

Constraints Faced by Participants and Non-participants in Adopting Social Forestry Practices

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ABSTRACT A study was conducted in Varanasi district of India to examine the problems in adopting social forestry practices based on descriptive and diagnostic research design. Fifty per cent of all the villages under the selected community blocks were included for study by proportionate random sampling. Sample respondents included one hundred and five participants as well as non-participants. Data were collected from respondents by conducting personal interview. The study revealed that the participants lacked in adequate training for raising social forestry plantations and knowledge in selecting suitable plant species for a particular site, whereas lack of technical knowledge for raising seedlings and their aftercare was identified as the major problem by the non-participants. The study has concluded to organise need based training giving due cognizance to the influencing variables-age, education, social participation, economic motivation, information sources utilization, size of land holding ,income and innovation proneness.

INTRODUCTION

Rehabilitation of the growing population, increasing demands in terms of communication and industrial development, meeting the growing domestic needs for food, fodder, fuel etc. have led to illicit cutting of trees and reducing the forest cover in a continued manner. Chowdhury (2004) in his study found that the people's participation in the social forestry illustrated the dissonance between myths and reality. Social forestry performance in achieving the participatory goals was poor. A number of common institutional and social problems seemed to have shaped the performance. Participation of the main target group the landless, women and disadvantaged class of the society was minimal in the project.

The forest wealth in India had to face a ruthless destruction in the name of forest development. The fast depletion of forest cover has ad-

versely affected the sustainability and ecological stability of the region by producing climatic change and aberrations. The emerging problem of ecology is a matter of serious concern for the predominantly agrarian system of India. This has also led to the multidimensional issues concerning to the agro-ecological stability in general and economic well being of the small and marginal farmers in particular. The most challenging task, therefore, is to save the existing forest and to check the spread of wasteland. This needs to be supplemented by the plantation programmes.

Giri and Ojha (2010) reported that over the past three decades, Nepal's community forestry program has undergone a tremendous shift from state centric and top down to community based participatory approach to forest governance. Research confirms that such shift has led significant improvements in local institutional arrangements (social capital) and the conditions of forests (natural capital). Yet, recent studies indicate that livelihood benefits to local communities, especially the poor and disadvantaged groups, remain limited. Such studies point to the need for problematizing the participatory approach itself to unravel the complex pathways of – and constraints to –livelihoods innovations in community forestry.

Social forestry deals with physically sick land and economically poor people to produce multiple products to meet the needs of local community. It has been identified as a tool for bringing

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about ecological and socio-economic improvements, and has the potential to alleviate poverty in rural areas. The success of social forestry programme is highly dependent upon the level of initiative and participation of rural community however; numerous constraints may result in limited peoples' participation in the programme.

Deforestation and degradation of productive lands are serious threats to the sustainability of forestry/agricultural practices in Kenya. In the last two decades farm forestry has been promoted through pilot projects among local communities as an example of sustainable land use. However adoption of farm forestry is limited outside the project locations because farm forestry improvement measures focused mainly on biological (for example, succession, biodiversity and traditional industrial timber production) and technical concerns (for example, material input delivery such as providing free tree seedlings for field planting) rather than local values, and interests and the constraints facing farmers (Appiah and Pappinen 2010).

Shyamsundar and Ghate (2011) reported that understanding the impact of community forest management on local people and forest sustainability is vital. The rural poor depend heavily on forests and good management can play a vital role in poverty reduction.

Blas et al. (2011) in their study related to constraints and management of community forestry found that some factors like appropriate leadership, and spending of logging receipts on collective benefits (direct and indirect) are needed to minimize conflicts. Government and development agencies should concentrate efforts on designing concrete tools for improving financial transparency while privileging communities with credible leaders.

Koli (2013) in his study on community forestry management reported that despite the potential of community forest management, the community based policy initiatives in Bangladesh failed to address the dynamic relationships among the formal and informal institutions that largely shape the rights and access of forest communities to forest resources. These policies ignored the social construction process that generated inequality and marginalisation in gaining access to forest resources.

