Geography

Research Paper



An Impact of Tulasi Irrigation Project on Agriculture Land Under Main Crops: A Comparative Study

* D. H. Pawar ** V. S. Pawar-Patil

* Asst. Prof., Dept. of Geography, Shivaji University, Kolhapur.

** Asst. Prof., Dept. of Geography, The New College, Kolhapur.

ABSTRACT

Dams play significant role in the process of development in which economic as well as social status of society particularly the population engaged in agriculture in command area increases in terms of different social aspects. In the present paper impact of irrigation development on area under different crops has been attempted. For the same analysis intensive fieldwork has been conducted in which thorough interview of the farmers have been taken in three sample villages. Distribution of crop-wise agriculture land has methodically classified and the proportion of the same is analyzed. Pre and post project proportion of area under different crops have also been taken for the analysis with an account of individual village. The result shows that there is considerable change in area under main crops e.g. kharip paddy, nachani, sugarcane, rabbi rice, sunflower, maize etc.

Keywords : Dam, impact, irrigation, command area, crops, social aspects.

STUDY AREA, DATABASE AND METHODOLOGY:

The Tulshi basin, occupying part of Karvir and Radhanagari tahsils of Kolhapur district, extends from $16^{\circ} 27'$ to $16^{\circ} 39'$ North Latitude and $73^{\circ} 57'$ to $74^{\circ} 08'$ East Longitude and has an area of about 165 km². It is one of the fertile and well-watered parts of south Maharashtra (Location Map).

Present work is based on primary as well as secondary data. The primary data has been collected through field work for which interviews, discussion and questionnaires have employed. The methodology adopted for the research is stratified random sampling techniques to choose the representative sample and following the techniques of collecting primary data by conduct of socio-economic survey with the help of all inclusive questionnaires. Stratification of villages in the command area have duly determined on the basis of location of villages it is therefore, categorized as head reach of command area, middle reach of command area and tail reach of command area. 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:

From the foregoing study of impact of irrigation on area under different crops, it is reveled that the cropping pattern in the command area of Tulasi irrigation project has metamorphic change owing to development of perennial irrigation. In pre project period food grain crops like as Kharip Paddy, Nachani were dominant crops but after the evolution of irrigation in post project period the farmers are shifted towards cash crops like as Sugarcane, Sunflower (Oil seeds) etc. More precisely it reveals that the area under Kharip Paddy, Nachani and Maize has reduced in the post project period where as the proportion of area under Sugarcane, Sunflower and Rabi rice have been showing increasing trend in this region. The upper reaches of Tulasi river basin showing reduction of area of Jawar where as the Sunflower oil seeds are newly introduced crops in this region. The assessment of the area under sugarcane cash crop of selected sample villages located in Tulasi river basin exhibits that owing to the perennial water requirement, it was very less amount of area under this crop i.e. 31.58 ha, however, due to the availability perennial irrigation, significant increment has occurred in it and it becomes 103.22 ha in post project period. The all categories of farmers are showing growth in the area of this crop in post project period of which marginal farmers having maximum growth in the same.

Table: 1 Area under Kharip Paddy

Particulars	Pre-	Percent	Post-	Percent	Percent
of Farmers	Project	Share	Project	Share	Changes
Marginal	12.60	18.66	9.04	17.23	-28.25
Small	36.04	53.38	26.49	50.48	-26.50
Medium	13.66	20.23	11.74	22.37	-14.06
Large	5.22	7.73	5.21	9.93	-0.19
Total	67.52	100.00	52.48	100.00	-22.27

Table: 2 Area Under Nachani/Ragi

Particulars of Farmers	Pre- Project	Percent Share	Post- Project	Percent Share	Percent Changes
Marginal	5.60	25.27	2.73	22.79	-51.25
Small	8.91	40.21	4.02	33.56	-54.88
Medium	5.03	22.70	3.22	26.88	-35.98
Large	2.62	11.82	2.01	16.78	-23.28
Total	22.16	100.00	11.98	100.00	-45.94

Table: 3 Area Under Sugarcane

Particulars of Farmers	Pre- Project	Percent Share	Post- Project	Percent Share	Percent Changes
Marginal	631	19.99	22.02	21.33	248.97
Small	12.08	38.28	40.70	39.43	236.92
Medium	6.03	19.11	21.00	20.34	248.26
Large	7.14	22.62	19.50	18.89	173.11
Total	31.56	100.00	103.22	100.00	227.06

Table: 4 Area under Rabbi Rice

Particulars of Farmers	Pre- Project	Percent Share	Post- Project	Percent Share	Percent Changes
Marginal	3.41	18.10	6.02	27.49	76.54
Small	6.02	32.42	5.11	23.33	-15.12
Medium	6.60	35.54	5.50	25.11	-16.67
Large	2.81	15.13	5.27	24.06	87.54
Total	18.84	100.00	21.90	100.00	16.24

Table: 5 Area Under Sunflower

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Particulars of Farmers	Pre- Project	Percent Share	Post- Project	Percent Share	Percent Changes
Marginal	0.00	0.00	0.49	14.04	0.00
Small	0.00	0.00	0.50	14.33	0.00
Medium	0.00	0.00	1.50	42.98	0.00
Large	0.00	0.00	1.00	28.65	0.00
Total	0.00	0.00	3.49	100.00	0.00

Table:6 Area Under Groundnut

Particulars of Farmers	Pre- Project	Percent Share	Post- Project	Percent Share	Percent Changes
Marginal	1.83	16.84	3.53	23.36	92.90
Small	2.44	22.45	5.32	35.21	118.03
Medium	3.30	30.36	2.76	18.27	-16.36
Large	3.30	30.36	3.50	23.16	6.06
Total	10.87	100.00	15.11	100.00	39.01

Table:7 Area Under Jawar

Particulars of Farmers	Pre- Project	Percent Share	Post- Project	Percent Share	Percent Changes
Marginal	0.50	23.70	0.74	19.95	48.00
Small	0.55	26.07	1.21	32.61	120.00
Medium	0.61	28.91	0.86	23.18	40.98
Large	0.45	21.33	0.90	24.26	100.00
Total	2.11	100.00	3.71	100.00	75.83

Table:8 Area Under Maize

Particulars of Farmers	Pre- Project	Percent Share	Post- Project	Percent Share	Percent Changes
Marginal	1.00	18.87	0.97	19.52	-3.00
Small	1.90	35.85	1.50	30.18	-21.05
Medium	1.00	18.87	1.20	24.14	20.00
Large	1.40	26.42	1.30	26.16	-7.14
Total	5.30	100.00	4.97	100.00	-623

Source: Based on fieldwork statistics.





Figure: Trend of Change of Area under Different Crops.



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