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SOCIO-ECONOMIC DEVELOPMENTS OF THE TRIBAL PEOPLE THROUGH WATERSHED DEVELOPMENT PROGRAMME: A STUDY IN ODISHA

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ABSTRACT

Watershed Development Programme is based on community approach with bottom-up planning from the perspective of watershed people. A study conducted with 196 watershed people from six watersheds covering four blocks of Nabarangpur and Kandhamal district in Odisha revealed that poor developments were observed on technological, economic, social, infrastructural, farm activities and income indicating that the project had not contributed significantly for the livelihood improvement of the tribal people. Socio-economic variables such as extension contact, house type, occupation, annual income, family type, family size and educational background of the respondents had significantly influenced various aspects of developments. The project officials have to priorities the needs of the tribal people and formulating feasible programmes and increase their occupational competency with remunerative enterprise, resource generation, productive time management, better coordination and team work as well as promotion of farm mechanization ensuring and team work as well as promotion of farm mechanization ensuring increase in production and income for the upliftment of tribal people in watershed area.

KEYWORDS: Development, Programme, Tribal People, Watershed

INTRODUCTION

Watershed Development Programme has been conceptualized as the rational utilization of land and water resources for optimum and sustained production with minimum hazard to natural resources. The programme based on natural resources management which means proper land use, protecting land against all farms of degradation, building and maintaining soil fertility, proper management of rain water, flood protection, draught mitigation and increasing productivity for all land uses (Gregersen and Brooks, 2007). The programme is based on community approach with bottom-up planning from the perspective of the watershed people alongwith fund utilization exclusively by them (Rajora, 2002). Recruitment of full time technical personnel with regular monitoring and supervision have helped to resolve the issues and solve the problems encountered during implementation (Rao*et. al* 2014). It is therefore apprehended that the programme have improved the resource utilization of apprehended that the programme have improved the resource utilization of farmers, enhanced eco-friendly resource use pattern, generate regular employment opportunities and finally improve the socio-economic conditions of the people in watershed areas (Dhyani *et. al.* 2005). An attempt was therefore made to assess the extent of socio-economic development of the watershed people in tribal areas.

RESEARCH METHODOLOGY

The study was undertaken in Odisha covering Nabarangpur and Kandhamal districts having more number of watersheds and dominated by tribal people. Three watersheds each from Umerkote and Papadahandi blocks in Nabarangpur as well as Tikabali and G. Udayagiri blocks in Kandhamal district were randomly selected. The President, Secretary and Chairman of each watershed were selected purposively due to their better involvement in the programme. Similarly; six from user groups, three from Self Help Groups, 3 from women community and one from watershed committee members were selected randomly covering 16 respondents from each watershed with total sample size of 192.

The data was collected personally with a semi-structured schedule pretested earlier. Information collected on scale point of strongly agree, agree and disagree were analyzed with score value of 3, 2 and 1 respectively to reveal the results.

RESULTS AND DISCUSSIONS

Watershed Development Programme aims at appropriate land use based on its potentialities and liking of the people. One of the major implementation aspects is to develop the knowledge and skill

Table 1: Extent of Technological Developments

Sl. No.	Development	Mean Score		Diff (%)	Pooled Mean Score (n = 192)	+/- Over Average
		Nabarangpur District (n = 96)	Kandhamal District (n = 96)			
1.	Increase in production and productivity	1.85	1.91	3.14	1.88	+0.27
2.	Adoption of recommended practice	1.61	1.53	4.97	1.57	–0.04
3.	Better exposure to information sources	1.80	1.73	3.89	1.77	+0.16
4.	Increase in occupational competency	1.37	1.28	6.57	1.33	–0.28
5.	Better use of available resources	1.91	1.95	2.05	1.93	+0.32
6.	Adoption of remunerative enterprises	1.07	1.74	38.51	1.41	–0.20
7.	Sustainability and stability in production	1.32	1.49	11.41	1.41	–0.20

(Maximum obtainable score – 3)

Competency of the watershed people on technologies feasible and sustainable to the area. It is observed from Table-1 that there were not much of technological developments particularly on adoption of recommended practices, increase in occupational competency, adoption of remunerative enterprise as well as sustainability and stability in production. Significant developments were also not observed on increase in production and productivity, better exposure to information sources and better use of available resources.

