

Study on Impact of Agricultural Activities on Sustainable Rural Livelihood of Watershed Project Beneficiaries in Khargone District of M.P.

^IRahul Mandloi, ^{II}Sanjay Vishwakarma, ^{III}Dr. Sandhya Choudhary, ^{IV}Dr. V.K. Swarnakar

^{I,II}M.Sc. Extension Education Final Year Student 2016, ^{III}Associate Professor

^{IV}Professor & Head, Extension Education, College of Agriculture, Indore

Abstract

Looking to the importance of livelihood of farmers through various agricultural activities, like watershed development programme are emphasizing the need for greater community involvement in planning and management of interventions, reorientation of line department roles and issues of efficiency, sustainability and equity. Keeping in pace with the nation wide trend and its own policy of decentralization, Madhya Pradesh Government started Rajiv Gandhi Watershed Mission Programme in the year 1995. Its strategy was to improve economic conditions of villagers by enhancing their employment opportunities by providing employment in initial stage by construction of water harvesting structures and various soil and water conservation activities and later on intensifying agriculture by providing a source of irrigation. The study revealed that the overall impact of agricultural activities on rural livelihoods of watershed project beneficiaries was found to change. This change occurred due to enhancement of socio economic status of beneficiaries.

Introduction

Watershed development is an approach to build and strengthen the basic resources in a watershed area, so as to enable the establishment of sustainable support for living standard of participant farmers. This is an integrated approach on a natural hydrologic unit known as watershed. Watershed is a natural hydrological entity that covers a specific area of land surface within whose boundaries the entire run-off ultimately passes through a specifically defined stream. Thus, it is a unit of land on which all rain water is collected by gravity and runs via a common single outlet and as such it is an area of land that contributes run-off to a common point and is separated from adjoining areas by a natural elevation ridgeline. Watershed as a geographic area drained by stream or a system of connecting streams such that all surface runoff originating due to the precipitation in this area leaves the area in a concentrated flow through a single outlet. Hence, a natural unit is widely used for ecosystem planning and development in the country. These resources are interdependent and integrated in such a way that use of one resource may influence the other. As such, the management planning of these factors is determined with the proper consideration of ecological and socio-economic factors. Agriculture and allied activities support livelihoods of nearly 70 per cent of India's rural population. In recent 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 requirements and fodder for their cattle. As a result, rural households are forced to look to alternative means for supplementing their livelihoods. Government of M.P has given high priority for the development of dry land agriculture on watershed basis where soil and moisture conservation efforts are being carried out for improving the productivity and stabilizing the agriculture production of the state. Success of any rural development project depends on degree of involvement of the people in the programme and at what extent they obtaining benefits from different activities relative with income generation. Keeping this in view to study impact of capital generating activities on sustainable rural livelihood the present investigation was conducted with following specific objective

Objective

To study the impact of agricultural activities on rural livelihoods

of watershed project beneficiaries

Review of Literature

Naik et al. (2009) carried out their study in Aghalya-Nagargatta watershed in Karnataka during 2006-07 to analyse the impact of Watershed Development Programme (WDP) on economic performance, annual income and employment generation of the beneficiaries. Two hundred and ten participant farmers from the project area were interviewed using a pre-tested schedule. The study revealed a significant increase in the economic performance index, 19 annual income and employment generation in case of marginal, small and large farmers after the implementation of Watershed Development Programme (WDP) in the area. Sagitra (2015) reported that one of the most notable difference seen after intervention of watershed project that the beneficiaries with high level of human capital assets had been increased by 19.99 per cent followed by high physical capital possession farmers has been increase by 20.84 per cent, high social capital possession has been increase by 16.67 per cent, of high financial capital possession has been increase by 21.66 per cent and high food security capital possession has been increase by 17.50 per cent respectively. Yadav (2015) reported that the highest contribution from livestock production system to farmer's livelihood was observed in respect of "employment generation" rank Ist followed by "income of family", "nutrient to the farm and use of cow dung" and "food security" rank IInd each, "social assets" rank IIIrd, "nourishment to the family" and "income generation" rank IVth each. The study also revealed that the higher percentage of livestock rearing farmers in the area observed medium overall contribution of livestock production system for livelihood security followed by low and high level of contribution of livestock production system for livelihood security.

