

INVOLVEMENT OF WOMEN IN NATURAL RESOURCE CONSERVATION

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ABSTRACT

Women are important stakeholders in natural resource management and conservation. They are much closer to nature and have far greater role in preserving soil, forest and other natural resources than men. In spite of their consistent struggle for the protection and promotion of natural resources for human survival, it is noticed that they are still marginalized at all levels of policy making, planning and decision making in natural resource conservation, environment management, protection and rehabilitation. Result shows that involvement of women especially tribal women at planning stage was found to be very low as compared to execution stage of natural resource conservation. To promote the involvement of women in conservational activities, quota of women's representative in user committee be made essential and need based trainings are to be incorporated in the programmes. The paper discusses the involvement of women in planning and execution stages of natural resources conservation.

INTRODUCTION

The linkage between women, natural resources and the domestic economies of poor rural households in India are interrelated. Women play pivotal role not only in conservation of natural resources but also in management of domestic economy. They are considered primarily as managers and often preserver of natural resources. The interaction of women with the environment as farmers, food producers and household managers has a direct impact on the well being of the nature. They gather firewood, collect medicinal herbs and look after the biomass. This gives them a special knowledge of nature, which the men do lack. However, inspite of their consistent struggle for the protection and promotion of natural resources for human survival, it is noticed that most conservation projects tend to overlook the priorities and areas where women play crucial role in conservation of natural resources. As a result they become victim of environmental degradation. Therefore, it is crucial time to focus and provide guideline through research study about those areas where women are involved for conservation and management of natural resources. Under this background, the

present work was conceptualized and undertaken to exam in extent of involvement of women in planning and execution stages with respect to conservation of natural resources.

RESEARCH METHODOLOGY

In order to get an idea of women's involvement in conservation of natural resources i.e. soil, water, forest and livestock, this study was conducted in purposively selected Udaipur district of southern Rajasthan as large number of non-government organizations and other environmental agencies are working for the conservation of natural resources. Udaipur district consist of eleven panchyat samities, out of these two panchyat samities viz., Girwa (tribal) and Badgaon (non-tribal) were selected purposively based on plenteous natural resources. Thus in all, eight villages; four villages from one tribal and four villages from one non-tribal panchyat samiti were selected for the study. A proportionate random sample of 200 respondents was drawn from eight villages of two selected panchayat samities. That way, 100 tribal and 100 non-tribal women were the respondents. Data were collected with the help of pre-tested interview schedule. Women's

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involvement was quantified through three point continuum scale: often, seldom and never with relative score 2, 1 and 0, respectively on the basis of response given by the respondents during interview. Collected data were analyzed and are presented in the form of frequency; percentage, ranks and MPS. 'Z' test was applied to see the difference between tribal and non-tribal women with regard to their involvement in conservation of natural resources.

RESULTS AND DISCUSSION

To get an overview of the respondents with

Table 1. Distribution of the respondents on the basis of their involvement in conservation of natural resource n = 200

Involvement level	Tribal (n ₁ =100) %	Non-tribal (n ₂ =100) %	Total	
			f	%
Low (Below 14.60)	21	9	30	15
Medium (14.61 to 25.50)	57	61	118	59
High (above 25.51)	22	30	52	26
Total	100	100	200	100

f = Frequency, % = Percentage, n₁ & n₂ = Size of sample

A further immense glance at the data unfolds that only 22 per cent tribal and comparatively good number of non-tribal respondents i.e. 30 per cent was recorded for the high level of participation in conservation of natural resources. It was followed by 57 per cent respondents from tribal group and 61 per cent respondents from non-tribal group had medium level of participation. Besides, respondents who fell in low level of involvement category were 21 per cent tribal and 9 per cent non-tribal, respectively. It is concluded that most of the women had medium level of involvement. In addition, non-tribal women comparatively exerted more towards the conservation practices than their tribal counterparts. This may be due to the fact that they were more aware and conscious of the advantages of natural resources conservation due to educational programme being run by different agencies.