Table 2: Extent of Economical Developments

Sl. No.	Development	Mean Score		Diff (%)	Pooled Mean Score (N = 192)	+/- Over Average
		Nabarangpur District (n = 96)	Kandhamal District (n = 96)			
1.	Generation of employment	2.28	2.27	0.44	2.28	+0.82
2.	Avenues for self employment	1.16	1.19	2.52	1.18	–0.82
3.	Productive time management	0.86	1.01	14.85	0.94	–0.52
4.	Easy marketing of the produce	0.75	1.23	39.02	0.99	–0.47
5.	Access to credit facility	1.73	2.00	13.50	1.87	+0.41
6.	Improvement on living condition	1.50	1.49	0.67	1.50	+0.04

(Maximum obtainable score – 3)

Watershed Development Programme is a unique one where people actively involved and empowered in programme formulation, implementation and fund utilization etc. by each and every people. Inspite of this there was not much of economical developments (Table–2) there poor opinions were observed on productive time management, avenues for self-employment and easy marketing of the produce. The extent of developments on improvement in living condition and access to credit facility were also not encouraging. However; there were satisfactory developments on generation of employment.

Table 3: Extent of Social Developments

Sl. No.	Development	Mean Score		Diff (%)	Pooled Mean Score (n = 192)	+/- Over Average
		Nabarangpur District (n = 96)	Kandhamal District (n = 96)			
1.	Good linkage established with officials	1.59	1.56	1.89	1.58	+0.18
2.	Better coordination and team work	1.46	1.38	5.48	1.42	+0.02
3.	More attention of the developmental departments	1.37	1.41	2.84	1.39	–0.01
4.	Conscious for eco-friendly technology	1.32	1.07	18.94	1.20	–0.20
5.	Optimum use of family resources	1.41	1.52	7.24	1.47	+0.07
6.	More consciousness of people	1.40	1.17	16.43	1.29	–0.11
7.	Increase in decision making capability	1.44	1.44	0.00	1.44	+0.04

(Maximum Obtainable Score – 3)

The guideline emphasizes for community organisation, group formation, team spirit, conflict resolution, capacity building along with health and educational developments of the watershed people. But, the study revealed (Table–3) that there were not much social developments as opined the respondents of both the districts. Poor responses were observed on their consciousness for eco-friendly technology, more consciousness for their improvement and more attention of the

developmental departments. Significant developments were also not observed on good linkages established with officials, better coordination and team work, optimum use of family resources and increase in their decision making capability.

Table 4: Extent of Infrastructural Developments

Sl. No.	Development	Mean Score		Diff (%)	Pooled Mean Score (n = 192)	+/- Over Average
		Nabarangpur District (n = 96)	Kandhamal District (n = 96)			
1.	Increased in water resources	2.54	2.34	7.87	2.44	+0.55
2.	Repair, restoration and up-gradation of common resources	2.12	2.06	2.83	2.09	+0.20
3.	Increase in soil fertility	2.10	2.57	18.29	2.34	+0.45
4.	Community approach	2.07	2.45	15.51	2.26	+0.37
5.	Better access to inputs and materials	1.40	1.17	16.43	1.29	–0.60
6.	Resource generation	1.85	1.61	12.97	1.73	–0.16
7.	Permanency in information flow	1.50	1.05	30.00	1.28	–0.61
8.	Resource mobilisation	1.73	1.73	0.00	1.73	–0.16

(Maximum Obtainable Score – 3)

Around 55.00 per cent of the funds have been earmarked under works particularly for ridge area and drainage line treatments, water harvesting structures, land developments etc. The respondents of both the districts had favourably opined (Table-4) for increase in water resources, repair, restoration and upgradation of common resources and increase in soil fertility. Poor opinions observed on permanency in information flow for optimum management of the infrastructures, access to inputs and materials, resource mobilisation, resource generation for post project activities and to some extent community approach need to be well taken care for the benefit of the watershed people.

