

# An Impact of Irrigation Project on Agriculture Land Holding: A Comparative Study of Tulasi Dam of Kolhapur-Maharashtra

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## ABSTRACT

Dams are the vital source to cater basic needs of water in the region. Water is essential for drinking purpose, irrigation for agriculture land, industry and many more. Dams are therefore, remain sole source of water. The present paper attempt to reveal the comparative assessment of the impact of irrigation development-that has taken place after the construction of dam on river Tulshi-on land holding. Investigation is based on intensive fieldwork of three sample villages in which the significant aspects like distribution of agriculture land, cultivated land, irrigated land and waste land are methodically analyzed and classified with the pre and post project proportion of land holding with individual village and sum of them. The analytical figures prevail that there is significant increment in irrigated and cultivated land in lieu of waste land.

**Keywords:** Dam, water, irrigation, landholding, irrigated, cultivated and waste land.

## STUDY AREA, DATABASE AND METHODOLOGY

Tulshi basin occupying considerable part of Karvir and Radhanagari tahsils of Kolhapur district of south Maharashtra, extends from 16° 27' to 16° 39' North Latitude and 73° 57' to 74° 08' East Longitude with an area of about 165 km<sup>2</sup> (Location Map).

Present work is based on primary data generated through field work employing stratified random sampling techniques to choose the representative sample and following the techniques of interviews, discussion and questionnaires that has verified later with secondary data retrieved from the *Grampanchayat* official records. Stratification of villages in the command area have duly determined on the basis of location of villages as head reach of command area, middle reach of command area and tail reach of command area Chande, Sawarde-dumala and Sawarwadi respectively. The household from sample villages classified as in the groups of Marginal farmers (land holding < 1.0 ha), Small farmers (1.0 ha to 2.0 ha), Medium farmers (2.0 ha to 4.0 ha) and Large farmers (4.0 ha & above).

## DISCUSSION AND CONCLUDING REMARKS

The proportion of ownership land facilitates valuable ground for development of agriculture in particular region. An attempt here is made to study the distribution of same in accordance of cultivable, irrigable and waste land of sample respondents by actual size of holdings they had and they have in pre-project period and post project period respectively.

**Table: 1 Pre-Project Proportion of Changes of Land Status**

Particulars of Farmers	Cultivated Land	Irrigated Land		Waste Land	Total Own Land
		Seasonal	Perennial		
Marginal	31.46	24.30	7.16	21.74	53.20
	<i>(59.14)</i>	<i>(45.68)</i>	<i>(13.46)</i>	<i>(40.86)</i>	<i>(100.00)</i>
Small	68.21	57.20	11.10	35.79	104.00
	<i>(65.59)</i>	<i>(55.00)</i>	<i>(10.67)</i>	<i>(34.41)</i>	<i>(100.00)</i>
Medium	36.23	24.85	11.38	22.47	58.70
	<i>(61.72)</i>	<i>(42.33)</i>	<i>(19.39)</i>	<i>(38.28)</i>	<i>(100.00)</i>
Large	22.94	13.50	9.44	19.26	42.20
	<i>(54.36)</i>	<i>(31.99)</i>	<i>(22.37)</i>	<i>(45.64)</i>	<i>(100.00)</i>
Total	158.84	119.85	39.08	99.26	258.10
	<i>(61.54)</i>	<i>(46.44)</i>	<i>(15.14)</i>	<i>(38.46)</i>	<i>(100.00)</i>

Source: Based on field work statistics.

Table 1 describes the aggregate condition of irrigated, cultivated and waste land to total own land. It reveals that, in pre project period there were 60% land to own land under cultivation in sample villages, of which above 40% was under seasonal irrigation and remaining came under perennial irrigation. Over all about 38% to own land was not in use for cultivation. Among the types of farmers in selected sample villages are concerned, small farmers were having about 65% land to own land under cultivation that is maximum one followed by medium, marginal and large farmers restively. Seasonal irrigation was overwhelmed in pre project time. Here also small farmers played crucial role and having 55% land to own land under seasonal irrigation, however, very meager proportion of land had came under perennial type of irrigation. Due to the sufficient and sumptuous economic support large farmers were having about 22% land to own land under perennial irrigation followed by medium, marginal and small farmers. With regards to waste land, it is shown that large farmers had 45.64% land to own land under the category of waste land.

**Table: 2 Post-Project Proportions of Changes of Land Status**

Particulars of Farmers	Cultivated Land	Irrigated Land		Waste Land	Total Own Land
		Seasonal	Perennial		
Marginal	45.54	9.84	35.70	7.26	52.80
	<i>(86.25)</i>	<i>(18.64)</i>	<i>(67.61)</i>	<i>(13.75)</i>	<i>(100.00)</i>
Small	84.85	16.75	68.10	21.65	106.50
	<i>(79.67)</i>	<i>(15.73)</i>	<i>(63.94)</i>	<i>(20.33)</i>	<i>(100.00)</i>
Medium	45.78	11.01	34.77	15.02	60.80
	<i>(75.30)</i>	<i>(18.11)</i>	<i>(57.14)</i>	<i>(24.70)</i>	<i>(100.00)</i>
Large	38.69	9.56	29.13	4.31	43.00
	<i>(89.98)</i>	<i>(22.23)</i>	<i>(67.74)</i>	<i>(10.02)</i>	<i>(100.00)</i>
Total	214.86	47.16	167.70	48.24	263.10
	<i>(81.66)</i>	<i>(17.92)</i>	<i>(63.74)</i>	<i>(18.34)</i>	<i>(100.00)</i>

Source: Based on field work statistics.

Above table 2 categorically describing the post project situation of cultivated, irrigated and waste land to own and of sample villages in Tulasi river basin. It is found that, cultivated land and land under perennial irrigation is showing increase, consequently considerable reduction has occurred in waste land and land under seasonal irrigation due to the construction of irrigation project. High proportion of cultivated land is belonging to large farmers i.e. 89.98% to own land. Less proportion of land is observed under the seasonal irrigation i.e. 18%

to own land, small farmers are having 15.73% land to own under seasonal irrigation that is maximum one. By virtue of the development of lift irrigation through irrigation project, perennial irrigation becomes dominant in this region. Near about 64% land to own land comes under the perennial type of irrigation. In the view of perennial irrigation, first and second ranks are occupied by large farmers and marginal farmers having 67.74% and 67.61% to own land under it respectively. The proportion of waste land has reduced after execution of irrigation project. With respect to waste land, medium farmers are showing maximum proportion i.e. 24.70% to own land.

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