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DESCRIPTIVE ACCOUNT  
OF THE  
WORKING OF IRRIGATION WORKS  
IN THE  
BOMBAY PRESIDENCY  
(EXCLUDING SIND).  
DURING THE YEAR 1912-1913.

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FOR PRESS ONLY.

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# DESCRIPTIVE ACCOUNT OF THE WORKING OF IRRIGATION WORKS IN THE BOMBAY PRESIDENCY (EXCLUDING SIND), DURING THE YEAR 1912-1913.

## NORTHERN DIVISION.

The detailed descriptive account of all the irrigation works in operation in this Division was published in the year 1906-1907.

2. The Hathmati and Khári Cut Canals are the largest irrigation works in the Ahmedabad Collectorate. The rainfall in the catchment of the Hathmati River was heavy at first and light in the latter part of the monsoon. The canal ceased flowing in December. The area irrigated was 12,217 acres and the gross assessed revenue Rs. 38,397.

Irrigation works in the Ahmedabad Collectorate.

3. The works in operation in the Kaira Collectorate were the Tránza-Nagráma, Wángroli, Sávli and Saiat Tanks. The rainfall in this area was very favourable and all these tanks filled almost up to their F. S. Ls. The supply available was fully used up for the irrigation of the kharif and rabi crops. The areas irrigated were 664; 2,209; 1,422; and 2,902 respectively, and the revenue realised was Rs. 1,724, Rs. 7,070, Rs. 4,705, and Rs. 9,303. This was the highest on record in the case of the Wángroli Tank and almost double the previous figure for the Sávli Tank.

New tanks in the Kaira and Panch Maháls Collectorates.

4. The Muwália Tank in the Panch Maháls Collectorate also nearly filled, and the area irrigated was 757 acres.

5. There were small floods in the Khári River at Ráipur in July and August 1912, but as the rainfall was deficient at the source of the river, the flow diminished later on. The absorption in the bed of the Khári River below Ráipur increased so much that about three-fourths of the supply passing down was lost; it was decided therefore to divert the water at the weir into the Khári Cut Canal, and then throw it again into the Khári River near Bidaj. The rice crop over a large area was thus saved. The Goblaj Tank and the Bherai reservoir filled and served to irrigate the rice crop.

Khári Slices.

6. The drainage channels in the Surat and Broach and Gujarát Irrigation Districts worked satisfactorily.

Drainage Channels.

## CENTRAL DIVISION.

7. The rainfall of the year was not on the whole opportune. It failed in the month of September, but later rain in October and November saved the situation. The demand for canal water for the khárif crops, except in the Násik District where the rainfall was opportune, was consequently great.

8. Good progress was made with the Godávari Canals. Sixty miles of the Right Bank and 20 of the Left Bank Canal in all were brought into operation. About 30,000 acres were irrigated by these canals in the Ahmednagar Collectorate which was the district that suffered most from short rainfall.

Godávari Canals.

9. The dam at Bhandardára (Lake Arthur Hill) was raised to a height of 50 feet against the final height of 260 feet. The work is being constructed of uncoursed rubble masonry, and a proof of its excellence is that heavy

Pravara Canal Head Works.

floods passed over this 50 feet high dam during the monsoon of 1913 without doing any damage to the masonry

Nira Right Bank Canal project. 10. Work in connection with the Nira Right Bank Canal project was commenced in October 1912. The project provides for—

(1) Raising the existing dam at Bhátghar (Lake Whiting) which now impounds 5,312 million cubic feet by 60 feet so as to store 24,300 million cubic feet. It is now proposed to construct an entirely new dam a short distance below the old works.

(2) Constructing a Right Bank Canal 109 miles long, to command 600,000 acres.

(3) Widening the existing Left Bank Canal.

The project is estimated to cost Rs. 2,57,72,499. The enlargement of Lake Whiting will submerge a comparatively large area in the Bhor State, and the main channel of the Right Bank Canal will run for a length of 43 miles through the Phaltan State. It is designed to bring under irrigation 190,000 acres in the Sátára and Sholápur Districts, which, above almost all others in India, require protection from drought and famine.

