28,186	28,387	16,179	12,683	12,683
Godavari	..	42,127	2,490	29,645	1,119	52,154	2,109	52,656	2,697	44,783	1,668	1,668
Kistna	..	36,418	..	1,431	12	11,749	25	7,800	..	6,927	12	12
Kolleru	..	83,578	7,115	76,745	7,710	87,437	7,474	97,074	12,165	86,092	9,117	9,117
Cuddapah	..	54,606	26,134	46,163	22,393	51,510	63,339	66,061	23,348	61,681	33,161	33,161
Kurnool	..	18,892	4,195	14,621	3,577	22,249	4,692	20,472	4,452	19,114	4,224	4,224
Anantapur	..	40,570	17,453	45,427	8,631	46,684	9,575	43,260	8,319	44,567	8,635	8,635
Bellary	..	20,522	7,693	31,475	7,544	22,432	7,459	23,299	5,945	32,492	7,019	7,019
West Coast	..	..	..	..	..	..	..	..	..	..	..	..
Salem	..	29,145	27,777	35,662	22,909	27,006	28,775	27,635	26,144	27,801	25,697	25,697
Coimbatore	..	36,253	13,818	33,919	15,849	38,985	19,659	29,086	19,591	37,330	18,862	18,862
North Arcot	..	68,578	25,568	47,855	19,277	51,771	21,991	61,521	24,939	53,843	22,093	22,093
Chingleput	..	219,132	43,136	217,419	30,065	220,509	23,609	233,663	59,113	223,973	37,594	37,594
South Arcot	..	80,103	15,839	23,456	10,083	89,382	17,772	92,909	21,388	88,252	18,414	18,414
Presidency	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore	..	18,632	1,965	18,264	1,651	17,355	2,135	17,365	2,277	17,624	2,025	2,025
Trichinopoly	..	79,693	29,715	73,186	30,985	79,618	32,434	80,443	34,618	78,752	32,379	32,379
Madura	..	47,694	20,652	28,821	20,682	44,945	20,255	46,417	21,065	43,398	20,468	20,468
Thanevelly	..	57,752	36,419	55,409	36,773	51,640	33,389	51,324	48,758	61,791	42,940	42,940
Total ..	..	1,459,200	392,021	863,344	253,633	1,002,335	239,755	1,060,564	310,726	982,235	258,039	258,039

APPENDIX II—cont.

Statement showing the area irrigated, revenue derived from, and outlay incurred on, Minor Works for which neither Capital nor Revenue nor individual accounts are kept—IV (c) In charge of the Public Works Department—cont.

	Irrigation revenue.										
	Period under review.						Outlay including establishment and tools and plant charges.				
	1899-1900.			1900-1901.			Period under review.				
	Average of triennial period ending March 1899.	1899-1900.	1900-1901.	Average of triennial period ending March 1902.	1900-1901.	1901-1902.	Average of triennial period ending March 1899.	1899-1900.	1900-1901.	1901-1902.	Average of triennial period ending March 1902.
	12	13	14	15	16	17	18	19	20	21	
Ganjam	51,948	73,718	75,400	72,753	73,024	15,564	11,537	11,554	7,372	11,275	11,275
Virajpatnam	94,394	23,551	11,564	29,460	37,893	38,962	32,125	30,783	20,905	27,923	27,923
Godavari	78,337	28,553	1,16,115	1,55,225	89,374	57,232	40,187	53,579	51,704	51,560	51,560
Kistna	..	..	..	..	..	..	..	..	..	..	..
Kolleru	3,91,511	..	..	..	..	..	..	..	..	..	..
Cuddapah	2,47,093	1,73,137	2,74,619	2,62,150	2,48,612	55,832	53,101	53,807	63,338	75,169	75,169
Kurnool	1,53,392	1,39,686	2,47,685	2,69,774	1,56,612	25,193	27,367	1,31,500	1,37,499	1,38,170	1,38,170
Anantapur	1,63,392	1,63,392	1,69,555	1,97,175	1,88,043	27,367	26,701	1,31,500	1,37,499	1,38,170	1,38,170
Bellary	1,81,717	1,94,810	1,54,946	63,419	1,77,274	1,14,615	1,30,786	1,30,786	23,670	20,063	20,063
West Coast	..	..	..	..	..	..	..	..	..	..	..
Salem	1,34,153	1,08,235	1,08,331	1,04,474	1,07,714	3,429	7,292	3,429	6,070	671	671
Coimbatore	1,80,370	1,57,959	1,89,154	1,54,609	1,80,574	65,388	38,655	59,415	76,022	52,764	52,764
North Arcot	2,00,681	1,60,922	1,61,173	2,37,333	1,87,632	4,276	20,697	49,115	97,245	46,906	46,906
Chingleput	5,63,943	5,29,077	4,43,167	5,17,651	5,37,638	73,503	1,65,149	1,43,931	1,21,400	1,43,493	1,43,493
South Arcot	3,13,505	3,07,435	3,34,311	3,09,310	3,34,165	93,677	1,74,254	1,77,369	1,86,401	1,79,321	1,79,321
Presidency	..	..	..	..	..	..	..	..	..	..	..
Tanjore	47,697	45,482	45,059	17,017	46,153	—	2,91,913	1,64,311	3,21,355	2,60,190	2,60,190
Trichinopoly	4,36,778	4,23,977	4,32,072	4,46,180	4,30,039	1,11,981	64,719	2,15,251	40,832	1,03,511	1,03,511
Madura	2,15,099	1,83,629	2,02,661	2,13,886	2,00,626	75,551	53,756	91,485	82,827	75,093	75,093
Thanevelly	3,73,460	3,70,139	4,29,627	4,56,694	4,16,975	1,16,445	1,24,745	1,25,743	1,17,342	1,21,777	1,21,777
Total ..	38,77,593	32,19,317	35,07,325	30,39,236	35,55,293	13,77,185	15,44,165	17,33,574	16,79,533	16,49,426	16,49,426

* Includes expenditure on Tank Restoration works.

