

Irrigational Facilities in Jalna district – A Geographical Review

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Abstract: In this research paper an attempt is made to evaluate the irrigational facilities in the district and changes there in last 10 years. The data for the present study is considered of 1995-96 and 2005-06.

Irrigation :

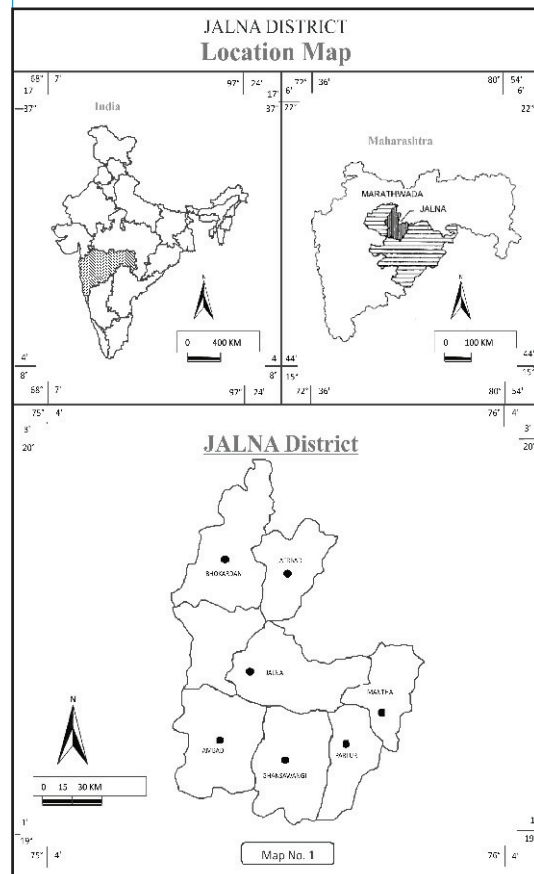
Irrigation is regarded as an integral part of a sound infra-structure and is one of the basic ingredients of agricultural activities. To be successful and well developed agriculture requires supply of water at regular interval and required quantities. This could be done by artificial application of water to land for growing crops and is known by the term “irrigation”.

Importance of irrigation as an essential input hardly needs emphasis. Moreover it is a pre-requisite for the adoption of new technology in agriculture and for the rapid growth of agricultural sector. The conversion of dry land into wet land provides a security against the vagaries of rainfall, preventing crop failure and enabling higher yield per hectare. It also helps to the farmers to take two or more crops from the same field within a year and it increases the productivity of the land by transforming agriculture.

Study Area:

The district is located in the central part of Maharashtra State in Marathwada region. The district is located between 19°15' and 20°32' North latitudes and 75°36' to 76°45' east longitudes. The north-south extension of Jalna district is 150 Kms and east-west stretch of the

district is 110 kilometers.



The shape of the Jalna district is just like crescent. It is bounded on north by Jalgaon district on the east by Buldhana and Parbhani district on the south by Beed district and on the west by Aurangabad district.

Geographical area of this district as per the 2001 census is 7727 sq. km and proportion as compared with Maharashtra state is about 2.47%. Out of the total geographical area 7577.90 sq. km. (99.53%) is rural and 34.5 sq. km. (0.45%) is urban. There were 960 villages in Jalna district. There are 779 Grampanchayat and eight Panchyat Samities in Jalna district. In 2001 the total population was 16.12 lakh.

Objectives:

The objectives of this study is as follows:

- 1) To examine the existing irrigational facilities in the district
- 2) To assess the changes in irrigational facilities in last 10 years
- 3) To evaluate the role of irrigational facilities in region.
- 4) To identify the problems regarding irrigational facilities in the district

Database and Methodology :

The present study is based on secondary data. This study attempts to assess the current irrigational facilities as well as the changes there in last 10 years (1995-96 to 2005-06)

Modes of irrigation:

There are different irrigational sources in Jalna district. The following modes of irrigation are used for irrigating the agricultural land.

- a) Major irrigation projects
- b) Medium irrigation projects
- c) Minor irrigation projects
- d) Well irrigation.

a) Major Irrigation Projects :

An irrigation projects which covers more than 10,000 hectares as the culturable common area is called Major project. The Major project can change socio-economic structure of

the region. There is not a single Major project in the Jalna district. But it has got benefit of Jayakwadi project. After the completion of entire work of Jayakwadi project 43,120 hectares land of Jalna district comes under irrigation. During 2005-06 about 21350 hectares land was irrigated by Jaykawadi project.

b) Medium Irrigation Projects :

Medium irrigation projects are those with culturable command areas between 2000 to 10000 hectares. There are seven medium irrigation projects in Jalna district.

