

Original Research Article

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Socio-Economic Development of Women through Watershed Development Programme

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ABSTRACT

Keywords

Development, Programme, Watershed, Women involvement

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Watershed development programme has been aimed at active involvement of the people in all the stages in the implementation process including fund utilization. The study therefore attempted to assess the extent of development of the watershed women. A sample of 192 watershed women involved in the programme were randomly selected from 24 watersheds covering two blocks each in Sundargarh and Keonjhar districts of Odisha. The findings revealed that the respondents were agreed for the developments in farm activities and technological backstopping in comparison to infrastructural, social and economic developments. Poor responses received on resource generation for post project activities, access to credit facilities, increase in soil fertility, water resources as well as repair, restoration and upgradation of existing common properties, permanency in information flow, increase in decision making capacity, improvement in overall living condition and consciousness for eco-friendly technology indicate that the respondents were not actively involved in the implementation process. The District Advisory Committee as the nodal officer at the district level have to closely monitor all the activities and involve watershed women in all the decision making process along with implement various income generating activities to empower them with income and employment generation.

Introduction

Watershed Development programme has been conceptualised as the rational utilization of land and water resources for optimum and sustained production with minimum hazard to natural resources (Vaidynathan, 2006). The programme is to develop, manage and sustained production system well suited to the existing environment and resource base that can be sustained for future generation

(Gregerson and Brooks, 2007). The programme has become the main intervention for natural resource management particularly properland use, protecting land from all forms of degradation, building and maintaining soil fertility, proper management of rain water, flood protection, draught mitigation and increasing productivity for all land uses (Sikka et. al., 2014). The guideline developed for the implementation of the programme had given emphasis for the active involvement of the

watershed people particularly women in all the stages starting from problem identification, programme formulation, implementation, fund utilization, creation and development of assets (Singh and Prakash, 2010). A study was therefore designed to assess the socio-economic development of women through Watershed Development Programme.

Materials and Methods

The study was undertaken in Sundargarh and Keonjhar districts of Odisha during 2018. A sample size of 192 watershed women from 24 watersheds covering two blocks from each district were selected randomly as the respondents for the study. The data collected on the scale point of strongly agree, agree and disagree over the framed statements were analyzed with the score value of 3, 2 and 1 respectively. The data was analyzed with mean score, gap percentage, critical ratio test and path analysis to reveal the results.

Results and Discussion

The programme has laid emphasis to promote sustainable diversifying livelihood options especially for the women and other resource poor household. The respondents had favourably opined for the development in various farm activities (Table-1) particularly increase in cropping pattern and cropping intensity, growing crops round the year, expansion of cultivated area, growing remunerative enterprise and use of resources efficiently. Favourable opinions were also observed on diversification to better enterprise as well as skill competency increase in use of inputs and materials.

The programme aims at appropriate land use based on the potentialities and liking of the watershed people including women. Capacity building programme are organised to equip the beneficiaries with adequate knowledge and

skills on technologies of various entrepreneurial activities feasible and sustainable to the area. The respondents also favourably opined (Table.2) for increase in production and productivity, adoption of remunerative enterprise, better use of available resources, adoption of recommended technology and to some extent increase in occupational competency.

Community Organisation, group formation, team work, community approach, conflict resolution, negotiation and mediation etc. are the principal motto of the project. Capacity building programmes are also adequately organized to develop completely of the watershed people. Good linkages have also been established with related developmental departments for resource mobilisation. The data collected on various aspects of social development of the respondents (Table-3) revealed that the respondents were agreed for the good linkages established with officials, optimum use of resources and to some extent on more attention of the developmental organisations as well as better coordination and team work. Poor responses were observed on increase in decision making capacity, consciousness for eco-friendly technologies and more consciousness of the people.

Watershed Development programme has empowered the watershed beneficiaries including women in programme formulation, implementation and fund utilization. Each family will have adequate programme. Community and group approach are other thrust in the programme. All these might have strengthen watershed women in economic developments. Therefore, the respondents had agreed for income and employment generation, avenues for self-employment, productive time management and to some extent easy marketing of the produce. But, they were not much agreed for their access to credit facilities, better education to children

and improvement in overall living condition indicating that much economic development was made with the implementation of the programme.

Sufficient funds of 55.00% of the total budget has been earmarked under work component. Emphasis had been given for the restoration of existing assets and creation of essential assets for the benefits of the watershed people including women. Poor responses were observed from the various aspects of the infrastructure development (Table – 5) covered under the study.

