



## PROSHIKA: MARGINALIZED PEOPLES' PARTICIPATION IN RURAL AFFORESTATION IN BANGLADESH

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### Abstract

*In Bangladesh, the rapid depletion of forest biomass has posed a serious threat to livelihoods and ecological harmony. PROSHIKA is a development organization but since its inception it has given top priority to environmental protection and natural regeneration. PROSHIKA believes that people can contribute to natural protection through afforestation when properly motivated and assisted. PROSHIKA's social forestry activities are directed towards poverty alleviation through a comprehensive approach in implementation strategies. Under these activities, PROSHIKA planted about 2.5 million seedlings with active participation of 2317 organized groups (20 persons on average) with food assistance by the World Food Programme (WFP) between 1991 and 1998, and from 1997 to 2001, planted about 3.4 million seedlings with 1974 groups with financial assistance of the EU food security project. The seedlings are planted on raised roadside like, feeder roads and highways, embankment, railways and private land. PROSHIKA also planted trees in homestead and other privately owned premises. Awareness about the importance of tree resources regeneration increase day after day, and support for PROSHIKA also expands accordingly. As a result, total biomass produced in this process contributes not only to better livelihoods but also to reducing global warming as carbon reservoir.*

**Keywords:** *marginal land, organized people, benefit sharing agreement, skills training, nursery.*

### Introduction

Bangladesh is situated in the north-eastern part of the South Asian subcontinent—between 20°25' and 26°38' north latitude and 80°01' and 92°40' east longitude—with total area coverage of 14.4 million ha among the most fertile land of the world, spanning the relatively narrow land between the

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Himalayan Mountain chain and the Bay of Bengal. As per Forestry Master Plan (FMP) in 1993, agricultural land makes up 9.25 million ha (64%) of the country while forest land accounts for 2.56 million ha (17.8%). Of 2.56 million ha of total forest land only 2.22 million ha is state-owned with 1.4 million ha as classified land and 0.73 million ha as unclassified. Village Forest covers only 0.27 million ha which is 1.9% of the total land area. The per capita availability of forestland in Bangladesh is less than 0.02 ha., which is one of the lowest in the world. A report by USAID (1990) reveals that the forest cover is only about one million ha or 6% of the country's total land area. South-Asia had an annual deforestation rate of 0.6% the period during 1981-90. In comparison, Bangladesh had a deforestation rate of 3.3%, which is about 10-12 thousand ha per annum during the same period.

More than 90% of the state-owned forestland is concentrated in 12 districts in the eastern and south-western regions of the country, and 28 districts out of 64 districts have no state-owned forest at all (GOB 1990). The state-owned forests are 10 times larger than the village forests, but contribute only about 20% of total forest products while village forests contribute is about 80% (FMP 1993). The total production in Bangladesh has been estimated at around 193 million cu. ft. in the year 2000, however the expected requirements for that year was 351.8 million cu. ft. This deficit was devastating for the rural communities, particularly the low-income people. The energy consumption pattern in Bangladesh is characterized by a heavy dependence on biomass fuel, which accounts for 73.1% of the total energy used from agricultural residues (65.5%), woodfuel (22.5%), and animal dung (14%) respectively (FAO 1998: 59, 132).

In the above circumstances, afforestation through social forestry activities can have good and sustainable results, and achieve national and international recognition. These practices are appropriate in conditions of poverty because the planted trees can provide immediate returns and benefits for the poor. If this programme is to contribute to the alleviation of rural poverty and stop forest depletion, it must be implemented based on a participatory approach where the participants (poor people) can actively take part in planning, implementation, and benefit-sharing activities. All categories of marginal lands (i.e., roads, railways, and embankment), that are state owned and controlled by different government branches may be considered for afforestation programme.

Since its inception, PROSHIKA has focused on the development of group consciousness to protect and generate natural resources. PROSHIKA, as a non-government development organization, has been working with the poor throughout Bangladesh since 1976. Its mission is to "conduct an extensive, intensive and participatory process of sustainable development through empowerment of the poor." PROSHIKA has specific objectives of: "structural

poverty alleviation; environmental protection; improvement in woman's status; increasing people participation in public institutions; and increasing people capacity to gain and exercise democratic and human rights." PROSHIKA is committed to sustainable development by redressing the exploitative development practices and initiating ecologically sensitive development programmes (PROSHIKA 2002: 42-45). To enhance effective participation and to build up capacity of the poor, PROSHIKA has facilitated the creation of an organization of the poor called "*Trinomol Janasangathans*" (grassroots people's organization), provided them with training and education services and also supported them, with credit, technical assistance and marketing skill (PROSHIKA 1998: 69-70).

