



A Geographical Analysis of Canal Water and its use in Malshiras Tahsil, Solapur District (Ms), India

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Abstract:

The irrigation area of Maharashtra state is the largest in the country according to the number of major dams and storage capacity. However, the irrigation sector in Maharashtra has different problems; this will reduce irrigation water usage capacity in the future, due to increased water demand for irrigation purposes, due to agricultural development and expansion. According to estimates of Maharashtra's, Water and Irrigation Commission (GoM, 1999), (Mane, July 2019). 70 % Area of Malshiras Tahsil Depending on canal irrigation. The Bhima an important tributary of Krishna River he meet on the right side of Krushan and Nira is a tributary of Bhima River Nira meet to Bhima Nira-Nrshingpur in Solapur Pune border. Malshiras tahsil located on right Bank on Nira basin. Nira is life line of Malshiras Tahsil. The Nira River is mainly suitable for irrigation. Bhatghar right bank canal proved water of Malshiras Tahsil. (Mane, July 2019).

Key word- Irrigation, ICA, Crop.

Introduction:

Rising population, growing industrialization, and explaining agriculture have pushed up the demand for water. Efforts have been made to collect water building dams and reservoirs and digging well's. (santosh P Mane, July, 2014) It is need to current year. The Population of Malshiras Tahsil has been increasing rapidly, however the water supply is very poor in caparison to the population of the Malshiras Tahsil. There is increased in water traffic and scarcity of water in a rural and urban area of Malshiras Tahsil. (Santosh P Mane, 2009) In Drought conditions low water availability in Malshiras Tahsil.

The sources of irrigation are governed by local climatologically, geological and other physical conditions the important sources available in the study areas are canal and wells and tube wells. The land areas irrigated by various sources of irrigation in the study area. It is clear that the highest contribution in sphere of irrigation in the study area is canal irrigation. The second place goes well and tube well irrigation (Dr. D. C. Kamble, 2019). Water available it is a backbone of all development like educational, industrial, and social and all over development is fully depending on water availability (Dr. A M kamble, 2009). Nira River add Canals provide sufficient water of Malshiras tahsil and Malshiras Tahsil all over development like industrial

development, Agriculture development, irrigation development and social status on depending on water.

Objective

- Canal water and its utilization in Malshiras Tahsil.

Database and methodology

Present study mostly relies on the primary and Secondary data collected 2015 through field Survey. For the present investigation, Tahsil is selected as in general and 10 Circle in particular. Availability of Man Canal and Small Sub canal.

Study Area

A brief study of the regional character is attempted in this chapter which is useful for understanding the basis for distributional pattern of population numbers and its density. Malshiras tahsil lies to north-west of Solapur district (Hajare R. V., 2014)

Malshiras is one of the 11 blocks of Solapur district and it extends approximately between latitudes 17° 36' North and 18° 2' north and between longitudes 74° 41' east and 76° 18' east. The block is on the western side of the district. Malshiras tahsil is situated on the west fringe of Solapur district and lies entirely in Nira basins. (Mane D. D., 2018) (Mane S. P., 2018)

The tahsil is bounded on the north by Indapur tahsil (Pune district) on the north-east Madha tahsil, on east by Pandharpur tahsil, on south by Sangola, on west by Man tahsil (Satara district) and north-west side Phaltan (Satara district). In the west part of Malshiras taluka Mahadeo hilly range pass north to south for a few kilometers and Sulski-Tuki (715m) is height pick in Malshiras tahsil and few scattered hills in Malshiras tahsil. The tahsil in general has flat or undulating Nira terrain.

