Khulna University Studies, 8(1): 87-92, 2007

RESEARCH ARTICLE **LIFE SCIENCE**

PRESENT STATUS OF PEOPLES' PARTICIPATION IN SOCIAL FORESTRY PROGRAM AT SAKHIPUR UPAZILA OF TANGAIL DISTRICT, BANGLADESH

Md. Wasiul Islam*, Md. Muktarul Islam and Farhadul Islam

Forestry and Wood Technology Discipline, Khulna University, Khulna 9208, Bangladesh

KUS – 06/01-010106

Manuscript received: January 01, 2006; Accepted: March 25, 2007

Abstract: Social forestry (SF) in Bangladesh is designed as a development strategy to promote the bio-socioeconomic conditions through poverty alleviation and better distribution of income. Success of this program depends on the active participation of the target people. SF program was initiated in Sakhipur Upazila of Tangail district in 1988-89. The study revealed that people are participating in SF activities organized by government and non-government organizations (NGOs) and are getting different types of benefits from the program. Of the respondents 80% are engaged in Forest Department's and 20% are engaged in NGOs' SF program. Among the participants 90% are male and 10% are female. Of the participants 80% are farmers, 11% are service holders and only 9% are housewives. In the study area participatory woodlot program involved majority (62%) of the participants, followed by sal forest coppice system (26%) and agroforestry (12%). SF plantation has increased overall income of the participants and now they are very careful to protect their plots against damages.

Key words: Social forestry, woodlot plantation, agroforestry, sal coppice, Tangail, Bangladesh

Introduction

Bangladesh is the most densely populated country in the world. Still the population is increasing at an alarming rate. To meet the demand of food, fuel, housing, transportation, etc. of this growing population, greater pressure has been put on the forest resources of the country. As a result forest resources are decreasing every day. Adverse effect of this reduced forest cover is inflicting upon the environment. For diminishing Government and village forests, the scarcity of timber and fuelwood is increasing (Dey, 1996). To cope with this problem social forestry (SF) has been initiated through out the country (Salamat, 1991). SF is a mechanism in which people's involvement in forestry production and protection is sought through a benefit sharing arrangement (Roy, 1997).

In the context of Bangladesh probably there is no option except participatory forestry in developing, managing, and protecting forestland and forest resources. Recognizing this, SF has been adopted as a policy statement in Bangladesh. Despite that the practice was initially planned for marginal lands controlled by government agencies. Later Forest Department (FD) has allowed it in the sal forest areas (Roy, 1997).

* Corresponding author**:** Tel.: +880-41-720171-3, extn.: 228; Fax: +880-41-731244; e-mail: <wasiulislam7@yahoo.com>

DOI: https://doi.org/10.53808/KUS.2007.8.1.0601-L

The sal *(Shorea robusta)* forests of Bangladesh comprise an area of 111,398 ha of notified forests under the control of the FD out of which 95,772 ha (86%) are located in the central region (Bhawal Ghar and Modhupur Ghar situated in Dhaka, Gazipur, Tangail, Mymensingh and Jaqmalpur districts) and 15,626 ha (14%) in the northern region (greater Dinajpur, Rangpur and Rajshahi districts) (Chowdhury, 1994).

The sal forest of the country, prior to the enactment of East Bengal State Acquisition and Tenancy Act (EBSATA) 1950, belonged entirely to the owners who were the top elite of the society, the *Zaminders*. It was decided by the government to constitute the forest into reserve forests in 1950. Of the total area of 111,398 ha sal forest, only 29,965 ha are Reserved Forest. The balance areas still enjoy the status of acquired forests, and the forest acts, rules and regulations are not fully applicable on them. Consequently the control measures are in slack. These legal complications have created tenurial complexities in the area resulting in huge numbers of court cases, both criminal and civil by and against the FD (Bhuiyan, 1994). The existing forest are left over of a once well-stocked high forest but degenerated because of repeated and indiscriminate felling. Such illegal felling activities are continuing even now despite all efforts by the FD to control them. The forest is highly irregular and abnormal in its stocking character. The age classes are unevenly distributed and intermixed. A recent estimate revealed that about 65% of the forest area are highly degraded or have been encroached (Ghani *et al.,* 1990). Though moratorium on felling is in force in the sal forest tract over three decades (since 1972) and attempts of rehabilitation of the forest through natural regeneration in the existing forest sand artificial plantation in the blanks and encroached areas are pursued for about four decades, the forests did not register improvement. To the contrary, unauthorized felling continued and the stock is progressively depleted through illegal removals of mostly bigger and quality trees on a regular basis (Bhuiyan, 1994).

