Participatory Management of Sodic Soils in Uttar Pradesh

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ABSTRACT

Participatory management is fast emerging as a concept for ensuring involvement of different stake holders . It is more important in case of implementing projects in rural areas. Land reclamation and its rehabilitation programme launched by Uttar Pradesh Land Development Corporation has shown involvement of farmers in land classification , identification of beneficiaries, distribution of inputs , management of link drains , sharing of water ,etc. The programmes of participatory management have created strengths like planning boring and link drains together; boring at the highest place with the consent of villagers; facilitating group loan, water sharing; helping formulation of water user groups and self help groups; scheduled meetings and interactions; suitable drainage avoiding water logging; sharing of inputs by farmers; strong technical support; increased crop productivity and family income; linkage with different organizations; distribution of Panchayat land among poor farmers; NGOs helping in community organization and over and above existence of transparency in input distribution and benefit sharing.

Keywords: Participatory management ; Sodic land;

Farmers are more willing to participate in activities which meet their felt needs and priorities which can be determined through a quick needs assessment *(Samuel, Paul ,1987)*. The needs of all people should be taken into consideration, not just those who are accessible and co-operative. If farmers are encouraged to express their needs and provide some input into the structure of project/ programme, they should not be ignored. Farmer's ideas must be taken into account to sustain their involvement. Farmers are more likely to participate if actual benefits are directly tied to participation *(Mathias, ,1995)*. Farmers specially those with low incomes, are more likely to participate and remain involved if the benefits are material, direct and immediate. One of the best ways of getting farmers interest is through the use of convincing and realistic demonstrations and trials.

Uttar Pradesh Bhoomi Sudhar Nigam has been running land reclamation programmes on participatory management in many districts of Uttar Pradesh including district Kanpur Dehat and Kanpur City since 1994.

This study has been conducted in the project unit-I operational in district Kanpur Dehat and Kanpur City with a purpose to find out the participatory management mechanism followed in the project by way of involving various level of officials responsible for project implementation and also the beneficiaries playing the role of equal partners in the implementation of various activities.

METHODOLOGY

150 beneficiaries have been interviewed in order to find out the level of their involvement in various agricultural activities related to project management.

As Kanpur Unit-I happen to operate mainly in district – Kanpur Dehat and in some parts of district Kanpur Nagar, district Kanpur Dehat and Kanpur Nagar became the ultimate investigation areas for this study. Out of the five sub-units, unit-I operational in block Maitha and Unit-III in Shivrajpur were selected on random basis for the study.

From sub-unit-I and sub unit-III, four villages were selected on random basis. Further, it was taken care to select one village purposively from each sub-unit from where the project has been withdrawn so as to study the withdrawl strategy pursued by the project in such villages. Thus, a total of 10 villages were selected for investigation.

RESULTS AND DISCUSSION

The resource situation of the beneficiaries was analysed on various parameters which included the possession of land and different other sources including implements, etc. The findings reflected that 28.00 per

cent of the beneficiaries were high resource farmers whereas 58.67 per cent were low resource farmers and about 13.33 per cent were landless farmers. The findings indicate that different categories of farmers have been included in the project including landless farmers and the maximum representation have been given to low resource farmers.

Table 1. Resource situation of beneficiaries (N= 150)

S.No.	Categories	N	%
1	High resource farm households	42	28.00
2	Low resource farm households	88	58.67
3	Land less farmers (Share cropping)	20	13.33
	Total	150	100.00

Table 2. Major land related problems and area under cultivation (N= 150)

S.No.	Categores	Affected area (ha)	%
1	Water Logging	18.37	7.72
2	Sodicity	60.98	25.65
3	Salinisation	4.17	1.75
4	Affected Area	83.52	35.13
5	Net cultivated area	154.19	64.87
	Total Area	237.71	100.00

The findings (Table 2) reveal that about 35.00 per cent of the total land possessed by beneficiaries was still problematic including 25.60 per cent affected with sodicity. The findings further reveal that a large area (65.00%) have been brought under cultivation. These figures are quite high as all the lands before project implementation were lying barren with sodicity and other problems. Some of the residents were inhabited during the project itself and the land was distributed to them.