### **Implementation Strategy**

Afforestation under Social Forestry programme requires innovative approaches in organization, motivation, training, technical and credit assistance. There is growing consensus among policy makers that government alone cannot solve the pressing problems of rural poverty and deforestation. PROSHIKA believes that members should organize themselves and be involved directly in production, marketing and benefit sharing systems related to afforestation. Tree growing with people participation can: a) increase income and employment opportunity for the poor; b) help the people meet their demands for timber, fruit, fodder, medicinal plant and fuel; c) increase tree-coverage in Bangladesh and thus contribute to the biomass production. PROSHIKA provides various types of seedlings for the poor to plant on the roadsides, marginal lands and in homesteads areas. During the last three decades, a number of international organizations have come forward to provide assistance to the PROSHIKA's afforestation programme—WFP (World Food Programme), European Commission (EC), Henrich Boll Foundation, Ford Foundation, etc.

### **Participants in Afforestation Activities**

People can understand their needs, rights and root causes of poverty if they are properly organized and gain a degree of firm consciousness of this matter. By getting training people become able to take part in planning, execution and monitoring of any development activities and by being organized together allows them to overcome the hardest challenges. The target peoples in PROSHIKA's interventions are:

- (i) *hardcore people* - those having no land or homestead; disabled; female headed households who have to sell their physical labour to earn a livelihood.
- (ii) *landless* - those having a homestead but no land and who try to make a living from casual labour or petty trading.

- (iii) *marginal household* - those who are able to produce 50% of their food needs from their own labour and who also have to work as casual labours.

At grass root level target people are organized in primary groups of 15-20 members, with separate male and female groups. Primary groups then form federation at village, union and *thana* levels, and perform specific responsibilities. Here 'village' refers to geographical location where around 200 - 250 households exist. In Bangladesh, nearly 80% of the population lives in a village. The livelihood of these people depends on agriculture and selling labour. At the same time, a 'union' is comprised of at least 3-5 villages and 'Thana' is an administrative unit of the government comprised of 12-15 unions.

Before mobilizing local people, PROSHIKA carries out baseline survey through participatory rural appraisal (PRA) techniques and use of questionnaire. The baseline survey collects socio-economic data on the status of local people, institutional framework, culture, geographical status, natural resources, different barriers and opportunities etc. Depending on the result of the baseline survey, in each village, landless, marginal farmers, labour, "hard-core" peoples are organized in to primary groups. Next steps for the group members is to implement different development activities like income generating activities, education, environmental protection activities, hygiene and sanitation activities. Some groups also start to take part in afforestation activities according to the availability of land where to carry out afforestation. Female groups are given priority for implementation of such activities, and they have equal rights over the benefits derived from planting trees.

### **Assistance Provided for Afforestation**

In order to extend afforestation activities at grassroot level throughout the country, PROSHIKA has addressed some basic requirements: training, management, credit support to enable poor people in the implementation of activities.

#### ***Training Assistance***

Training is integral to mobilization and awareness building of target people. Generally PROSHIKA offers two categories of training: *human development training* and *practical skill development training*. Human development training can be described as a systematic process of awareness building, such as 'Development and Organization', 'Women and Development', 'Management and Development', etc. These kinds of trainings are offered to selected members of the groups to develop leadership capacity among group members that they are able to take part in decision-making process of development activities. Practical skill development training is meant for those who will undertake different employment and income

generating activities, including forestry development activities like creation of a nursery, planting, management of plantation. As an outcome of the training process, participants from organized groups learn how to mobilize their own human and material resources for development actions, identify and use the unutilized and underutilized local resources.

### *Assistance to Establish Nursery and Plantation*

The establishment of a nursery is an essential part in the implementation of an afforestation programme. In the beginning, PROSHIKA provided various seedlings of fruit, timber and medicinal plants to the organized members to be planted in their homestead. The seedlings were coming from the nurseries of the Bangladesh Forest Department. PROSHIKA soon realized that acquiring seedlings from government not only had complexities linked to bureaucratic procedures, but also needed money. If the group members were to produce these seedlings themselves, a substantial amount of income would be added to their daily earnings from selling the seedlings. Based on this realization, PROSHIKA started providing training, technical assistance and credit support to the group members for establishment of nurseries. Also, a remarkable numbers of nurseries were established by group members in different *thana* with their own fund, and PROSHIKA provide training and technical support. As a result, at the plantation site, a sufficient numbers of nurseries were established with 30,000 to 50,000 seedlings grown. This ensured the existence of continued supply of planting material for the desired quality and quantities. The overall cost for growing the aforesaid number of seedlings is estimated at around Tk. 30,000 - 40,000 (1 \$=Tk. 68 ). This cost is normally given to group members in the form of credit.

