

## **Stakeholder's Participation in Watershed Programme for Sustainable Livelihoods of Tribal People- A Study in Odisha**

S. R. Dash, Plabita Ray, D. V. Singh and N. Bar

*Krishi Vigyan Kendras, Orissa University of Agriculture & Technology, Bhubaneswar*

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**Abstract:** Stakeholders have significant contribution in effective implementation of the Watershed Development Programme. A study conducted with 192 watershed people in tribal areas from four blocks in Nuapara and Kalahandi districts of Odisha revealed for the poor participation of the stakeholders in implementation of the programme. Professional attitude, assuming responsibility for success, accountability, sincerity, interest and interpersonal relationships were lacking with the officials. Sufficient attempts were not given for community organisation particularly leadership development, good harmony, cooperation and coordination among people. Adequate supports were not extended for credit, input supply and infrastructure developments. Technical guidance particularly immediate action on field problems, close monitoring and supervision, training, exposure and diagnostic visits were lacking. The Watershed Mission Director and the Collector and District Magistrate as the chairman of the district advisory committee have to take all attempt for active participation of the stakeholders and organise watershed community properly for successful implementation of the programme towards upliftment of tribal people.

**Keywords:** Participation, Stakeholder, Tribals development, Watershed programme.

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### **I. Introduction**

Watershed management is necessary to protect, conserve and improve the land resources for efficient and sustained production, protect and enhance water resources, moderate floods and reduce silting of tanks, conserve rain water and increase irrigation to crops. The watershed guidelines in para 16 have clearly mentioned for the establishment of appropriate institutional arrangements to steer and guide the project personnel and beneficiaries for creating sufficiently skilled as well as capable human resources. Therefore, both internal and external stakeholders need to be linked and interact frequently to provide a forum for collective action (Mascarenhas, 1999, Kulshrestha et. al. 2014 and Rodriguez et. al. 2014). The impact of watershed management depends on effectiveness of the technology in the background of needs, priorities, cultural practices, community participation, political will of the Government and cooperation between officials (Murthy, 2013). The watershed development programme must lead to people's self reliance, self support and self esteem for which the stakeholders have significant contribution for effective implementation of the watershed development programme towards upliftment of the tribal people in watershed areas.

With this background, the study was designed to assess the participation of the stakeholders for the upliftment of tribal people in watershed development programme.

### **II. Research Methodology**

Western Undulating Zone covering Kalahandi and Nuapada district in Odisha have comparatively more number of watersheds and dominated by tribal people. Three watersheds each from Golamunda and Dharmgarh blocks in Kalahandi as well as Nuapada and Khariar blocks in Nuapara districts were selected randomly. The President, chairman, secretary from each watersheds were selected purposively due to their better involvement in the programme. Similarly, 6 from User Groups, 3 from Self Help Groups, 3 from women community and one from watershed committee members were selected randomly as the respondents. Thus; 16 tribal respondents were selected from each watershed with the total sample size of 192 covering 12 watersheds from four blocks in two districts. The data collected personally through a semi-structured schedule on scale point were analysed with appropriate statistical tools to reveal the results.

### **III. Results and Discussion**

Strong linkages have to be established with the related stakeholders to explore resources and facilities for effective implementation of the watershed development programme. It is revealed from Table-1 that the respondents of both Kalahandi and Nuapara district had very poor opinion about the participation of the Animal resources, Agril. Engineering, Electricity departments, traders and inputs dealers, research institutes, cooperation and revenue department as well as credit institutions. They had expressed for better participation of

the Soil Conservation, Agriculture and Horticulture department. Good Cooperation and involvement of all the related stakeholders are essential for successful implementation of the watershed development programme.

**Table-1: Participation of stakeholders in watershed programme**

Sl. No.	Participation	Mean Score		Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)		
1.	Revenue department	1.55	1.26	1.41	53.00
2.	Electricity department	0.41	0.50	0.46	84.67
3.	Agril. Department	2.36	1.95	2.16	28.00
4.	Soil conservation department	2.61	2.49	2.55	15.00
5.	Horticulture department	2.36	1.95	2.16	28.00
6.	Agril. Engineering department	0.62	0.30	0.46	84.67
7.	Credit institutions	1.23	1.49	1.36	54.67
8.	Cooperative department	0.53	1.82	1.18	60.67
9.	Traders and input dealers	0.83	0.80	0.82	72.67
10.	Animal resource department	0.20	0.15	0.18	94.00
11.	Research institutions	0.75	1.10	0.93	69.00
	Average	1.22	1.25	1.24	58.67

(Maximum Obtainable Score – 3)

The behaviour of the officials many a times motivate the users to adopt the recommended practice. Very poor opinions were observed from the respondents of both the districts (Table-2) about the attitude of the stakeholders towards involvement in the watershed programme. The respondents of both the districts were not favourably opined for developing their professional attitude, assuming responsibility for success, accountability, good interpersonal relationships, sincerity and interest in work. However, the stakeholders had good behavior, cooperative, and cordial relationships with the respondents.

