

Watershed Management and Its Impact on Socio-Economic aspect of people: A Study of Village- Jeur Baijabaiche, Tehsil - Nagar, District of Ahmednagar, Maharashtra

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ABSTRACT

In Maharashtra, Ahmednagar district is mainly known as a drought prone area. Climate of Ahmednagar is generally hot and dry and is characterized by a hot summer and general dryness during major part of year except during monsoon season. Ahmednagar district has an uneven rainfall and the distribution rainfall is also uneven and it's not always regular. Average rainfall of Ahmednagar district 531.mm .The district being situated in "Rain Shadow" zone of Western Ghats, it often suffers the drought conditions. Therefore Watershed development project in the country has been sponsored and implemented by Government of India from time to time. Various watershed development programs like Drought Prone Area Program (DPAP), Desert Development Project (DDP), River Valley Project (RVP), National Watershed Development Project for Rain -Fed Areas (NWDPR), Integrated Watershed Development Program (IWDP), Rain Water Harvesting, CCT, and Jalyukt Shivar Scheme were launched subsequently in various hydro-ecological regions. Paani Foundation works collectively with The Government of Maharashtra.

It is ideal for increase infiltration of rain water, reduces runoff, and reduces the soil loss and increase the ground water level. This is useful for increase agriculture productivity and solving the problem of shortage of drinking water

2. STUDY AREAS

The study area is "Jeur Baijabaiche Village", Nagar-Tehsil, Ahmednagar District, and Maharashtra. It is located between 19.09" latitude and 74.7" longitude .It is 16 km away from Ahmednagar. The total geographical area of the village is 3084.17 ha. There are total 12 sub villages (wadi) under Jeur, which are Bahirwadi, Chafewadi, Sasewadi, Todmalwadi, Waghawadi, Dhanger wadi, Jarewadi, Magarwasti, Udermal Pagermal, Lingadewasti and Belhekar wasti

3. NEED OF RESEARCH PROBLEM

The Jeur Baijabaiche is a village in Ahmednagar District of Maharashtra which is just 16 Km away from Ahmednagar. Farming is the main occupation of the village people and more than 60% people of village are engaged in the Agriculture. The farmer produces "Rabbi" crops and "Kharif" crops throughout the year. Economically backward people especially women from SC, ST, NT Category are working in farm on basis of daily wages. Poverty rate is very high in the area. Area has water scarcity issues as area receives very less rainfall the annually. Every year the area faces the problem of water scarcity because there is no water in well, river and in ground. Therefore, the progress of the village has not taken place as per expectation, resulting in problematic issues like poverty, illiteracy, unemployment, malnutrition and the health of the people.

As I was born and brought up in this area, I felt and understood the requirement of the people of this area. Therefore I have selected the study area of the village of Jeur Baijabaiche.

4. SCOPE OF RESEARCH

The study of watershed management becomes very important as it helps us to properly balance between uses the water resources and socio –economic development.

This study also helps to upliftment and development of the life of the rural people through watershed management.

- 1) It helps to improve the productivity of the soil through improved soil and water management practices.
- 2) It helps to increase crop production through proper watershed management.
- 3) It helps to restore the ecological balance through resource conservation.
- 4) It helps to spread awareness, literate and train the local inhabitants about watershed management.
- 5) And with focus on the above mentioned objectives, we would like to emphasize on the development of socio-economic condition of the people of the selected area

5. OBJECTIVES OF THE STUDY

The objectives of my study area are:

- 1) To study the Geographical setup of the village Jeur Baijabaiche, Ahmednagar, District of Maharashtra.
- 2) To study the concept and methods of watershed management.
- 3) To assess the socio-economic impact of watershed management project upon farmers in the village.
- 4) To explore the major problems of people in the study area.
- 5) To suggest a remedial measures to improve the socio-economic status of village people through water management.

6. HYPOTHESIS

There is significant relation between “Watershed Management and the socio-economic aspect of people in the village Jeur Baijabaiche, Ahmednagar, District of Maharashtra.

7. METHODOLOGY

The present study is based on the data collected from primary and secondary sources.

a) Primary data: The primary data was collected through field visit of various destinations in the study area by the structured questionnaire. Sample studies of 200 people were collected from random sampling of target group of people (especially farmers of village). Besides data collection also involves discussion with people of village and local government.

b) Secondary data: Secondary data was collected through District Census Hand Book, Sandarbha Maharashtra,, Published and unpublished materials from District socio economic review; Tehsil of Nagar , District of Ahmednagar. Besides data also collected from reference Books, Journals, Article from the News papers and Internet.

