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Impact of Watershed area Development in Cropping pattern of Talmod Village of Osmanabad District

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Abstract

Water and Land are most important natural resources these are key of the overall development. These natural resources can be best utilized and managed in an effective and gainful manner through watershed approach. Watershed management encompasses the concept of optimum utilization of soil and water for agricultural production as well as applying together the technical know-how, the people and the environment into a harmonious situation. Both natural resources and the socio-economic situations of any watershed are to be given equal importance. Integrated management of natural resources on watershed basis is the right approach for sustainable development for achieving goals like food security, poverty alleviation, and welfare of weaker sections of the society.

In this research article, I will study and discussion of watershed area development work and its impact of cropping pattern of selected Talmod village of Osmanabad district in Marathwada region.

Keyword: *Watershed,* catchments, *Cropping Pattern*

Introduction

The watershed area development aims at to overcome water scarcity and to develop non-arable area. The watershed remains on the conservation of soil and moisture that helps to strengthen the moisture retention capacity of soil. The watershed development strategy not only assures the optimum development of resources but also helps in restoration of ecology and environment.

The term of watershed is composed from two words water and shed, meaning of 'shed' is to separate. Originally watershed came to be used to denote a divide line which separates a drainage basin from another. Watershed is a geographical area where in rain water falling in drain into a common point, it is a unit of land on which all water that falls collects by force of

gravity, runs via common outlet. Watershed is defined as an area enclosed in a catchment boundary of a river basin. It is enclosed by two ridgelines and it has a natural outlet.

The watershed can be defined as "**catchments area of a particular stream or river**".

Objective of Study

General objectives of the present research paper are

- To take information about watershed Development Concept.
- To comparative study of before and after the watershed development work and its impact on cropping pattern in village.

Hypotheses: Watershed area development brings about changes in cropping pattern, in villages.

Data Collection and Analysis Methods

The present study is based on investigation, information, about various spot observations. Data will be collected from primary and secondary sources. It was decided to collect maximum information through secondary sources. The primary data was collected from them with the help of questionnaires. Appropriate representation was given to the farmers possessing holders. For the purpose of the study, a total number of 60 (10%) households from village have been selected through Multi Stage Random Sampling Method.

Secondary data from watershed development work & Farm Pond beneficiaries were selected randomly based on the availability of list of beneficiaries which is received from the department. Project reports, socio – economic review, gazetteers, reference books, research articles, internet etc. and numerical data information has been analysed.

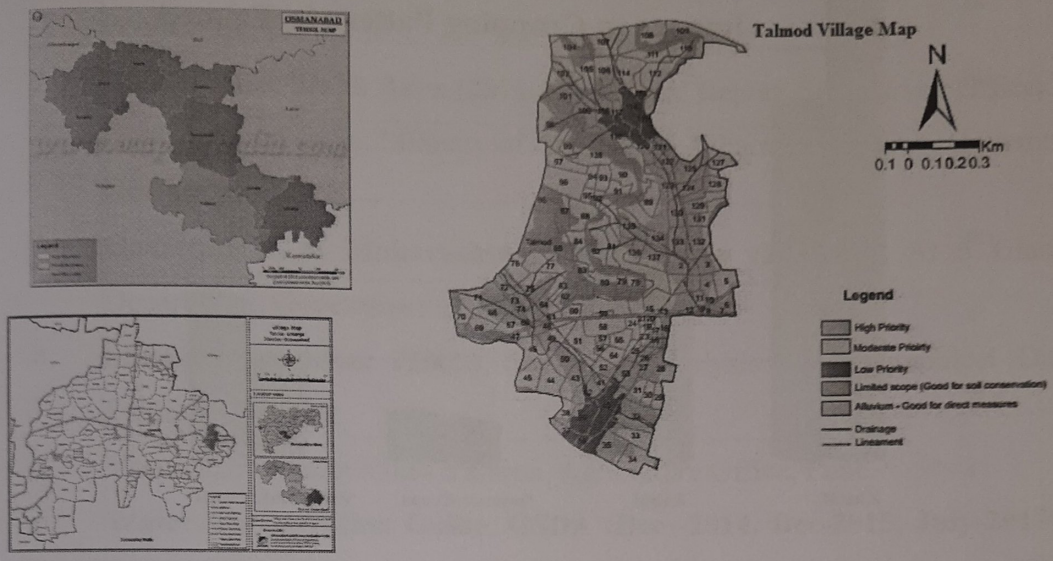
Study Area

Talmod is a large village located in Omerga tahsil of Osmanabad district, Maharashtra. It is situated 12km away from sub-district headquarter. He is the part of Bhima River Watershed Area. Talmod village is also a gram panchayat. Micro Watershed area code no. BM-11/03/02, 03. Village total geographical area 972.38 (ha) and also treatable area are 855.69 (ha), Area treated Under IWMP/DPAP /Hariyali/ Other Schemes is 835.66 (ha). The village located at 17°49′40′′ North latitude and 76°45′04′′ East longitude. Talmod village has population of 3183 out of which 1619 are males while 1564 are females as per population census 2011.