**Table-2: Attitude of the tribals towards stakeholders**

Sl. No.	Attitude	Mean Score		Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)		
1.	Good behavior	2.40	2.58	2.49	17.00
2.	Cooperative and cordial	2.31	2.39	2.35	21.67
3.	Sincere and interest in work	1.92	1.71	1.82	39.33
4.	Accountability	1.56	1.31	1.44	52.00
5.	Establishing good interpersonal relationship	1.86	1.44	1.65	45.00
6.	Developing professional Attitude	1.46	1.07	1.27	57.67
7.	Assume responsibility for success	1.56	1.16	1.36	54.67
	Average	2.01	1.89	1.95	35.00

(Maximum Obtainable Score – 3)

Community participation is very much essential for effective implementation of the programme. Various committees are to be formed to ensure common decision making process. Therefore, the stakeholders have to organise the community properly to ensure their active involvement in planning, execution as well as developing norms and systems for equitable distribution of the benefits to the watershed people. But, poor responses received (Table-3) on developing leadership and interest, establishing good harmony, cooperation and coordination among people will definitely restrict participation of the tribals in effective implementation of the programme although, favourable opinions observed on rapport establishment with tribal people, decisions on common agreement and establishing good harmony.

**Table-3: Participation in community organization**

Sl. No.	Participation	Mean Score			Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)	Diff. %		
1.	Report establishment with villages	2.68	3.29	18.54	2.99	25.25
2.	Divisions on common agreement	2.44	3.04	19.74	2.74	31.50
3.	Negotiation and mediation in conflicts	1.92	2.07	7.25	2.00	50.00
4.	Establishing good harmony	2.04	1.77	13.24	1.91	52.25
5.	Developing interest among people	1.73	1.72	0.58	1.73	56.75
6.	Establishing leadership among people	1.97	1.93	2.03	1.95	51.25
7.	Developing leadership among people	1.65	1.72	4.07	1.69	57.75
	Average	2.06	2.22	7.21	2.14	46.50

(Maximum Obtainable Score – 4)

Extending credit facilities are another requirement for adoption of the suggested technologies for better production. The tribal people therefore need adequate support of the credit institutions for financial assistance. But, very poor credit and financial supports were extended to the watershed people (Table-4) The respondents had not agreed for the support of the credit institutions in processing of documents, timely disbursement of loan, fixing installments as per capability, flexibility in repayment, sanctioning required amount of credit and insurance coverage.

**Table-4: Participation in credit and financial support**

Sl. No.	Participation	Mean Score		Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)		
1.	Sanctioning required amount	1.47	2.19	1.83	54.25
2.	Facilitating for credit facility	1.35	2.09	1.72	57.00
3.	Assist in processing of documents	1.20	1.75	1.48	63.00
4.	Timely of loan disbursement of loan	0.91	1.19	1.05	73.75
5.	Fixing installments as per capability	0.61	0.64	0.63	84.25
6.	Flexibility in repayment	0.63	0.44	0.54	86.50
7.	Facilitating insurance coverage	0.41	0.31	0.36	91.00
	Average	0.94	1.23	1.09	72.75

(Maximum Obtainable Score – 4)

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Watershed Development Programme is an approach for the integrated developments of the watershed as a whole. The tribal people are therefore to be well equipped with knowledge and skills various enterprises feasible and sustainable to the area. Very poor opinions of the respondents were observed on the participation of the stakeholders on technical guidance (Table-5) particularly on exposure visit for confidence development, training for capability building, immediate action on field problems, regular diagnostic visit, close monitoring and supervision.

**Table-5: Participation in technical guidance**

Sl. No.	Participation	Mean Score		Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)		
1.	Technical guidance by experts	2.19	2.95	2.57	35.75
2.	Regular diagnostic visit	1.45	1.99	1.72	57.00
3.	Close monitoring and supervision	1.41	1.68	1.55	61.25
4.	Immediate action on field problems	1.31	1.47	1.39	65.25
5.	Adequate training for capacity building	1.85	1.69	1.77	55.75
6.	Exposure visit for confidence	1.43	1.07	1.25	68.75
7.	Continuous flow of information	2.17	3.03	2.60	35.00
	Average	1.69	1.98	1.84	54.00

(Maximum Obtainable Score – 4)

Timely availability of quality inputs with required quantity, reasonable price and easy access of the tribal people facilitate in use of the recommended practice. Very poor responses were observed (Table-6) towards supply of inputs on credit, reasonable price, authenticity in input supply, timely availability, quality input supply and cooperation of input dealers.

**Table-6: Participation in input supply**

Sl. No.	Stakeholder	Mean Score		Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)		
1.	Cooperation of input dealers	1.45	2.36	1.91	52.50
2.	Supply of quality inputs	1.28	2.12	1.70	57.50
3.	Timely supply	0.97	1.72	1.35	66.25
4.	Authenticity in input supply	0.61	1.27	0.94	76.50
5.	Reasonable price	0.60	0.77	0.69	32.75
6.	Supply of inputs on credit	0.69	0.71	0.70	82.50
	Average	0.93	1.49	1.21	69.75

(Maximum Obtainable Score – 4)

Maximum funds of 55.00% of the total project cost have been earmarked under works. Adequate infrastructure developments are expected in each watershed. But the study revealed (Table-7) that the respondents of both the districts were not favourably opined for ensuring power supply, custom hiring service on farm implements, subsidy facilities and assistance for developing own infrastructure as well as protection for crop damage. However; better supports were provided on developing irrigation facilities and construction of irrigation channels.