There were four major sub activities related to land distribution and area planning i.e land distribution, area planning and developing plan map, land classification and soil testing. The concept of participatory management was so well inherited in the project management that more than 80 per cent of the beneficiaries were found having full involvement in all the four activities which were related to field level planning. The participation of local people has been ensured in relation to influencing administration helping the Uttar Pradesh Bhoomi Sudhar Nigam workers in approval of site plan, categorization of land by water user groups and collection of soil samples from the field. Based on the findings, it can be concluded that the participation of beneficiaries is of highest level not only in social and administrative aspects of area planning, rather it is also ensured in technical aspects also. Therefore, a mechanism has been developed by the project to involve the beneficiaries in all the activities related to area planning.

Table 3. Participation level of beneficiaries in land distribution and area planning (N= 150)

S. No.	Particulars	Full		Partial		No		Mean	X^2
		No.	%	No.	%	No.	%	score	Value
1.	Pursuing the administration for land distribution	132	88	11	7.33	7	4.67	2.83	10.143*
2	Area Planning & developing plan map in Site Implementation Committee	128	85.34	20	13.33	2	1.33	2.84	
3	Categorization of land by Water Usar Groups	132	88.00	10	6.66	8	5.34	2.82	
4	Taking soil samples from fields for testing	121	80.67	4	2.66	25	16.67	2.64	

* Significant at 5% level, df=3

The beneficiaries were found contributing in management of drainage system. Project officials were found involved in imparting knowledge and providing financial support whereas, beneficiaries were found physically doing the work, arrangement of additional required money and after care of the drainage systems. Thus, the project team and beneficiaries were found complimenting each other in the operation and maintenance of drainage systems. 50 to 65 per cent of the beneficiaries were found having full level of participation in all the activities except that of management of hume pipes where the full participation of only about 31 per cent beneficiaries *(Ghanshyam and Prasad R. 1985)*.

Table 4. Participation of beneficiaries in management of drainage system. N=150

S.No.	Particulars	Full		Partial		No		Mean	X^2
		No.	%	No.	%	No.	%	score	Value
1.	*Bunding/levelling*								
	(i) Physical contribution	96	64.00	44	29.34	10	6.66	2.57	5.389**
	(ii) Arranging additional money	91	60.67	47	31.33	12	8.00	2.53	
2	*Field drain*								
	(i) Physical contribution	98	65.33	21	14.00	31	20.67	2.45	
	(ii) After care of field drains	89	59.33	26	17.33	35	23.34	2.36	
3.	*Link drain*								
	(i) Group doing physical work	84	56.00	38	25.33	28	18.67	2.37	
	(ii) After care	78	52.00	43	28.66	29	19.34	2.33	
4	*Hume pipe*								
	Arranging additional money	47	31.34	15	10	88	58.66	1.73	

** Significant at 1% level, df=6]

Table 5. Major strengths of participatory management (N=150)

S.No.	Particulars	SA (%)	A (%)	DA (%)	Mean Score	X^2 Value
1	Link drain and boring are jointly planned	85 (56.67)	75 (30.00)	20 (13.33)	2.45	-
2	Boring at the highest place for facilitating water availability	82 (54.67)	50 (33.33)	18 (12.00)	2.43	16.822^{NS}
3	Land classification done jointly	90 (60.00)	46 (30.67)	14 (9.33)	2.50	-
4	Farmers become aware about the characteristics of their lands	72 (48.00)	32 (34.67)	26 (17.33)	2.30	
5	Facilitates group working for sharing equal water	90 (60.00)	38 (25.33)	22 (14.67)	2.45	
6	Helps in formulation of SHGs for saving and internal loaning	81 (54.00)	44 (29.33)	25 (16.67)	2.37	
7	Scheduled meetings and interactions are held	75 (50.00)	52 (34.67)	23 (15.38)	2.34	-
8	Suitable drainage to avoid water logging	95 (63.33)	40 (26.67)	15 (10.00)	2.53	-
9	Sharing of inputs by farmers for land reclamation	73 (48.66)	47 (31.34)	30 (20.00)	2.28	-
10	Technical support for undertaking various activities	88 (58.66)	44 (29.34)	18 (12.00)	2.46	-
11	Increased crop productivity and family income	92 (61.33)	44 (30.67)	12 (8.00)	2.53	-
12	Linkage with different organizations	85 (56.66)	48 (32.00)	17 (11.34)	2.45	-
13	Loaning on easy terms	70 (46.66)	52 (34.67)	28 (18/67)	2.28	-
14	Distributing Panchayat land among poor farmers	65 (43.33)	53 (35.34)	32 (21.33)	2.22	-
15	NGOs helping in group formation	83 (55.33)	40 (26.67)	27 (18.00)	2.37	-