Involvement of women at planning stage:

It is clear from Table 2 that respondents were agree to encourage others to join the consultation programme (MPS 82.5) with top rank order. The participation of women was further observed in preliminary meetings before initiating work in the

respect to involvement, they were grouped into three strata viz., (i) Low (ii) medium (iii) high involvement level. This stratification was framed on the basis of calculated mean and standard deviation of the involvement performance score obtained by the respondents. Majority of respondents (59 per cent) had medium level of involvement, whereas, 26 per cent had high level of involvement and remaining (15 per cent) respondents observed low level of involvement in planning and execution of natural resources conservational activities. (Table 1)

area (MPS 64) and the formulation of plans for conservation of natural resources (MPS 60) which were accorded second and third ranks, respectively. Identification of site for plantation in consultation with committee members (MPS 46.5) and frequent interaction on techno-economic aspects (MPS 41.5) were accorded fourth and fifth ranks, respectively by the respondents. Likewise in estimation of tentative cost the participation of women was very less i.e. 37 MPS.

Further analysis of data in Table 2 indicate that both the tribal and the non-tribal women had almost the same pattern of ranking with regard to the involvement of women at the planning stage except in few practices. Extent of involvement in frequent interaction on techno-economic aspects stood at fifth place in case of tribal (MPS 26) and sixth place in case of non-tribal women (MPS 57). Similarly, estimation of tentative cost assigned fifth rank by non-tribal women (MPS 58.1) and sixth rank by tribal women (MPS 16) with their least participation. This is because lack of organized platform for women to express their needs and view, lack of interest towards government programme,

natural resource groups and moreover lack of training among women with their policy making capacities.

Thus, it is concluded that involvement of non-tribal women were higher in all activities of planning stage. The reason of low involvement of tribal

women may be due to illiteracy, poor socio economic condition, legal and cultural barriers, lack of training and traditional societal constraints. Moreover they are frequently ignored in the planning phase because of commonly held myths about their participation.

Table 2. Involvement of the women in planning stage of natural resources conservation

S. No.	Aspect	n = 200					
		Tribal (n ₁ =100)		Non-tribal (n ₂ =100)		Total	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Encourage others to join the consultation programme	84.0	1	81.0	1	82.5	1
2.	Preliminary meetings organized before initiating work in the area	57.5	2	70.5	2	64.0	2
3.	Formulation of plans for conservation of natural resources	50.5	3	69.5	3	60.0	3
4.	Identification of site for plantation in consultation with the committee members	31.5	4	62.0	4	46.5	4
5.	Frequent interaction on techno economic aspects	26.0	5	57.0	6	41.5	5
6.	Estimation of tentative cost	16.0	6	58.1	5	37.0	6

MPS=Mean per cent Score, n₁+n₂ = Size of sample

Involvement of women at execution stage:

Table 3 depicts that involvement of the selected respondents was found very high in animal husbandry activities (MPS 87) with first rank, growing plants and inter culture operations (MPS 84.5) and forestland preparation for planting (MPS 81.5) were accorded second and third rank, respectively by the respondents. A fair proportion of respondents (MPS 77) were found to be involved in nursery preparation for seedling followed by the selecting ram and buck for breeding purpose (MPS 74.5) with fourth and fifth ranks. Sowing of improved vegetable seeds (MPS 68.5) was accorded sixth rank by the respondents followed by replacing of adult female (cow)(MPS 67), growing windbreaks in rows for afforestation (MPS 58) and maintenance of soil and water conservation structures (MPS 54.5), which were awarded seventh, eighth and ninth ranks, respectively by the respondents. However in case of construction of bunds and dams, involvement of respondents was very low (MPS 42.5) with last rank.

Analysis of Table 3 further divulges that involvement of tribal women in growing plants and inter-culture operations was very high (MPS 93) in

comparison to non tribal women (MPS 76) which was placed at first rank in case of tribal women while sixth rank in case of non-tribal women. The tribal women (MPS 89) and non-tribal women (MPS 85.5) were engaged in animal husbandry activities, as they were solely responsible for feeding, watching, watering and milking of livestock. This aspect was ranked second by tribal women whereas, first by non-tribal women. The extent of involvement about forestland preparation for planting was 85 and 78 MPS among tribal and non-tribal women and they have ranked third and fourth, respectively. In order to sequel this tribal women were also found fairly acquainted with nursery preparation for seedlings (MPS 79 fourth rank) as against of non-tribal women (75.5 MPS) holding seventh rank in hierarchy. Thus, it was observed that the tribal women considerably playing more active role in above practices than non-tribal women.