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Table-1

CANAL WATER RESOURCES AND ITS USE IN MALSHIRAS TAHASIL

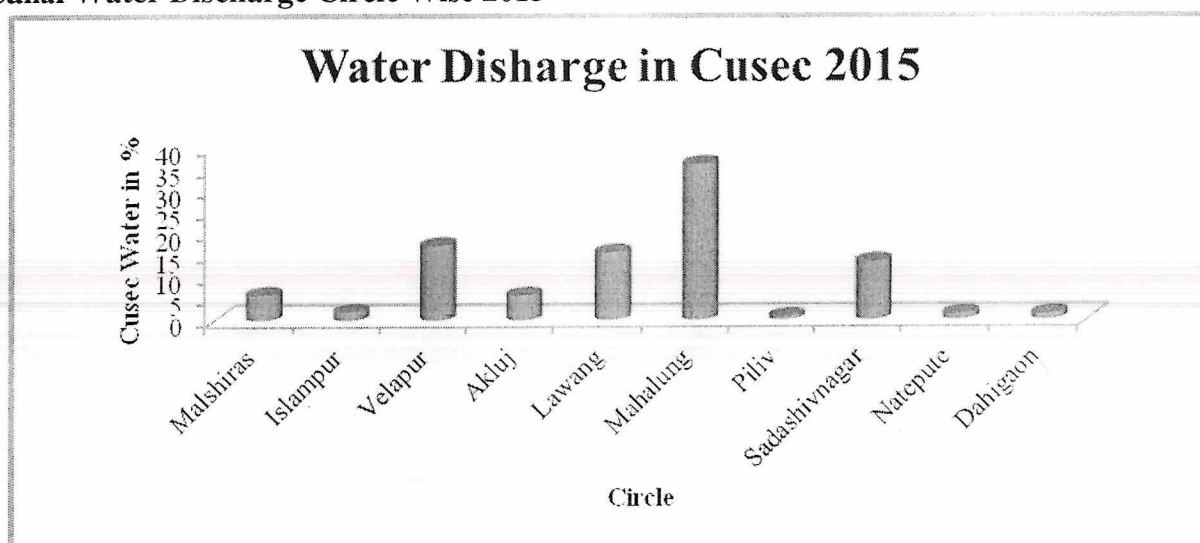
Sr. No	Circle	Discharge of Water in (Cusecs)	%	I.C.A (Hect)	%	Total Use of Water- 2015					%
						Irrigation (TMC)	%	Dome stic (TMC)	%	Indus trial (TM C)	
1	Malshiras	109	5.9	2832	6.7	2532	8.3	0.3	19.4	0	0
2	Islampur	37	2	872	2.1	793.6	2.6	0	0	0	0
3	Velapur	319	17.3	5886	13.9	5415.88	17.8	0.31	20	0	0
4	Akluj	106	5.8	1895	4.5	1795	5.9	0.3564	23	0.88	29.3
5	Lawang	289	15.7	7798	18.4	5120	16.9	0	0	0	0
6	Mahalung	665	36.2	15070	35.5	6349	20.9	0.232	15	0.871	29

7	Piliv	15	0.8	1027	2.4	1082	3.6	0	0	0	0
8	Sadashivnagar	248.1	13.5	6063.5	14.3	6264	20.6	0	0	0.654	21.8
9	Natepute	25.25	1.4	532.5	1.3	532.5	1.8	0	0	0	0
10	Dahigaon	25.33	1.4	459.5	1.1	477.5	1.6	0.35	22.6	0.6	20
Malshiras Tahsil		1838.68	100	42435.5	100	30361.5	100	1.5	100	3	100

Sources- irrigation office Malshiras and Phaltan (2015)

Fig-1

Canal Water Discharge Circle Wise 2015

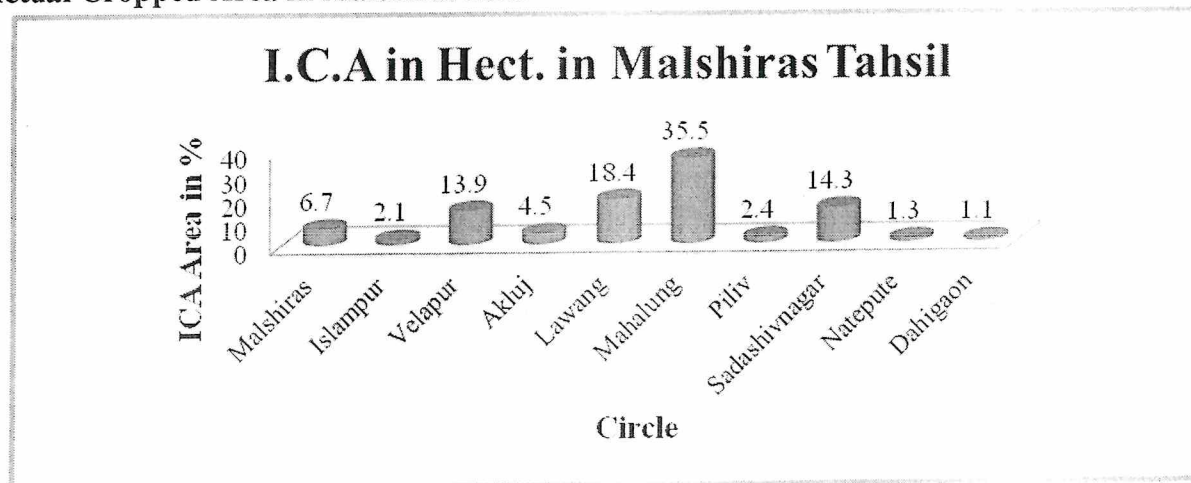


Sources- irrigation office Malshiras and Phaltan (2015)