Data analysis: The collected data through the questionnaire is finally tabulated, analyzed and the result presented in the form of maps, tables, photographs etc. It has been explained by using tools of descriptive statistics i.e. mean, mode, medium and correlation through micro soft excel. Research study has also used map.

9. ANALYSIS AND INTERPRETATION OF DATA

The present study has focus on various aspects of socio-economic &Environmental characteristics people of village Jeur Baijabaiche.

Table: 1 Respondents occupation.

Sr. No	Occupation	Respondents	Percentage
1	Farming	200	100

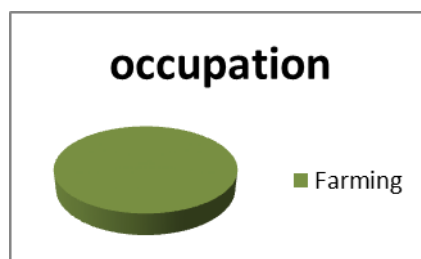


Fig: 1. Picture of Respondents occupation.

Table: 2 classification of Respondents Gross Income Level.

Sr. No	Income level	Respondents	Percentage
1	Less than 1 lakh	6	3
2	1 to 5 lakh	106	53
3	5.1 to10 lakh	64	32
4	Above 10 lakh	24	12
Total		200	100

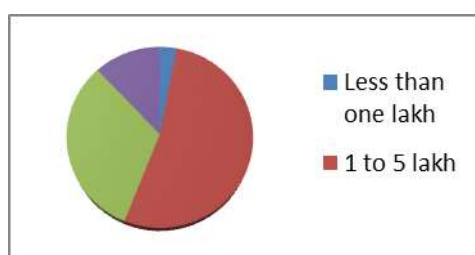


Fig: 2. Picture of Classification of Respondents Gross income level

Table: 3 Classifications of Respondents Sources of Water

Sr.No	Sources of Water	Respondents	Percentage
1	River	90	45
2	Well	190	95
3	Boar well	152	76
4	Pond (Nalla bound)	80	40
5	Farm Pond (Shet Tale)	42	21
6	Gabion Dam	56	28
7	Hand pump	22	11

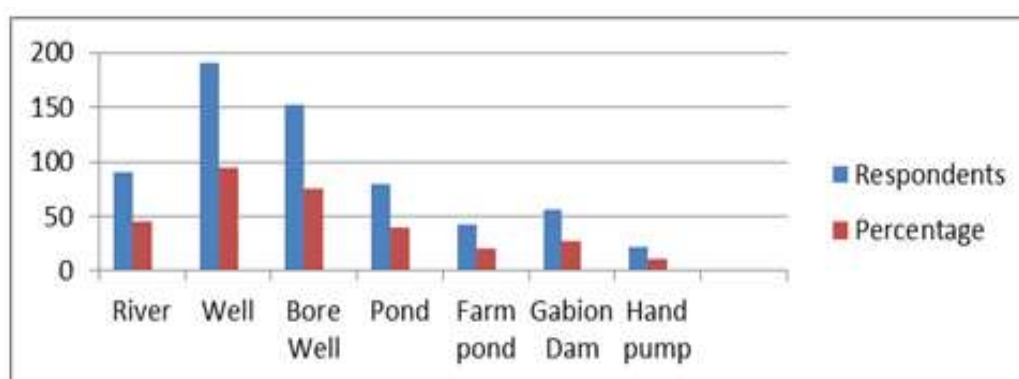


Fig: 3. Picture of Classification of Respondents sources of water.

Table: 4.Types of responders farming.

Sr. No	Type of Farming	Respondents	Percentage
1	Kharif (on rain water)	200	100%
2	Rabbi (on irrigation facilities)	160	80%

Sources: Primary data collected from study area of watershed management beneficiaries.

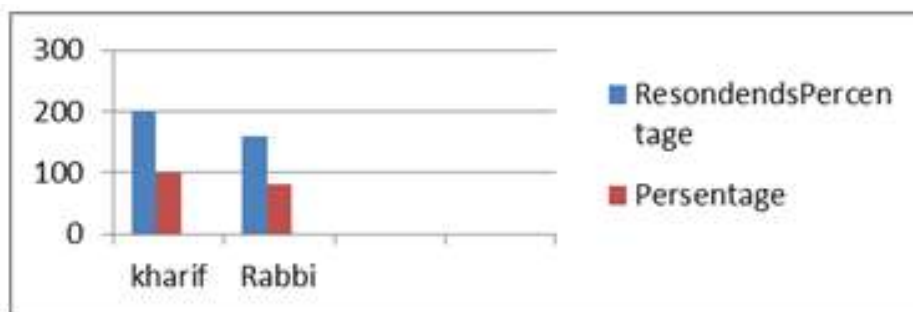


Fig: 4. Picture of Types of responders farming.