Rantala and German (2013) in their study on governance process behind community forest management found that the current outcomes of

community-based forest management, favouring conservation over exploitation, precariously depended on contested claims to legitimacy embedded in intra-community social and political dynamics. To broaden the bases of legitimacy of community forest governance, and to enhance its long-term sustainability, structures for improved deliberation, representation, and accountability should be supported.

Participation of people in social forestry programme depends upon their familiarity with the programme, knowledge of different components of the plantation activities, awareness about environmental conservation as well as economic motivation. Therefore, a research study was undertaken with specific objectives to unfold the constraints related to social forestry.

Research Objectives

1. To compare the selected socio-economic, personal and psychological characteristics of the respondents.
2. To identify and compare the constraints faced by the participant and non-participant respondents in adopting social forestry practices.
3. To suggest suitable measures for increased people's participation in social forestry.

METHODOLOGY

Sampling

Social forestry division, Varanasi was selected purposively for the present study. Concern over less forest cover and familiarity with the prevailing custom, culture and language provided the base for purposive selection of the Social forestry division, Varanasi. Multi-stage sampling was followed for drawing a representative sample. Out of the eight community development (CD) blocks under social forestry division, Varanasi, one most progressive and one least progressive community development block viz., Sewapuri and Chiraigaon respectively was selected. Further, 50 per cent of all villages under the selected community blocks, that is, eight out of sixteen villages of Sewapuri CD block and six out of twelve villages of Chiraigaon CD block were selected by following proportionate random sampling procedure. First of all a list of participant and non-participant respondents was

prepared in each of the selected CD blocks. Fifty-five participants as well as non-participant respondents from eight selected villages of Sewapuri CD block and fifty participants as well as non-participant respondents from six selected villages of Chiraigaon CD block were drawn as sample respondents by proportionate random sampling procedure. Thus the final sample consisted of 210 respondents out of which 105 were participants and 105 non-participants of social forestry practices.

Empirical Measurement of Variables

The present study included a set of socio-economic, personal and psychological variables viz., age, education, sources of information, social participation, innovation proneness, size of family, size of land holding, credit behaviour, annual income, economic motivation and attitude. The variable age was measured in terms of chronological age in completed number of years; education was measured by the scale developed by Trivedi (1963), sources of information by the modified scale developed by Ramchandran (1974), social participation by the modified scale of Trivedi (1963), innovation proneness by the scale developed by Singh and Lokhande (1972), size of family, size of land holding, credit behaviour and annual income was measured with the help of schedule developed for this purpose; economic motivation by the modified scale of Supe and Kolte (1971). The variable attitude was empirically measured with the help of attitude scale developed by Jha (2009). The respondents were classified into three categories based on mean (μ) and standard deviation (s.d) values for the variables viz., sources of information, innovation proneness, annual income, economic motivation and attitude. The three categories were demarcated as respondents having scores more than $\mu + s.d$ value, respondents having scores in the range of $\mu \pm s.d$ value and those having scores lower than ($\mu - s.d$) value.

Data Analysis

Data were obtained from the selected respondents by conducting personal interview with the help of pre-tested structured schedule. Analysis of data was done using frequency, percentage, mean, standard deviation, correlation and regression analysis.

RESULTS AND DISCUSSION

Socio - economic and Psychological Characteristics of the Respondents

From the Table 1 it was evident that majority (63.81%) of the participants were middle aged, most (31.43%) of the participants had education up to high school level as well as primary and middle school level, medium size (2-4 ha) of land holding as in case of 55.24 per cent, medium level of annual income in the range of Rs 26,000- Rs 36,200 as found in case of 52.38 per cent of the respondents. Majority (64.76 %) of the respondents had higher level of economic motivation and most (54.28 %) of them had medium level of social participation having active membership in more than one organisation. It was also evident that most (61.91 %) of the participants had medium level of knowledge about social forestry practices, favourable attitude (60.95 %), medium level of entrepreneurship (64.76 %), medium level of innovation proneness (43.81%) and high level of utilization of mass communication sources as found in case of 41.91 per cent of the respondents. Appiah and Pappinen (2010) in their study found that farm labour was represented by a young population (56.3% under the age of forty). They were mainly engaged in small-scale mixed cropping integrated with multipurpose trees and some livestock. Farmers' concerns included population pressure on limited farmlands and the problem of credit for agricultural inputs.