NS: Non significant at 1% level, df=15 Note : SA=Strong Agree, A=Agree, DA=Disagree Agree

Table 6. Major opportunities of participatory management (N=150)

S.No.	Particulars	SA (%)	Agree (%)	DA (%)	Mean Score	X^2 Value
1	Land classification and field survey need to be conducted more spefifically	78 (52.00)	54 (36.00)	18 (12.00)	2.40	-
2	Land classification need to be done by farmers first and then verified by project team	70 (46.67)	42 (28.00)	38 (25.33)	2.21	4.603^{N}
3	Group President and Treasurer need to be changed on rotation basis	82 (54.67)	52 (34.66)	16 (10.67)	2.42	-
4	Before taking decisions each group member need to be taken into confidence	80 (53.33)	49 (32.67)	21 (14.00)	2.39	-
5	Developing mechanism for regular cleaning of link drain	75 (50.00)	51 (34.00)	24 (16.00)	2.34	-
6	No barriers between link drain should be allowed	78 (52.00)	54 (36.00)	18 (12.00)	2.40)	-
7	Better motivation of group members for understanding group property as their own property	72 (48.00)	45 (30.00)	33 (22.00)	2.26	-
8	Seed arrangement need to be done at village level	76 (50.67)	46 (30.66)	28 (18.67)	2.32	-
9	Enhancing repayment of loans by group members	81 (54.00)	44 (29.33)	25 (16.67)	2.37	-
10	Regular screening of defaulters	73 (48.67)	40 (36.67)	37 (24.66)	2.24	-
11	Draining out salt affected water to distant place linking to some water source	75 (50.00)	53 (35.33)	22 (14.67)	2.35	-

Note : SA=Strong Agree, A=Agree, DA=Disagree Agree, NS: Non significant at 1% level, df=10

The UPBSN programmes have been rated as one of the best in developing countries by visiting Technology Mission of World Bank. These rating is based on certain landmarks achieved in the areas of planning boring and link drains together; boring at the highest place with the consent of villagers; farmers involvement in land classification; facilitating group loan, water sharing; helping formulation of water user groups and self help groups; scheduled meetings and interactions; suitable drainage avoiding water logging; sharing of inputs by farmers; strong technical support; increased crop productivity and family income; linkage with different organizations; loaning on easly terms; distribution of Panchayat land among poor farmers; NGOs helping in community organization and over and above existence of transparency in input distribution and benefit sharing *(Heverkort, (1985)*. The mean value showing level of opinion of beneficiaries between a minimum of 2.22 to 2.53 out of 3.00, exhibit percentage agreement to the tune of 74.00 to 84.33 per cent.

Thus, the findings indicate that the approaches like group working, water sharing, link drain and boring development for irrigation and leaching, linkage with different organizations and transparency in all the activities are the major strengths contributing to the success of this project.

The highest opinion was received for conducting specific land classifications and changing office bearers of groups on rotation basis. These two factors are the base for different kinds of works to be under taken in the project. Land classification decides the kind of subsidies to be provided by the project to beneficiaries and also other kinds of supports like technical input and other supports. Likewise, group is the operational unit which holds the responsibility of looking after most of the project activities. Therefore, the members of such groups feel that Group President and Treasurer should be changed regularly on a rotation so as to avoid dominance of certain people and also for the proper functioning of the group with equal participation of all the group members. The other important opportunities are developing mechanism for regular cleaning of link drain, developing understanding among group members for owning group property, arrangement of seed at village level, enhancing repayment of loans, regular screening of defaulters and properly draining out salt affected water.

CONCLUSION

The findings indicate that the project on sodic land reclamation has been implemented on participatory mode where in the farmers have been actively associated in different activities including distribution and planning of area and management of drainage system. As a result the project has reflected many strengths viz. group working, water sharing, linkage with different organizations and transparency in all the activities. However, there are certain opportunities which need to be addressed for better implementation.

REFERENCES

1. Ghanshyam and Prasad, R. (1985). Farmers response to amendment use for reclaiming alkali soils and use of sodic waters for crop production". *Indian Journal of Extension Education*, **XXXI** (1-4) : 18.
2. Heverkort, (1985**)**. Steps for participatory technology development. *Extension Digest*, **3**:17.
3. Mathias, (1995). Indigenous knowledge and participatory technology development. *Extension Digest*, **3**:10.
4. Samuel, Paul (1987). Community participation in development project". Washington D.C. The World Bank Report, **9**:143.