Table: 5. Respondents Cropping Pattern Kharif Season.

Sr.No	Kharif	Respondents	Percentage
1	Moong Bean	140	70
2	Moth Bean	54	27
3	Pigeon pea (Toor)	110	55
4	Horse gram (Hulge)	40	20
5	Millets (Bajra)	186	93
6	Green peas	50	25
7	Groundnut	46	23

Sources: Primary data collected from study area of watershed management beneficiaries.

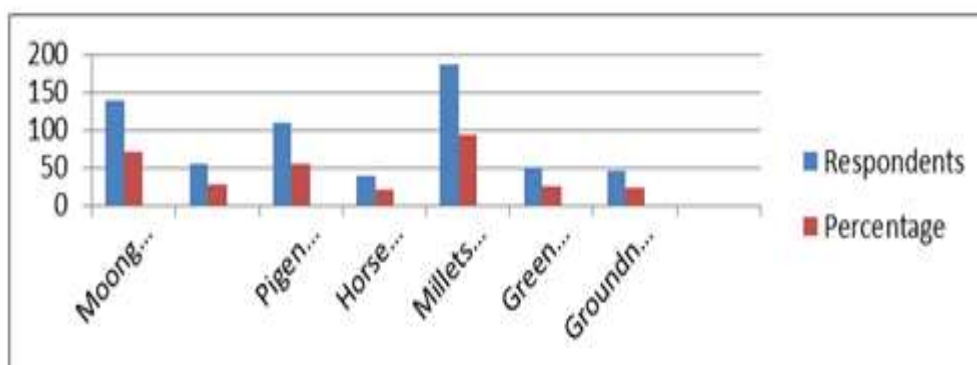


Fig: 5. Picture of classification of Kharif Crop

Table: 6. Respondents cropping Pattern of Rabbi Season

SR NO	Rabbi	Respondents	Percentage
1	Wheat	146	73
2	Jawar	120	60
3	Onion	182	91
4	Bengal gram (Chana)	100	50
5	Cotton	40	20
6	Vegetables	90	45
7	Animal Fodder	60	30
8	Horticulture	48	24

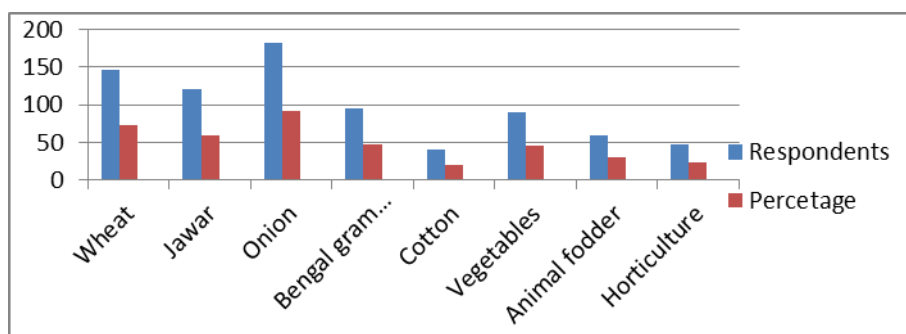


Fig: 6. Picture of cropping pattern of Rabi Season of respondents.

Table: 7. Classification of Animal Fodder.

Sr. No	Type of Animal Fodder	Respondents	Percentage
1	Maize	22	11
2	Grass (Ghass)	60	30
3	Millet remains (Kadval)	42	21
4	Hay (dry bhusa)	34	17
5	Sugar cane	12	6
6	Jawar remains (kadaba) forage	30	15

