

***Possible Approaches to Sustainable Forest Management
Through Peoples Participation: Madhupur Tract***

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Abstract

Issues affecting the Madhupur Tract are discussed. An assessment of participation in woodlot project is made. The possibility of expanding Participatory Forest Management (PFM) is examined with reference to the views of one forest official and a forest staff and two local people, by examining data from 53 questionnaires completed by the researchers by explaining each question to the respondents since most of them were illiterate. Recommendation to expand PFM for improving Madhupur tract's. Present condition are made on the basis of findings from the research.

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CHAPTER-1

BANGLADESH & THE FORESTS

1.1 Country profile

Bangladesh is a small South Asian country which became independent on 26 March 1971 and has an area of 147,570 sq. km. with 12 nautical miles of territorial water (BBS, 1994, p.3). Bangladesh is located between 20° 34' and 26° 38' north latitude and between 80° 01' and 92° 40' east longitude. The country is bounded completely by India in the west and north, jointly by India and Burma at the east and by the Bay of Bengal to the south (Map # 1). Bangladesh is one of the world's most densely populated countries with 755 people per sq.km. According to the population census of 11 March 1991, the population was 11.4 million (57.2 m. male and 54.1 m. female). The sex ratio is 106 males per 100 women. The annual population growth is 2.1%, literacy rate is 32.4% (Statistical Pocket Book'96). and the per capita income is US \$ 283 in 1997 (ASIA WEEK, October 31, 1997).

1.2 Climate

There are three main seasons, (1) Winter (September-February) with maximum temperature of 29°C and minimum 11°C (2) Summer (March -May) with maximum temperature of 34° C and minimum 21°C (3) the monsoon (June-August) with average rainfall of 1194 mm to 3454 mm.

1.3 Land of Bangladesh

Almost all of Bangladesh (144,400 sq. km) lies in the active delta of three of the World's major rivers (FMP, 1993, p.2), the Ganges, the Brahmaputra and the Meghna. There are some highlands in the Mymensingh, Sylhet and Chittagong Hill Tract region. The south western region consists of a large number of dead and cut-off rivers, the coastal plain of which includes the famous Sundarbans mangrove forest. Within greater Sylhet and Mymensingh Districts lie a number of depressed basins inundated by fresh water during the monsoon, gradually dry out during the dry season" (FMP, 1993, p-2).

1.4 Land and forest area

Agriculture land use is the highest (64%), followed by forest (18%) and urban areas (8%). The land distribution can be seen in the Table-1.

Table-1: Bangladesh Land Area Classification.

Land category	Hectares (million)	Percent
Agriculture	9.25	64.2
State Forest		
Classified	1.49	10.3
Unclassified	0.73	5.1
Private Forest	-----	-----
Village	0.27	1.9
Tea/Rubber Garden	0.07	0.5
Urban	1.16	8.1
Water	0.94	6.5
Other	0.49	3.4
Total	14.40	100

Source: FMP (1993), GOB.

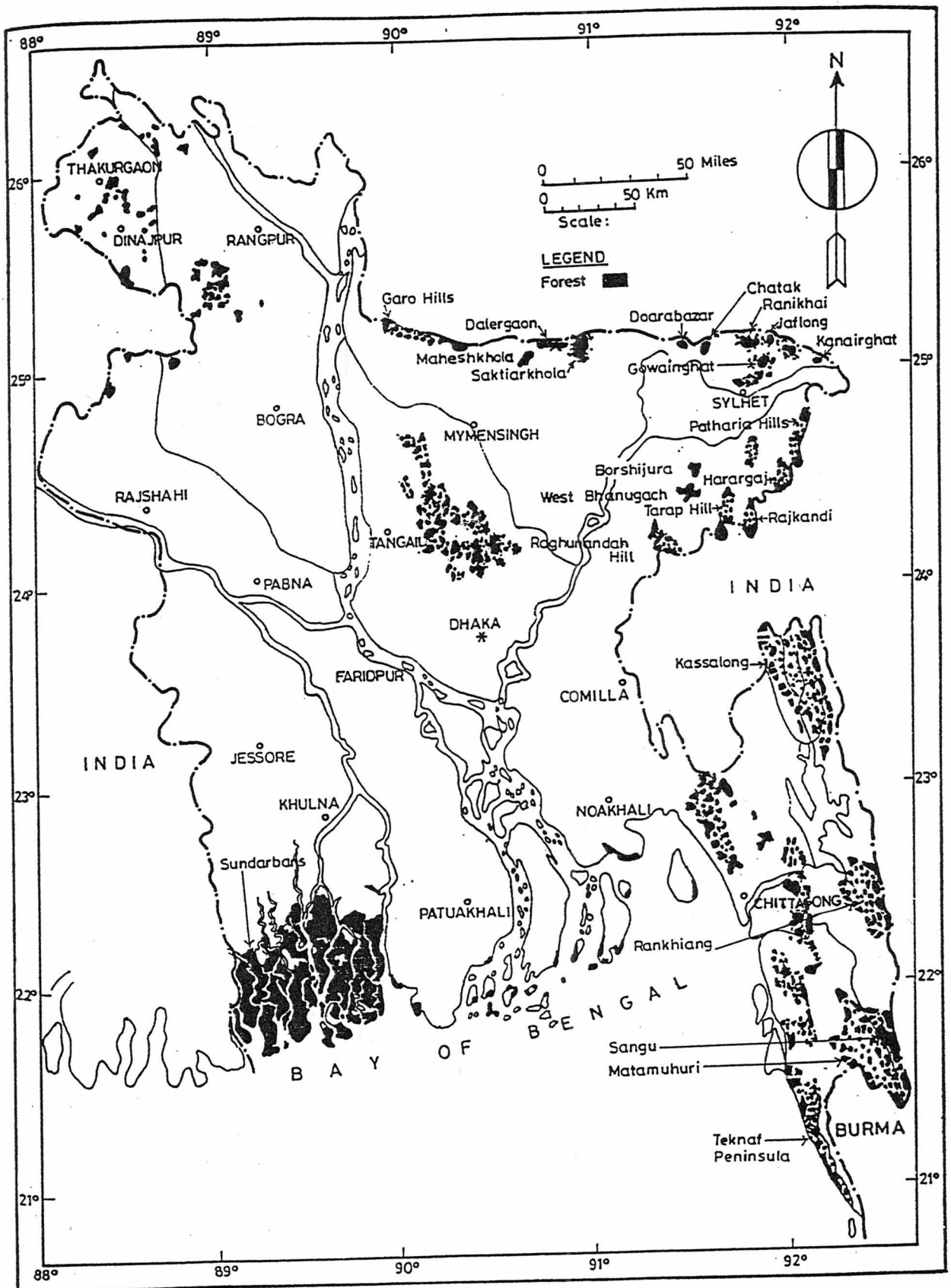
1.5 Forest: Officially the forest cover is 1.88 million ha., but much of it is in hilly areas and Madhupur and Barind tracts are severely degraded (Brammer et. al, 1993, p-20). The forest types can be seen in table-2 and forest areas in Map # 1.

Table-2: Forest Type

Forest Type	Location	Area
1. Moist semi-deciduous forest	Eastern hill area	0.46 million ha.
2. Dry sal forest	Madhupur & Barind tracts	0.12 million a.
3. Sundarbans mangrove	Khulna and Chakoria	0.58 million ha.
4. Village homestead forest of multipurpose trees and bamboo's		0.72 million ha.

Source: (Task force in Iqbal, 1996, p-4).

The country's forest resource are under great pressure from a growing population with high rates of degradation and greater pressure still likely to occur in future. Nonetheless although the forest sub-sector contributes only 3% to national GDP, its environmental value is very high for country like Bangladesh which is prone to frequent floods, cyclones, tidal surges and tornadoes (Iqbal 1996 , p-4).



Bangladesh - Key Map

SOURCE: Forestry Master plan - vol.1

CHAPTER-2

THE MADHUPUR TRACT

2.1 Madhupur forest, commonly known as Madhupur Garh, is a forest-tract of mainly sal tress (*Shorea robusta*) is the largest natural sal forest in the country. In Bangladesh, sal forest has a fairly wide but interrupted distribution extending from Panchagarh in the North, Sherpur in the East and Commilla in the South. The total area is about 110 thousand hectares, out of which 86% is in the central region i.e. in Mymensingh, Tangail and Gazipur districts and 14% is in the northern region.

2.2 The tract lies between 24°-25°15 north latitude and between 90-91° east longitude. The belt known as Madhupur Garh falls between the Brahmaputra and the Jamuna with a length of about 80 Km. and width of about 7-20 Km running north to south lying in the districts of Gazipur, Mymensingh and Tangail. The Sal forest occupy 89,000 hectares on the Bhawal-Madhupur tract and 15,000 hectares on the Brained Tract. The Madhupur forest is a slightly uphill tract of no more than 15 meters in highest over the surrounding plains. The ridges locally known as Chalas which are flat terraces lands but not continuous. Many depressions with gentle slope intercepting the ridges know as biads are almost all cultivated for growing paddy. Chalas contain the forest trees (Alam 1995:42-43).