Plantations are established where the nearest suitable roadsides, railways, embankments are available to the concerned groups. Organized members seem to be well motivated to manage the plantation with their own contributions since the very beginning of the afforestation programme. To grow one kilometer or one-acre block plantation with 1000 seedlings, the estimated amount required around Tk. 5-8 thousand for purchasing and carrying the seedlings. The established nursery by any member of a particular group is treated as personal property. The group can purchase required seedlings for the plantation from the nursery. In most cases, the cost for the establishment of the plantation is borne by group members collectively. If needed, PROSHIKA provides additional credit in support of the establishment of the plantation. All members participate with self-employed labour. Group members may select the plant species that they prefer. During the training, and in regular group meeting, members are taught criteria for choosing plant or tree species. In general, group members prefer fast growing species for establishing a plantation. PROSHIKA provides

technical assistance for group mobilization and the whole range of activities needed in establishing the plantation, maintaining and harvesting the matured trees. Qualified personnel is responsible for expansion of these activities at *thana* level.

#### *Care and Maintenance of Plantation*

Sometimes, plantations may fail due to lack of care. Proper maintenance such as, weeding, cleaning, watering is required immediately after planting. Damage by the cattle cannot be avoided without continued physical presence at the plantation site. Social conflict may also cause damage to the plantation. In order to ensure proper care for the plantation, one group member is selected as caretaker in charge of 500 seedlings for three years after planting. This approach secures people's participation and responsibility in the 10 to 60 km plantation in each *thana*. With the assistance of WFP (World Food Programme), daily wages are provided to the caretakers in the form of food or cash. This system also creates short-term employment opportunities for the caretakers who are vulnerable members within the group. In addition, a caretaker can plant other crops in the plantation to generate additional income himself and other members (a portion of the income goes to the group fund).

#### *Assistance to Groups for Land Lease Agreement*

In Bangladesh, people have no proprietor rights on public forest. Only recently, a law "Social Forestry Rule-2004" was enacted to allow and regulate plantations in public forest. The idea of plantation establishment on marginal lands like roadsides, highways, embankments, and private land is new to local people. These lands are under specific government authority and need prior permission for using these lands for any other purpose. In the beginning, people had no idea of how to request and obtain a lease from the appropriate authority for afforestation activities, and therefore access to these lands was difficult. Some authorities, do not agree to lease to private organizations for 15-20 years, considered longer than the rotation cycle of the plantation itself assumed at 10-15 years. PROSHIKA had to make extra effort for leasing the land from the concerned land owning agencies. The right to plant is established by making benefit-sharing agreements in non-judicial stamps, with a set of conditions. The agreement involves the landowners, PROSHIKA, and the concerned groups. The agreement sets the percentage of the final harvest of trees that would be shared. Usually, the group gets 65% of the benefits, the land-owning agency gets 25% and implementing agency 10%, but it can vary. In the 1990s, benefit sharing mechanisms were rarely adopted. Now they are a much more common practice.

### *Technical and Management Assistance*

A successful plantation depends on proper management and appropriate technical assistance to the group members. Technical assistance is given in case of seed collection, germination technique, thinning and pruning, intercropping, pest and disease control etc. Also, from a management point of view, it is important to make sure that activities such as, resources collection, assistance to the preparation of the plan, distribution of responsibilities among the groups are timely executed. Qualified staff at field and central levels assist the groups.

### **Achievement, Challenges, and Lessons Learned**

#### *Increased Tree Coverage*

The most significant achievement of PROSHIKA in participatory afforestation is a significant increase of tree coverage. During the last two decades, group members organized by PROSHIKA have created a real revolution in afforestation by utilizing marginal land like. From 1991 to 2001, with the assistance of WFP and EC, the afforestation programme planted 6442 km strip and 1397 acres of block plantations (Table 1) and a total of 6340888 seedlings of various species were used by the group members.

