
A DESCRIPTIVE ACCOUNT

OF THE

WORKING OF IRRIGATION WORKS

IN

DECCAN AND GUJARAT

DURING THE YEAR

1909-1910.

For Press only.

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NORTHERN DIVISION.

In this Division the Hathmati and the Khari Cut Canals were amalgamated with effect from the 1st April 1909 and the combined project has been classed under "49" Irrigation Major Works under the orders of the Government of India. There was a good supply throughout the monsoon in the Hathmati River, and the canal was run quite full in the kharif and rabi seasons. Owing to the extraordinary rainfall there was a heavy flood in the Hathmati River, the earth-work of the canal head-work was slightly damaged but the canal was re-opened in a week. The area irrigated was 21,398 acres and the gross assessed revenue Rs. 1,00,085. These are the highest on record, since the commencement of irrigation under the canal.

The season was one of deficient rainfall and the Tranja-Nagrama, Wangroll and Savli Tanks did not receive sufficient supplies. The Saiat and Muvalia tanks filled, but the distribution systems under these new tanks are not yet completed and the areas irrigated were small.

Rs. 94,445 were spent on repairs and improvements to 80 small tanks in the Gujarát Irrigation and 41 in the Surat and Broach Districts.

There was abundant supply of water for both the kharif and rabi crops in what are called the "Kalambandi" villages.

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

CENTRAL DIVISION.

The largest irrigation works in the Presidency, excluding Sind, are in the Central Division. The Nira and Mutha Canals have large storage works amongst the ghat hills at Lake Whiting near Bhor and Lake Fife near Poona. The assured storage is mainly devoted to sugarcane cultivation and the crops obtained are exceedingly good. These crops require a large volume of water and the cultivation of sugarcane greatly restricts the area of irrigation as many precautions have to be taken to assure water for these valuable crops.

The year under reference was distinguished by the completion of the erection of the automatic gates on the waste weir of Wághad Tank supplying the Kadva river works and by the commencement of irrigation from Chankapur Tank. Chankapur Tank is formed by a fine masonry dam on the Girna in the North of Násik; the water is let down the river for a few miles and picked up again by a long low masonry weir and supplies a canal on the Left Bank of the Girna and also several old Bandharas or weirs with short canals. Wághad Tank is formed by a high earthen embankment. The supply is much less than the demand and is all used up annually. The addition of automatic gates to the waste weir adds considerably to the volume stored and will enable some sugarcane to be grown with confidence.

The Godaveri Project in the Násik and Ahmednagar Irrigation District is a fine type of this class of work with Ghat-fed storage. Excellent progress was made during the year on the large masonry dam at Nandgaon for the storage tank on the Darna River near the G. I. P. Railway between Igatpuri and Násik, on the weir or head-works to the canals at Nandur-Madmeshwar and on the two canals one on each side of the Godaveri and extending from the weir to the Dhond-Manmád Railway. Rs. 19,85,517 was spent during the year on the Godaveri Works.

A sixth work of this class is the Pravara Project, the storage for this will be formed at Bhandardara near the source of the Pravara River by a great masonry dam 250 feet high. The country is very rocky and steep and lies at the Southern base of the great hill of Kalsubai—the highest in the Deccan; the great height of the dam is therefore necessary to obtain sufficient storage. The lake bed being steep and rocky, submerging the lands does very little damage; the cost of masonry is the chief item in the works. Preparations to commence this great dam were made during the year and as the Godaveri works on the other side of the range of hills are completed, the plant and labour will be moved to Bhandardara. The commencement of this work is an important event.

The tanks in the Deccan depending on local rain had a successful year. The rains were heavy at the early part of the monsoon and failed in the cold weather so that the tanks obtained good supplies most valuable in the rabi season.

Special comment is worthy on the large tank at Ekruk near Sholápur; in addition to irrigation, this tank supplies the town of Sholápur and its cotton and other mills with water. Water has thus to be reserved for the town, and as the tank has a Deccan catchment and rain is not assured, the result is that more than one year's storage must be reserved for the town. The loss in evaporation only in this dry country is seven feet in a year, the area of the tank is large 4,551 acres at full supply level, and hence, the losses are out of all proportion to the volume used by the town and mills. In the year previous to this, the tank reached the limits fixed for the reserve for the town and irrigation had to be refused; the rains this year however were good and the tank filled and overflowed.