2.3 Climate: the climate inside the forest is moderate. April is the hottest month recording a maximum temperature of 100°F. The cold season prevails during November to February with the minimum temperature falling to about 50°F. (Chowdhury 1970).

2.4 Tree & shrub species: Sal (*Shorea robusta*) is the major tree species. Other common trees and shrub species are Hargoza (*Dillenea Pentabya*), Bohera (*Terminalia bellirica*), Jiga (*Ilex carmandelica*), Sidha (*Lagerstroemia parviflora*), chapalish (*Artocarpus chaplesha*), Haldu (*Adina cardifolia*), koroï (*Albezzia procera*). Thus biodiversity of Madhupur Sal forest is quite wide-ranged and interesting both from geological and conservation point of views. Chowdhury (1970) has estimated that 150

different species of plants of various genera are found in the Madhupur tract. Some dominating trees & shrubs species and their use can be seen from Table: 3.

Table-3: Tree & shrub species and their uses

Local name	Scientific names	Family	Uses
Kaika	<i>Adina cordifolia</i>	Bubiaceae	Internal fitting of building, packing furniture, toys, gun stock, flooring and pancellings, Railways carriage.
Koroi	<i>Albizzia procera</i>	Leguminosae	Construction purposes, furniture, large size panels, boats, oars, agricultural implements, wheel, rice pander.
Chambal	<i>Artocarpus Chaplasha</i>	Artocarpeae	Ship & house building, cars, masts, carts, furniture, box general, carving, coopers works and shanks of built up jute bobbins.
Kathal	<i>Artocarpus integrifolia</i>	Artocarpeae	Musical instruments, furniture, houses building, country craft, mast, carts, tool handles, brush banks. The fruit is edible.
Kanchan	<i>Bauhinia variegata</i>	Legumionsae	Bark, root, buds and flowers are used medicinally.
Sonalu	<i>Cassia fistula</i>	Leguminosae	House posts carts, agricultural implements, rice pander, tool handles, charcoal, bark is used in tanning.
Pana, toonu	<i>Cedrela toona</i>	Meliaceae	Venncers, Furniture wood
Chalta	<i>Dillenia, indica</i>	Dilleniaceae	The fruit is edible.
Ajuli	<i>Dillenia Pentagyna</i>	Do	House building, boat, carriage shaft charcoal.
Jiyal Jiga	<i>Lannea grandis</i>	Anacardiaceae	Cart wheel, spoke, yoke, rice pander, house building, oil presses, Jingan gum used in Calico printing and sizing cloth, bark used in tanning.
Jarul	<i>Lagerstroemia</i>	Lythraceae	Good timber tree.
Sidha	<i>L. parviflora</i>	Lythraceae	House building, cart, handles.
Ban-am	<i>Mangifera oppositifolia</i>	Anacardiaceae	Fuel
Local name	Scientific name	Family	Uses
Gandi Gajari	<i>Miliusa velutina</i>	Anonaceae	Agricultural implements and firewood.

Sati	<i>Pennisetum</i>	Scitamineae	The rhizome is used for manufacture or sati food.
Amlaki	<i>Phyllanthus emblica</i>	Euphorbiaceae	Charcoal, bark and fruits are used in medicine and tanning .
Mankata	<i>Randia dematorum</i> syn	Rubiaceae	Agricultural implements, medicine
Gajari, Sal	<i>Randia Spinose</i> <i>Shorea nobusta</i>	Combrataceae Deptero carpacea	Timber, posts and firewood, gum is used in the manufacture of shoe-polish, carbon papers ribbons
Bahera	<i>Terminalia belerica</i>	Combrataceae	The fruit for inkmaking and medicine, the seed is used as hair oil & bark for tannin.
Haritaki	<i>Terminilia chebula</i>	Euphotbiaceae	The fruit one of the best tanning material for dyeing cotton, wool and leather.
Pitali	<i>Trewia nodiflora</i>	Rutaceae	Timber,wood is used for drum, packing cases etc.
Banja	<i>Zanthoxylum budrunga</i>		Timber root yields edible oil.

2.7 Landscape: Madhupur tract has a diverse range of landscape or sub-regions. Soil types vary among these sub-regions. The soil in the Madhupur tract consists of hard sandy clay mixed with scattered magniferous iron (commonly called Madhupur kankar) used in road building in large quantities. The soil is compact and hard when dry but melts with the rain fall becoming soft and tenacious. During rainy seasons, the subsoil water rises to a depth of six feet only while during the dry season in March-April-May it goes down to 50 to 60 feet. There is very large deposit of good quality shingles in the northern belt(Brammer 1996).

Physiographic sub-regions and the categories can be seen from table 4 & 5.

Table-4: Physiographic sub-regions

Physiographic sub-regions
1. Level terrace with deep, well drained to poorly drained, upland soils; few or no valleys
2. Broadly dissected terrace with deep, well drained, upland soils:
2a. with dark gray heavy clays in valleys
2b. with gray silty soils in valleys
3. Closely dissected terrace with deep, well drained, upland soils:
3a. with dark gray heavy clays and <i>beels</i> in valleys
3b. with gray silty soils in valleys
4. Closely dissected terrace with floodplain soils in valleys
4a. with deep upland soils
4b. with shallow upland soils
5. Closely dissected terrace with shallow, moderately well to poorly drained, upland soils
5a. with dark gray heavy clays in valleys
5b. with gray silty soils in valleys
6. Level terrace with shallow, or mixed deep and shallow, poorly drained upland soils, few or no valleys
7. Broad valleys with poorly or very poorly drained, dark gray, heavy clays

Source: Brammer (1996)

Table-5 Physical characteristics of terrace subtracts.

	Physiography	Main Soil types Madhupur Tract
1.	Level terrace with deep, well-drained soils; few or no valleys	DRBTS BMTS, DGTS
2a.	Broadly-dissected level terrace with deep, well-drained, upland soils and heavy clays in valleys.	DRBTS ABC
2b.	Similar to 2a but also with grey silty soils in some valleys	DRBTS ABC GVS
3a.	Closely-dissected terrace with deep, well-drained soils on level or rounded uplands and heavy clays in broad valleys.	DRBTS ABC
3b.	Similar to 3a, but also with grey silty soils in some valleys	DRBTS, ABC
4.	Similar to 3a, but hillocks smaller and some below maximum flood-level, and usually with some floodplain soils in valleys.	RBTS ABC
5a.	Closely-dissected terrace with moderately well to poorly, drained shallow upland soils and heavy clays in valleys	DRBTS ABC
5b.	Similar to 5a, but with grey silty soils in narrow valleys.	SRBTS GVS
5c.	Similar to 5a, but with floodplain soils in valleys.	SRBTS
6.	Level terrace with shallow, or mixed deep and shallow, poorly-drained soils; few or no valleys	SGTS DFTS GVS
7.	Broad valleys	ABC
8.	Deeply-dissected terrace with mainly deep, poorly-drained soils on level upland and terraced valleys sides, and gray silty soils in valleys	ABC
9.	Broadly-dissected level terrace with deep, well-drained, upland soils and various soils in valleys	

Abbreviations

DRBTS= Deep Red-Brown Terraces Soils
 SRBTS= Shallow Red-Brown Terrace soils
 BMTS= Brown Mottled Terrace Soils
 DGTS= Deep Gray Terrace soils
 SGTS= Shallow Gray Terrace soils

GVS= Gray valley soils
 ABC= Acid Basin Clays
 GPS= Gray piedmont soils
 P= Peat soils
 FS= Various floodplain soils

Source: FAO (1988) in Brammer 1996.

CHAPTER: 3

MANAGEMENT

3.1 Government (i.e. the Forest Department or FD) took over the management of the forest in 1940s. Before that the forest was owned by the landlords. FD took over the management and conservation responsibilities gradually before complete nationalization of the tract in 1950.

3.2 Before the year 1951, the forest was owned by the Zaminders (landlords) known as Atani Raj. In February 1925 the British Government decided the Atia part of the forest as protected areas on request of some proprietors of Atia. Afterward Araipara and Non-Araipara chakra consisting of 26 mouzas and Non-Aripara chakra consisting of 48 mouzas were declared as Reserved Forest and brought under the government management.

3.3 The forest belonging to Muktagacha Atani Raj Estate were handed over to Government on 27th October 1938. After the enactment of East Pakistan Private Forest Act, 1949 (Act V of 1950) the Atia and Atani Raj forest became vested forest under section 59 of the Act. Since 1951 after enactment of the East Pakistan State Acquisition and Tenancy Act (1950) many of the vested forest were acquired under section 3.11 of the Act (DFO 1996).

3.4 Management: In 1925, the Forest Department took over the management of Aripara of Atia Forest and a scheme was prepared to work the forest under a system of coppice with standard on rotation of 20 years which however, proved a failure (Chowdhury, 1970: p-46). The standard from the old crop failed to respond to the coppice felling and unfortunately they were so numerous that the stool of the cut tree failed to give out new vigorous shoots for want of sufficient light' (Chowdhury 1970 p. 46). This system of coppice was abandoned from 1934 and was replaced by a system of simple coppice. Rotation of 20 years was found inadequate to produce

sufficient wood in Gazari poles required for local demand. At present feeling is banned totally.