Table 1 Statement Showing Completed Medium Irrigation Projects in Jalna District

Sr No	Name of tahsil and project	Year of completion	Project expenditure in Rs. Lakh	Length of canal in K.M.	Culturable command area in hectares	Irrigable area by completed project
1	2	3	4	5	6	7
1	Jui Project, Danapur Village, Bhokardan	1960	36.05	18.21	2636	2163
2	Appar Dudhana, Somnath Village, Jalna	1966	81.11	08	5283	3401
3	Galthati project, Shahapur Vilage, Ambad	1966	77.90	16	2969	2193
4	Jivrekha project, village, Jafferabad	1966	41.61	17.06	2589	1064
5	Kalyangirijja project, Sawangi Vilage, Jalna	1972	66.66	16.28	1736	1360
6	Dhamna project, Selud Village, Bhokardan	1974	70.98	16.03	1682	1376
7	Kalyan project, Somna Village, Jalna	1987	726	10	26.93	1920

Source: District Socio-Economic Abstract, Jalna

Table 1 reveals that seven medium projects were completed before 1987 in different parts of the study area. Government has spent about Rs. 1100.31 lakh for the completion of seven medium projects. Out of the seven projects nearly Rs. 726 lakh amount was spent on Kalyan Medium project.

The length of the canal is different. Jui

project canal has 18.21 Km. length, whereas Upper Dudhana project canal is only 8 kilometres. Cultural command area of the Medium project is about 19588 hectares. The total irrigable area of these medium projects is about 13477 hectares. During 1996-97 two medium projects like Galhati and Jivrekha were completed empty. Remaining five medium projects were partly filled during the rainy season. About 1728 hectares land was irrigated during winter season in 2005-06. Most of these medium projects become dry in summer season. They do not provide water for irrigation in summer season.

c) Minor Irrigation Projects :

After independence of India government of Maharashtra has given more stress on Minor irrigation tanks. There are 65 minor irrigation projects in the study area.

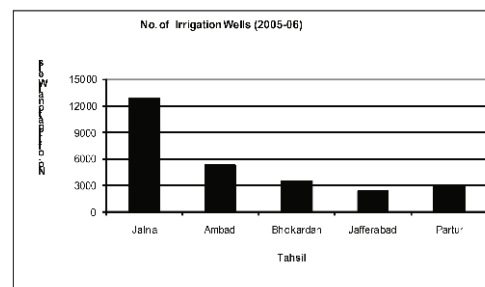
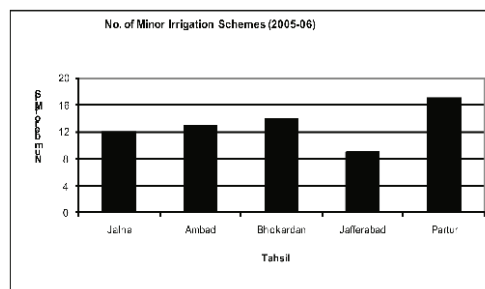
Table 2 indicates that out of the total minor projects about 41.52 percent projects were concentrated in Ambad and Bhokardan tahsil where as only 13.85% were found in Jafferabad as on March 2000. About 20242 hectares irrigation potentials are created in the entire study region. Out of the total irrigation potentials about 24.2% potential are created in Bhokardan tahsil while only 13.63% potentials are found in Ambad tahsil. As on 31st March 2000 only 3281 hectares land was net irrigated area in 2000. About 36% net irrigated land was found in Partur on the other hand only 1.95% net irrigated land by Minor irrigation scheme was recorded in Bhokardan tahsil. Fluctuation of monsoon rainfall is responsible for the less net irrigated area by the Minor irrigation schemes. In addition the minor schemes, 286 percolation tanks are completed in Jalna district. Out of the total percolation tanks about 90 percolation tanks are found in Jalna tahsil, 87 tanks in Bhokardan, 44 in Jafferabad, 39 in Ambad, and 26 in Partur tahsil. About 84 percolation tanks are in the progress.