Analysis of the socio-economic and psychological characteristics of the non-participants revealed that majority (59.04%) of the respondents were middle aged, most (73.33%) of them were found as illiterate and functional literate, possessed small size (1-2 ha) of land holding as in case of 59.05 per cent, low level of annual income (less than Rs 26,800) as found in case of 79.05 per cent of the respondents. Majority (58.10 %) of the respondents had low level of economic motivation and most (67.59 %) of them had low level of social participation having active membership in only one organisation. It was also evident that most (68.57 %) of the participants had low level of knowledge about social forestry practices, less favourable attitude (65.71 %), low level of entrepreneurship (70.47 %), low level of innovation proneness (63.81 %) and low level of utilization of mass communication sources as found in case of 56.19 per cent of the respondents.

Based on the 'Z' statistics, it was found that participant and non participants differed signif-

Table 1: Distribution of respondents based on their socio - economic and psychological characteristics

Characteristics	Category	Participants (N=105)		Non-participants (N=105)	
		Frequency	Percentage	Frequency	Percentage
Age	Young	30	28.57	26	24.76
	Middle aged	67	63.81	62	59.04
	Old	08	07.62	17	16.20
Educational Status	Illiterate and functional literate	29	27.62	77	73.33
	Primary and middle	33	31.43	19	18.09
	Higher secondary	33	31.43	06	05.72
	Graduate and above	10	09.52	03	02.85
Size of Land Holding	Marginal (< 1 ha)	04	3.81	21	20.00
	Small (1-2 ha)	25	23.81	62	59.05
	Medium (2-4 ha)	58	55.24	22	20.95
	Big (> 4 ha)	18	17.14	00	00.00
Annual Income	Low (< Rs 26,000)	34	32.38	83	79.05
	Medium (Rs 26,000- Rs 36,200)	55	52.38	20	19.05
	High (>36200)	16	15.24	02	01.90
Level of Economic Motivation	Low	05	4.76	61	58.10
	Medium	32	30.48	34	32.38
	High	68	64.76	10	09.52
Social Participation	Member of one organisation	38	36.19	73	67.59
	Member of more than one organisation	57	54.28	32	29.63
	Office bearers	05	4.76	03	02.78
Knowledge Level	Low	18	17.14	72	68.57
	Medium	65	61.91	30	28.57
	High	22	20.95	03	02.86
Attitude	Less favourable	07	6.67	69	65.71
	Favourable	64	60.95	34	32.38
	Most favourable	34	32.38	02	01.91
Entrepreneurship Level	Low	24	22.86	74	70.47
	Medium	68	64.76	28	26.67
	High	13	12.38	03	02.86
Level of Innovation Proneness	Low	21	20.00	67	63.81
	Medium	46	43.81	33	31.43
	High	38	36.19	05	04.76
Utilization Level of Mass Communication Sources	Low	31	29.52	59	56.19
	Medium	30	28.57	34	32.38
	High	44	41.91	12	11.43

icantly in terms of their knowledge level ($Z=28.136$), attitude ($Z=12.638$) and entrepreneurial ability ($Z=11.163$) in relation to social forestry.

It may be inferred that higher economic motivation, better literacy level, social participation, knowledge level, favourable attitude and entrepreneurial ability might have been instrumental in creating a driving force to the participants to engage in social forestry practices.