Major threats to better management could be identified as follows:

a) The whole tract is criss-crossed & highly intersected by private land, khas land and forest lands. In the absence of physical demarcation of boundary, the management has become difficult & highly complicated. This has resulted in indiscriminate illegal felling of trees & encroachment of forest and land breaking for both agriculture and pineapple cultivation.

b) Scarcity of tillable land and lack of cooperation and coordination between FD and other Government agencies with FD are the added problems of destruction of forest.

c) The area is mostly plainland and easily accessible.

These problems have attributed to (i) theft of the 'standards' i.e. the mother -trees . (ii) absence or lack of cultural operations & (iii) lack of scientific management.

3.5 Administration : The whole forest has fallen into two districts 73%, of which is in Tangail and 27% in Mymensingh district. Since this research is conducted on the Madhupur Thana of Tangail , we will concentrate on Tangail only. Divisional Forest Office in Tangail is the HQ of the Tangail forest area. Administration is run by 8 forest range viz.; National park HQ, Madhupur range, Arankhola, Dokhola range, Ghatail, Dhalapara, Hataya & Bashratali. Besides there are 8 thana Nurseries, & 4 forest extension & Training and nursery centres. There are three vehicles (car-1, Jeep-1 & Pick-up-1) for whole zone. Besides, each range office has one motorcycle, i.e., 5 for 5 Ranges. The numbers of firearms for forest protection is about 45. The whole zone lacks quick communication system e.g. there is no walki-talkies for communications. Moreover, the number of FD staff & equipment are quite insignificant compared to the size of the forests.

3.6 Administrative regions and manpower of Madhupur thana part of the forest can be seen at table-6. Madhupur thana forest area constitutes 72% of the total forest area of the tract in Tangail district. This study was conducted at the Dokhola range of Madhupur Thana.

Table-6: Administrative regions and manpower

	Beat/Centre	Forester	Guard	Forest watcher	Gardene r	Watcher	MLS S	Total
1.F.R=1	i. Central Beat	2	9	1	2	-	2	16+1=17
	ii. Gahria Beat	1	4	-	2	1	1	9
	iii. Gachabari	1	6	-	1	-	-	8
	iv. Boyribaid	1	11	1	-	-	1	14
	v. Rajabari	1	5	-	-	-	-	16
	vi. Rasulpur	1	5	-	-	-	1	7
	vii. Rest House	-	-	-	-	-	1	1
2. Dhokla Forest	i. Central Beat	1	4	1	-	-	2	8+1=9
	ii. Arankhola Camp	-	2	-	-	-	-	2
	iii. Tiler Tal Camp	-	2	-	-	-	-	2
	iv. Harin Dhara Camp	1	3	1	1	-	-	6
3. Aran khola Camp D.R=1	i. Central Beat	1	4	-	-	1	-	6+1=7
4. Modhu- pur Range D.R=1	i. Charal jani Beat	1	6	-	-	1	-	7+1=8
	ii. Gangair check	-	1	-	-	-	-	1
5. Forest Extension Training Centre	i. Modhupur Nursery	2	-	-	-	7	1	7+1=8
	ii. Rasulpur Training Centre							
	Total							115

CHAPTER-4

DEGRADATION

4.1 All the Sal forest of the country are severely degraded by human interventions like illegal felling, burning and encroachment. The Madhupur Forest is no exception to it. About 65% of sal forest is highly degraded of which the worst victim is the Madhupur tract.

4.2 Despite continued efforts by the Forest Department (FD) to protect and manage the forest, the forest degradation rate is very high. 'Officially the country's forest covers is 1.88 million ha. but much of it is in hilly area and Madhupur and Barind tract are severely degraded' (Bhammer et. al 1993 p. 23). Evidence suggest that the forest degradation is no exception to the global trend of replenishing forest specially in the tropics. Government acting an weak absentee landlord over forest they control (Holmberg et.al 1991, p.16). Government usually take a top-down approach from the level of policy decision to its implementation having a poor performance in protection & management of the forest. The present condition of the sal forest of plain land is piteous and degrading. Only 32% of these areas are now covered with forest (Ali, 1990: 8). Massive deforestation has occurred during the liberation war which continued until late 1980s.

4.3 Encroachment: Evidence suggests that the major cause of forest degradation in the past was illegal encroachment. Consequently, the government declared a ban in 1972 on logging of state-owned forest. But this declaration of ban worked a little. Local encroachers are still active to exploit resources from the forest.

4.4 The rate of degradation of the Madhupur forest due to human encroachment can be seen from table-7:

Table-7: Encroachment of the Madhupur forest

Name of Thana	Total Forest Area	Protected Forest (PF)	PFas% of total tract	Encroached Land (EL)	EL as % of total tract	Encroaching families	Woodlot & Agro forestry	Woodlot & Agro forestry as % of Total Forest
1	2	3	4=3/2	5	6=5/2	7	8	9=8/2
Sakhipur	47,220.60	38,232.28	80.97%	20,582.33	43.59%	10,259	9,695.80	20.53%
Ghatail	21,855.47	7,251.01	37.18%	13,512.41	61.82%	4,649	5,478.92	25.06%
Madhupur	45,565.18	2,526.14	05.54%	21,217.35	46.56%	8,209	4,473.38	09.82%
Mirzapur	7,576.36	7,275.93	96.03%	4,516.17	59.0%	1,103	1,183.63	15.62%
Kalihati	659.29	191.01	28.97%	338.31	51.31%	121	----	-----
Total	11,22,786.90 0 acr.	55,4476.38 Acr.	45.18%	60,166.57 Acr.	99.00%	24,332	20,831.73	37.56%

Source: DFO, Tangail, 1997.

4.4 Table -7 shows that 45.18 % of the total forest area is protected forest. 49.00 % of the total forest area has been encroached by 24,332 families. In the Madhupur thana the percentage of encroachment is 46-56 and the number of encroaching families are 8,209. This can be seen that although percentage of encroachment is high / lower in Madhupur (46-56%) than overall encroachment in Tangail (49.00%) almost half of the forest has been degraded in this process.

CHAPTER-5

PARTICIPATION

5.1 Definition: Participation is an objective, input and tool of development. The term participation often refer to concepts like ' Popular participation and / or community participation'. According to the United Nations Research Institute for Social Development (UNRISD), participation' means: " the organized efforts to increase control over resources and regulative institution in given social institutions, on the part of groups and movements of those hereto excluded from such control " (Stiofel and Wolfe, 1994 : 5 in Rizwan Khair 1997). However, development theorist like westergaard (1986) differs with this view saying that participation is "..... collective efforts to increase and exercise control over resources and institutions on the part of groups and movements of those hereto excluded from such control (Westergaard 1986: 24-25 in Rizwan Khair 1997:1)". Some theorists consciously escape the maze of definition by viewing participation otherwise. For example, the Cornell University Rural Development Committees Study finds "it (participation) appears more fruitful and proper to regard participation as a descriptive term denoting the involvement of a significant number of persons in situation or actions which enhance their well-being e.g. their income, security or self-esteem (Uphoff et al. 1979: 4; in Rizwan Khair 1997). In the pursuit of controversies regarding participation we have pick up a simple definition where participation has been defined not as a technology but as a process of social action and social change. [Forestry Master Plan, (1993:39].

5.2 Participatory Forestry : Peoples participation is now considered as the key factor in making any afforestation programme a success. It is a socio-political concept concerned with people taking part in decision making and implementing process. Participation is of various types in terms of : Who is involved, the objectives of participation, size and complexity of participatory efforts and in what aspects of an activity participation takes place (Forestry Master Plan, Vol. 1:38).

5.3 Participation of Madhupur: Peoples participation in the forest under Madhupur thana introduced in 1992 by the FD. Local people are participating in three programmes. These are:

i) Agroforestry: Such projects are taken in the encroached degraded areas. Trees are planted in three adjoining columns and rows in each block. The space in between each block is 18 meters is used for cropping. People grow crops like pineapple, maize, cassava, paddy, ground nut etc. in these spaces. The benefits sharing is 50% by the villagers & 50% by FD.

ii) Woodlot: The system is similar to agroforestry. But since this is done in the vacant / demanded lands under FD, the benefit sharing is 60 % by FD and the rest by the participants.

iii) Street Plantation: Benefits sharing is 65% by the participants . 10% by FD, 10% by the land owning agency, 10 % by the NGO involved & 5% by the local Union Parishads. Outcome of participation between 1987-1995 can be seen from table: 8.