APPENDIX III.

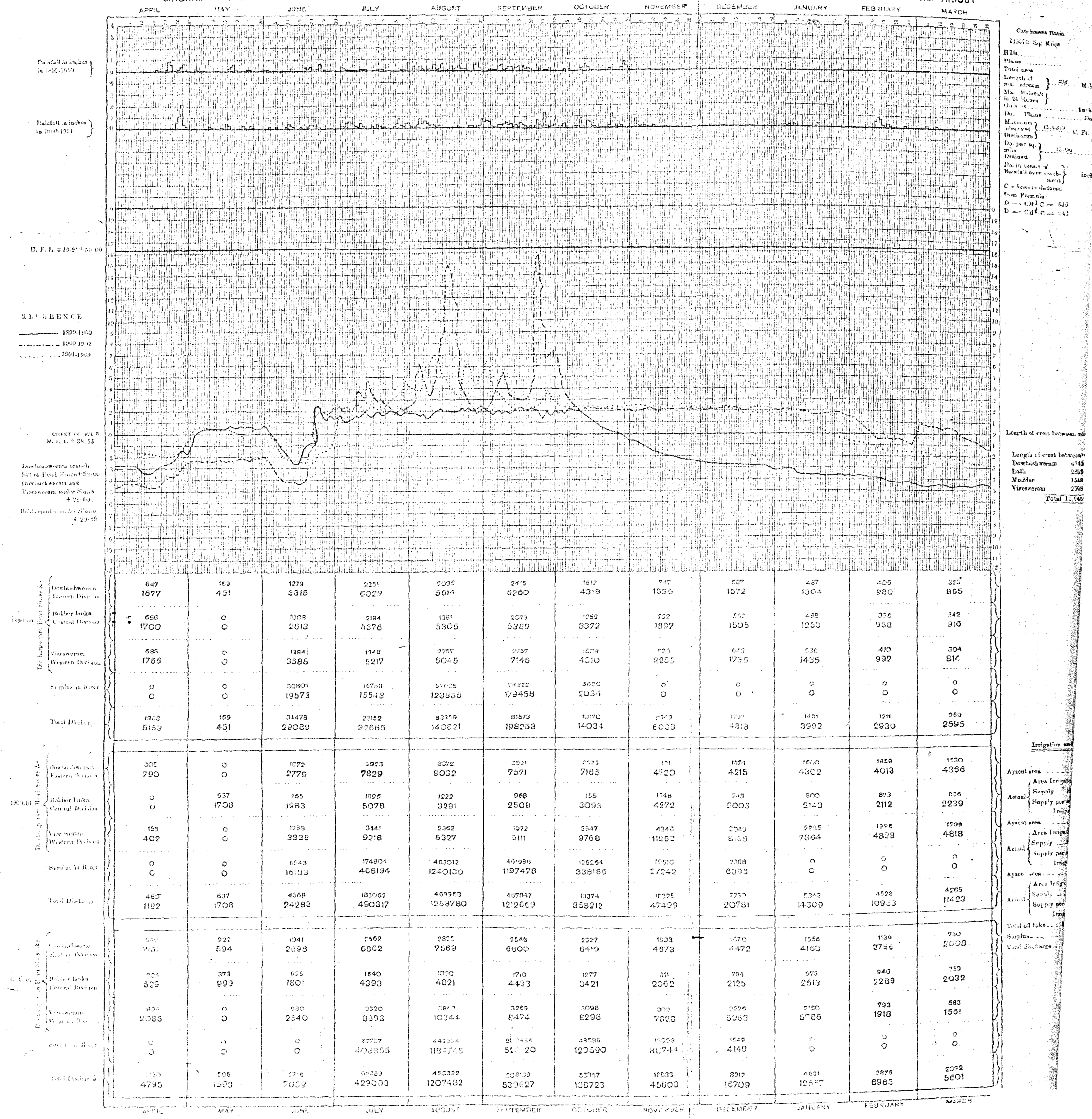
Statement showing the area irrigated, revenue derived from, and outlay incurred on Minor Works for which neither Capital nor Revenue nor Individual accounts are kept—IV (b) In charge of the Revenue Department.

Area charged as irrigated.									
	Period under review.						Average of triennial period ending March 1899.		
	1899-1900.			1900-1901.			1901-1902.		
	First crop.	Second crop.	ACRES.	First crop.	Second crop.	ACRES.	First crop.	Second crop.	ACRES.
1	2	3		4	5		6	7	
Ganjam ..	52,965	2,958	60,799	57,287	3,852	60,222	55,322	3,852	59,174
Vizagapatam ..	49,531	37,643	87,174	49,696	954	50,650	46,549	1,001	51,550
Godavari ..	46,785	1,141	47,926	46,956	114	47,070	43,814	326	44,140
Katwa ..	36,215	382	36,597	36,365	169	36,534	33,081	243	33,324
Nellore ..	19,791	3,559	23,350	23,350	3,785	27,135	23,350	3,785	27,135
Cuddapah ..	97,213	23,454	120,667	110,715	39,031	149,746	120,667	29,071	149,738
Kurnool ..	24,167	4,873	29,040	29,040	2,101	31,141	28,933	2,207	31,140
Amalapur ..	85,445	39,727	125,172	76,690	22,182	98,872	76,690	22,182	98,872
Belary ..	37,016	13,069	50,085	51,842	7,745	59,587	50,085	9,500	59,585
West Coast ..	..	..	..	..	..	..	..	..	..
Salem ..	82,632	74,841	157,473	90,242	75,688	165,930	82,632	75,688	158,320
Coimbatore ..	13,113	4,577	17,690	9,891	4,290	14,181	12,045	6,870	18,915
North Arcot ..	158,464	71,913	230,377	125,428	47,932	173,360	141,332	65,992	207,324
Chingleput ..	111,499	18,475	130,000	115,214	12,667	127,881	117,551	13,845	131,396
South Arcot ..	202,652	41,707	244,359	133,407	45,645	179,052	133,411	45,114	178,525
Presidency ..	..	..	..	..	..	..	..	..	..
Tanjore ..	35,692	2,607	38,299	34,915	2,742	37,657	37,579	4,131	41,710
Tribenopoly ..	45,499	14,727	60,226	44,468	12,053	56,521	47,167	11,015	58,182
Madura ..	84,749	12,165	96,914	57,461	13,297	70,758	60,459	10,774	71,233
Tinnevely ..	59,118	45,313	104,431	71,547	31,405	102,952	87,830	15,122	102,952
Total ..	1,251,542	422,342	1,673,884	1,125,229	379,068	1,504,297	1,231,525	425,005	1,656,530