Lately people's participation has been sought since 1989 for rehabilitation of the blanks and encroached areas under Thana Afforestation and Nursery Development Project (Anon, 1989). These new plantations, established with high grade survivability and growth quality continued to be in good shape and sustainable till the present time. With further refinements of both technical and social involvement mechanisms, the participatory forestry program may finally worked out to be a sustainable forestry development in these human interfered sal forest tracts, and for that matter in all other similar situations. Presently participatory forestry program is confined to the denuded areas only; the natural stands are kept outside the preview of this program. And it is here that depletion of the forest is continuing on a regular basis. Participatory management program also needs to be extended to such degraded natural stands, if worthwhile protection and desired forest recovery is to be achieved on a sustainable basis (Bhuiyan, 1994). Encroachment and illicit removal of timber are the major problem of this sal forest (Chowdhuri, 1994). By considering all the factors of the forest social forestry and agroforestry has been identified as the way to recover the forest. The present study has been carried out in this connection to assess the people participation status in social forestry program at Sakhipur Upazila of Tangail district.

Sakhipur Upazila of Tangail district was selected as the study area purposively due to pressure of active public participation and diversified SF practices. The objectives of this study are to know the status of peoples' involvement and their attitude toward SF program at Sakhipur Upazila of Tangail district and to assess the success and failure of peoples' participation in SF program in the study area. Study on the present status of peoples' participation in SF program may identify the loop holes in the program and contribute to increase participation and may enhance selection and management of participants in SF program. There are some limitations of the study. It was difficult to make the people understand about the purpose of the survey. Some times people did not response positively because they thought that they would not get any profit from the survey work.

Materials and Methods

Study area: Sakhipur is one of the 11 upazilas of Tangail district. The Upazila covers an area of 429.63 sq km and bounded by Ghatail Upazila on the north, Mirzapur Upazila on the south, Bhaluka, Shreepur and Kaliakair Upazila on the east, Kalihati and Basail Upazila on the west. The Bangshai and the Salda are important rivers of the Upazila (Anon, 2004). A special feature of the sal tract is that the forests are located on flat-topped hillocks (locally called *Chala*) separated by an intricate network of depressions (locally called *Baid*) in honeycomb layout pattern. The baids are generally cultivated with paddy. Homesteads, cultivable lands and forests are inextricably mixed up making forest boundary demarcation and maintenance extremely difficult (Bhuiyan, 1994). Sakhipur Upazila has a sub-tropical moderate climate with a medium rainfall during April to October. But during the months of June to July (monsoon period) the rainfall is more than the rest of the year. The average annual rainfall of this region is about 2246 mm. The remaining five months are dry period (ranges from 4 mm in December to 34 mm in March). The percentage of relative humidity is highest having a range from 68% in March to 89% in July. The mean monthly temperature ranges from 18.3º C in January to 28.7 ºC in August, whereas mean annual temperature is 25.33º C (Anon, 1999). The soils of sal forest area belong to the Red Brown Terrace soil, grey terrace soils and deep Red-Brown Terrace soils. The topsoil texture ranges from silt loam to silty clay loam. The sub-soil texture is mainly silty clay loam or clay. The substratum is usually clay. The underlying clayey substratum is either partly weathered or unweathered and usually occurs at the depth of around 1 m (Amin and Fattah, 1994). There are total 26134 ha cultivable land, 16279.62 ha of forestland under 12 forest beats (smallest administrative unit) and 345 ha fallow land in this Upazila. Of the total area single crop land is 40%, double crops 58% and treble crop land 2%. Land under irrigation covers 75% of the total land area. Main crops are paddy, wheat, onion, brinjal and chili. Main fruits are mango, jackfruit, banana, papaya, berry and watermelon. Population of this Upazila is 220281; of which 51.01% male and 48.99% female; 93.5% are Muslims and 6.5% are Hindus. There are also some (111 nos.) ethnic people called Mandi. Main occupations of this population are: agriculture 67.56%, agricultural labor 15.11%, wage labor 2.17%, business 5.84%, service 2.68%, and others 6.64% (Anon, 2004).