Material & Methods

The present study had been conducted in Khargone districts of Madhya Pradesh. Multi stage sampling design had been adopted for selection of sample for study. The watershed project was undertaken for the implementation of the livelihood development programmes in Bhagwanpura Block in Khargone District. Bhagwanpura Block was selected purposively for the study because watershed programme had been launched in this block, having

maximum area under coverage and also due to convenience of the researcher for data collection. At the second stage of selection 2 villages namely Badi and Devanaliya were selected purposively because in these villages maximum number of households had benefited by the project. The method used for selection of the beneficiaries was random sampling. From the selected villages, the list of beneficiaries' undertaking agricultural activities was prepared and among them 95 beneficiaries (35 farmer from Badi and 60 from Devanaliya) had been selected for present study. An interview schedule was used as the research instrument in order to collect relevant information from the beneficiaries. Data were

collected by the researcher himself. The task was accomplished through a door to door visit to the selected beneficiaries using the structured interview schedule. The data was collected for the year of 2015-16.

Result & Discussion

Sustainable rural livelihood of beneficiaries:

The impact of crop loan on socio economic change of beneficiaries was analyzed by considering the criteria of important socio economic attributes which encompassed 13 components. The

impact of sustainable rural livelihood of beneficiaries before and after undertaking the agricultural activities in various attributes generating status was documented. The distribution of beneficiaries as per their socio economic status before and after the project has been presented in Table 4.9

Table: Impact on sustainable rural livelihood of beneficiaries after and before intervention of the project. (n=95)

S.No.	Categories	Before project			After project		
		Low	Medium	High	Low	Medium	High
1.	Change in cropping pattern/System	44 (46.30)	26 (27.30)	25 (26.40)	12 (12.63)	48 (50.52)	35 (36.84)
2.	Change in water conservation and water use efficiency	54 (56.85)	22 (23.15)	19 (20.00)	14 (14.73)	39 (41.05)	42 (44.21)
3.	Change in material possession	35 (36.84)	39 (41.05)	21 (22.11)	28 (29.47)	29 (30.52)	38 (40.00)
4.	Enhancement in production	29 (30.50)	34 (35.80)	32 (33.70)	23 (24.20)	30 (31.60)	42 (44.20)
5.	Enhancement in productivity	32 (33.70)	31 (32.60)	32 (33.70)	25 (26.30)	28 (29.50)	42 (44.20)
6.	Change in diversification	35 (36.80)	35 (36.80)	25 (26.40)	29 (30.50)	32 (33.70)	34 (35.80)
7.	Adoption of crop diversification	30 (31.60)	52 (54.70)	13 (13.70)	28 (29.50)	35 (36.80)	32 (33.70)
8.	Benefit relised from crop diversification	37 (38.90)	38 (40.00)	20 (21.10)	29 (30.50)	34 (35.80)	32 (33.70)
9.	Credit needs after project intervention	27 (28.40)	56 (58.90)	20 (21.10)	18 (18.90)	30 (31.60)	47 (49.50)
10.	Loan recovery become easy after project intervention	31 (32.60)	43 (45.30)	21 (22.10)	22 (23.20)	23 (24.20)	50 (52.60)
11.	Adopted the improved crop production technology after the project intervension	26 (27.40)	57 (60.00)	12 (12.60)	26 (27.40)	29 (30.50)	40 (42.10)
12.	Motivated to other farmers regarding improved technology	34 (35.80)	38 (40.00)	23 (24.20)	18 (18.90)	26 (27.40)	51 (53.70)
13.	Enhancement in socio economic status after the project	27 (28.40)	48 (50.50)	20 (21.10)	19 (20.00)	37 (38.90)	39 (41.10)
	Overall	34 (35.80)	40 (42.10)	21 (22.10)	22 (23.16)	32 (33.68)	41 (43.16)

Impact of project on overall change in socio economic status:

Table: Overall changes in socio economic status of beneficiaries due to watershed project.