It has been clearly mentioned in the guideline for raising the watershed development fund for the repair and maintenance of the created assets during post project period. Each beneficiaries have to contribute 10.00% of the total expenditure for the activities undertaken. It is therefore presumed that the respondents were not involved in the decision making process for utilization of funds towards infrastructure development as well as contribution for the development fund.

Comparative analysis of the various aspects of development revealed (Table-6) that the respondents of both Sundargarh and Keonjhar district were almost of similar opinion as no significant differential opinions observed through critical ratio test. The respondents were not agreed for the significant developments on infrastructure, economical and social aspects as well as technological developments. It indicates that watershed women were not actively involved in need identification, programme formulation, implementation, monitoring and evaluation for which they could not get any scope to put forth their essential requirements. The programme might have designed by the project personnel and the women simply implementing for which the respondents agreed for better developments on farm

activities. Path analysis indicated that social participation had the highest direct effect followed by age, possession of livestock and education. Similarly; extension contact had the highest indirect effect. The attribute extension contact had association with five other socio-economic attributes. The findings therefore conclude that the attribute extension contact channelized through holding size, education, occupation, social participation and possession of agricultural implements could be able to exhibit significant influence in accelerating various developments of the women through Watershed Development Programme. The residual effect being 0.031 inferred that 3.1% of the variation in the relation could not be explained.

Watershed Development Programme aimed at all round development of the watershed as a whole. The programme is designed from the people's perspective with participatory approach.

The watershed people including women are to be actively involved in all the stages of the programme implementation processes. The findings revealed that the respondents had better development in farm activities and technological backstopping in comparison to infrastructure, social and economic developments.

Comparative poor developments observed on a three point continuum were resource generation for post project activities (1.47), access to credit facilities (1.58), increase in soil fertility (1.65), increase in water resources as well as repair, restoration and upgradation of common properties (1.76), permanency in information flow (1.85), increase in decision making capacity (1.88), improvement in overall living condition (1.91), exposure to various sources of information (2.01) and consciousness for eco-friendly technology (2.06).

Table.1 Extent of developments on farm activities

S. No	Development	Mean Score			Rank
		Sundargarh (n = 96)	Keonjhar (n = 96)	Pooled score (n = 192)	
1.	Increase in cropping pattern & cropping intensity	2.72	2.54	2.63	I
2.	Growing remunerative enterprise	2.47	2.19	2.33	IV
3.	Diversification to better enterprises	2.26	2.28	2.27	VI
4.	More area covered under cultivation	2.54	2.42	2.48	III
5.	Growing crops round the year	2.61	2.55	2.58	II
6.	Efficient use of resources	2.35	2.27	2.31	V
7.	Skill competency in use of inputs and materials	2.28	2.14	2.21	VII

(Maximum obtainable score-3)

Table.2 Extent of the developments on technological adoption

S. No	Development	Mean Score			Rank
		Sundargarh (n = 96)	Keonjhar (n = 96)	Pooled score (n = 192)	
1.	Increase in production and productivity	2.59	2.20	2.40	I
2.	Adoption of recommended technology	2.45	2.17	2.31	IV
3.	Exposure to various information sources	2.15	1.87	2.01	VII
4.	Increase in occupational competency	2.26	1.98	2.12	V
5.	Better use of available resources	2.37	2.26	2.32	III
6.	Adoption of remunerative enterprises	2.46	2.24	2.35	II
7.	Sustainability & stability in production	2.18	2.02	2.10	VI

(Maximum obtainable score-3)

Table.3 Extent of social developments

S. No	Attitude	Mean Score			Rank
		Sundargarh (n = 96)	Keonjhar (n = 96)	Pooled score (n = 192)	
1.	Good linkage established with officials	2.53	2.25	2.39	I
2.	Better co-ordination and team work	2.28	2.16	2.22	IV
3.	More attention of the developmental organizations	2.33	2.17	2.25	III
4.	Conscious for eco-friendly technologies	2.15	1.97	2.06	VI
5.	Optimum use of resources	2.39	2.22	2.31	II
6.	More consciousness of people	2.20	2.04	2.12	V
7.	Decision making capacity increased	1.98	1.78	1.88	VII

(Maximum obtainable score-3)