Data collection and preparation: A field survey was conducted with a semi-structured questionnaire which was prepared on basis of a reconnaissance survey. The total number of participants in SF program in the area is 4772 (i.e., 2.17% of the total population of the study area). Two hundred of them (i.e., 4.19% of the total participants) were selected randomly for interview by drawing random numbers (by collecting the total information of the participants from FD) from a random number table. The field survey was conducted in January, 2005. Secondary information was collected from libraries, reports, journals, newspapers, Bangladesh Bureau of Statistics (BBS) and internet sources. The collected data from the both sources were carefully reviewed and sorted according to the sequence of information. Then data were analyzed for explaining it easily by constructing different tables and graphs with the help of MS Excel computer package. Finally the sorted and analyzed data were compiled sequentially and systematically to present the paper.

Results

About the respondents: Among the participants in SF program in Sakhipur Upazila male and female ratio was 9:1. The professions and educational status of the participants in SF program of the study have been shown in Fig. 1 and 2.

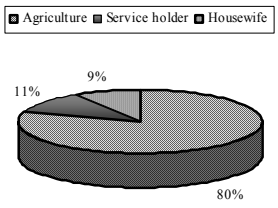

Fig. 1. The professions of the participants in SF program in the study area.

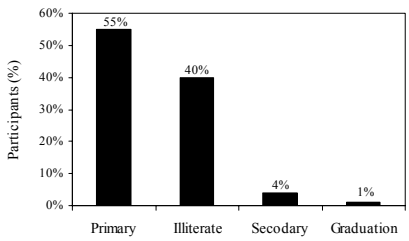

Fig. 2. Educational status of the participants.

Types of social forestry practiced by the participants: Most of the participants (62%) are involved in participatory woodlot plantation program. Another 26% of the participants are involved in sal coppicing and the other 12% in agroforestry practice. Woodlot plantations are raised mainly for fuelwood production. Participants prefer fast growing multipurpose species (e.g., akashmoni, eucalyptus, gamar, ghora neem, minjiri, etc.) for woodlot plantation. They carry out some management operations e.g., weeding, watering, thinning, pruning, etc. Agroforestry practice in the area is designed to meet the increased public demand for food, fuelwood, timber, etc. Akashmoni, eucalyptus, gamar, ghora neem, etc. trees are planted along with paddy, wheat, onion, brinjal, chili, etc. Participants take care of both tree and agricultural crops. Sal forest is naturally regenerated but subsequent management actions are carried out by the participants. Previously FD managed the forest and often confronted with local people and the forest continued to degrade. At present, the local people are managing the forest following the procedure prescribed by the FD. Each participant is allotted 2-5 ha of sal coppice area. In the 1st year 2-3 healthy coppice shoots are kept in each clump. In the 2nd year participants thin out the coppices to an initial number of 5,000-6,000 shoots per ha. By 5th year this should be reduced to 3,000-4,000 stems per ha and by 10th year it will be thinned out to 2,000-2,500 stems per ha and that will be maintained up to 20th year (coppice rotation). After 20th year 100-150 stems per ha would be kept as standard. During harvesting in the 2nd rotation (40 years after the initiation of management) half of the standards could be removed to retain 40-50 standards per ha up to 60 years.

Major species used by the participants: Choice of species should, as far as possible, ensure multiple use of resource with the available technology. Site potentialities, benefits and the beneficiaries are required to be connected to maximize benefit (Anon, 1995). Various types of species that are planted at Sakhipur Upazila under social forestry program are given in Table 1.