Regarding role in replacing of adult female (cow) in case of tribals obtained rank seventh while in case of non-tribal thrid rank with MPS 55 and 79, respected. The extent of participation in maintenance

of soil and water conservation structures was observed 52.5 MPS in tribal women and 57 MPS in non-tribal women. Further, it was noted that tribal women hardly participate in growing windbreaks in rows for afforestation (MPS 39.5) while fair

involvement of non-tribal women was observed in same item with MPS 76.5. Regarding constructing bunds and dams, involvement of non-tribal women was average (MPS 56) as against the MPS 29 of tribal women.

Table 3. Extent of involvement of women in execution and post execution stage of conservation of natural resources

n = 200

S. No.	Aspect	Tribal (n ₁ =100)		Non-tribal (n ₂ =100)		Total	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Animal husbandry activities	89.0	2	85.5	1	87.0	1
2.	Growing plants and inter culture operations.	93.0	1	76.0	6	84.5	2
3.	Forestland preparation for planting	85.0	3	78.0	4	81.5	3
4.	Nursery preparation for seedling	79.0	4	75.5	7	77.0	4
5.	Selection of ram and buck for breeding purpose	68.5	5	80.5	2	74.5	5
6.	Sowing improved vegetable seeds	67.5	6	69.5	8	68.5	6
7.	Replacing of adult female	55.0	7	79.0	3	67.0	7
8.	Growing windbreaks in rows for afforestation	39.5	9	76.5	5	58.0	8
9.	Maintenance of soil and water conservation structures	52.5	8	57.0	9	54.5	9
10.	Constructing bunds and dams	29.0	10	56.0	10	42.5	10

MPS=Mean per cent Score, n₁&n₂ = Size of sample

Overall involvement in planning and execution stages of conservation of natural resources of the respondents:

The data presented in Table 4 reveal maximum involvement at execution stage (69.6 per cent) followed by planning stage (55.3 per cent), which were accorded first and second ranks, respectively. A further glance at the data unfold that involvement in planning stage obtained 66.4 MPS in case of non-tribal women followed by tribal women (44.3 MPS). However, average participation was found at the execution stage in case of tribal women (65.8 MPS). Likewise, three fourth non-tribal women were found

to be involved in execution stage with 73.4 MPS. It can be observed that calculated 'Z' value was greater than tabulated value (2.58) at 1 per cent level of significance indicating clear difference between tribal and non-tribal women with respect to their involvement in both the stages of conservation. It may be due to the fact that the non-tribal women had good socio-economic status and higher literacy and were linked with conservation project. Yet another cause may be that non-tribal women were not so much bound with societal constraints that provide an opportunity to express their view and opinion.

Table 4. Difference in level of involvement between tribal and non-tribal women with regard to conservation of natural resources at planning and execution stage

n = 200

S. No.	Involvement stage	Tribal (n ₁ -100)		Non-tribal (n ₂ -100)		Total		'Z' value
		MPS	Rank	MPS	Rank	MPS	Rank	
1.	Planning stage	44.3	2	66.4	2	55.3	2	5.86***
2.	Execution stage	65.8	1	73.4	1	69.6	1	3.08***
	Overall	55.3		69.6		64.2		5.27***

MPS=Mean per cent Score, n₁&n₂ = Size of sample, *** = Significant at 1 percent level

CONCLUSION

Involvement of tribal women was found to be comparatively low in conservation of natural resources than non-tribal women. This study showed that tribal women had poor involvement in practices related to techno-economic aspects at planning stage. Further, the participation of tribal women at execution stage was found to be average whereas, involvement of non-tribal women was more than average. Therefore, in order to promote involvement of tribal women at planning and execution stages, quota of women's representative in users' committee be made essential so that they get opportunity to take part in decision making process and may feel concerned with various activities regarding conservation of natural resources. Further, it is recommended that skill oriented trainings on women conservation aspect should be organised, as well as they should be convinced personally about benefits of conservation of these resources in their daily life.

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