Above table-1 and finger-2 Showing water discharge in Mahalung 36.2% (665 cusec), Velapur 17.3% (319 Cusec), Lawang 15.7% (289Cusec), Sadashivnagar 13.5% (248.1 Cusec), Malshiras 5.9% (102 Cusec), Akluj 5.8% (106 Cusec), Islampur 2% (37 Cusec), Dhaigaon 1.4% (25.33 Cusec), Natepute 1.4% (25.25Cusec), Piliv 0.8% (15 Cusec). In Malshiras Tahsil highest water discharge in Mahalung 36.2% (665 cusec), and lowest water discharge in circle Piliv 0.8% (15 Cusec). In Malshiras Tahsil total water discharge 1838.68 Cusec.

Figur-2

Actual Cropped Area in Malshiras 2015



Sources- irrigation office Malshiras and Phaltan (2015)

Above table-1 and finger-2 Showing Mahalung 35.5% (15070 ICA), Lawang 18.4% (7798 HCA), Sadashivnagar 14.3% (6063.5 ICA), Velapur 13.9% (5886 HCA), Malshiras 6.7% (2832 ICA), Akluj 4.5% (1895 ICA), Piliv 2.4%(1027 ICA), Islampur 2.1% (872 ICA), Natepute 1.3% (532.5 ICA), Dhaigaon 1.1% (459.5 ICA). In Malshiras Tahsil highest ICA area in Mahalung 35.5% (15070 ICA), and lowest water discharge in circle Dhaigaon 1.1% (459.5 ICA). Total ICA Area in Malshiras Tahsil 42435.5 ICA area.

Total Usable Water in Malshiras Tahsil

1. Irrigation (TMC)

Above table Showing total water use in irrigation Mahalung 20.9% (6349 TMC). Sadashivnagar 20.6% (6264 TMC), Velapur 17.8% (5415.88 TMC), Lawang 16.9% (5120 TMC), Malshiras 8.3% (2532 TMC), Akluj 5.9% (1795 TMC), Piliv 3.6% (1082 TMC), Islampur 2.6% (793.6 TMC), Natepute 1.8% (532.5 TMC) and Dhaigaon 1.6% (477.5 TMC). Highest water available in Mahalung Circle 20.9% (6349 TMC) and Dhaigaon 1.6% (477.5 TMC). Total water of irrigation of Malshiras Tahsil 30361.5 TMC.

2. Domestic Water (TMC)

Above table Showing total water use in domestic Akluj 23% (0.3564 TMS), Dhaigaon 22.6% (0.35 TMC), Malshiras 19.4% (0.3 TMC), Velapur 20% (0.31 TMC). And Mahalung 15% (0.232TMC) and Sadashivnagar, Lawang, Piliv, Islampur and Natepute canal water not use in domestic. Highest domestic use of water in Akluj circle 23% (0.3564 TMS) and lowest in Mahalung circle 15% (0.232TMC), total domestic water use in Malshiras Tahsil 1.5 TMC.

3. Industrial

Above table Showing total water use in Akluj 29.3% (0.88 TMC), Mahalung 29% (0.871TMC), Sadashivnagar 21% (0.654 TMC), Dhaigaon 20% (0.6 TMC) and Malshiras, Islampur, Velapur, Akluj, Lawang, Piliv, Natepute canal water not use in domestic.

Concluding

Malshiras Tahsil is mainly under rain Shadow area but Nira River and Bhima river Right Bank Canal irrigation system give fulfill water of agriculture, Domestic and Industrial in Malshiras. (Dr. D C Kamble, June-2018). 30366 TMC water available in Malshiras in this use of water 30361.5 TMC (99.985%) of total Water, Industrial use 1.5 TMC (0.010%) and Domestic use 1.5 TMC (0.005). water availability is an backbone of Malshiras Tahsil development.

Drought conditions low water availability, need to aware people use of water new techniques in agriculture like sprinkler drip irrigation etc. aware people rooftop rainwater harvesting.

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