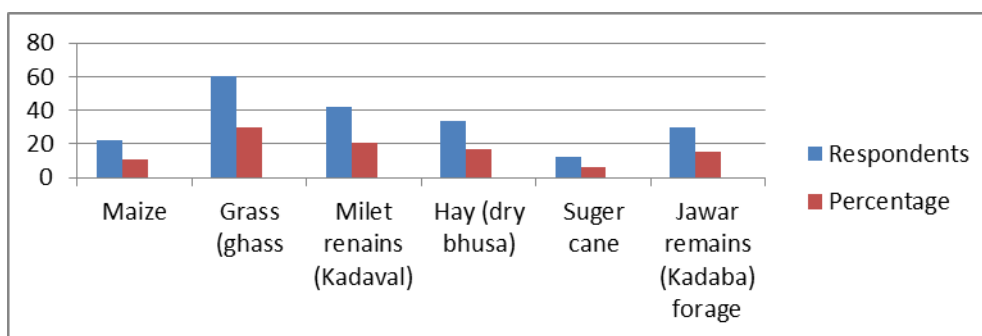


Fig: 7 Picture of classification of Animal fodder

Table: 8. Classification of Horticulture of Respondents

Sr. No	Type of Horticulture	Respondents	Percentage
1	Orange	12	6
2	Pomegranate	12	6
3	Chikoo	8	4
4	Lemon	6	3
5	Custard apple	16	8
6	Guava	8	4

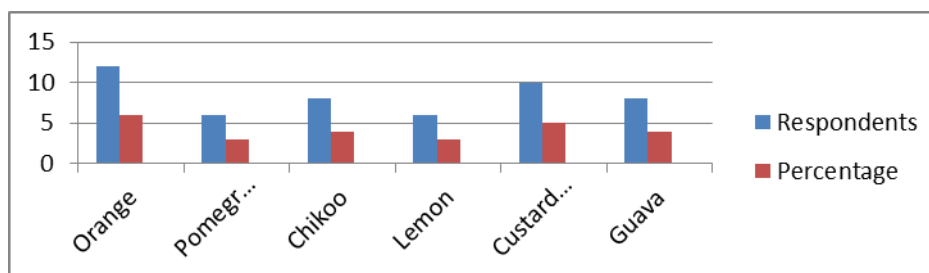


Fig: 8. Picture of classification of Horticulture

Table: 9. Type of Vegetables.

Sr.No	Vegetables	Respondents	Percentage
1	Fenugreek (Methi)	120	60
2	Spinach (palak)	50	25
3	Dill (Shepu)	66	33
4	Mint	20	10
5	Amaranth (chouli)	40	20
6	Coriander	100	50
7	Ladies finger	130	65
8	Cucumber	36	18
9	Brinjal	80	40
10	Ridge gourd (Dodke)	68	34
11	Bitter gourd (karle)	60	30
12	Bottle gourd (bhopla)	38	19
13	Long beans (chouli)	44	22
14	Cluster beans (Gavar)	68	34
15	Cabbage	72	36
16	Cauliflower	80	40
17	Radish	30	15
18	Carrot	48	24
19	potato	50	25
20	Sweet potato	36	16
21	Chillies	82	41
22	Ginger	16	8
23	Garlic	100	50

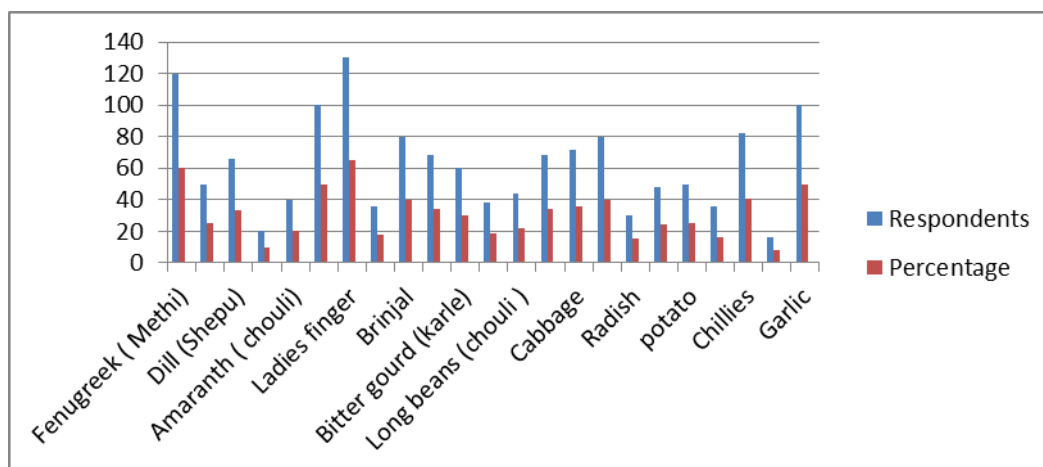


Fig: 9. Picture of types of vegetable by respondents

Table: 10. Classifications of Livestock of Respondents

Sr.No	Types of Livestock	Respondents	Percentage
1	Cow	58	29
2	Buffalos	84	42
3	Ox	12	6
4	Goat	36	18
5	Poultry	54	27