Table-8:

Name of the Range	Plantation period	Area		Woodlot		Agroforestry				Total No of participants
		Hectors	Gharo tribal	Non-Tribal	Total	Area Hector	Gharo Tribal	Non Tribal	Total	
1	2	3	4	5	6	7	8	9	10	11
1.Dhokhla	1989-90	101.22	41	43	84	-	-	-	-	84
	1990-91	161.94	57	81	138	-	-	-	-	138
	1991-92	141.70	63	77	140	-	-	-	-	140
	1992-93	50.00	24	38	62	40.0	1	39	40	102
	1993-94	-	-	-	-	40.0	-	42	42	42
	1994-95	-	-	-	-	100.0	3	94	97	97
Total	-	454.86	185	239	424	180	4	175	179	603
2. Modhupur	1987-88	8.10	2	5	7	-	-	-	-	-
	1989-90	80.97	-	75	75	12.14	-	14	14	89
	1990-91	80.97	22	45	67	-	-	-	-	67
	199-92	16.00	1	18	19	-	-	-	-	19
Total	-	186.04	25	143	168	12.14	-	14	14	182
3. National Park Central range	1989-90	141.75	48	81	129	10.12	-	10	10	91
	1990-91	127.57	48	60	-	-	-	-	-	108
	1991-92	89.08	18	71	89	-	-	-	-	89
	1992-93	140.00	27	113	140	-	-	-	-	140
	1993-94	-	-	-	-	68.00	57	11	68	68
	1994-95	-	-	-	-	120.0	15	105	120	120
Total	-	498.40	141	325	466	198.12	72	126	198	664
4. Arankhola	1989-90	60.72	7	43	50	16.20	-	15	15	65
	1990-91	60.72	3	50	53	-	-	-	-	53
	1991-92	60.72	-	71	71	-	-	-	-	71
	1992-93	68.00	3	65	68	15.00	4	10	14	82
Total	-	250.16	13	229	242	31.20	4	25	29	271
Total	-	1389.46	364	936	1300	421.46	80	340	420	1720

5.4 Participation is taking place between agreement signed between the FD and local people. The concerned Beat Officer selects the land and people to participate (people encroaching the land are given priority). Participants are selected by the Union Committee which is approved finally by the Thana Committee before the agreement is signed. The constitution of the committees are as follows:

Union Committee

UP Chairman- Chairman
Block Supervisor (Agriculture)
- Member Secretary
Forester-Member

Thana Committee

TNO-Chairman
Range Officer (Forest)-Member Secy.
Thana Parishad Members-Members

Criteria for the selection are: i) Landlessness ii) living in and around the forest, iii) Unisex, iv) Allocation of one hectare land per head.

5.5 Primary data of this study has been collected from the Dokhola range. Although this area is highly encroached. It can be seen that 'woodlot' instead of ' Agro-forestry' is prominent here. This is due to FDs efforts to involve people in FD lands instead of going into degraded encroached areas.

CHAPTER-6

DATA COLLECTION, FINDINGS & RECOMMENDATIONS

DATA COLLECTION:

This research was based on data collected through questionnaire, individual interviews, observations and literature review. Data has been analyzed in Appendix-A and interviews can be seen in Appendices B-E.

6.1. Literature Review :

Most of the materials were collected in May '97 from BPATC library & Divisional Forest Office (DFO), Tangail. Literature is based on reports and articles from journals.

6.2. Questionnaire :

Questionnaires were filled-up through asking questions to the target group. Since most of the respondents are illiterate, questions were asked verbally, explained, elaborated to them by the researchers. Data was collected from the people living in the Dokhola Forest Range area. Two staff of the Dokhola Forest Range were with the team worked as the guides to the researchers.

6.3. Interviews :

Four interviews were conducted personally by a researchers at Tangail, Madhupur and Dokhola. Two of the interviewees were FD staff while the rest were villagers of Dokhola.

6.4. Observation :

Observation was also made during collection of data by the researchers at Tangail, Madhupur and Dokhola.

6.5. Objectives :

The objectives of these questionnaire, interviews, observations were to investigate:

- i) who are the living inside the forest at Dokhola range of Madhupur & their occupation.
- ii) What people think about the causes of forest degradation.
- iii) How they look at the participation process. Whether they like it or not.
- iv) Whom they want to be involved in the participation process & how.

6.6. The process of interview :

All four interviews were semi-structured conducted during May & June 1997 at the places of the interview.

6.7. Piloting :

Piloting was done with two BPATC staff who are from Tangail & Madhupur and are familiar with the Madhupur forest.

6.8. Distribution of Questionnaire :

Questionnaires could not be distributed because most of the respondent were illiterate. Data was collected verbally and then written on the questionnaire by the researchers in front of the respondents.

6.9. Limitations of the research:

- i) Piloting process was not appropriate. The questionnaire need to be piloted with some local people at Dokhola.
- ii) Duplication also found in few questions, e.g. question No. 9 and 9.1 were almost similar.
- iii) No data was collected from women because these were collected from village shops, Hat (market places) & tea-stall. The researchers could not make it possible to collect data going straight to the village homes (where the female participants live).
- iv) Only 11 out of 53 respondents were from Garo tribes. More data from them could not be collected.
- v) Time was a major constraint to conduct such an important & demanding area of research like causes of forest degradation from people point of view & participation.

FINDINGS AND RECOMMENDATIONS

6.2 General findings:

- i) Illegal encroachment by the Garo tribes & migrants from the plain land was the major cause of forest degradation in the past. General increase of population of Garo tribes and plain land migrant with consequent need for more land resulted in massive forest encroachment by them.
- ii) The forest also suffered serious degradation during the war of liberation in 1971. During the nine months of the war of liberation the usual day to day forest management & protection activities were almost inoperational. As result massive illegal deforestation took place.
- iii) Gross illegal tree felling and logging also took place soon after the independence which continued until late 1980s. Immediately after the independence a section of vested interest groups mainly traders were involved in mass illegal tree felling & logging having support from local influentials and politicians
- iv) Garo tribes induced people from the plain land to settle inside the forest by offering cheap price for the land they encroach. These indigenous people of the Madhupur tract encroached a significant area of the forest for habitation and agriculture initially. Afterwards, they used these encroached land as a means of extra income by selling them to the plainlanders at a cheaper price.
- v) Poverty, social disturbances e.g riots, war and river erosion which took place in other parts of the country compelled people to migrate inside the forest. The reason for such migration was the low cost of lands from illegal encroaches. Sometimes clan relationship with the forest people induced the outsiders to settle inside the forest.
- vi) A large number of Garo men migrated inside the forest and still migrating due to marital custom where the groom has to settle in the brides home for good. However, it need to be noted that the migrant male Garos coming inside the tract for marital purposes do not necessarily increase the total Garo population living in the forest because, many local Garo grooms are also going out to other Garo enclaves

for the same reason. However, data shows that most of the respondents have mentioned that such custom has attributed to the increase of population inside the forest.

vii) Ineffective family planning programme failed to create awareness among the people inside the forest in the past causing rapid population growth. However, government & NGO programmes are getting better results now.

viii) Corruption & management inefficiency of the FD staff was also a major cause of forest degradation which still continues. The age-old alliance between some FD staff and the local traders continues over generation resulting continued forest degradation.

ix) Some local and Politically influential people who are involved directly or indirectly in wood trade, brick fields are patrons of logging causing massive forest degradation in the past as well as at present. Infact of official ban on felling heavily dependence on Madhpur's wood led to illegal logging for survival of such profit making industries.

x) Heavy dependence of the local people on the forest for survival has also contributed to rapid forest degradation. People are involved in pineapple cultivation only three months of the year. During the rest nine months they have to depend on the forest. Besides regular wood theft these people are used by outsiders for illegal logging.

xi) Wildlife which worked as a natural guard to trespassers became extinct in the recent past due to forest destruction, illegal killing & poaching of animals. Extinction of natural guards resulted in rapid forest destruction and clearance happening recent years. Now a days the illegal loggers can go easily deep inside the forest anytime without the fear of animal attracts.

xii) People are aware about the FDs official function. But they are very much critical about inefficiency & corruption which they think are the major causes of FDs failure. Respondents have mentioned about management and protection as the major responsibility of FD. But according to them corruption by the FD staff is the key cause which is resulted in inefficiency & consequent failure to protect the forest.

xiii) The FD is understaffed compared to the size of the forest. Due to lack of adequate and modern communication equipment's & vehicles, it has become almost impossible to check illegal activities inside the forest.

xiv) Population growth rate inside the forest is reducing due to literacy & family planning programmes by GO & NGOs. This will reduce pressure on the forest in the long run. As rate of literacy is growing, the local people are now aware about the consequences of deforestation and the necessity of maintaining environmental balances through afforestation, population control and ecology-friendly industrialization.

xv) NGOs especially Proshika, Worldvision, CARITAS are working extensively with the people. But their activity is concentrated more in the micro credit area although Proshika signed an MOU with FD for social forestry which is not functioning due to misunderstanding & lack of co-ordination between them.

xvi) Contradicting views prevail among the FD staff and local people about plantation of exotic tree species in the participatory forests. FD thinks that these foreign species have rapid growth & good quality wood which is economically attractive. By contrast, according to the local people these species are not suitable to the environment since they do not attract birds & animals. Moreover, cropping is difficult due to dense canopy and heavy fall of leaves on the ground.

xvii) For sustainable forest management people has stressed the need for their participation in forest protection, management, planning and implementation. Success of woodlot forestry has further strengthened the need for peoples participation. Adversity that FD faces in forest protection due to lack of staff & equipment could also be overcome significantly by involving local people in protection.

xviii) People prefers participation with FD to NGOs. They however like to have NGOs involved in micro credit & motivational programmes while FD should be involved with in planning, protection, management & implementation of programmes.

xix) Alternative income generating schemes especially establishment of pineapple & jackfruit processing industries can reduce peoples dependence on the forest which will contribute to increase of forest area in future.

xx) Findings of interviews (Appendices: B-E) also substantiated findings of the questionnaire.

xxi) Key finding:

There exist a deep rooted mistrust and hatred between the FD & forest people. According to the FD staff, most of the people are wood thieves who are degrading the forest. By contrast, most of the people think that corrupt FD staff are the main cause of the forest's degradation. However, participation has reduced the communication gap and contributed in reduction of mistrust developing rapport & confidence about each other. People now prefer to work with FD in the planning, protection, management & implementation of forest, not with the NGOs in these fields.

