Impact of Communication Behaviour of Farmers of Watershed areas in central India

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Introduction

The degraded land is estimated to be about 178 million hectares in the country. The total arable dryland / rainfed land is under a constant degradation process, the degree of variation being from moderate to severe level of erosion. The reason for soil erosion in drylands is due to many, varied and complex factors, which include not only biophysical factors but also socio-economic factors. The socio-economic factors are totally neglected to improve degraded natural factors such as land, water and vegetation (Sastry et al. 2004). Hence, the Government of India initiated watershed development programme during 1983-84 to improve natural factors so as to improve the economic conditions of farmers and this programme has been continuing till date with sufficient allotment of funds in the budget. A research project was undertaken to know the impact of watershed on natural factors for the benefit of administrators, policy makers etc.

Most of the people living in rural areas depend on agriculture. It has however, been recognized that only through holistic development like the watershed Development Programme, economic conditions of such people can be improved. Watershed development is a risk reduction management approach, which aims at protecting the inhabitants of the poorly endowed fragile ecosystems from acute distress caused by recurring droughts. Watershed management is the process of formulating and carrying out a course of action that seeks to harness the potential of natural, agricultural and human resources of the area. It aims at providing resources that are desired by and suitable to the community. The primary objective is integration of many scattered programmes on natural resource management systems like soil conservation, afforestation and minor irrigation with production systems. Properly formulated micro-watershed project based on a study of climate, soil, water and plant resources on one hand and the human,

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animal resources on the other hand, offers ample scope for evolving sustained livelihood support system in these hinterlands.

The present study aims at reporting some findings concerning the level of general information and efficacy of the watershed management programmes. Further, the study is an endeavour to investigate the important aspects of communication behaviour of farmers and constraints faced by them.

Objectives

i) To study the sources and channels of communication used by the farmers

ii) To see the impact of communication behaviour of farmers of watershed and non-watershed areas about recommended soil and water conservation practices.

iii) To identify the constraints faced by the farmers of watershed and non-watershed areas

Methodology

The study was conducted in ORP watershed Sheetalpur at Hamirpur, Tejpura at Jhansi and Bajni at Datia districts of Bundelkhand region. From each watershed, 50 farmers representing different categories viz., landless, marginal, small, medium and large were selected randomly making a total sample size of 150. The data was collected by personally interviewing the respondents with the help of a pre-structured and tested interview schedule. The collected data was tabulated and analysed by applying suitable statistical tools for drawing meaningful conclusions.

Results and Discussion

i) Communication Sources utilized by Farmers

The major sources of communication utilized by the farmers in watershed areas were agricultural scientists (76%) followed by soil conservation officers (68%), agricultural officers (Bank) (42%), animal husbandry officers (39%), progressive farmers (32%) and sarpanch (29%), whereas in non-watershed areas major sources of communication were sarpanch (53%), progressive farmers (46%), soil conservation officers (19%), animal husbandry officers (17%) and agricultural officers (Bank) (16%) (Table -1).

Table 1: Communication Sources utilized by Farmers of Watershed and non-Watershed areas

N = 75

Sl. No.	Source	Percentage of farmers*			
		Watershed		Non-Watershed	
		%	Rank	%	Rank
1.	Neighbours	26	VII	42	III
2.	Progressive farmers	32	V	46	II
3.	Sarpanch	29	VI	53	I
4.	Soil Conservation officer	68	II	19	IV
5.	Agril. Officer (Bank)	42	III	16	VI
6.	Agril. Scientist	76	I	11	VII
7.	A.H. officer	39	IV	17	V
8.	Other development officers	17	VIII	09	VIII

* Indicates percentage worked out on the basis of total sample.

ii) Communication Channels utilized by Farmers

The results indicated that the major channels of communication in watershed areas were training (82%), radio (68%), demonstration (62%), T.V. (59%), meetings (36%), panchayat (34%) and gossip groups (19%) whereas in non-watershed areas major channels of communication were gossip groups (65%), panchayat (63%), radio (49%), meeting (32%), demonstrations (26%) and training (16%) (Table 2).

Table 2: Communication channels utilized by farmers of watershed and non-watershed areas

N = 75

Sl. No.	Channel	Percentage of farmers*			
		Watershed		Non-Watershed	
		%	Rank	%	Rank
1.	Panchayat	34	VI	63	II
2.	Meeting	36	V	32	IV
3.	Gossip group	19	VII	65	I
4.	Radio	68	II	49	III
5.	Training	82	I	16	VIII
6.	T.V.	59	IV	31	V
7.	Demonstration	62	III	26	VI
8.	Others	15	VIII	21	VII

*Indicates percentage worked out on the basis of total sample.

iii) Impact of Communication behaviour of Farmers

The results presented in Table-3 show that the mean scores (376.12) of communication behaviour of overall farmers of watersheds were worked out whereas in case of non-watershed areas the overall mean scores (276.39) were worked out in view of the recommended soil and water conservation practices.

