

Stakeholders participation in watershed management for sustainable agriculture

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Abstract

Watershed Development Programme in India is being implemented by both Government and Non-Government Organizations and is incurring lot of expenditure. Realising the importance of people's participation in Watershed Development Programme, a comparative analysis of people's participation in WDP implemented by Government and Non-Government Organization was conducted in Eastern Dry Zone of Karnataka State. Two watersheds, one implemented by Government Organization – Kalyanakere Mavathur and other implemented by Non-Government Organization – Kamasamudram (MYRADA) were selected. The sample size constitute 120 beneficiaries, 60 from each watershed spread over four micro-watersheds. The study revealed that majority of the GO Beneficiaries had medium level of participation (36.7 per cent) as against NGO, who had high level of participation (58.4 per cent). A high level of participation was observed in collection of facts, analyzing the situation, identifying the problem, deciding on objectives, developing a plan of work and execution of a plan by NGO beneficiaries. On the contrary, the GO Watershed beneficiaries were found to have a low level of participation in steps viz; collection of facts, identifying the problem, deciding on objectives, developing a plan, execution of plan and evaluation. Majority GO beneficiaries were found to have information, consultation and functional type of participation in different steps of WDP. While most of the NGO beneficiaries were found in functional, information and consultation type of participation. A majority of the beneficiaries expressed a lack of knowledge as the major constraint to participation which suggested conducting an effective educational activities and creating an awareness of the programme.

Key Words

Watershed, sustainable agriculture, peoples participation.

Introduction

Rainfed agriculture is the key to sustainable development of water and food. In India, more than 70 per cent of the cultivated area is rainfed and rainfed agriculture produces about 45 per cent of total food grain production (Swaminathan 1996). The potential for increasing the irrigable area and enhancing productivity from irrigated lands has its limitations. Therefore, if the country has to conserve and develop natural resources in rainfed areas to improve their production and productivity, their development on watershed basis is inevitable. At present, over 8000 watershed projects are being implemented by government and nongovernmental organisations in India. Watershed development encompasses dimensions like equity, sustainability, gender and social and environmental impact assessment. It has become a trusted tool for the overall development of a village and people living within a watershed area. It has been conceived basically as a strategy for protecting the livelihoods of the people inhabiting the fragile ecosystem experiencing soil erosion and moisture stress. It comprises of development of the watershed area with an integrated approach to harmonize the use of natural resources like land, water, vegetation, livestock, fisheries and human resources with the active involvement of the beneficiary community. Thus, it is being used as a rational unit for planning and management of soil, water and other natural resources. These programmes necessarily involve individual, group and community action. In this direction, the present study has been designed to study the extent and type of participation of beneficiaries in watershed development programmes implemented by Government Organization and Non-government Organization besides knowing their problems in participation.

Methods

The study was conducted in purposely selected Eastern Dry Zone of Karnataka state. For the purpose of comparison two watersheds implemented by Government Organization (Kalyanakere-Mavathur) and Non-government Organization Kamasamudram (MYRADA) were selected for the study. Four micro watersheds were selected in each watershed on a random basis. A proportionate random sampling method was employed to select to 60 beneficiaries in each watershed spread over four micro-watersheds. Thus, the total sample size

constitutes 120 beneficiaries. The data were collected through a personal interview method using a pre-tested structured interview schedule. The obtained data were tabulated, analysed and interpreted using appropriate statistical measures.

Results

Overall participation of beneficiaries in watershed development programme

Table-1 indicated that the beneficiaries participation in NGO implemented watersheds was found to be more (median value 85 per cent) than for Government organize implemented watersheds (12 per cent). The probable reason for the high participation of farmers in NGO implemented watersheds is that NGO had developed the programme based on felt needs and conducted the educational activities and need based training methods so as to involve farmers in planning and implementation of the programme. Moreover, they conducted participatory approaches with beneficiaries.

Table 1. Overall participation of beneficiaries in watershed development programme.