Constraints Faced by the Participant Respondents in Adopting Social Forestry Practices

It was evident from Table 2 that majority (80.95 %) of the participants indicated that lack of adequate training in raising social forestry planta-

tions was the most prominent constraint faced by them in adopting social forestry. Due to this factor even those persons having requisite potential, found it difficult to adopt social forestry practices. Harpal et al. (1995) had similar findings. Lack of knowledge in selecting suitable plant species for a particular site was the second major constraint faced by 62.86 per cent of the respondents. Tewari (1991) and Harpal et al. (1995) had similar findings. Damage of plants by stray animals was faced as constraint by 59.05 per cent of the respondents. Non availability of sufficient number of suitable seedlings from the government nurseries at optimum time was experienced as a constraint by 52.38 per cent of the participant respondents. Saxena (1992), Singh and Ja-

Table 2: Constraints faced by the participant respondents in adopting social forestry practices (N=105)

<i>S. No.</i>	<i>Nature of problems</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Rank</i>
1.	Lack of adequate training in raising social forestry plantations	85	80.95	I
2.	Lack of knowledge in selecting suitable plant species for a particular site	66	62.86	II
3.	Damage of plants by stray animals	62	59.05	III
4.	Non availability of sufficient number of plants/seedlings from government nurseries at optimum time of planting	55	52.38	IV
5.	Quality of plants supplied by the government nurseries is not good	50	47.62	V
6.	Damage of plants by incidence of diseases and insect –pest infestations	47	44.76	VI
7.	Lack of incentive/subsidy to those who adopt social forestry	44	41.90	VII
8.	High cost of seedlings for ornamental / commercial plants	41	39.05	VIII
9.	Insufficient technical knowledge to start nurseries for social forestry plantations	33	31.43	IX
10.	Lack of marketing facilities for social forestry products	30	28.57	X

gadeeshwar (1996) and Pathak (1997) had similar findings. Other constraints minor in nature were reported by less than 50 per cent of the respondents. Appiah and Pappinen (2010) in their study found that farmers' concerns included population pressure on limited farmlands and the problem of credit for agricultural inputs.

Constraints Faced by the Non-participant Respondents in Adopting Social Forestry Practices

Table 3 revealed that the major constraint faced by 77.14 per cent of the non participant respondents was lack of technical knowledge for raising seedlings and their after care. Since these respondents lacked technical knowledge in raising the plants suitable for social forestry and their after care, they were observed to be scared,

unwilling and less confident in adopting social forestry practices. Singh and Jagadeeshwar (1996) had similar findings. The next prominent problem perceived by the respondents (74.29 %) was identified as lack of proper knowledge about social forestry practices. This might be due to their low exposure to the different information sources. Tewari (1991) had similar findings. Lack of proper support from the forest extension agency, was perceived as a constraint by 60.95 per cent of them. Singh and Jagadeeshwar (1996) had similar findings. Lack of sufficient credit facilities and lack of incentive / subsidy for adopting social forestry, non availability of sufficient number of suitable seedlings from the government nurseries at optimum time and no proper training by forest department for raising nursery for social forestry was faced as constraint by 60 per cent, 59.05 per cent, 58.10 per cent and 53.33 per

Table 3: Constraints faced by the non-participant respondents in adopting social forestry practices (N=105)

<i>S. No.</i>	<i>Nature of problems</i>	<i>Frequency</i>	<i>Percentage</i>	<i>Rank</i>
1.	Lack of technical knowledge for raising seedlings and their after care	81	77.14	I
2.	Lack of proper knowledge about social forestry practices	78	74.29	II
3.	Lack of support of forest extension agency	64	60.95	III
4.	Lack of sufficient credit facilities	63	60.00	IV
5.	Lack of incentive/subsidy for adopting social forestry	62	59.05	V
6.	Non availability of sufficient number of plants/seedlings from the government nurseries at optimum time of planting	61	58.10	VI
7.	No proper training is imparted by forest department in raising nurseries for social forestry	56	53.33	VII
8.	Lack of training to control diseases and insect pest attack on tender saplings	52	49.52	VIII
9.	Damage of plants due to incidence of diseases and infestation of insect pest	50	47.62	IX
10.	Fear of loss in yield of field crops raised due to social forestry plantations on field boundaries/bunds	46	43.81	X
11.	Feel tempted to grow commercial plants only	32	30.47	XI
12.	Lack of proper marketing facilities for products obtained under social forestry practices	30	28.57	XII
13.	Non availability of surplus land for social forestry	26	24.76	XIII
14.	Fear of allelopathy by certain plants under social forestry	18	17.14	XIV