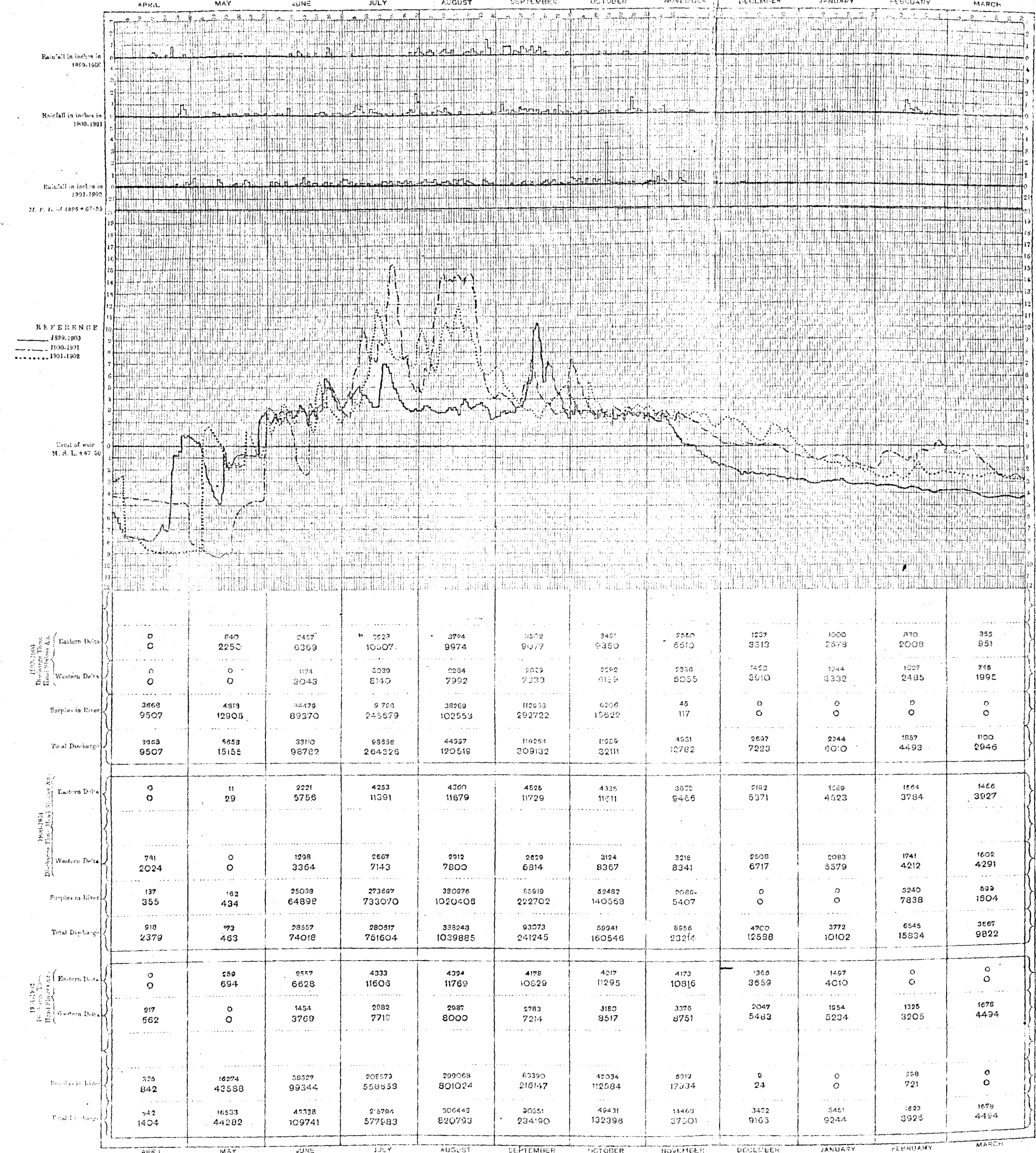
APPENDIX III—cont.