Participation Score	Government Organization		Non-Government Organization		Total		Chi-Square Value
	Number	Per cent	Number	Per cent	Number	Per cent	
Above median	7	11.7	51	85.0	58	48.4	61.7 **
Below median	53	88.3	9	15.0	62	51.6	
Total	60	100.0	60	100.0	120	100.0	

Median value 55.5

** Significant at 0.01 probability level

Extent of participation in different stages of watershed development programme

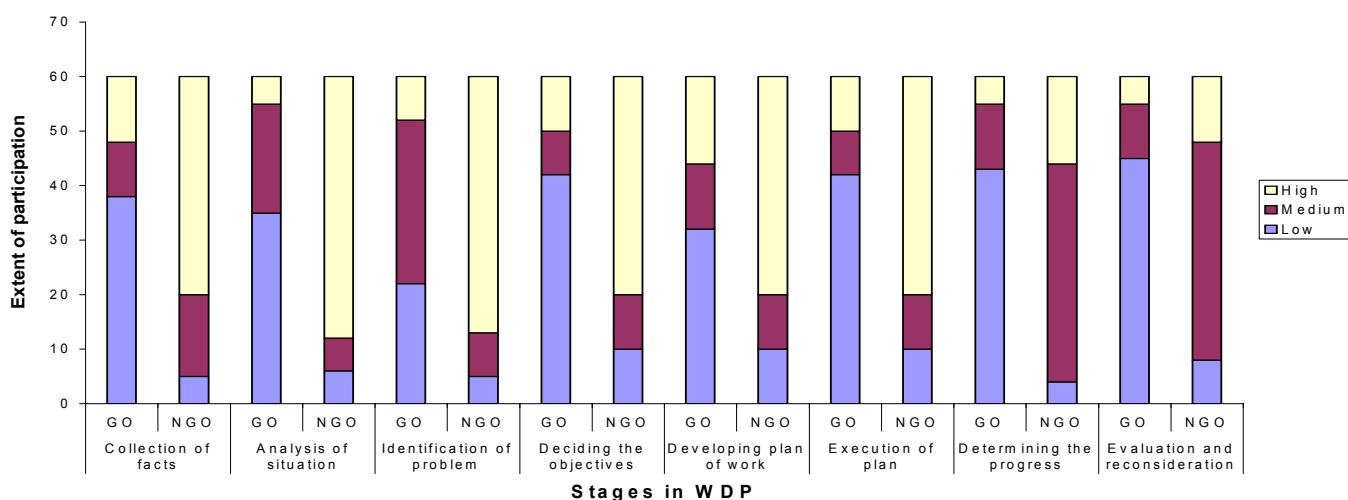


Figure 1. Extent of participation in different stages of watershed development programme.

Figure 1 indicates that more than two-thirds of the NGO beneficiaries (66.7 per cent) had a high level of participation in collection of facts compared to 63.3 per cent of GO beneficiaries who had low level of participation. A similar trend was observed with respect to participation of GO and NGO beneficiaries in analyzing the situation, where 58.4 per cent of the GO beneficiaries and 80 per cent of the NGO beneficiaries had low and high levels of participation respectively. In identifying the problem, 86.6 per cent of the GO beneficiaries exhibited low to medium level of participation as against 91.7 per cent of NGO beneficiaries, who showed medium to high levels of participation. Regarding deciding on the objectives, a large majority of the GO beneficiaries (70 per cent) had a low level of participation compared to almost similar number of NGO beneficiaries (66.8 per cent) with a high level of participation. More than half of the GO beneficiaries (53.3 per cent) had a low level of participation in developing a plan of work. On the contrary 66.8 per cent of the NGO beneficiaries had a high level of participation in this step. In Execution of the plan, 70 per cent of GO beneficiaries showed a low level of participation compared to 66.8 per cent of NGO beneficiaries.

Majority of the GO beneficiaries (71.6 per cent) had low level of participation in determining the progress as against 63.4 per cent of NGO beneficiaries who showed a medium level of participation. It is interesting that three quarters of the GO beneficiaries (75 per cent) showed a low level of participation in the evaluation stage in comparison with 66.8 per cent of NGO beneficiaries who had a medium level of participation. It could be inferred from the results that the majority of NGO beneficiaries had a high level of participation in all of the steps of WDP compared to GO beneficiaries who had a low level of participation. The Chi-square test reveals significant variation in the extent of participation of the beneficiaries between the two organizations.