cent of the non participant respondents respectively. Devendrappa et al. (2011) reported that majority of the respondents were young, educated up to high school and had favourable attitude and agreed with the statement that social forestry adoption ensures many advantages.

Factors Influencing Participatory Behaviour of the Respondents

It was evident from Table 4 that the variables Education, Social participation, Economic Motivation and Sources of information utilized had positive and highly significant association; the variable Age had negative and highly significant association at 1 per cent level of probability; the variables Size of land holding and Innovation proneness had positive and significant association and the variable Annual income had negative and significant association with the participatory behaviour of the respondents at 5 per cent level of probability. Based on these findings, it may be inferred that respondents having higher level of Education, Social participation, Economic Motivation, Utilization of information sources, Size of land holding, Innovation proneness, young in age and having low Annual income exhibited higher level of participatory behaviour in relation to social forestry.

Lekshmi and Annamalai (2010) reported in their findings that most of the beneficiaries had a high level of awareness about Social forestry Programmes influencing their participatory behaviour. Wright and Andersson (2013) in his study reported that NGOs have no discernible effect on community forestry institutions,

though other external actors—most notably, municipal governments—seem to have a positive effect.

It was also evident from Table 4 that the variables Age and Education had negative and highly significant association with the non participatory behaviour of the respondents at 1 per cent level of probability. Based on these findings, it may be inferred that respondents old in age, having relatively higher level of Education, exhibited lower level of participatory behaviour in relation to social forestry.

CONCLUSION

Social forestry aims at management of forest resources and promoting the socio economic development of small and marginal farmers. These twin aims can be accomplished by ushering the participation of the target audience by instilling a sense of awareness about environment protection and human welfare as well as the benefits derived from the participation in the programme which may be instrumental in augmenting their socio economic and livelihood security in the long run. The study revealed that participant and non participants differed significantly in terms of their knowledge level, attitude and entrepreneurial ability in relation to social forestry. Lack of adequate training in raising social forestry plantations was the most prominent constraint faced by the participants whereas non participants lacked in technical knowledge for raising seedlings and their after care. Further the variables- age, education, social participation, economic motivation, information

Table 4: Association of selected variables with participatory behaviour of the respondents

S. No.	Variables	Coefficient of correlation 'r' (participation)	Coefficient of correlation 'r' (non participation)
1.	Age	-0.3271**	-0.2483**
2.	Education	0.5821**	-0.3906**
3.	Size of family	-0.0647	-0.1322
4.	Size of land holding	0.1897*	-0.1148
5.	Annual income	-0.2437*	-0.1803
6.	Social participation	0.5049**	-0.0785
7.	Economic motivation	0.4628**	-0.0851
8.	Credit behaviour	0.1106	-0.1674
9.	Sources of information utilized	0.2824**	-0.0532
10.	Innovation proneness	0.2163*	-0.0943

*Significant at 0.05 level of probability.

** Significant at 0.01 level of probability.

source utilization, size of land holding, annual income and innovation proneness, had significant association with the participatory behaviour of the respondents. Thus it may be concluded that the variables as identified above may be given due cognizance in selection of respondents for promoting social forestry practices.

RECOMMENDATIONS

Based on the findings of the study, following recommendations are suggested as follows:

1. Adequate trainings may be conducted by the forest department for imparting technical knowledge in raising seedlings and their after care, creating awareness about the economic and ecological benefits of social forestry as well as entrepreneurial development programmes.
2. Profits obtained from social forestry plantations, may be shared between government and the village community.
3. Research and extension linkage with people's participation may be strengthened.

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