11. Lengths aggregating 1,148 miles of canals and distributaries were maintained and 158,515 acres were irrigated during the year. Of this, 14,280 acres were under sugarcane. The gross assessed revenue was Rs. 13,87,718 while the working expenses amounted to Rs. 4,16,650.

Irrigated area, Revenue and Expenditure.

12. In addition to the regular canals referred to above, there is an extensive system of bandhára irrigation in the Násik and West Khándesh Collectorates. The area irrigated by these works was 39,372 acres. Remissions amounting to Rs. 27,947 and 5,982 were granted in the Násik and West Khándesh Districts on account of the short supply of water.

Second Class Works.

## SOUTHERN DIVISION.

13. The rainfall in the Southern Division was far more than that of the previous year and the average. It was also timely and consequently the irrigated area on all the First Class Works was somewhat less than usual. But on Second Class Works there was a small increase of 956 acres because of the better supply in the tanks.

Rainfall and irrigation.

14. In the Sátára District the rainfall was the highest on record for 30 years in the Krishna valley, and affected the irrigating systems there as above described, but in the Eastern tracts the earlier rain failed and the kharif irrigation in consequence was greater.

Krishna Canal.

15. In Belgaum the Gokák Canal irrigated about 50 per cent. of its command, and the increase in kharif was due to a great demand for fodder crops.

Gokák Canal.

16. It is interesting to note that in July 1912 the greatest flood yet recorded passed over the Dhupdal Weir amounting to 145,000 cubic feet per second, or nearly 0.21 inch run-off per hour from the catchment area of 2,080 square miles.

17. As usual an increased storage was obtained during the rabi season by building a temporary wall 2 feet high upon the weir crest. Water was provided throughout the year for the Gokák mills.

18. In Dhárwár the rainfall was good everywhere and the crops were satisfactory.

## GENERAL.

19. For Class I Works—Works for which Capital and Revenue Accounts are kept—the figures showing areas irrigated, revenue assessed and realised and working expenses, as compared with former years, are as follows:—

Years.	Area irrigated.	Revenue.		Working expenses.
		Assessment.	Realization.	
	Acres.	Rs.	Rs.	Rs.
1902-1903	99,290	7,73,444	7,46,315	3,39,847
1903-1904	87,819	7,78,638	8,63,048	3,08,124
1904-1905	131,905	8,45,905	6,65,237	3,56,124
1905-1906	105,716	8,93,325	8,47,811	3,57,670
1906-1907	108,787	9,47,167	8,58,820	3,67,062
1907-1908	130,808	10,87,554	11,01,106	3,80,332
1908-1909	142,928	10,99,014	10,67,329	3,89,423
1909-1910	145,155	11,22,916	12,55,165	4,16,046
1910-1911	123,356	10,95,369	12,51,247	4,38,524
1911-1912	142,934	13,31,017	13,76,101	4,68,047
Average for ten years	121,870	9,97,435	10,03,218	3,82,120
1912-1913	197,365	15,83,168	14,13,527	5,09,099

The increase of 54,431 acres in the total area irrigated as compared with the previous year was chiefly due to the extension of irrigation in the Pravara and Godavari tracts but also in part to the scanty monsoon rainfall causing a heavy demand for canal water. The increase was distributed over the several classes of works as follows:—

	Acres.
Protective Works	+ 41,857
Productive „	+ 4,508
Minor „	+ 8,066
Total	+ 54,431

The increase in the gross revenue is principally due to the area irrigated having been larger than in the previous year. The Irrigation Operations of the year show most satisfactory results, inasmuch as the area irrigated, as also the figure of gross revenue, both assessed and realized, are the highest on record.

The working expenses show an increase of Rs. 41,052 over the figure of the previous year which is chiefly due to an increase in expenditure under repairs on Protective Irrigation Works, particularly the Godavari Canals. Every additional length of canal brought into operation involves an increased charge for maintenance.

20. The following table gives a general comparison of the figures for Class II Works, for which only Revenue Accounts are kept, for the year under report with those for 1911-1912:—

	1911-1912.	1912-1913.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Area irrigated	140,720	148,444	7,724	...
	Rs.	Rs.	Rs.	Rs.
Revenue receipts	4,60,858	5,13,833	52,975	...
Expenditure	4,37,344	3,94,390	...	42,954