Typology of participation among GO and NGO beneficiaries

The different types of participation exhibited by the GO and NGO beneficiaries in different stages of WDP is provided in Table 2. It could be noted that in the collection of facts the majority of GO beneficiaries exhibited information giving and consultation types of participation. A similar trend was true with respect to the steps of analyzing the situation, identifying the problems, and deciding the objectives. On the contrary, a majority of the beneficiaries had functional and consultation type of participation with respect to other steps of WDP including developing the plan, execution of plan, determining the progress and reconsideration with evaluation. It was surprising to note that around one-third of the GO beneficiaries did not participate in the different stages of WDP. Further, information giving and consultation type of participation was evident with most of NGO beneficiaries in the collection of facts step. Functional and information giving type of participation was exhibited by most of the farmers in analyzing the situation, identifying the problem and deciding on the objectives. Functional and consultation type of participation in developing a plan, self-mobilization and information giving in evaluation of the programme was the type of participation observed with a large number of beneficiaries. Maximum percentages of farmers were observed in functional, information giving and consultation participation and a negligible percentage was observed in non-participation.

Table 2. Typology of participation.

Programme stages	Type of participation	
	GO Beneficiaries	NGO Beneficiaries
Collection of facts	Information giving and consultation	Information giving and consultation
Analysis of situation	Information giving and consultation	Functional and information giving
Problem identification	Information giving and consultation	Functional and information giving
Deciding the objectives	Information giving and consultation	Functional and information giving
Developing plan of work	Functional and consultation	Functional and consultation
Execution of plan	Functional and information giving	Self mobilization and information giving
Determining the progress	Functional and information giving	Self mobilization and information giving
Reconsideration with evaluation	Functional and information giving	Self mobilization and information giving

Perceived problems

It was evident from the Table 3 that more than two-third of the (80%) of the GO watershed beneficiaries expressed that a lack of knowledge about the programme was their constraint. This was followed by uneven distribution of incentives, supply of poor quality materials and inputs, poor quality of work, groupism and politics and lack of free time to participate in the watershed programme. With respect to NGO beneficiaries, as high as many 60 per cent of the respondents considered a lack of knowledge about the programme as their constraint followed by lack of motivation, poor quality of work, materials and inputs, caste based groupism and political interference.

Table 3. Perceived problems of beneficiaries in participation.

Sl. No.	Problems	GO Watershed			NGO Watershed		
		No.	%	Rank	No.	%	Rank
1.	Lack of knowledge	48	80.0	I	36	60.0	I
2.	Uneven distribution of incentives	41	68.3	II	14	23.3	VI
3.	Supply of poor quality materials	40	66.6	III	16	26.6	IV
4.	Poor quality of work	38	63.3	IV	18	30.0	III
5.	Caste based groups & Political interference	36	60.0	V	15	25.0	V
6.	Lack of free time to participate in watershed activities	33	55.0	VI	4	6.6	XIII
7.	Unfavourable attitude of extension personnel	31	51.6	VII	10	16.6	IX
8.	Lack of resources	28	46.6	VIII	13	21.6	VII
9.	Lack of incentives and motivation from the implementing agencies	26	43.3	IX	8	13.3	X
10.	Lack of interest	21	35.0	X	12	20.0	VIII
11.	Lack of motivation from the village leaders	20	33.3	XI	25	41.6	II
12.	Improper locations of soil and water conservation structures	17	28.3	XII	6	10.0	XI
13.	Not concerned with local needs	15	25.0	XIII	5	8.3	XII

Conclusion

The study conclusively demonstrated that the majority of beneficiaries of the watershed development programme implemented by a government organisation had a medium level of participation. A majority of the NGO beneficiaries had a high level of participation in all the stages of watershed development programme viz. collection of facts, analysis of situation, identification of problem, deciding on objectives, developing plan of work, execution of plan, determining the progress and reconsideration compared to GO beneficiaries who exhibited a low level of participation. Most of the GO and NGO beneficiaries were found to have information, consultation and functional types of participation in different steps of the WDP. A majority of the farmers expressed a lack of knowledge about watershed development as their major constraints to participation.

References

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