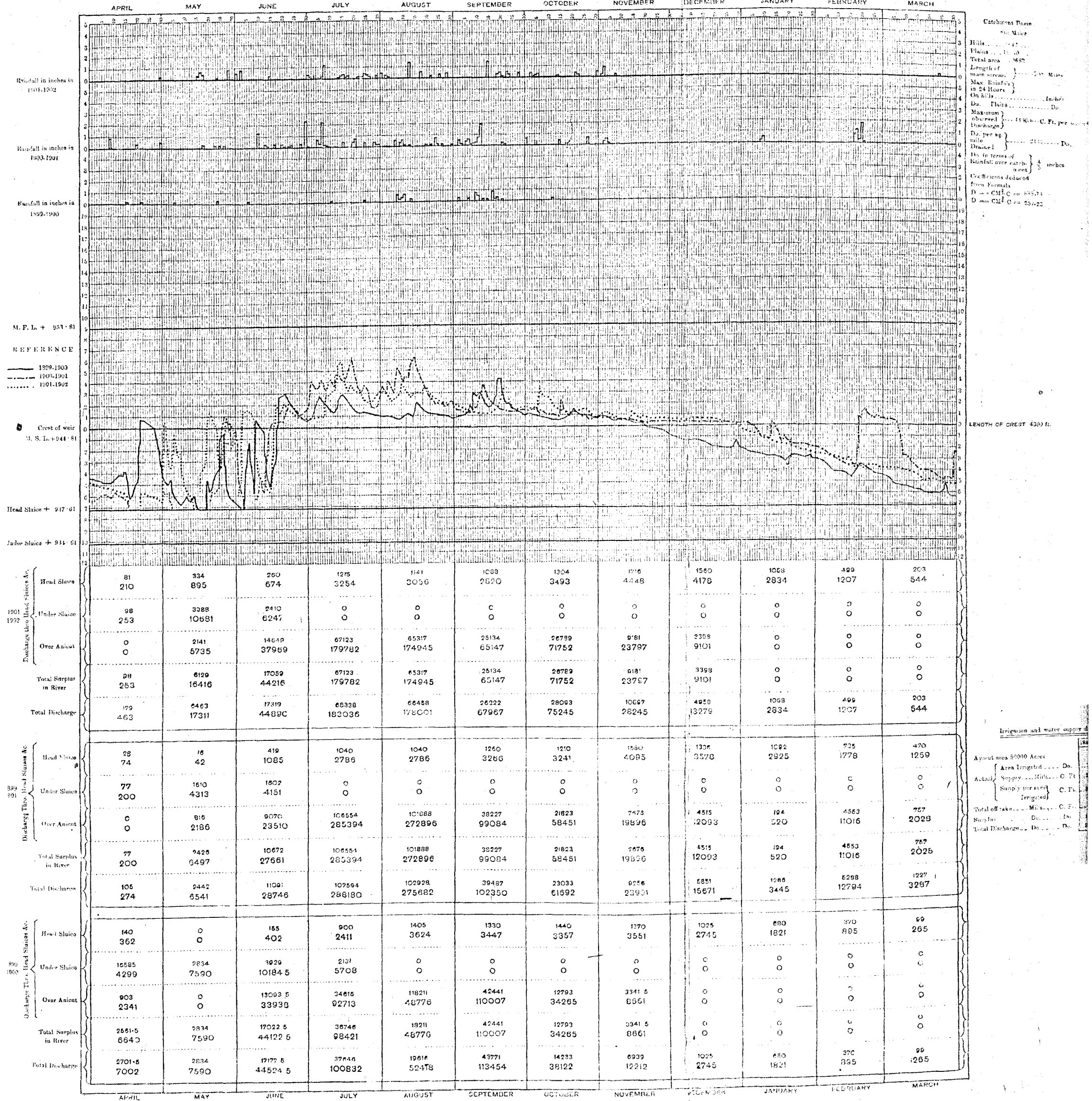
Statement showing the area irrigated, revenue derived from, and outlay incurred on Minor Works for which neither Capital nor Revenue nor Individual accounts are kept—IV (c) In charge of the Revenue Department—cont.

