



# Impact on Sustainable Rural Livelihood of Integrated Watershed Management Program of Beneficiary Farmers in Khandwa District of Madhya Pradesh

Ms. Sonila Bhanvar<sup>1</sup>; Dr. Sandhya Choudhary<sup>2</sup>;  
Dr. D.K. Verma<sup>3</sup>; Dr. A. Wankhede<sup>4</sup>

<sup>1</sup>M.Sc. Agriculture Extension & Communication Final Year Student 2019, College of Agriculture, Indore

<sup>2</sup>Professor, Agriculture Extension & Communication, College of Agriculture, Indore

<sup>3</sup>Assistant Professor (Contractual) Agriculture Extension & Communication

<sup>4</sup>Associate Professor, Agriculture Extension & Communication, College of Agriculture, Indore

**Abstract:** *This study concentrates on the Integrated Watershed Development program and impact of the program in terms of crop production, water consumption in farming system, as well as income and employment generation. Again it is found to use to the maximum extent water resources and provide betterment in farmer's livelihood. Evaluation studies on Integrated Watershed Development Programme have shown that the impact of the programme in terms of production, consumption, income and employment generation was found to be satisfactory to a minimum extent. Hence it is worthwhile to study the changes occurred in livelihood activities of beneficiaries farmer of Integrated Watershed Development Programme (IWMP) in Khandwa district of Madhya Pradesh with 80 beneficiaries farmers. The major finding of study was that the impact of agricultural activities on rural livelihoods of watershed project beneficiaries on different attributes like improvement of water resources, land use change, socio economic status, health services improvement, employment generation in family, capacity building, agriculture livelihood favourability, capital and food security.*

**Keywords:** *sustainable rural livelihood, Integrated Watershed Management Program, beneficiary farmers, Impact*

## Introduction:

The twenty-first century is a time by which the world is seriously confronted by issues sustainable use of water and land resources to improve rural livelihoods for It is clearly argued that a stable livelihood contributes to the pleasant development of related policies, poverty eradication and sustainable use of resources. Conservation and management of land and water resources. for sustainable intensification of agriculture and poverty, decrease in developing regions has remained one of the most challenging policy issues for a long time, and most local, regional, and international policies, programs, initiatives, covenants, protocols, and conferences pay much attention on land resources such as soil, water, and vegetation in trying to improve human livelihoods as well as conserving these resources for future generation. It is clearly argued that a stable livelihood



contributes to the harmonious development of related polices, poverty eradication and sustainable use of resources.

Agriculture and allied activities hold livelihoods of nearly 70 per cent of India's rural population. In new years, land based livelihoods of small and marginal farmers are increasingly becoming unsustainable, since their land has not been able to support the family's food necessities and fodder for their cattle. As a effect, rural households are required to look at alternative funds for supplementing their livelihoods. Rural men and women, particularly in poor households connect in diverse and multiple activities to improve their livelihoods by maximizing income generating activities, while minimizing vulnerability and risk and achieving other household objective.

#### **Objective:**

To study the Impact on sustainable rural livelihood of Integrated Watershed Management Program beneficiary farmers.

#### **Review Literature:**

Nuraeni(2013) concluded that the internal factors directly and significantly influenced both the farmers' perception and participation in the implementation of such watershed conservation.

Dhakad (2014) found that after the NRLM programme all the selected aspects of sustainable livelihoods viz human capital, food security, physical capital , financial capital and social capital of NRLM beneficiaries were significantly higher than that of before programme.

Panda *et al.* (2015) It was found that with the creation of irrigation potential the traditional cropping system have been shifted in favour of valuable cash crops. In spite of crop shifting and higher yields there was a large scale of food insecurity; it was to the tune of 84 per cent in the project area and 100 per cent in the non project area.

Roy *et al.* (2015) revealed that incorporation of new technologies increased the yield of major crops in the watershed area. The increment in yields with respect to paddy, groundnut and mustard were 36.30, 40 and 33.3 per cent, respectively. The results further showed that fuel wood and fodder yield have also been increased by 66.66 and 75 per cent, respectively in case of small farmers.

Biradar *et al.* (2016) revealed from the study that, among income generating activities promoted under project 25.83 per cent of the respondents had preferred cow rearing as their income generating activity

Chourasia *et al.* (2017) found that due to watershed interventions there has been a substantial increase in irrigated area, groundwater table which brought changes in cropping patterns, diversification through introduction of high value crops. The watershed program also significantly



improved the socio-economic status of the watershed community by generating employment opportunities reducing the migration of both skilled and unskilled labour from the watershed village.

### Material & Method:

The present study was conducted in Khandwa district of Madhya Pradesh. There are six Integrated Watershed Management Programme running since the year 2009-10 by the Department of Panchayat and Rural development in six blocks. The maximum number of villages have been covered under IWMP Khandwa. Hence IWMP of Khandwa, Khalwa and Pandhana block was considered for the study with 80 beneficiaries farmers as consider the sample who have participated in IWMP.

### Result & Discussion:

#### Impact on sustainable rural livelihood of Integrated Watershed Management Program beneficiary farmers

Table: Distribution of the respondents according to their overall sustainable rural livelihood of IWMP

S. No.	sustainable rural livelihood	Frequency	Percentage
1.	Low	22	27.50
2.	Medium	39	48.75
3.	High	19	23.75
	<b>Total</b>	<b>120</b>	<b>100.00</b>

The above Table reveals that out of 80 respondents, 48.75 per cent showed medium sustainable rural livelihood, 27.50 per cent of respondents indicated low sustainable rural livelihood, where as 23.75 per cent depicted high sustainable rural livelihood of IWMP .

Thus, majority of the beneficiary were found to have medium sustainable rural livelihood of various components of IWMP followed by low and high sustainable rural livelihood of various components of IWMP



**Table: Impact of agricultural activities on rural livelihoods of watershed project beneficiaries**

S. No.	Indicators of sustainable livelihoods	Mean sustainable livelihood index		Difference in (%)	SD	Z-value
		Before 2009	After 2009			
1	Improvement of water resources	11.25	5.26	113.87	2.86	2.13
2	Land use change	10.50	5.18	102.70	2.35	2.07
3	Socio economic status	10.48	5.09	105.89	2.33	2.06
4	Health services improvement	10.46	6.12	70.91	2.31	2.05
5	Employment generation in family	10.65	6.31	68.77	2.41	2.08
6	Capacity building	10.37	5.99	73.12	2.26	2.03
7	Agriculture livelihood favorability	15.62	7.36	112.22	3.36	2.41
8	Capital	24.81	13.56	82.96	4.89	2.76
9	Food security	7.82	4.68	67.09	1.79	1.97
	Overall mean sustainable livelihood index	12.44	6.03			

**Significant at 5% level of significance**

Table depicts the 'z' value indicating the Impact of agricultural activities on rural livelihoods of watershed project beneficiaries. The characteristics namely, improvement of water resources, land use change, socio economic status, health services improvement, employment generation in family,



capacity building, agriculture livelihood favourability, capital and food security had significant relationship of impact of watershed at 5% level of significance.

The impact of agricultural activities on rural livelihoods of watershed project beneficiaries on different attributes like improvement of water resources, land use change, socio economic status, health services improvement, employment generation in family, capacity building, agriculture livelihood favourability, capital and food security. It was found that the improvement of water resources had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the land use change had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the socio economic status had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the health services improvement had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the employment generation in family had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the capacity building had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the Agriculture livelihood favourability had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the Capital had significant impact with the rural livelihoods of watershed project beneficiaries. It was found that the food security had significant impact with the rural livelihoods of watershed project beneficiaries.

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