



Irrigation Status in Buldhana District: A Geographical Study

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Introduction:

Irrigation is essentially the artificial application of water to overcome deficiencies in rainfall for growing crops. Irrigation as a protective measure to supplement rainfall and precaution against the failure of crops is always practiced in the various parts of the world. Irrigation is very vital to overcome the basic problems of the agriculture. Irregular, uncertain and unevenly distributed rainfall in time, amount and space is not sufficient for growing certain crops.

Water is the most important single requirement for the growth of crops. Crops can be raised successfully only if water is available in adequate quantity either from rain or surface flow or below ground. Rainfall in most part of the country is confined mainly to the four rainy months of June to September. During the remaining months the water requirements have to be fulfilled from ground and surface water resources. Irrigation is required not only in low rainfall area and during non-rainy season but also during long breaks in rains in good rainfall areas.

Artificial irrigation was practiced in India as far back as in the fourth millennium B.C. Growth of population of consequent need for larger agricultural production, the requirement of irrigation has increased a great deal.

Irrigation Status in Buldhana District:

Buldhana district receives inadequate rainfall and rivers are not much bigger and also very few in numbers. Out of the rivers Khadakpurna is the only river which has good deal of water capacity for major part of the year. Otherwise almost all the rivers get dried in summer or have very less water. Hence with the constant efforts of the government, at present there are 2 major and 11 medium irrigation projects in the district. The following modes of irrigation are used for irrigating the agricultural land.



Table No. 1
Irrigation Projects in Buldhana District

Sr No	Name of the Project	Year of Completion	Total Expenditure Of Project in Lakh	Canal Length in KM	Command Area	Irrigation Area
1	Gigaon {Nandura}	2015	122098	25	140400	84240
2	Khadakpurna {Deulgaonraja}	2010	77514	48	33506	17870
3	Pentakli {Mehkar}	2007	17245	40.54	11900	9884
4	Man {Khamgaon}	1991	6085	22.5	13936	7804
5	Torna {Khamgaon}	1992	1810	24.5	2614	1465
6	Utawali {Mehkar}	2008	6600	17.42	5886	3790
7	Nalgaon {Motala}	1967	272.2	28.94	91.65	86.04
8	Dhyanganga {Khamgaon}	1974	280.72	19	4249	4249
9	Palghad {Motala}	1981	185.36	15	3032	2415
10	Mandva {Khamgaon}	1981	191.7	13.41	1170	1156
11	Koradi {Mehkar}	1986	876.19	49.3	5995	3834
12	Mas {Khamgaon}	1985	622.97	13.26	8144	5773

Source: Executive Engineer, Medium Irrigation Project Division, Buldhana



a) Major Irrigation Projects :

A project which covers more than 10,000 hectares culturable command area is called major irrigation project. The major project can change socio-economic structure of the region. There are two major irrigation projects in the district.

1) Khadakpurna Project :

The project is located in Deulgaonraja tahsil in Buldhana district. This project is constructed on the river of Purna near Deulgaonraja city. About Rs.77,514 lakh amount was spent for the construction and development of canals. The project was completed in 2010. The total length of the canal is 48 kilometers. The storage capacity of this project is 160.606 million cubic meters. About 33506 hectare land is under command in Buldhana district in Vidarbha region of Maharashtra.

2) Wan Project :

The project is located on the Wan river, near Bhairavgad, Tq. Talhara in Akola district. About Rs.228.40 lakh amount was spent for the construction and development of canals. The project was completed in 2006. Total length of canal is 14.13 km and storage capacity of this project is 83.465 million cubic meter. The height of this project is 60.44 meters. Total irrigation potentials of the project is about 25028 hectares. Though the project is located in Akola district, it provides irrigational facilities to 15100 hectares land of Buldhana district.

b) Medium Irrigation Projects :

Medium irrigation projects are those with culturable command areas between 2,000 to 10,000 hectares. There are 11 medium irrigation projects in Buldhana district. Table 3.1 reveals that 10 medium irrigation projects were completed before 2010 in different tahsils of the study area. Government has spent about 34169.14 lakh for the completion of 11 medium projects. Out of the total irrigation projects about 41.66% projects are situated in Khamgaon tahsil and 25% projects are situated in Mehkar tahsil. About 33.34% projects are situated in remaining tahsils.