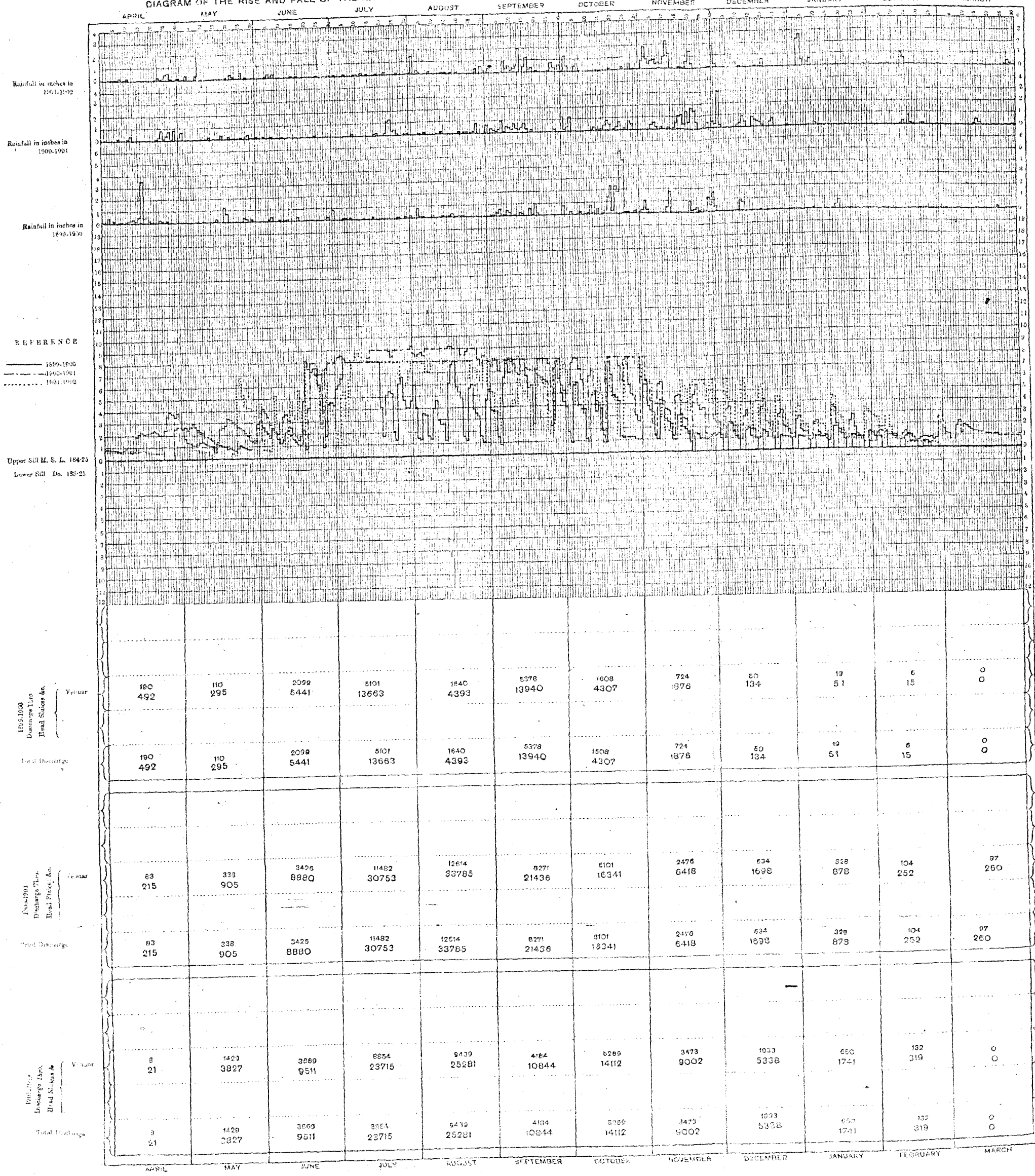
	Irrigation Revenue.						Outlay including establishment and tools and plant charges.					
	Period under review.			Average of triennial period ending March 1899.			Period under review.			Average of triennial period ending March 1902.		
	1899-1900.			1900-1901.			1899-1900.			1901-1902.		
	12	13	14	15	16	17	18	19	20	21	22	23
Ganjam ..	51,773	72,618	78,483	73,710	74,940	19,243	18,284	18,876	18,295	18,485	..	..
Vizagapatam ..	85,067	1,74,925	1,76,372	88,536	1,47,278	21,609	22,266	24,173	20,685	22,795	..	..
Godavari ..	59,814	13,259	57,931	1,10,406	70,535	20,692	24,293	17,739	24,060	22,064	..	..
Katwa ..	79,180	19,225	96,405	58,829	56,182	17,452	14,295	14,634	19,019	16,019	..	..
Nellore ..	58,410	74,061	1,00,640	1,13,814	98,172	21,079	17,301	12,859	11,558	13,906	..	..
Cuddapah ..	3,00,382	3,15,749	3,55,602	3,12,277	3,22,293	27,464	29,935	37,692	39,609	35,682	..	..
Kurnool ..	68,758	40,672	62,175	62,175	56,985	10,761	18,710	21,154	18,672	22,859	..	..
Amalapur ..	2,48,621	2,41,526	2,24,336	2,05,936	2,15,068	24,767	28,090	47,831	21,148	..	..	..
Belary ..	1,14,611	68,975	62,775	60,245	63,899	10,757	16,219	47,831	17,592	..	..	..
West Coast ..	..	..	..	..	..	..	..	..	..	..	..	..
Salem ..	2,87,625	2,62,504	2,96,568	2,95,794	2,62,082	20,783	22,152	19,298	20,833	20,762	..	..
Coimbatore ..	41,885	25,868	41,613	42,981	37,823	8,475	3,977	9,698	7,932	7,904	..	..
North Arcot ..	5,93,666	4,38,052	4,41,065	5,59,660	4,79,579	60,478	47,445	53,850	55,277	52,360	..	..
Chingleput ..	2,38,801	2,17,919	2,79,109	2,79,109	2,45,010	25,302	30,607	25,700	44,865	37,037	..	..
South Arcot ..	7,32,648	6,53,733	6,44,861	6,84,402	6,54,334	64,511	72,475	64,701	51,268	62,881	..	..
Presidency ..	..	..	..	..	..	..	..	..	..	..	..	..
Tanjore ..	79,793	74,578	84,665	84,591	81,278	6,444	11,786	12,740	18,197	14,742	..	..
Tribenopoly ..	1,22,124	1,13,167	1,17,234	1,27,824	1,19,406	22,243	19,839	43,626	45,493	36,989	..	..
Madura ..	2,66,917	1,44,930	1,98,293	2,51,828	1,98,830	19,068	21,191	28,986	26,489	27,455	..	..
Tinnevely ..	4,33,415	3,41,951	4,29,315	4,49,111	4,06,792	56,505	33,716	35,613	38,088	36,092	..	..
Total ..	38,63,681	22,93,907	27,22,281	38,01,219	38,27,812	4,24,067	4,48,945	5,09,846	5,06,097	4,86,456	..	..



THE TOTAL SUPPLY OF WATER IN THE GODAVARI RIVER AT DOWLAISHWERAM ANICUT IS 1,14,000 CUSECS PER ANNUM. THE TOTAL DISCHARGE OF WATER IN THE GODAVARI RIVER AT DOWLAISHWERAM ANICUT IS 1,14,000 CUSECS PER ANNUM.