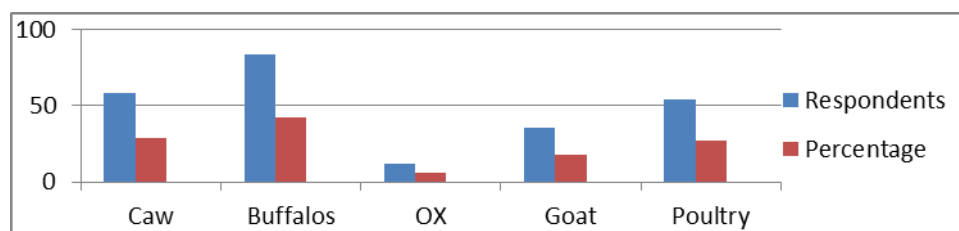


Fig: 10. Picture of classifications of Livestock

Table: 11 Classification of Technology used in the farm by respondents

Sr. No	Use of Technology	Respondents	Percentage
1	Tractors	190	95
2	Electronic Meter	160	80
3	Drip Irrigation	52	26
4	Sprinkle irrigation	12	6

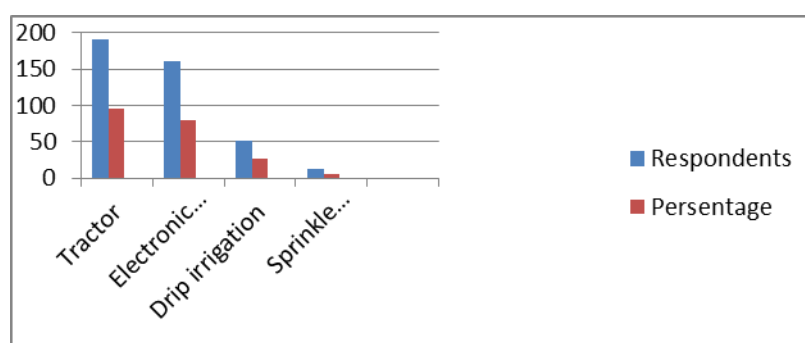


Fig: 11 Picture of classification of technology Used by respondents in farms

4.2 THE FINDING OF THE STUDY (RESULT)

The following results were obtained through the analysis of the produced socio-economic questionnaires.

- 1) Around 70 percent farmers and villagers have took participation in project work for water management and done work such as Nalla widening, River Deeping, Nalla repairing, CCT, contour bond ,earthen dam, compartment bonding, gabion dam and well replenish with Panni foundation and under the schemes of Government of Maharashtra.
- 2) 90 percent respondents have agreed that, watershed management operations have a Positive impact on their cropping pattern and increase agricultural production including Kharif crops and Rabbi Crops from their land in last two decades.
- 3) 80 percent respondents are believed that, construction of watershed management projects have effectively increased their income.
- 4) 95 percent respondents announced that, changed in their Housing structure of prior to the construction of watershed management project.
- 5) 90 percent respondents are believed that positive impact of construction of different watershed management project on educational status of their children's has increased the income.
- 6) 90 percent respondents announced that, implementation of construction project have been an effective impact on the use of sources of transport.
- 7) 80 percent respondents were satisfied with construction of projects and have a positive impact on use of technology in their farm.

- 8) 80 percent respondents have agreed that, constructing of operation is effectively changes in discharge of water from well and bore well. Therefore possible to take all vegetables during the seasons thus helps to increase source of income for their livelihood.
- 9) 60 percent respondents have declared that watershed management project have a positive effect on the number of livestock and their income in the region.

SUGGESTION

1) Judicious use of water: Judicious use of water controls weed growth and water logging in a watershed. It also results in increase in the crop growth. Thus judicious water use can improve the cropping pattern to a large extent.

2) Introduce scientific micro irrigation techniques. This method including Drip irrigation, Sprinkle irrigation and Micro irrigation helps to loss of water in conveyance (drain) and deep percolation is avoided. It will help to check the growth of weed and water logging plants is completely controlled.

3) Water Harvesting: In both dry and rainfed areas, water harvesting by row crops or interplot is in pounds to use it for crops during the long spell of drought.

4) Rainwater Harvesting System: Rainwater harvesting system is collection of rainwater from the surface which directly receives rainfall. **Rainwater harvesting system can be rooftop rainwater harvesting or artificial groundwater recharging.**

5) Water conservation: Conservation or water conservation helps to recharge ground water by reducing consumption and using alternative source of water. This method includes rainwater harvesting, groundwater recharge, reuse of Greywater and recycling wastewater

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