Table 1. Different species planted in SF activities and their survival percentage in the study area.

Local name	Scientific name	Survival (%)	Types of SF practice	Purpose	Rotation (yrs)
Sal	*Shorea rubasta*	95	Sal coppicing	Timber	20
Akashmoni	*Acacia auriculiformis*	96	Agroforestry and woodlot	Fuel wood	10
Eucalyptus	*Eucalyptus camaldulensis*	95	Agroforestry and woodlot	Fuel wood	10
Chickrassy	*Chickrasia tabularis*	93	Woodlot	Fuelwood	10
Gamar	*Gmelina arborea*	90	Agroforestry and woodlot	Fuelwood	10
Minjiri	*Casia siamea*	90	Woodlot	Fuelwood	10
Ghora neem	*Melia azadirach*	90	Agroforestry and woodlot	Fuelwood, Medicinal	10

The participants use these species for getting cash, timber, small construction materials, posts, agricultural implements, fuelwood, etc. The FD officials and NGO personnel fix the plantation maintenance technique, rotation and harvesting system. Sal is the only species, which has longer rotation (60 years) for timber production. Akashmoni, eucalyptus, gamar, ghora neem, and minjiri are cultivated on 10 years rotation.

People participation in social forestry activities through GO and NGOs: Of the participants 80% are involved in GO's and 20% in NGOs' SF program. In both the cases overwhelming majority of the participants are male i.e., 93.75% and 75% respectively. Female make only 6.25% in GO's and 25% in NGO's SF program (Table 2).

Table 2. People involvement in social forestry activities through GO and NGO in Sakhipur Upazila.

Respondents	GO			NGO		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
200	150 (93.75%)	10 (6.25%)	160 (80%)	30 (75%)	10 (25%)	40 (20%)

Successes and failures of people participation in social forestry program: There are successes and failures of people participation in SF in the study area. The successes are: (i) public attitude

towards forest has changed (ii) maintenance of plantation has improved (iii) the survival rate of planted trees has increased (iv) the illegal cutting of planted trees has reduced. The failures are: (i) in some cases participants are not selected properly, local elites are also selected as participants. As result landless and poor farmers are deprived of their right to become participants (ii) one man/woman is selected as participant for several times in different rotations and thus the non-participant landless and poor farmers do not get opportunity to become a participant of the program (iii) due to insufficient training some participants do not actively take part in plantation management.

Discussion

SF program was started at Sakhipur Upazila of Tangail district about 15 years ago. At the beginning people were suspicious about the program. Nevertheless, the officials of FD and NGOs tried to encourage them to get involved in this program. After the first rotation of the SF program, participants are more encouraged as they have got their share from the program. Though participants now have confidence in the program but still they are not backed by appropriate forestry technology.

Tenure of the contract between FD and participants is found as a bottleneck for implementing participatory forestry. FD allowed rights of participants over the land for a period of seven years, but logically this should have been at least equal to the length of rotation period, so that participants can manage and protect trees till harvesting. According to the participants, a negative attitude is also observed among the foresters to involve women in forestry activities. They desire that activities of women are confined in the areas where there is a locality apprehending the social problems. But in participatory forestry both men and women should be treated equally (Roy, 1997).

Only about 10% female participation in SF is not encouraging. As most of the plantations were raised on the forestland of the study area so the male were the major participants of the social forestry program. On the other hand, for female members there are some restrictions in working outside their residence. Male family members hinder them to work under the social forestry program due to their family tradition or religious bindings. From the field survey it is noticed that, the people has negative attitudes toward NGOs though it is changing gradually. Again female participants do not take part in decision making process. The same thing is also reflected in their family life when there is a question of decision making regarding their family affairs. In these cases, the male members take the final decision and neglect the female member's opinions.
Most of the participants are not educated and as a result their main occupation is local area based agriculture (80%). There are very few people (only 11%) who are service holders act as the participants of SF program. Poverty is the foremost problem of the area. This problem creates impediments to be literate for the people. There is no incentive and credit system for the participants for the success in SF practice. Such situations of the people lead themselves to adopt social forestry activities at the study area as a means of alternative source of income to uplift their socio-economic status. There are also many other sources of alternative income but SF program is very easy to implement and requires very low investment.