Table 5: Development on Farm Activities

Sl. No.	Development	Mean Score		Diff (%)	Pooled Mean Score (n = 192)	+/- Over Average
		Nabarangpur District (n = 96)	Kandhamal District (n = 96)			
1.	Increase in cropping pattern and cropping intensity	1.77	2.13	16.90	1.95	+0.28
2.	Adopting remunerative enterprise	1.02	1.94	47.42	1.48	–0.19
3.	Diversion to better enterprise	0.93	1.79	48.04	1.36	–0.31
4.	Better use of crop inputs	1.91	1.89	1.05	1.90	+0.23
5.	Use of implements	1.20	1.46	17.81	1.33	–0.34
6.	Plantations in degraded lands	2.43	2.06	15.23	2.25	+0.58
7.	Pasture development in wasteland	1.83	1.01	44.81	1.42	–0.25

(Maximum Obtainable Score – 3)

Watershed programme aimed at promoting sustainable livelihood by diversifying livelihood options and improvement in land productivity. The developments made on farm activities revealed (Table – 5) that there was not much of developments on farm activities particularly on use of implements, diversion to better enterprise, adopting remunerative enterprise, better use of crop inputs and to some extent on increase in cropping pattern as well as cropping intensity. It is therefore confirmed that the programme has not achieved its objectives towards development of the tribal people in watershed areas. However; some developments were observed on plantations in degraded lands, better use of crop inputs,

increase in cropping pattern and cropping intensity.

Table 6: Extent of Developments on Increase in Income

Sl. No.	Development	Mean Score		Diff (%)	Pooled Mean Score (n = 192)	+/- Over Average
		Nabarangpur District (n = 96)	Kandhamal District (n = 96)			
1.	Income increased	1.80	2.07	13.04	1.94	+0.24
2.	Able to meet the family requirements	1.34	1.71	21.64	1.53	–0.17
3.	Savings increased	1.34	1.32	1.49	1.33	–0.37
4.	Better education to children	1.55	1.32	14.84	1.44	–0.26
5.	Optimum utilization of resources	1.52	1.97	22.84	1.75	+0.05
6.	Fully utilization of family labour	1.86	1.94	4.12	1.90	+0.20
7.	Increase in farm investment	1.98	1.98	0.00	1.98	+0.28

(Maximum obtainable score – 3)

Livelihood security is the overriding goal of the programme along with promoting sustainability and equitable sharing of benefits. Increase in income through adequate farm activities, food and nutritional security, distress mitigation etc. are also the motto of the project. But, the findings have not supported (Table–6) for the increase in savings, better education to children and not able to meet family requirements. Similarly; the developments on increase in farm investment, fully utilisation of family labour, optimum utilisation of resources and increase in income were not satisfactory indicating any significant change in income level of the respondents.

Table 7: Comparative Analysis of the Developments

Sl. No.	Development	Mean Score		Diff (%)	Pooled Mean Score (n = 192)	1% Over Average
		Nabarangpur District (n = 96)	Kandhamal District (n = 96)			
1.	Technological	1.55	1.66	6.02	1.61	46.33
2.	Economical	1.38	1.53	9.80	1.46	51.33
3.	Social	1.43	1.36	4.90	1.40	53.33
4.	Infrastructural	1.91	1.87	2.09	1.89	37.00
5.	Farm activities	1.58	1.75	9.71	1.67	44.33
6.	Income	1.63	1.76	7.39	1.70	43.33
	Average	1.58	1.66	4.87	1.62	46.00

(Maximum obtainable score – 3)

Comparative analysis revealed (Table-7) for significant percentage of gaps in various aspects of developments. Average gap of 46.00% brought the fact that there was not much developments of the tribal people through implementation of the watershed development programme.

CONCLUSIONS

Ministry of Rural Development, Govt. of India has developed guideline for implementation of the Watershed Development programme with the central emphasis on capacity building of the watershed people and their active participation right from planning, implementation and post project maintenance. Livelihood security is the goal of the programme with sustainable production. But the study revealed that there was no significant developments of the tribal people. Poor developments observed on various aspects of technological, economical, social, infrastructural, farm activities and income level revealed that the project have not achieved its objectives. However, socio-economic variables particularly extension contact, house type, occupation, annual income, family type, family size and education had contributed significantly for their development.

The findings therefore conclude that the project officials have to prioritize their needs and formulate feasible programmes with active participation of the tribal people ensuring increase in their occupational competency with remunerative enterprise, employment generation, productive time management, better co-ordination and team work, easy access to inputs and materials, resource generation as well as use of implements and machineries for increase in production, productivity and income of the tribal people living in watershed area towards their sustainable livelihood.

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