Nine hundred and sixty-eight miles of canals and distributaries were maintained, 99,251 acres were irrigated of which 14,093 were sugarcane, the gross assessed revenue was Rs. 8,62,070 and Rs. 3,15,949 were spent on working expenses.

In addition to the works and irrigation described above, there is an extensive system of "Bandhara" irrigation in the Northern Deccan along the edge of the ghats where many small masonry weirs have been constructed across the streams and supply by short channels, lands favourably situated for irrigation; 41,773 acres were irrigated by these works.

SOUTHERN DIVISION.

In the Southern Division, the Krishna Canal in the Sátára District and the Gokák Canal in Belgaum are the most important works; they are not large canals but have fine masonry head-works on the ghat-fed rivers of the Krishna and Ghatprabha and obtain an abundant supply throughout the monsoon but after the rains cease, depend upon the flow in the rivers, which rapidly becomes small. The Krishna has the better hot weather supply of the two and some sugarcane is grown under this canal but the Gokák Canal has a very limited hot-weather supply, and during the year under reference, replenishments usually obtained from thunder-storms early in May were not received.

There are 12 smaller works in the Southern Division for which separate records are kept. These all depend on the local rains. The Rewári and Chikli Canals in the Sátára District have no storages and resemble the Bhandharas of

the Násik and Khándosh Districts. They were very useful this year as the rainfall was heavy in the early part of the season and failed later. The remaining 10 works are storage tanks with a channel direct from the tank. They consist of the Upper Man River Works, Yerla River Irrigation Works and the Maini Tank in the Sátára District: the Muchkundi Tank in the ~~Belgaum District~~, the Gadikeri Tank in the Belgaum District and the Dambal, ~~Muller, Asupni,~~ Madag and Mavinkop Tanks in the Dhárwár District.

The Maini Tank has filled every year since its construction in 1802, even in the great famine year, and is a most useful work.

The Sátára Tanks were well supplied but for the Dhárwár Tanks the supply was not equal to the demand.

The South of the Presidency is the land of small tanks; they are situated in the South of Belgaum and the West of Dhárwár and the East of Kánara on the Deccan or inland edge of the reliable monsoon rainfall where the rainfall diminishes from the intense fall on the gháts and coast districts to the light rain of the Deccan.

They temporarily store this rain and issue it to crops, mainly rice, and the small tanks are filled and emptied several times a year. There are several thousands of these useful tanks. The tanks are systematically repaired and kept in good order, and during the year, Rs. 99,979 were spent and 21½ tanks repaired.

The Naregal and Dharma Canals included amongst these second class works are fed from weirs across ghát-fed streams and besides irrigating directly, supply a number of tanks and are very efficient works. Sanction was granted during the year to an estimate for Rs. 88,912 for improving the Dharma Canal.

The small Madag Canal is a very similar work, being fed from a ghát-fed river. The head-works are the remnants of a great tank constructed many years back and breached.

GENERAL.

The area irrigated during the year was 146,446 acres and the assessed revenue Rs. 11,22,916 and the proportion for the various classes of works was approximately as follows:—

	Area.	Assessment.
	Acres.	Rs.
For works with storage on Ghát River	72,967	7,63,375
For works without storage but on a river with Ghát catchment	12,732	69,476
For works dependent on local rain or tanks with a Deccan catchment	60,747	3,01,065
Total	146,446	11,22,916

The figures of area and assessment for small tanks in the Deccan and Gujarát are not totalled but for certain tanks included under the head second class works the revenue realized and expenditure incurred during the past 3 years is as follows:—

	1907-08.	1908-09.	1909-10.
	Rs.	Rs.	Rs.
Revenue realized	5,07,891	4,93,850	5,11,434
Expenditure	4,01,568	6,01,827	4,28,544
Net Revenue	1,06,323	- 5,477	83,250
Percentage Expenditure to Revenue	79.07	101.10	83.7

The year was one of successful irrigation within the limits possible to the works.