The above findings have similarity with the case of the Sundarban part of West Bengal. Participation has contributed to effective protection and better management of the forest. A forest official from West Bengal explained the whole experience (in Iqbal 1996). His comments are worth quoting at length " Degradation in Sundarbans created severe disturbances in wildlife habitat and animals started coming out from there. This resulted in human-animal conflicts. Degradation reached the extent that miles of forest became open space with no sign of even of rootstocks in many places (in Iqbal 1996). Talking about the experiences of degradation in West Bengal, he continued " during 1976-77 our activities related to forest vigilance and protection through increase in manpower, equipment and patrol vehicles did not achieve desired results. The forest degradation continued". He also mentioned about the creation of mistrust and huge communication gap between FD and local people which led to serious confrontations and killing of FD staff by local people. He added " this gave the realization that joint partnership in forest management and protection with the local people is needed to achieve national objective". The result was significant, as he continued, "with a few years, better understanding and mutual trust developed between the forest staff and local people. The frequency of illegal activities became less and the degraded areas came under tree coverage". Similar experience has been observed in the case of Uttar Pradesh (UP) hill forests. According to another interviewee (who is

working in UP hill tracts) participation has reduced tension between FD and local people, forest degradation has gone down and the forest area has increased' (Iqbal 1996).

This can be seen " a positive attitude where a " threat " (forest destruction by the local people) has been converted to an "opportunity " (by involving them in management and protection and income sharing) and full advantage of this opportunity has been taken" (Iqbal 1996 p. 53)

6.3 Short coming of the study

This research is based on a small number of primary data which was collected from a small part of a Forest Range in the Madhupur tract. No data was collected from women and NGO staff. Neither data was collected from illegal wood loggers, wood traders and brick field owners who also have stakes (although illegal) at the forest's output.

At present peoples participation is going on three types of projects viz: Agroforestry woodlot & street plantation (social forestry). But data of this study is based on participants of woodlot forest and non-participants. Consequently, this is a partial research from which specific policy recommendation is difficult to make. However, findings suggest that participation has a very positive result on the forest as well as in removing conflict & differences between FD staff & local people.

Questions like how participation process should be organized, how benefits will be shared, what types of legal supports should be needed, what kind of species are appropriate, how the differences between FD & NGO can be removed, how the major user like sawmills, woodbased industries, brick fields and the illegal loggers could be stopped, need to be studied carefully by a comprehensive research project. This study can works as a guideline to that.

6.4 Recommendation: A thorough, comprehensive & in-depth study incorporating all stakeholders of the Madhupur tract need to be conducted to find out ways & means for sustainable forest management ensuring peoples participation.

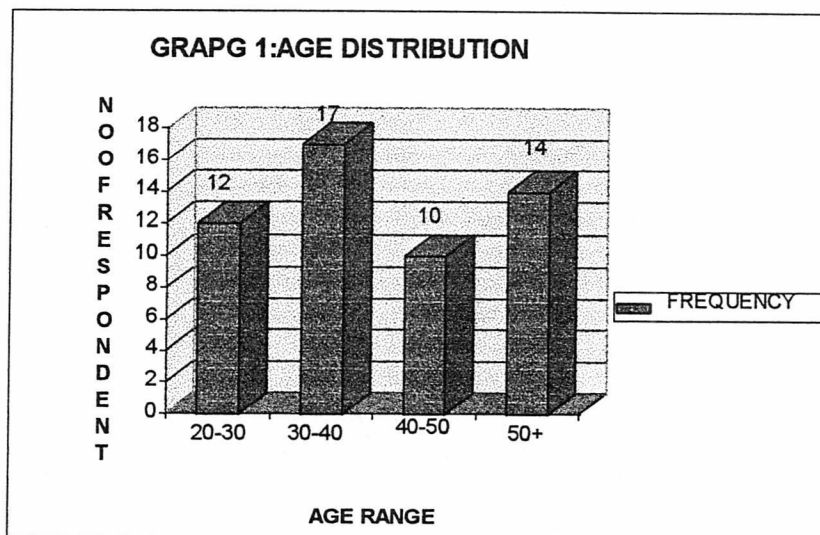
APPENDICES

1. Data Analysis:

Data was collected through questionnaire and four interviews. Data has been tabulated and then analyzed in Excel (Microsoft Windows Programme) and presented while a cross check of the findings has been made by the interview and observations.

2. Age distribution of the respondents:

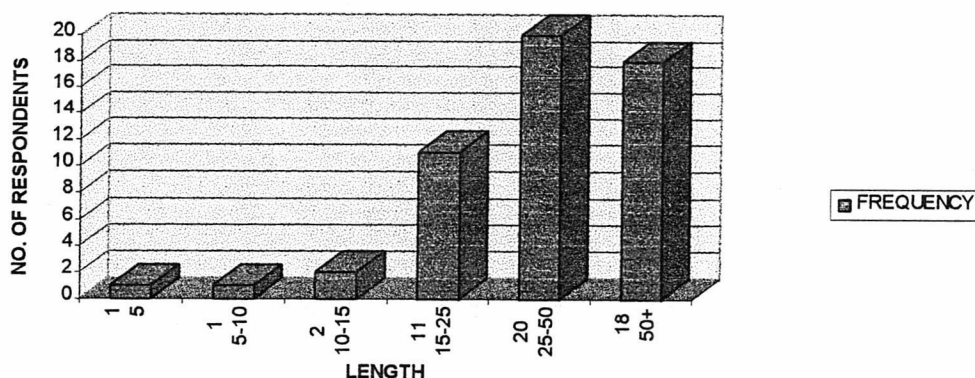
The highest age group of respondents was in between 30-40 years followed by the 50+ age group. This can be seen from graph-1



3. Length of living inside the forest :

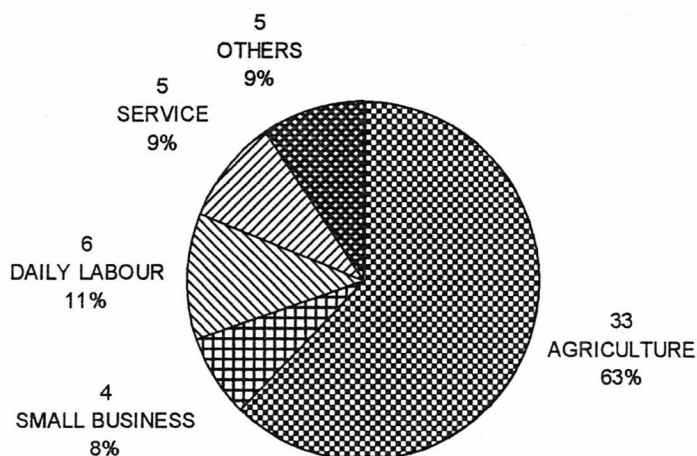
Twenty respondent (highest) are living inside the forest for 25-50 years range followed by 50+ length group (graph-2).

GRAPH-2: LENGTH OF LIVING INSIDE THE FOREST



4. Occupation : Most of the respondents occupation is agriculture (Graph-3)

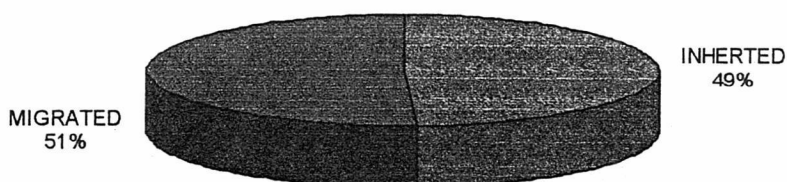
GRAPH-3: OCCUPATION OF THE RESPONDENTS



5. Process of settlement:

51% of the respondents are migrants from the plain land and the rest 49% are living there through generation (graph-4).

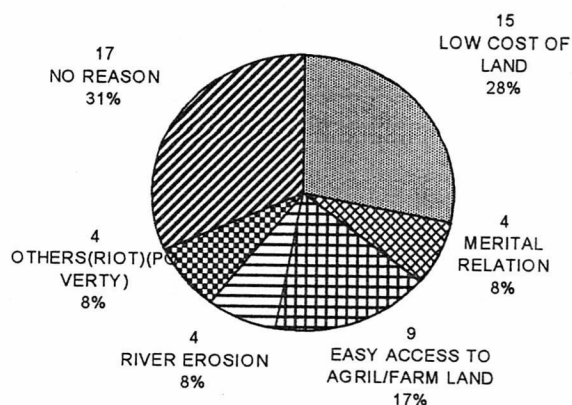
GRAPH-4:PROCESS OF SETTLELMENT



6. Reasons for migration :

The highest that is 26% of the respondents mentioned low cost of land as the main cause of their migration inside the forest, while 17% have mentioned agriculture/farming opportunities as their reasons for their migration .26% has not given any reason.