All the medium irrigation projects are completed in the study region through five year plans. Major expenditure was spent on Khamgaon tahsil. The length of the canals is different. Pentakli canal has 40.54 km length whereas Man project has 22.5 km length. Other projects Torna, Utawali, Nalgaon, Dhyanganga, Palghad, Mandava, Karade, Man has length 24.5 km, 17.42 km, 25.94 km, 19 km, 15 km, 13.41 km, 49.3 km, and 13.26 km respectively.

First project constructed in Buldhana district in 1967 is Nalgaon in Motala tahsil covers 8604 hectare irrigation area. After Nalgaon, Dhyanganga in 1974, Palghad in 1981, Mandava in 1981, Man in 1985, Koradi in 1986, Main 1991, Torni in 1992, covers irrigation area 4229, 2415, 1156, 5773, 3834, 7804 hectares.

This projects area helpful for agriculture use. Thousand of land is under irrigation. But due to unfavorable geographical conditions, most of the medium projects in the study region are not fully filled during every rainy season but sometimes they become overflow. The importance of medium works lies in the conservation of surplus and floodwater. The catchment area of the dams needs protection from soil erosion, otherwise the dam may be silted very soon and go out of use.

Net Irrigated Area to Net Sown Area:

Table 2 it can be seen that percentage of net irrigated area to net sown area is increased from 5.87% to 8.79% in Buldhana district during the period of investigation. Out of the total net sown area below 5% net sown area was found under irrigation in Sangrampur (2.56%), Shegaon (2.89%), Nandura (2.96%), Khamgaon (1.19%), Mehkar (2.78%) and Lonar (3.26%) whereas 5% to 10% area was under irrigation in Jalgaon-Jamod (5.99%), Malkapur (5.65%), Motala (8.57%), Chikhli (6.58%) and Deulgaonraja (7.88%) tahsil. About 10% to 15% area under irrigation found in Buldhana (10.65%) tahsil and above 15% net sown area was under irrigation in Sindkhedraja tahsil (15.33%) during 1985-90. Table 3.3 shows that below 5% net sown area was found under irrigation in Shegaon (3.2%), Motala (2.88%), Chikhli (3.99%), and Lonar (4.93%) in 2001-06.

Table No. 2
Tahsilwise Trends in Percentage of Net Irrigated Area to Net Sown Area

Sr. No.	Tahsil	1985-90	2001-2006	Volume of Change in %
1	Jalgaon Jamod	5.99	17.17	11.18
2	Sangrampur	2.56	7.87	5.31
3	Shegaon	2.89	3.2	0.31
4	Nandura	2.96	7.23	4.27
5	Malkapur	5.65	9.51	3.86
6	Motala	8.57	2.88	-5.69
7	Khamgaon	1.19	8.73	7.54
8	Mehkar	2.78	8.94	6.16
9	Chikhli	6.58	3.99	-2.59
10	Buldhana	10.65	16.77	6.12
11	Deulgaonraja	7.88	15.05	7.17
12	Sindkhedraja	15.33	7.95	-7.38
13	Lonar	3.26	4.93	1.67
	Dist. Total	5.87	8.79	2.92

Source: Computed by the Author



About 5% to 10% area was under irrigation in Sangrampur (7.87%), Nandura (7.23%), Malkapur (9.51%), Khamgaon (8.73%), Mehkar (8.94%) and Sindkhedraja (7.95%). Above 10% area under irrigation was observed in Jalgaon-Jamod (17.17%), Buldhana (16.77%) and Deulgaonraja (15.05%) during 2001-06. Negative change were found in Motala (-5.69%), Chikhli (-2.59%) and Sindkhedraja (-7.38%). Positive changes were found in remaining tahsils during the study period. Major positive change was found in Jalgaon-Jamod tahsil where major negative change was found in Sindkhedraja tahsil.

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