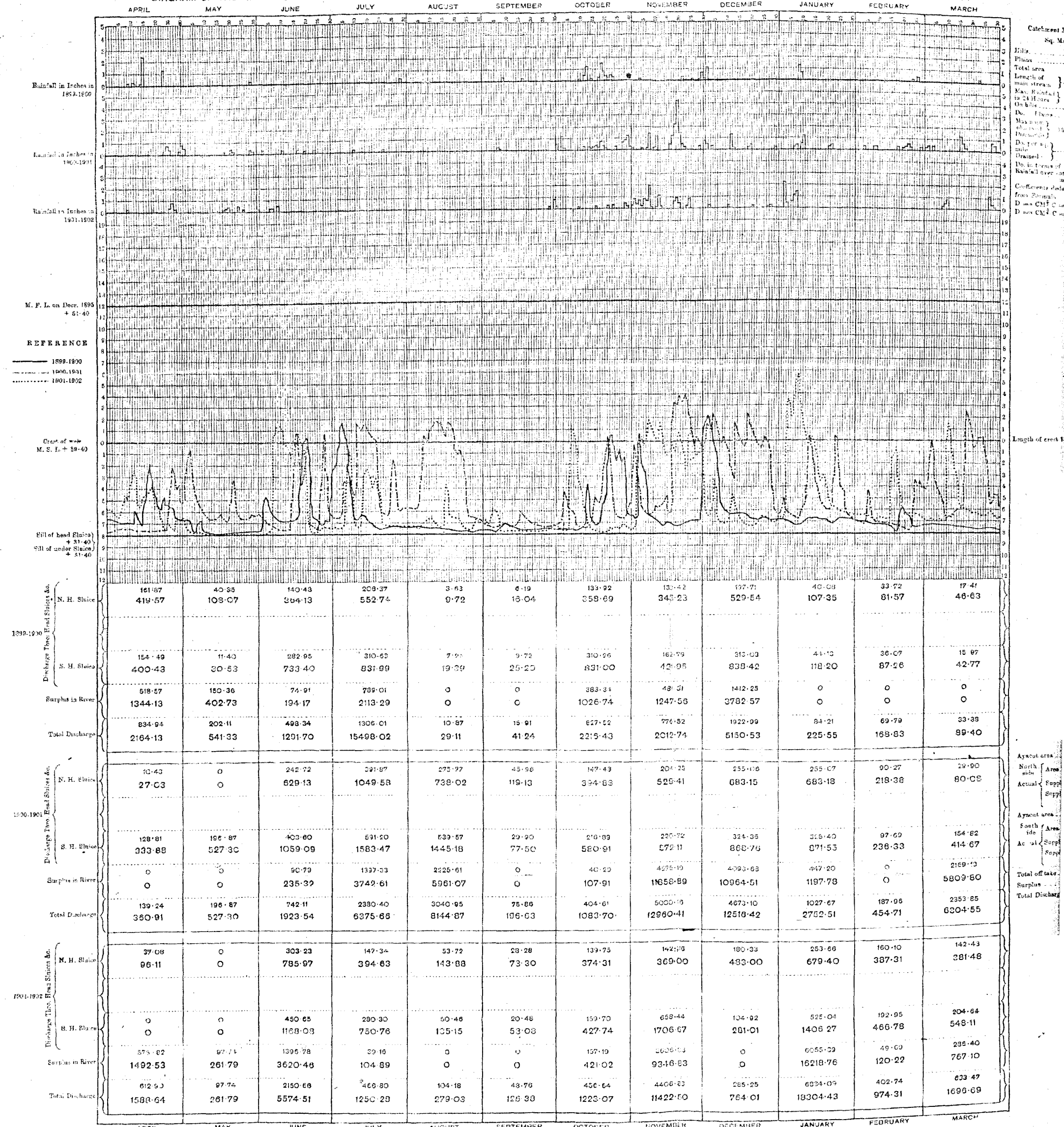






Irrigation and water supply details

	1899-1900	1900-1901
Area irrigated	40,471	40,471
Actual supply	40,471	40,471
Total of area	40,471	40,471
Total Discharge	40,471	40,471