The watershed project area falls in agro climatic zone - assured rainfall zone. The project area receives unreliable annual rainfall of about 662.15 mm. The average maximum and minimum temperature of the area is 41^0C and 10^0 C. The rainy season is most humid than the

rest of the year.

Study area Map



https://www.mapsofindia.com/maps/maharashtra/tehsil/osmanabad.html

Impact on Cropping Pattern

The information received by the people of the village selected for getting the information of the pickup was used while collecting information, the information collected from the farmer's family and the crop taken before the watershed area development crops and later crops was collected.

The following table no. 1.1 is given information about

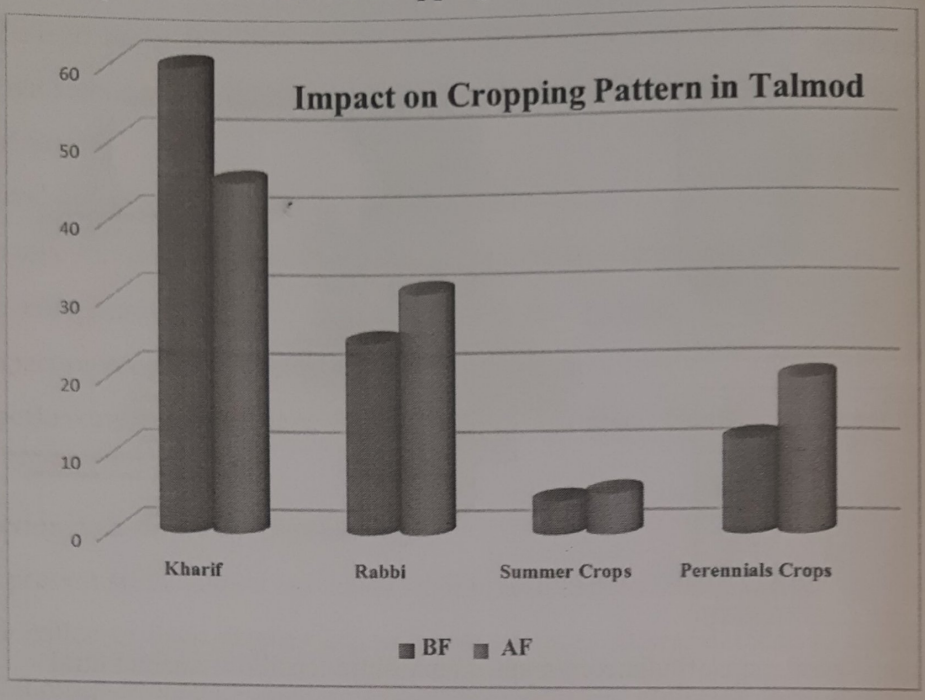
Impact on Season wise Cropping Pattern in Talmod villages (Area in Acre)

Sr. No.	Season	Before (BF)	After (AF)	Increase/ Decrease
1	Kharif	753 **(59.67)**	661 **(44.81)**	**-12.22**
2	Rabbi	307 **(24.33)**	451 **(30.58)**	**46.91**
3	Summer Crops	53 **(4.20)**	76 **(5.15)**	**43.40**
4	Perennials Crops	149 **(11.81)**	287 **(19.46)**	**92.62**
Total Area in Acre.		**1262**	**1475**	**16.88**

Source: Primary Survey (Computed by Researcher)

Note: Figures in Parentheses indicate percentages

Graph No. 1.1, Impact on Season wise Cropping Pattern in Talmod villages



The above table and graph number 1.1 is given Talmod villages season wise area of crops and season wise field area of crops in Acres. it implies that before the village works in the area of watershed area development, the area under different crops in all selected villages was Kharif 59.67 percent, Rabbi 24.33 percent, summer crops 4.20 percent and perennials crop 11.81 percent respectively.

According to the change in the area under this crop area, their ratio is Kharif 44.81 percent, Rabbi 30.58 percent6, summer crops 5.16 percent and perennials crops 19.487 percent change in crops respectively. This leads to conclusion that after watershed area development, the Kharif has decreased by 12.22. In the area of rabbi crops 46.91 percent, summer cropped area 43.40 percent and perennials have been increased by 92.62 percent in the field of cropped area.

Conclusions

- The Kharif crop area has decreased by 12.22 percent after the watershed area development in the selected villages of cropping pattern, but the Rabbi crop area has increased by 46.91 Percent.
- After the watershed area development changes has occurred in Kharif crops. The area under cultivation of Bajra, Jowar, Cotton, Tur, Mug and Udid is decreasing and there is an increase in area under Soyabean and other crops.
- Percent, Summer Crops area 43.40 percent and perennials crops area by 92.62 percent.

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