S.No.	Categories	Before loan	After loan
1.	Low	34 (35.80)	22 (23.16)
2.	Medium	40 (42.10)	32 (33.68)
3.	High	21 (22.10)	41 (43.16)

Total	95 (100.00)	95 (100.00)
t=5.09		

The overall impact of agricultural activities on rural livelihoods of watershed project in changing the socio economic status of beneficiaries was determined by distribution pattern of beneficiaries among the different categories before and after the project. It was found that generally all most among all the parameter of socio economic status of beneficiaries have been found to change from low and medium to high socio economic status category. In this way, the overall changes in socio economic status may determine that overall 35.80 per cent of beneficiaries was found under low “overall socio economic status” category before the project was decreased and become 23.16 per cent after the project. On the basis of above findings, one of the most notable difference seen after project was that the beneficiaries with low “overall socio economic status” had been decreased by 12.00 per cent over before.

The overall changes in socio economic status may be determined that overall 42.10 per cent of beneficiaries was found under medium “overall socio economic status” category before the project was decreased and become 33.68 per cent after the project. On the basis of above findings, one of the most notable difference seen after project was that the beneficiaries with medium “overall socio economic status” had been decreased by 8.42 per cent over before.

On the other hand, the overall changes in socio economic status may be determined that overall 22.10 per cent of beneficiaries was found under high “overall socio economic status” category before the project was increased and become 43.16 per cent after the project. On the basis of above findings, one of the most notable difference seen after project was that the beneficiaries with high “overall socio economic status” had been increased by 21.06 per cent over before.

To determine the impact of agricultural activities on rural livelihoods of watershed project on socio economic change of beneficiaries, t’ test value was calculated. The calculated ‘t’ value 5.09 at 5 per cent level with 12 d.f. was higher than the table value of ‘t’ 1.99. This was declared to be significant. Therefore, it may be concluded that the data provided enough evidence that there was positive change in socio economic status of beneficiaries after the project. This clearly shows that with regard to the socio economic status of beneficiaries there was a significant difference between before and after the water shed project.

The study revealed that the overall impact of agricultural activities on rural livelihoods of watershed project beneficiaries was found to change. This change occurred due to enhancement of socio economic status of beneficiaries. The enhancement of socio economic status was determined by shifting in distribution pattern of beneficiaries from low status towards medium and high categories during before to after the project intervention. It was found that generally all most among all the parameter of socio economic status of beneficiaries had been found to change from low and medium to high socio economic status category. This finding is in conformity with the finding as reported by Sagitra (2015).

Reference;

[1]. Naik,R.G.; Khan,M. and Narayanaswamy,C. (2009). *Impact of watershed development programme on economic performance, annual income and employment generation*

of beneficiary farmers. Crop Research Hissar. 38(1&3): 287-290.

[2]. Patidar, Rajendra (2008). *A comparative study of knowledge and adoption of soil and water conservation methods and technology among adopted and non adopted farmers of Rajiv Gandhi watershed mission in Dhar district of M.P. M.Sc. (Agri.) Submitted to Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur.*

[3]. Paul,G.; Badal,P.S. and Kumar,P. (2009). *Impact of watershed development programmes on productivity and efficiency of crops in Rajasthan. International Journal of Agricultural Sciences. 5(2): 463-468*

[4]. Sagitra, Nitesh (2015). *Impact of capital generating activities on sustainable rural livelihoods of Watershed project beneficiaries in Dhar District (M.P.). M.Sc. (Agri.) Thesis Submitted to the Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya.*

[5]. Yerpude, Seema and Khare, N.K. (2003). *Socio-personal correlates of extent of participation of tribal women in watershed practices. JNKVV Res. J. 37(2):49-51.*

[6]. Yadav, Rajni (2015). *Contribution of livestock production system to farmer’s livelihood in District Dhar of Madhya Pradesh. M.Sc. (Agri.) Thesis Submitted to the Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya.*