GRAPH-5: REASONS FOR MIGRATION



7. Percentage of income from forest source:

All 53 respondents answered to this question. 24 of them have dependence ranging from 25%-100% (table-9).

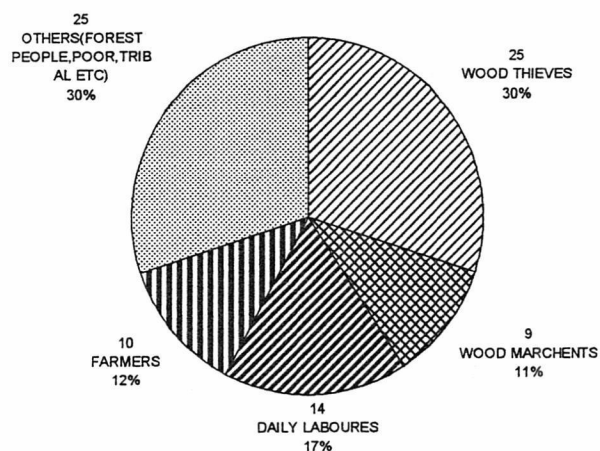
Table-9: Percentage of income from forest source

Dependency Range	No. of respondents
5% & less	6
5%-10%	8
10%-25%	5
25%-50%	13
50%-75%	4
75%-90%	12
90%-100%	5

8. Occupations of people dependent on the forest:

Respondents mentioned more than one categories of forest dependent people. Result show that majority of forest dependent people (30%) are wood thieves(graph-6):

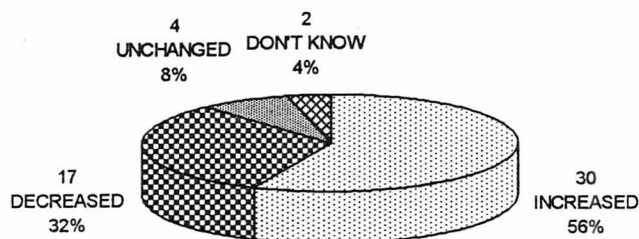
GRAPH-6: OCCUPATION OF PEOPLE DEPENDENT ON THE FOREST



9. Trend of dependence:

Majority of the respondent (57%) mentioned that the trend of dependency of the forest by the local people is increasing while 32% said that the dependency has decreased (graph-7).

GRAPH-7: TREND OF DEPENDENCE



10. Reasons for increasing / decreasing/ unchanged/ dependence:

All respondents answered to this question and each gave several reasons. These could be summarized as follows:

Reason for increasing dependence	Poverty, Population increase, Low income, Daily need, No alternate income generating schemes, Illegal logging, Ignorance about environment.
Reason for decreasing dependence	Forest vigilance by FD, Awareness among people, Agriculture, Rubber plantation, Degradation and consequent scarce fuelwood/ log, Change occupation, , Participation.
Reason for unchanged dependence	Peoples participation, awareness

11. Outcome Of such dependency:

26 persons responded on this question. 20 of them (77%) mentioned *deforestation* as the outcome of increased dependency on forest. 4 of them (15%) mentioned *increase of forest cover* due to decrease dependency and 2 (7%) of them mentioned *unchanged forest cover* since there was no change of forest dependency.

12. Change of forest cover:

Fifty one responded to this question. Majority (38 out of 51) found that forest area is *decreasing* while 11 has found *major decrease*. One respondent said that the forest area is *increasing* and 3 respondents said the forest area has remain *unchanged*.

13. Cause of such decreasing forest area:

Each respondents gave several reasons. The highest frequency is 41 shows peoples dependence on forest is major cause of reduction of forest area followed by 39 inefficient forest management by FD (table-10).

Table-10: Cause of decreasing forest area

Causes of decrease	Frequency
People dependence on forest	41
Management inefficiency of FD	39
Corruption by FD staff	30
FD staff used by illegal loggers	34

One of the respondents said, " It may sound unpleasant but the truth is that, the FD staff don't perform their responsibility & duties seriously & sincerely due to lack of supervision. Consequently, FD staff are more interested in corruption than discharging their duties".

Some respondent pointed about the alliance of between some corrupt FD staff & wood traders and consequent illegal logging as the prime cause of deforestation. As one respondent remarks, " You know better, don't you? Of course, massive corruption . Do trees have wings?"

14. Action required to reduce dependence :

All respondent replied to this question. Suggestions made by them can be seen from the following table(table -11)

Table-11: Action required to reduce dependence

Action required	Frequency
Alternate income generating schemes	21
Pineapple juice processing plant	30
Garment Factory	2
Others (Mill / Factories)	-

15. Respondents awareness /knowledge about FD's function :

Each respondents gave several answers, which can be seen from the following table (table-12)

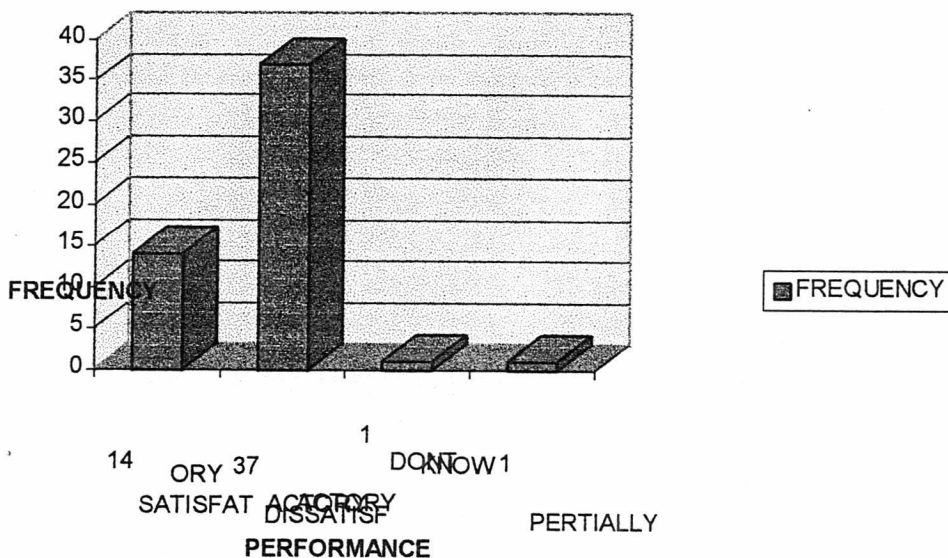
Table-12: Respondents awareness /knowledge about FD's function :

FD's Functions	Frequency
Management	39
Forest Development	36
Forest Conservation	43
Ensure law & Order	33
Others	1

16. Performance of the FD :

All respondents answered to this question. Most of them (37) expressed dissatisfaction about FDs function (graph-8).

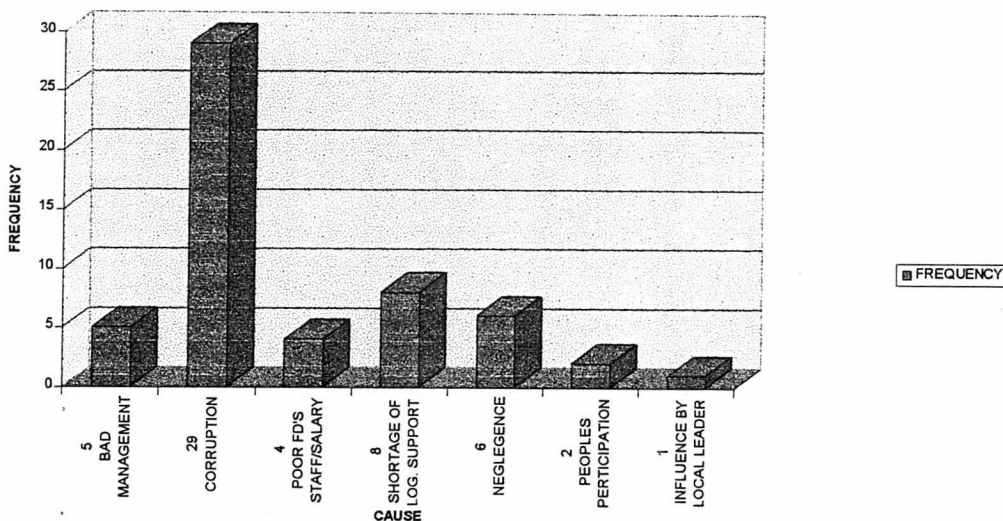
GRAPH-8:FOREST DEPT'S PERFORMANCE



17. Causes of success / failure of FD:

47 respondents answered , each respondent gave several reasons expressing that FD has failed to perform their duty.

GRAPH-8:CAUSES OF FAILURE OF FD



18. Results of FD's inefficiency :

44 respondent gave several reasons while 9 didn't gave any answer (table-13).

Table-13: Results on FD's inefficiency

Effects on	Effects	Number of
Forest	Deforestation & Degradation	39
Environment	Extinction of Flora & Fauna	7
People	Suffering, harassment to FD Fall of income	23

19. NGOs:

All respondent answered to this question. Most of them mentioned about Proshika and World Vision (table-14).