The following suggestions can be made for the success of people participation in SF program as well as in Bangladesh:

- Benefit sharing agreement should be on a non judicial stamp to establish confidence among local people on FD and NGO.
- Some incentives in various forms (e.g., seeds, seedlings, fertilizers, pesticides, gabions, loans, trainings, etc.) may be given to the participants for the better performance of SF program.

- In some cases beneficiaries of social forestry program are not selected properly. The true beneficiaries should be the landless people and poor farmers who actually need help. So by applying appropriate techniques, beneficiaries should be selected. Besides this, women involvement should be increased.
- The provision of sufficient long-term credit with very little or no interest should be offered thus the poor people can generate their own income. Proper direction and assistance should also be provided to make a better utilization of that credit.
- Adequate technical and managerial training for both staff and target beneficiaries should be organized.
- To make participation of the people effective and sustainable, sufficient motivation is required and this responsibility must be taken up by the NGOs. Involvement of groups in planning and decision making process to be ensured through proper policy directions.

Conclusion

Local people are very important, in making any decision about common property, like land utilization. The success and failure of any SF program depends on the level and magnitude of people participation. The attitude of the local people of the study area on SF program is positive. People are motivated towards SF activities as they are getting reward from the program. We should encourage the people's active participation.

References

Amin, S.M.R. and Fattah, M.I.M. 1994. *Agroforestry for the Degraded Sal Forest.* Proceeding of the national workshop held at Bangladesh Agricultural Research Council, Dhaka (November 26 to December 1, 1994). BARC and Forest Department with the Financial Assistance from Asia Pacific Agroforestry Network (APAN), Dhaka, pp. 75-76.

Anon. 2004. *National Encyclopedia of Bangladesh*. Vl. 9, The Asiatic Society of Bangladesh, Dhaka, pp. 23-24.

Anon. 1995. *Social Forestry in Bangladesh: State of Art Study.* BRAC-Winrock International, Agroforestry & Participatory Research and Training Support Program, Bangladesh Agriculture Research Council, Dhaka, Bangladesh, 209 pp.

Anon. 1999. *Upazila Statistics, Major Crops and Agricultural Inputs*. Bureau of Statistics, Statistics Division, Ministry of Planning, Government of Bangladesh.

Bhuiyan, A.A. 1994. Agroforestry for the Degraded Sal Forest. Proceeding of the national workshop held at Bangladesh Agricultural Research Council, Dhaka (November 26 to December 01, 1994). BARC and Forest Department with the Financial Assistance from Asia Pacific Agroforestry Network (APAN), pp. 26-43.

Chowdhury, R.A. 1994. Agroforestry for the Degraded Sal Forest. Proceeding of the national workshop held at Bangladesh Agricultural Research Council, Dhaka (November 26 to December 01, 1994). BARC and Forest Department with the Financial Assistance from Asia Pacific Agroforestry Network (APAN), pp. 9-25.

Dey, T.K. 1996. *Social Forestry*. Forest Extension Division, Bangladesh Forest Department, Comilla, Bangladesh.

Ghani, Q.; Alim, A. and Stevens, P.R. 1990. Rehabilitation and landuse planning of sal Forests. FAO/UNDP, Project BGD/85/085, Working Paper No. 39, Dhaka, Bangladesh.

Anon. 1989. Upazila Afforestation and Nursery Development Project (1987-94). Forest Department, Government of Bangladesh, Dhaka, Bangladesh.

Roy, M.K. 1997. Forest, People and Environment. Paper presented in the workshop on importance of non-formal education, organized by Bangladesh POUSH, Dhaka, Bangladesh.

Salamat, A.H. 1991. A review of social forestry projects and programs in selected states in India. Report prepared for Government of India and the Swedish International Development Authority.