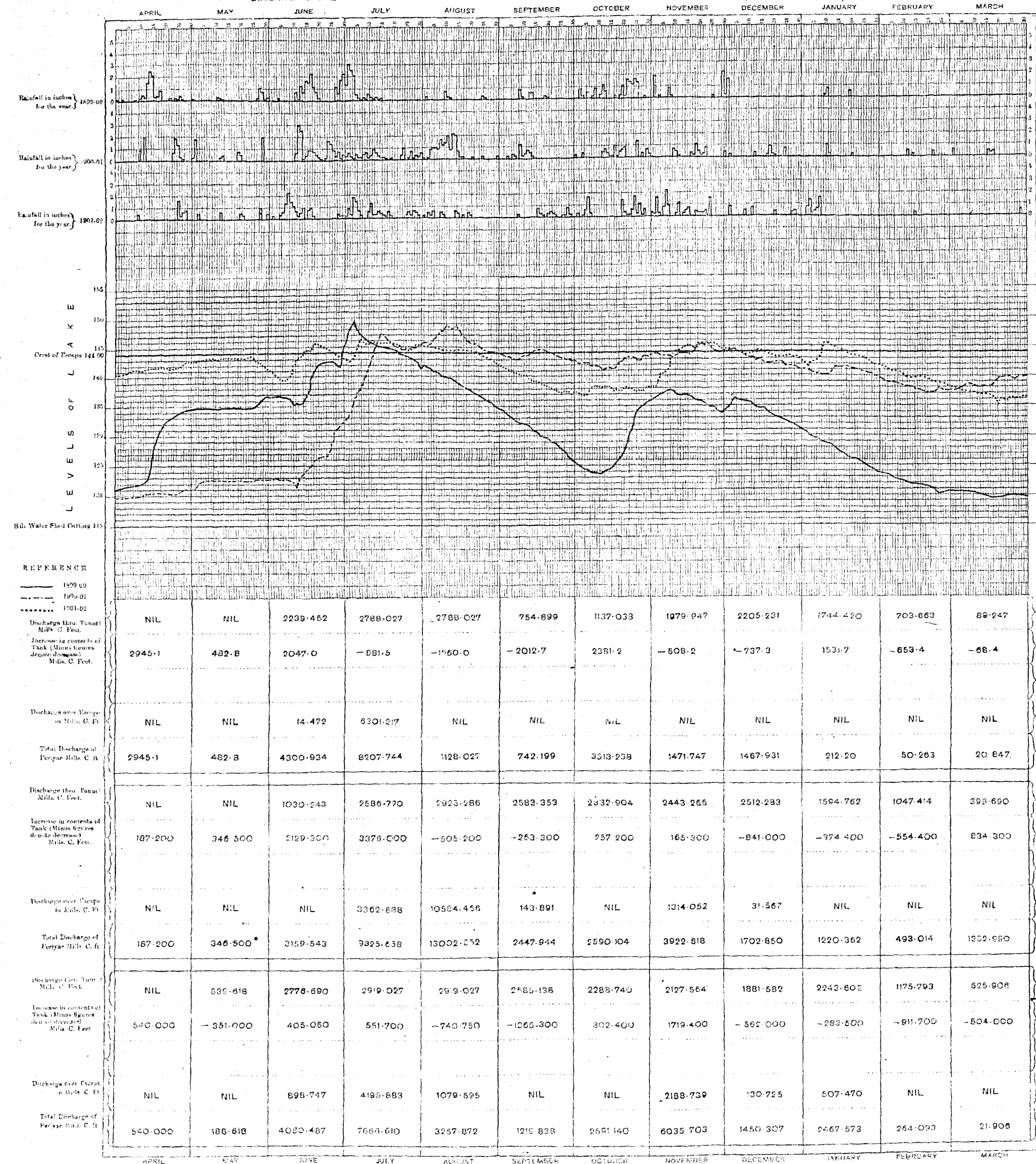


MADURA DIVISION

PERIYAR LAKE

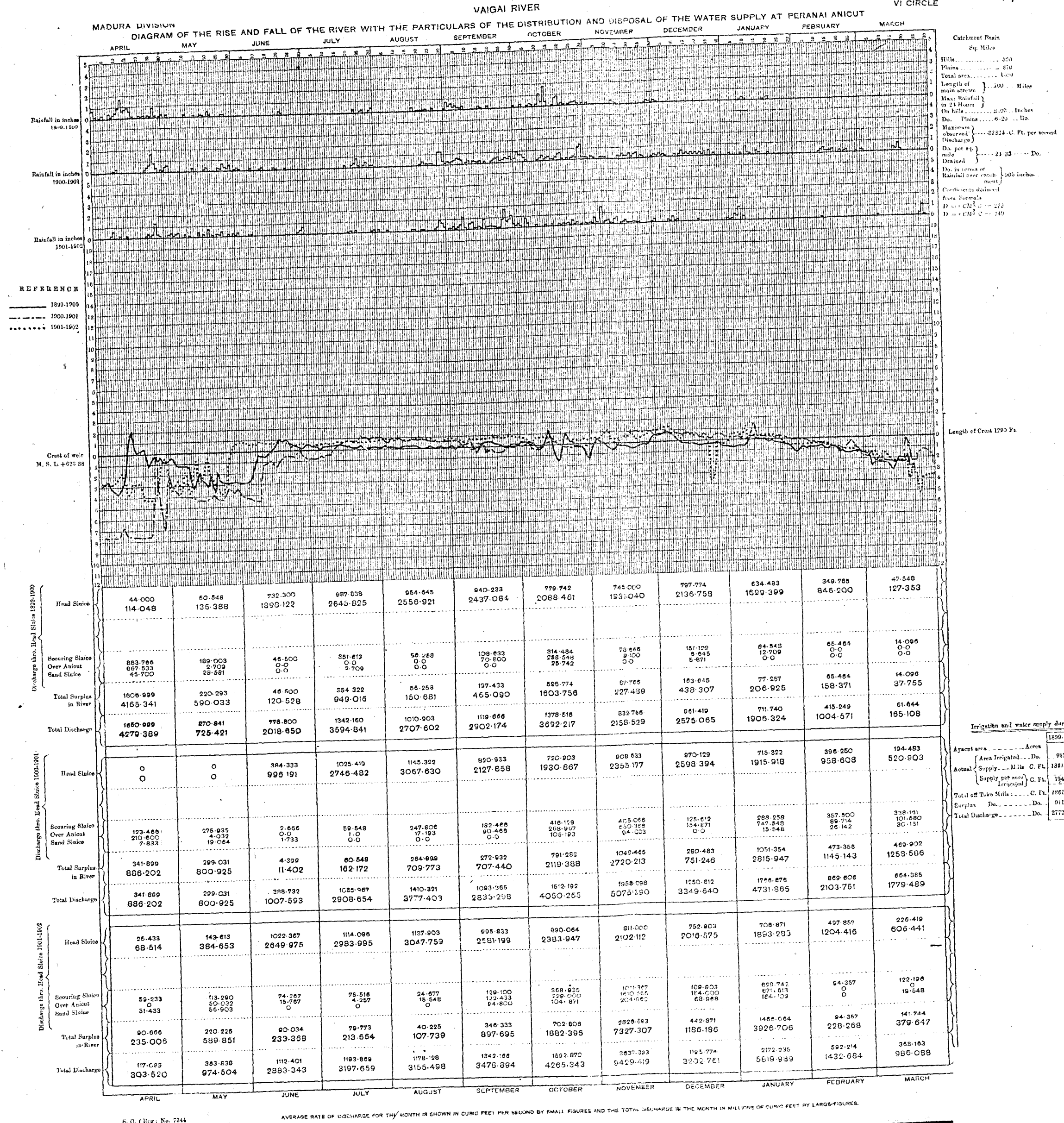
SIXTH CIRCLE

DIAGRAM OF THE RISE AND FALL OF THE PERIYAR LAKE WITH PARTICULARS OF THE DISTRIBUTION AND DISPOSAL OF THE WATER

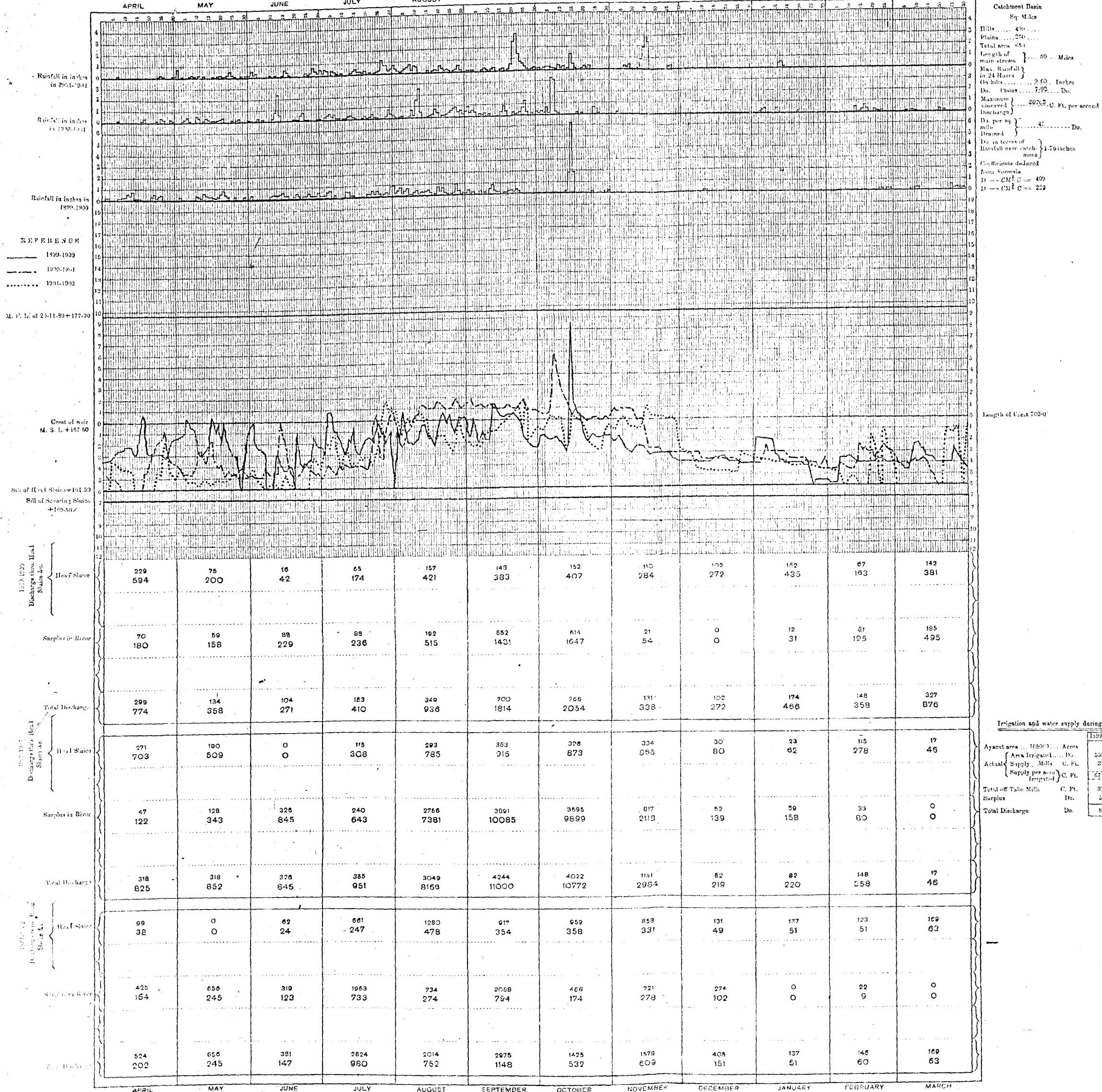


Irrigation and water supply during years.

	1899-1900	1900-1901	1901-1902
Area irrigated in Acres	114000	114000	114000
Actual Supply in M. Ft. C. Ft.	18429.921	15457.571	21992.698
Supply provided by Periyar C. Ft.	18429.921	15457.571	21992.698
Total of Lake in M. Ft. C. Ft.	18429.921	15457.571	21992.698
Surplus in M. Ft. C. Ft.	6411.981	3150.851	2961.159
Total Discharge of Lake in M. Ft. C. Ft.	24745.659	21608.421	24953.857
Deficit Not Covered in M. Ft. C. Ft.	1157.100	4736.599	1193.730
Total Discharge of Periyar in M. Ft. C. Ft.	24745.659	21608.421	24953.857



GANJAM DIVISION
DIAGRAM OF THE RISE AND FALL OF THE RIVER WITH THE PARTICULARS OF THE DISTRIBUTION AND DISPOSAL OF THE WATER SUPPLY AT JANAMILLY ANICUT



AVERAGE RATE OF DISCHARGE FOR THE MONTH IS SHOWN IN CUBIC FEET PER SECOND BY SMALL FIGURES AND THE TOTAL DISCHARGE IN THE MONTH IN MILLIONS OF CUBIC FEET BY LARGE FIGURES.