Table.4 Extent of economical developments

S. No	Development	Mean Score			Rank
		Sundargarh (n = 96)	Keonjhar (n = 96)	Pooled score (n = 192)	
1.	Generation of employment	2.36	2.28	2.32	II
2.	Income generation	2.55	2.43	2.49	I
3.	Avenues for self employment	2.35	2.13	2.24	IV
4.	Productive time management	2.27	2.19	2.23	V
5.	Easy marketing of the produce	2.21	2.07	2.14	VI
6.	Improvement in overall living condition	1.95	1.87	1.91	VII
7.	Access to credit facilities	1.62	1.54	1.58	IX
8.	Better education to children	1.94	1.78	1.86	VIII
9.	Optimum utilisation of resources	2.32	2.24	2.28	III

(Maximum obtainable score-3)

Table.5 Opinion about infrastructure development

S. No	Development	Mean Score			Rank
		Sundargarh (n = 96)	Keonjhar (n = 96)	Pooled score (n = 192)	
1.	Increase in water resources	1.86	1.66	1.76	VII
2.	Resource generation for post project activities	1.58	1.36	1.47	IX
3.	Better access to inputs and materials	2.29	2.21	2.25	I
4.	Mobilization of resources	2.18	1.98	2.08	III
5.	Repair, restoration and up gradation of common properties	2.12	1.84	1.98	IV
6.	Permanency in information flow	1.97	1.75	1.86	V
7.	Community approach	2.01	2.13	2.12	II
8.	Increase in soil fertility	1.78	1.52	1.65	VIII
9.	Establishing Irrigation facility	1.92	1.70	1.81	VI

(Maximum obtainable score-3)

Table.6 Comparative analysis of the developments

S. No.	Development	Mean Score		Diff. (%)	C.R. Value	Pooled mean score	Gap (%)
		Sundargarh (n = 96)	Keonjhar (n = 96)				
1	Farm activities	2.46	2.34	4.87	0.054	2.40	20.00
2	Technological backstopping	2.35	2.10	10.63	0.117	2.23	25.67
3	Social	2.26	2.08	7.96	0.088	2.17	27.67
4	Economical	2.17	2.05	5.52	0.061	2.11	29.67
5	Infrastructure	1.96	1.81	7.65	0.084	1.89	37.00

(Maximum Obtainable Score – 3)

Table.7 Influence of socio-economic attributes on developments

S. No	Attribute	Total effect	Total direct effect	Total indirect effect	Substantial effect		
					I	II	III
X ₁	Age	0.912	0.742	0.170	0.143 x ₇	0.107 x ₁₁	0.077 x ₂
X ₂	Education	0.516	0.598	-0.082	-0.232 x ₉	0.084 x ₁₂	0.021 x ₈
X ₃	Family type	-0.814	-0.920	0.106	0.147 x ₁	0.086 x ₅	-0.058 x ₇
X ₄	Family type	-0.814	-0.842	0.028	0.095 x ₃	0.078 x ₂	-0.047 x ₉
X ₅	House type	-0.814	-0.715	-0.099 x ₁₂	-0.062 x ₁₀	0.055 x ₉	-0.024 x ₆
X ₆	Occupation	0.789	-0.879	0.090	0.108 x ₄	-0.064 x ₁₂	-0.024 x ₆
X ₇	Annual income	-0.840	-0.654	-0.186	-0.041 x ₂	-0.036 x ₃	0.025 x ₁₁
X ₈	Holding size	-0.996	-0.812	-0.184	0.123 x ₁₂	-0.084 x ₁₁	-0.079 x ₁
X ₉	Possession of livestock	0.836	0.687	0.149	0.118 x ₃	0.078 x ₁	0.052 x ₅
X ₁₀	Possession of Agril. Implements	-0.880	-0.997	0.117	-0.124 x ₁₁	-0.093 x ₄	-0.078 x ₁₂
X ₁₁	Social participation	0.814	0.980	-0.166	-0.189 x ₅	-0.098 x ₁₂	0.063 x ₆
X ₁₂	Extension contact	0.098	-0.110	0.208	0.121 x ₆	-0.043 x ₈	-0.370 x ₄

Residual effect- 0.031

Highest indirect effect- Extension contact

It is apprehended that the guideline has not being followed and watershed women were not actively involved in all the stages of the programme implementation particularly decision making process.

Living condition of the family cannot be improved unless watershed women have adequate income and employment generation. The District Advisory Committee as the nodal agency at the district level have to closely monitor all the activities and involve the women in all the decision making process alongwith implement adequate income generating activities for their empowerment with substantial income and employment generation.

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