Table 3: Impact of Communication behaviour of Farmers of watershed and non-watershed areas

Sl. No.	Components of Communication Behaviour	Mean scores	
		Watershed (N = 75)	Non-Watershed (N=75)
1.	Sources of communication (SC)	148.56	119.35
2.	Channels of communication (CC)	133.72	105.61
3.	Information receiving behaviour (IRB=SC+CC)	282.28	224.96
4.	Knowledge (K)	23.58	14.68
5.	Symbolic adoption (SA)	37.40	19.83
6.	Use adoption (UA)	32.86	16.92
7.	Information use behaviour (IUB=K+SA+UA)	93.84	51.43
8.	Communication behaviour (CB=IRB+IUB)	376.12	276.39

The mean scores of sources of communication, channels of communication, knowledge, symbolic adoption and use adoption of watershed farmers were 148.56, 133.72, 23.58, 37.40 and 32.86, respectively. However, in case of the farmers of non-watershed areas these mean scores were 119.35, 105.61, 14.68, 19.83 and 16.92 respectively. Further, the mean scores of information receiving behaviour (282.28), information use behaviour (93.84) and communication behaviour (376.12) of farmers of watershed areas were higher than the corresponding mean scores of non-watershed areas, like, 224.96, 51.43 and 276.39, respectively. This indicates that the farmers of watershed areas had better communication behaviour towards recommended soil and water conservation practices than non-watershed areas. Similar findings were reported by Lal (1972) that 43.33 percent of the farmers had medium, 36 percent low and 20 percent had high communication behaviour in respect of farm technology. The majority of the farmers, i.e. 79.33 percent had low to medium communication behaviour with the various information sources both the receiving as well as passing of information concerning high yielding varieties. Earnest (1973) studied communication utilization behaviour variables, viz; number of sources utilized, extent of information received from

sources, source credibility, frequency of use of sources, number of channels utilized, extent of information received from the channels and characteristics of innovation showed significant difference in their means between small and big farmers. Akhouri (1973) revealed that there was significant relationship between information input, processing and output.

iv) Constraints faced by Farmers in Watershed areas

Table- 4 depicts that the major constraints faced by the farmers of watershed areas were low land holdings (38%) followed by lack of inputs (36%), marketing (31%), high cost of technology (28%), low benefit at initial stage of adoption (21%) and training & awareness (19%).

Table 4: Constraints faced by the Farmers in Adoption of Technology in Watershed and non-Watershed areas

N = 75

Sl. No.	Constraints	Percentage of farmers*	
		Watershed	Non-watershed
1.	High cost of technology	28	62
2.	Low benefit at initial stage of adoption	21	76
3.	Low land holdings	38	53
4.	Training & awareness	19	87
5.	Lack of inputs	36	58
6.	Marketing	31	47

*Indicates percentage worked out on the basis of total sample

Further, the table indicates that in case of non-watershed areas the major constraints faced by the farmers were training & awareness (87%) followed by low benefit at initial stage of adoption (76%), high cost of technology (62%), lack of inputs (58%), low land holdings (53%) and marketing (47%) respectively. This indicates that the farmers of non-watershed areas must be provided need based skill oriented training and awareness camps should be organized for them from time to time.

Conclusion

The major sources of communication utilized by the farmers in watershed areas were agricultural scientists (76%) followed by soil conservation officers (68%), agricultural officers (Bank) (42%) animal husbandry officers (39%), progressive farmers (32%) and sarpanch (29%), whereas in non-watershed areas major sources of communication

were sarpanch (53%), progressive farmers (46%), soil conservation officer (19%), animal husbandry officer (17%) and agricultural officer – Bank (16%). Similarly, major channels of communication in watershed areas were training (82%), radio (68%), demonstration (62%), T.V. (59%), meeting (36%), panchayat (34%) and gossip groups (19%) whereas in non-watershed areas major channels of communication were gossip groups (65%), panchayat (63%), radio (49%), meeting (32%), demonstrations (26%) and training (16%) Further, mean scores of communication behaviour of overall farmers of watershed and non-watershed areas were worked out in view of the recommended soil and water conservation practices. The mean scores of information receiving behaviour, information use behaviour and communication behaviour of farmers of watershed areas were higher then the corresponding mean scores of non-watershed areas. This indicates that the farmers of watershed areas had better communication behaviour towards recommended soil and water conservation practices than Non-watershed areas. Therefore, it is recommended that the facilities available to the farmers of watershed areas should also be provided to the farmers of non-watershed areas for sustainable production and productivity. The major constraints faced by the farmers in adoption of suitable soil and water conservation technology are high cost of technology, low benefit at initial stage of adoption, training and awareness, marketing, low land holdings and lack of inputs in watershed areas.

It is hoped that the findings of this study would provide the necessary guiding insight for developing a need based communication strategy for other parts of the country with a similar situation and commitments.

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