Table-14: NGOs familiar to respondents

Name of NGO	Number of Responses
Proshika	42
World Vision	24
BRAC	5
CARITAS	19
ASA	6
Grameen Bank	4
Don't know	6

20. Functions of NGOs:

All respondents answered and each gave several functions of the NGOs (table- 15).

Table- 15: Functions of NGOs

Functions	Frequency
Loan/ credit	36
Education	16
Motivation / Afforestation	8
Road construction & maintenance	10
Medical / health care facilities	6
Don't Know	12

21. Respondent's involvement with NGO:

51 replied to this question. 39 of them are not involved with NGO's while 12 are involved.

22. Type of involvement with NGOs:

All 12 respondents who are working with NGOs replied that they are involved in the credit / loan operation of the NGOs.

23. Functions:

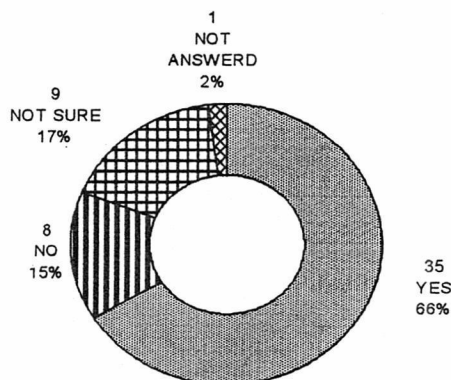
51 respondents replied to this question. 39 of them mentioned that NGOs are working independently while 12 mentioned that NGOs are working jointly with FD.

24. Outcome of the FD and NGO joint work:

Answering to the question whether forest management will be improved if FD and NGOs work together, 35 out of 52 said *yes*, 8 said *no* and 9 respondent were *not sure*.

Graph-10 : Management will be improve if FD & NGOs work together

MGT. WILL BE IMPROVED IF FD'S & NGO'S WORK TOGETHER



About the impact of joint forest management by Government and NGO, one respondent assumed that it may reduce corruption. He said: "when both parties are present, one will prevent others corruption and vice-versa". Some respondents are not very hopeful about GO-NGO joint venture in managing forests as some of respondents said : ' their joint work may produce conflict'.

25. Giving reasons to their comments on FD-NGO joint function:

34 replied that this will ensure transparency & reduce corruption while 5 respondent said that GO-NGO joint work will lead to conflicts, 5 respondents said that they are not sure and 9 abstained from responding to this question.

26. Peoples thought on the outcome if the forest is destroyed:

All respondent responded to this question, each gave several outcomes.

Table-16: Effect on local people if the forest is destroyed.

Peoples view	Frequency
Shortage of firewood	24
Shortage of logwood	25
Fall of income	21
Environment degradation	34
Loss of tourism	8
Loss of grazing field	2
No loss	1
Others	2

Respondent are aware about the impact of deforestation on the environment. Some are even conscious about the social cost of illegal logging. One remark: "No doubt some are being benefited by it (illegal logging) but the cost to overall environment & the society due to deforestation is very high."

27. People view on participation:

All answered to this questions. 51 (out of 53) said that participation is essential to protect the forest from degradation. One respondent did not agree with this while one was not sure.

Some respondents are very aware about their rights and responsibilities regarding forest management, as one said: "We are the sons of this soil, we are to conserve our forest ourselves."

Some of the respondents believe in the strength of people's unity. As one of them comments, "we the people are the basic force for sustainable forest management, through protection, planning & implementation of the plans."

Some respondents evaluate people's participation in forest management from efficiency point of view, as one of them said "initiatives involving people are most effective tool for successful social afforestation programmes".

Most of the respondents said that working together with FD has curbed down bad feeling about each other (FD & local people). While one says look at the reserve forest, it is thin because FD is managing it. Try to have a look in a participatory forest. You will see the difference. People & FD jointly can make it happen.

28. Reasons for peoples participation:

All respondents replied to this question and each gave several reasons (table -9).

Table-17: Reasons for peoples participation

Reasons	No. of responses
To ensure conservation	23
increased/ improved forest vigilance	15
Create sense of belonging and love for forest	25
Raise of people's income	10
Effective / better forest management	18
Pleasure of work jointly with FD	26
Reduced corruption of FD	1

29. How to involve people:

All answered to this question . Forty eight of them mentioned *formation of groups* will give better results. Three of them mentioned *family-wise involvement* while two of them preferred *individual involvement* in participation process.

30. Incentive for participation:

All respondents answered to this question and gave several incentives for involvement (table 10)

Table -18: Incentives for participation

Incentives	No. of responses
Benefit sharing	46
Publicity	12
Training	42
Extension and Motivation	24

31. Who to implement participatory programme:

All the respondent replied to this question. Thirty seven said FD and People should implement jointly. Fourteen respondent referred FD-NGO-people joint work while two have mention that people/ NGOs should be given responsibility of implementation.

32. Information on ongoing alternative income generating schemes to reduce dependence on the forest:

All answered to this question. 48 of them said that no such schemes exists, three of them replied positively while two respondents do not know whether there is any scheme or not.

33. Types of such a schemes in operation:

Only 3 respondent mentioned about some cottage industries operating in the forest area.

34. Need of establishing alternative income generating schemes:

All respondents answered affirmatively on the question whether they feel the need of establishing alternative income generating schemes in this area .

35. Preferred type of income generating schemes:

Table-19: Preferred type of income generating schemes:

Preferred type	No. of response
Garment Industry	15
Jackfruit/ Pineapple juice plant	24
Cottage Industry	15
Other (Mill / Factories)	17
No responses	6

36. Replying to the question why they feel the need for establishing alternative income generating schemes:

46 replied giving several reasons. Most of them (33 responses) mentioned about *increase of peoples income* followed by *reduction of forest dependence* (14 responses) and *reduction of unemployment* (14 responses) .

37. Respondents involvement in Participatory Forest Management(PFM):

All responded to this question. Twenty-five of them are the participants of PFM and 28 respondent are non-participants of PFM.

38. Process of involvement in PFM :

Nineteen respondents mentioned that they were informed by the FD, while six respondent were informed by other participants.

39. Types of participatory forest: All 25 respondent involved in woodlot forestry.

40. Positive side of such participation:

All of 25 respondent who are participating in PFM, gave several positive outcomes of participation (table-20).

Table -20: Positive side of participation

Positive side	Frequency
Financial benefit	35
Afforestation	12
Availability of wood	5

41. Negative side:

5 (out of 25 respondents of PFM) answered to this questions. According to them mistrust and lack of confidence on FD is the major negative factor. They are not sure whether FD will give them the final output after the harvest.

42. Change in the attitude/life-style due to involvement in PFM:

Thirty respondents gave several factors which have led to change in attitude/ life-style due to participation, each gave several reasons. The highest (27 responses) is the creation of *awareness about environment*, followed by *responsibility of forest conservation* (19 responses) and *increased income*(13 responses).

33. Responsibility of local people in PFM:

Thirty nine replied to this question. Twenty four of them mentioned about *maintenance* while 10 said *conservation* and 5 mentioned *protection as function* of people in PFM.

44. Responsibility of FD in PFM:

Twenty nine replied. some of them gave more than one answers. *Inputs supply* was the highest(12 responses), *conservation* (7 responses), *assistance* (5 responses), *afforestation* (5 responses) and *management* (4 responses).

45. NGOs functions in PFM:

Only 3 replied to this question saying that NGO's are working in extension, afforestation and lending programs.

46. On the question whether PFM should be expanded in future: all respondents answered affirmatively.

47. Reasons for future expansion of PFM:

On the question why PFM should be expanded in future, 25 replied giving several answers (table-21).

Table 21: Reasons for future expansion of PFM

Reasons for future expansion	No. of responses
Spontaneous people involvement in management	13
More afforestation and expansion of target area	19
Environment protection	24
Employment/income generation	23

48. Possible responsibilities of FD, people and NGO to improve forest management in future:

34 respondents answered mentioning several possibilities (table-22). This can be seen that joint people and FD involvement in afforestation, management, protection and conservation (Sl. 4 & 5) has been stressed while NGOs are preferred for loan disbursement (Sl.-8).

Table 22: Possible responsibilities

Sl.	Responsibilities	People	NGOs	FD
1	Ensure forest ownership	2	-	3
2	Involvement in big programs	-	1	-
3	Cooperation	1	-	5
4	Afforestation, Management, and look after	31	8	21
5	Forest conservation	11	7	10
6	Ensure law & order	1	-	7
7	Motivation	1	6	4
8	Loan	-	7	1
9	Transfer of technology/ input supply	-	-	10

Causes of the forest's degradation:

1. Illegal Encroachment: Large scale illegal encroachment by the Garo people was one of the major causes beside continued corruption by the FD in connivance with wood traders & local people. Garo families used to clear the forest for settlement & agriculture (especially Jhum cultivation). Afterwards Garos induced Muslims from the main land to purchase land from them at a lower price for settlement and agriculture. This process of illegal encroachment and selling continued for a long time, resulting a massive reduction of forest area. Encroachment has been stopped by the end of 1980s.

2. Population increase: With the increase of family population, pressure on the forest land increased which ultimately led to the present state of degraded forest.