Table 1. Yearly Afforestation Activities with the Assistance of WFP and EC

Plantation Years	Strip (km)	Block (acre)	Institute Plantation (No.)	Total seedling planted
1991-92	337	0	0	212457
1992-93	573	0	0	486099
1993-94	497	27	0	693000
1994-95	430	0	0	430000
1995-96	156	0	0	250500
1996-97	193	41	0	318500
1997-98	884	357	0	844953
1998-99	840	205	0	625000
1999- 00	1195	215	98	899164
2000-01	1337	552	365	1581215
Total	6442	1397	463	6340888

In 1991, three roads of 3 km in length were planted on both side with 4125 seedlings of different species in Kaliakoir Thana (Now Upazila) in Gazipur districts, about 60 kms from capital city of Dhaka. A study in 2003, found that a total of 2497 trees have survived and were measured for harvesting. The growth performance of different species is shown in the following table (Table 2). It is no doubt that this private initiative will play an important role in

contributing to raising the national tree coverage target set in Forestry Master Plan (ADB 1993) to about 20% by the year 2020.

Table 2. Growth Performance of Standing Tree in Three Sites

Species	0 - 1'- 6" dbh		1'-7" - 2'-6" dbh		2'-7" - 3'-0" dbh		3'-1" > dbh		Total
	No	Avg. ht (ft).	No	Avg. ht (ft).	No	Avg. ht (ft).	No	Avg. ht (ft).	
<i>Acacia mangium</i>	75	12.2	386	14.8	368	17.6	293	18.6	1122
<i>A. auriculiformis</i>	550	9.3	599	12.3	57	15.4	25	19.6	1231
<i>E. cameldunensis</i>	8	9.3	25	18.0	8	25.0	1	19.6	42
<i>A. indica</i>	7	8.0	1	7.0	0	0	0	0	8
<i>A. Procera</i>	8	7.0	2	8.5	0	0	0	0	10
<i>Cassia simea</i>	0	0	5	7.2	13	9.1	0	0	18
<i>Swietenia. microphyla</i>	7	5.0	1	10.0	0	0	0	0	8
<i>Accacia nilotica</i>	4	6.0	0	0	23	12.4	5	14.0	32
<i>Terminalia arjuna</i>	26	6.0	0	0	0	0	0	0	26
Total	685		1019		469		324		2497

Note: dbh = diameter at breast height)

### ***Challenges Faced during the Afforestation Activities***

The organization and mobilization of people have faced the challenges created by social barriers. For example, influential people sometimes used words to harass female caretakers. People also tried to damage the plantation established by poor people. These obstacles were overcome by group members by relying on each other and through motivation work.

### ***Lessons Learned from Afforestation***

During the last three decades of intervention, PROSHIKA has gained a lot of experiences or lessons learned in afforestation with the participation of local people, in particular:

- *Organization building:* "Grassroot"s people should be organized collectively for the implementation, maintenance of plantation and reforestation.
- *Awareness building:* If "grassroot"s people are properly aware about their needs, and rights, they have environmental knowledge, then they are able to manage the plantation. Awareness building activities can be conducted through the meetings, workshops, trainings, celebration of national and international important days, rallies etc.
- *Benefit sharing agreements:* People involvement is legitimized through the mechanism of benefit sharing agreements. This mechanism ensures the

rights on the resources that help the sustainability of the afforestation programme.

- *Choice of species:* Species selection plays an important role in a successful afforestation programme. It depends on geographical location of the plantation site, the growth performance of the particular species, local use of particular species, market price, and demand for fuel wood etc. For example, in case of strip plantation, Raintree (*Cassia simea*) grows better than other species in southern belt of Bangladesh. Mehogany (*Swietenia microphylla*) does well in the central part (District of Dhaka, Manikgonj), Acacia (*A.aurculifomis*) in Tangail and Mymensingh districts, and eucalyptus is most popular in the northern part. *Sissoo* (*D. sissoo*), a quick growing species suitable to the northern part of Bangladesh, has been affected by unknown diseases that destroyed most of the plantation.
- *Intermediate return:* For establishment of successful plantation, proper maintenance of trees is a must. Pruning and thinning is done after 3-4 years. Depending on the species, before final harvest, discarded wood material from pruning and thinning can be used for firewood. Groups members also benefit from agricultural crops planted in the plantation in the first phase. The plantation also helps the biomass production.
- *Reforestation:* After harvesting the mature trees, the groups deposit a percentage of their share for reforestation to ensure the sustainability of these activities.

### Concluding Remarks

PROSHIKA is playing a vital role in social and economic development as well as environmental protection by involving poor and marginalized people in afforestation and reforestation activities. Its experiences can be used by others in the country to increase tree coverage as well as fulfill the needs of local people. This approach may also be considered as an adaptation strategy to combat climate change, in which case, more administrative supports would be needed.

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