Table 2 Statement Showing Tahsilwise Minor Irrigation Scheme

Sr No	Name of the tahsil	No. of the minor irrigation scheme	Irrigation potential in hectare	Net irrigated area in hectare
1	Jalna	12 (18.46)	4642 (22.93)	1204 (36.70)
2	Ambad	13 (20.00)	2758 (13.65)	186 (5.67)
3	Bhokardan	14 (21.54)	4898 (24.20)	64 (1.95)
4	Jafferabad	09 (13.85)	3478 (17.18)	646 (19.68)
5	Partur	17 (26.15)	4466 (22.06)	1181 (36.00)
6	Jalna district	65 (100)	20242 (100)	3281 (100)

Source : Socio-Economic abstract of Jalna district, 2005-06. Figures in the brackets indicates percentage

The survey work of 74 Kolhapur types bandhares have been completed and the files are put to the sanction to the Zilha Parishad Office, Jalna. In seventh plan Rs. 505 lakh amount was spent on the various irrigation schemes. In eighth five year plan Rs 1820 lakh amount was spent for the development of irrigation potential in the district. In ninth five year plan about Rs. 2790 lakh were spent on the development of irrigation.



Sr. No	Tahsil	1995-96			2005-06		
		No. of Wells in use	No. of Wells not in use	Total Wells	No. of Wells in use	No. of Wells not in use	Total Wells
1	Jalna	3940 (90.26)	425 (9.74)	4365 (100)	12750 (99.37)	80 (0.63)	12830 (100)
2	Ambad	310 (79.83)	331 (20.17)	1641 (100)	4503 (84.75)	810 (15.25)	5313 (100)
3	Bhokardan	1000 (71.43)	400 (28.57)	1400 (100)	3507 (100)	00 (0.00)	3507 (100)
4	Jafferabad	560 (56.00)	440 (44.00)	1000 (100)	2390 (100)	00 (0.00)	2390 (100)
5	Partur	920 (72.44)	350 (27.56)	1270 (100)	2325 (76.88)	699 (23.12)	3024 (100)
6	Jalna district	7730 (79.89)	1946 (20.11)	9676 (100)	25528 (94.14)	1589 (5.86)	27117 (100)

Source : *Socio-Economic abstract of Jalna district, 1983-84, 2000-2001. Figures in the brackets indicates percentage.*

d) Well Irrigation : As the cost of construction of wells is low they are well suited to poor and marginal farmers. There is great demand for irrigation Wells due to the paucity of other irrigation facilities. Jalna district has given more priority for the construction of new wells as well as regions of the old wells. Irrigational wells are increased through five year plans in the Jalna District.

In 1995-96 out of the total irrigation wells below 10% wells were not in use in Jalna on the other hand 44% wells were not found in use in Jafferabad tahsils. As far Jalna district is concerned 20.11% wells were not in use in 1995-96 whereas about 5.86% wells were not in use in the district in 2005-06. It means that the rate use of wells increased to some extent during the period of investigation. During 2005-06 about 100% wells were used for irrigation in Jafferabad and Bhokardan tahsil. Only 0.63% wells were not used for irrigation in Jalna tahsil 15.25% in Ambad and 23.12% wells were not used for irrigation in Partur tahsil in 2005-06. Most of the wells become dry in summer season.

Table 4 Tahsilwise Trends in Percentage of Net Irrigated Area to Net Sown Area

Sr. No.	Name of the tahsil	1995-96	2005-06	Volume of change in %
1	Bhokardan	12.11	10.80	- 1.32
2	Jafferabad	7.14	11.07	+ 3.93
3	Jalna	10.01	12.39	+ 2.38
4	Ambad	12.26	14.42	+ 2.15
5	Partur	11.37	7.62	- 3.76
6	Jalna district	11.04	11.68	+ 0.64

Source : *Computed by the Author*

Table 4 reveals that below 10% net sown area was irrigated in Jafferabad whereas above 10% net sown area was irrigated in Bhokardan, Jalna, Partur and Ambad tahsils during 1995-96. (Map 3.2A)

Below 10% net sown area was found in Partur tahsil whereas 10% to 50% net sown area was found under irrigation during 1996-2000. Below 2% negative change in irrigated area was took place in Bhokardan and above 2% negative change in irrigated area was recorded in Partur. About 2.15% to 3.93% positive change in irrigated area was experienced in Ambad, Jalna and Jafferabad tahsils between 1995-96 and 1996-2000.

Conclusions :

The situation or the facilities of irrigation in the district is not adequate. At present there is no major irrigation project but the district gets the benefit of Jayakwadi project which is located in Aurangabad district to some extent. The district has itself 7 irrigation projects, 65 minor irrigation schemes and 27127 irrigation wells.

Reference:

- 1) District Socio-Economic Abstract, 1995-96 and 2005-06.