**Table-7: Participation in infrastructure development**

Sl. No.	Stakeholder	Mean Score		Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)		
1.	Developing irrigation facility	2.65	3.43	3.04	24.00
2.	Construction of channels	2.68	3.41	3.05	23.75
3.	Ensuring power supply	0.33	0.16	0.25	93.75
4.	Protection for crop damage	1.93	0.45	1.19	70.25
5.	Custom hiring service on implements	0.43	0.23	0.33	91.75
6.	Assistance for own infrastructure	0.75	0.89	0.82	79.50
7.	Subsidy facility	0.33	0.64	0.49	87.75
	Average	1.30	1.32	1.31	67.25

(Maximum Obtainable Score – 4)

Policy considerations such as community participation, gender sensitivity, social and economic equity, accountability, transparency alongwith strengthening of local institutions have been emphasized in the guideline for empowerment of the watershed people. Poor responses observed (Table-8) on exploring external responses, emphasis on solving problems, fully utilization of available resources, constraints analysis and regular meeting with the stakeholders indicated that the guideline had not been followed properly. However, better opinion was observed on thrust for improvement of the tribal people.

**Table-8: Participation in policy consideration**

Sl. No.	Participation	Mean Score		Pooled mean score (n = 192)	Gap (%)
		Nuapada District (n = 96)	Kalahandi District (n = 96)		
1.	Regular meeting with stakeholders	2.21	2.21	2.21	44.75
2.	Fully utilization of available resources	2.12	1.35	1.74	56.50
3.	Exploring external resources	1.99	0.49	1.24	69.00
4.	Thrust for improvement of tribal people	2.09	2.87	2.48	38.00
5.	Emphasis on solving problems	1.75	1.20	1.48	63.00
6.	Constraint analysis and remedial measures	1.87	2.20	2.04	49.00
	Average	2.01	1.72	1.87	53.25

(Maximum Obtainable Score – 4)

Socio-economic attributes many a times play significant role in effective implementation of the programme. Multiple regression analysis revealed (Table-9) that education, extension contact, family size, holding size and occupational backward of the respondents had significantly influence for the participation of stakeholders in effective implementation of the Watershed Development Programme for the development of the tribal people

**Table-9: Socio-economic variables influencing participation of stakeholders**

Sl. No	Variable	Unstandardised Co-efficient		Standardised Co-efficient		't' value	Probability
		Beta	Standard error	Beta	Standard error		
1.	Age	0.363	2.303	0.009	0.068	0.157	0.874
2.	Education	2.469	1.386	0.146	0.059	1.780	0.076
3.	Family type	1.816	3.074	0.039	0.032	0.590	0.555
4.	Family size	5.728	3.041	0.128	0.066	1.883	0.061
5.	Social participation	0.238	0.685	0.022	0.049	0.347	0.728
6.	Cosmopolitaness	0.196	0.489	0.030	0.057	0.401	0.688
7.	Extension contact	1.518	0.491	0.254	0.033	3.087	0.002
8.	Communication materials used	0.807	0.618	0.119	0.023	1.305	0-193
9.	House type	-1.796	2.201	-0.069	0.054	-0.816	0.415
10.	Holding size	4.141	1.953	0.193	0.063	2.120	0.035
11.	Occupation	-5.276	2.533	-0.130	0.084	-2.082	0.038
12.	Annual income	2.070	2.038	0.102	0.057	1.105	0.311

$$R^2 = 0.408 \text{ Adj. } R^2 = 0.468 \text{ S.E.} = 17.235$$

#### IV. Conclusion

Very poor participation of the developmental departments was observed except Soil conservation, Agriculture and Horticulture departments. Professional attitude, assuming responsibility for success, accountability, sincerity, interest and interpersonal relationships were lacking with the officials involved in the programme implementation. Sufficient attempts were not made for organising the community particularly leadership development, establishing good harmony, cooperation and coordination among people. Adequate supports were also not extended for credit, input supply and infrastructure development except developing irrigation facilities. Technical guidance particularly immediate action on field problems, close monitoring and supervision, training, exposure and regular diagnostic visits were lacking. All these may restrict for successful implementation of the programme to achieve the end results. Socio-economic attributes such as education, extension contact, holding size and occupational background of the respondents had found to influence the participation of the stakeholders.

It is therefore suggested that the Watershed Mission Director at the State level as well as the collector and District Magistrate at the district level have to ensure all these aspects resulting active participation of the stakeholders along with proper organization of watershed community for successful implementation of the watershed development programme succeeding socio-economic development of the tribal people.

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