3. Continued corruption by the FD staff is another major causes of the forest degradation. Such corruption occurs in two ways (a) Large scale illegal logging in conjunction with the smugglers & rich wood merchants (b) Small scale corruption in conjunction with petty thieves. The forest staff are poorly paid & detached from their family for a long time. Consequently they fall easily to the illegal offer of rich wood merchants. Sometime they patron the petty wood thief for mutual benefits. Participation in degraded forest has also created opportunity for further corruption by the FD staff. Since participation with local people are happening in degraded areas through new plantation, FD staff are now destroying the reserve forest and then earmark that areas for new plantation with local participation

Participation

Participation is taking place mostly under the woodlot projects. However, People has tremendous mistrust on the FD. Consequently they are not sure whether they will be able to get the output by the end of felling (10 years).

Group formation committee does not work fairly. Beat officers have upper hand over the concerned UP Chairman due to their relationship based on mutual benefits through illegal logging. So corrupt people are getting major role in the groups.

Moreover tree species planted in woodlot project are of foreign species (Akashmoni, Minjium, Ucaliptus). These are not congenial to the environment. Birds and Animals don't live or forage in these forests.

Remedies:

- 1) Major role of the local peoples is needed for sustainable forest management since FD is corrupt. To do this, Peoples' rights / ownership on land should be established. This will reduce vindication & harassment of local people by FD staff. People could then be motivated for afforestation, protection and cultivation (Pineapple, Cassava etc.) They can then negotiate things with FD on an equal footing.
- 2) In the participatory forests local tree species instead of the foreign species should be planted. Otherwise animals & birds will be extinct.

NGO

NGOs play a good role in group formation and help poor people through their loan programme. NGOs don't harm, they help. NGOs help is needed in poverty alleviation and motivational programmes for peoples participation.

Population & Awareness: Child and adult education programmes have raised literacy level inside the forest and created awareness about environment & family planning etc. Family planning programme of the Govt. & NGOs contributed to reduction of population growth which has reduced pressure on forest land.

Causes of forest destruction:

- (a) Illegal encroachment by Garo and migrants from plain land caused major forest destruction in the past. However, illegal encroachment has been stopped.
- (b) Socio-economic condition: The present cause of degradation is mainly due to wood theft and illegal logging by the local people. People living in the area get only three months employment during Pineapple harvest. The rest of the year they depend on the forest for income.
- (c) Illegal logging occurs through organized criminal groups from Mymensingh and Jamalpur district especially from Muktagacha, Kamalpur, Banairpar and Fulbaria. A kind of local feeling exist among these groups. Thieves from Mymensingh and Jamalpur enters the part of the forest while thieves from Tangail are active inside the Mymensingh part of the forest.
- (d) Brick fields: A large number of brick fields in Dhaka, Mymensingh, Tagail and Jamalpur region are major users of Madhupur wood. Since felling its banned officially, demands of firewood in these brick fields is one of the major source of organized crime inside the forest. Brick field owner pay in advance to the illegal loggers & rich wood marchents for wood supply causing organized crime inside the forest.

2. The Forest Department

The FD is under staffed and poorly equipped to combat crimes inside the forest. Consequently illegal felling and forest destruction continues. Allegation of corruption against FD staff is exaggerated. Rate of such corruption is quite insignificant compared to the magnitude of organized crimes committed by smugglers and some local influential people. They often shifted responsibility of such crime to the innocent forest staff. Moreover due to strong disciplinary measures and peoples awareness the rate of corruption by the FD staff has decrease substantially.

Participation:

Peoples participation in the Madhupur forest is having quite good result. People are working whole heartedly and protecting the participatory forest (woodlot, agro-forestry and street plantation) actively. This has stopped illegal encroachment, curbed wood theft and increased forest area through new plantation in the encroached and degraded forest land.

However, a kind of mistrust on FD exists among the participants. Final harvest of the planted trees will require 3-4 more years, people are confused whether they will get the proper share. Hopefully this problem will not exist after the final harvest when they will get their share from the output.

Since, foreign species are planted in participatory forest they have grown very fast creating dense canopy. Consequently it has become difficult to produce agriculture crop due to inadequate sun light. However these tree species have good quality wood for furniture making which could be a good substitute to expensive 'Shegoon timber'.

Participation is taking place between agreement signed between the FD and local people. The concerned Beat Officer selects the land and people to participate (people encroaching the land are given priority). Participants are selected by the Union Committee which is approved finally by the Thana Committee before the agreement is signed. The constitution of the committees are as follows:

Union Committee

UP Chairman- Chairman
Block Supervisor (Agriculture)
- Member Secretary
Forester-Member

Thana Committee

TNO-Chairman
Range Officer (Forest)-Member Secy.
Thana Parishad Members-Members

NGOs:

NGOs viz. Proshika, Poush, Joutha Uddog and Grameen Bank are working the area. Proshika signed a MOU with the FD for plantation and protection in 1994. But

Proshika has stopped its activity in this field for some unknown reasons. 'Poush' is working in block plantation, 'Joutha Uddog' in local and street plantation, while 'Grammen Bank' is motivating people for protecting the street plantation.

Future role of NGOs

NGO role should be motivational i.e. raising awareness, mental grooming of the people about the environment and its protection. Moreover NGO loan programme in agricultural crop, irrigation, seed and small business can augment productivity as well as reduce dependence on the forest.

Future role of FD:

FD has the technical expertise, infrastructure and logistics which can be improved and strengthened for efficient management & protection. FD can play the key role in PFM with local people.

Causes of forest's degradation

- a) Major degradation occurred during 1972-92 due to illegal encroachment. The Garo landless and poor families near the forest fringes are the major encroachers. However, the encroachment rate has gone down significantly since 1992.
- b) The Madhupur forest is a plain land forest instead of hills which is easy for access. Consequently rate of wood theft & illegal logging is quite high. Too many poor families are living inside and around the forest who depend mainly on income from the forest. Consequently a daily entrance inside the forest is essential. Moreover there are some families whose occupation is wood theft over generations.
- c) There is a bombing range of the Air-force inside the forest. Atleast 20 bombing sessions on average held each year. While people and FD stay confined in their house / office during the bombing session, wood thieves avail this opportunity. Major illegal tree felling occurs during these bombing sessions.
- d) Local influential people: Sometimes local influential people exert illegal pressure on FD, police and administration, resulting massive illegal woodlogging.

2. The FD:

The FD is understaffed & poorly equipped. Crime inside the forest quite often results direct confrontation between FD and thieves. Causality occurs from both sides. Forest area under the Madhupur thana is different from other parts of the forest. Most of the people living inside forest are wood thieves. Consequently a hostile relation exists between the FD staff & local people. Rate of physical attack is also higher.

Participation:

Mainly woodlot plantation is the major area of participation in Madhupur thana. Some agro-forestry project are also taken in some parts for Madhupur thana. Union Coordination Committee is playing the key role in selecting participants. A criteria for the selection are: i) Landlessness ii) living in and around the forest, iii) Unisex, iv) Allocation of one hectare land per head.

Problems: i) At the initial stage of participation poor people did not come forward. Consequently some rich people entered in the participatory forest management. ii) Relation between FD and local people has improved in other parts of Tangail except Madhupur. Since most of the people living inside Madhupur thana forest area are illegal encroachers and wood thieves, hostile relation with FD continues. iii) Participants faces communication problem with expatriate donors. Consequently their views are not communicated correctly and donors' views and ideas are imposed on them.

FD is making efforts through person to person contract, contract with groups, through workshops and meetings to motivate local people, so that they can work together with FD.

NGOs.

A kind of conflict between FD and some NGOs exists. Some NGOs are propagating that the forest management will be shifted the local people from the FD which encourage people to undermine FDs responsibility to disobey instructions. Sometimes NGOs agitate people against FD. They also try to cheat other by showing FD's success in participatory forestry as their success. NGOs are successful in loan programme but failed in motivating people about the forest and environment.

APPENDIX-E
INTERVIEW-D
(with a local school teacher)

1. Causes of forest's degradation: Illegal encroachment was the main cause of forest destruction during the past which has been stopped now. FD is also responsible for forest degradation during the past and at present as well. Since felling is banned, auction of trees has been stopped. Felling of trees over a regular rotation was good for both FD and local people. Government earned revenue through auction and local people were benefited from agriculture, plantation and employment in these areas. Since felling is banned FD staff in connivance with the wood traders are now felling trees and sell them out illegally. Consequently banning of felling cycle has increased the rate of illegal logging/ felling.

Participation:

People are working hard in participatory forest to protect and manage it. Each participants pays 100 Tk. per month and guards personally at night. However there exists uncertainty and lack of confidence among the people about the availability of final harvest from the wood. People cannot trust the FD's staff and feels insecure because of having no right on the land.

Foreign species are introduced in participatory forest which are not suitable to the environment. People got a good pineapple harvest in the woodlot forest in the first year. Afterwards production fell and in some cases no cropping is possible due to thick canopy of the trees and fall of substantial tree leaves from these trees. These trees do not attract birds and other animals. Consequently, birds and animal species are declining.

Prospect:

To ensure sustainable forest management people's participation is essential. But for that people need to own the land legally. Otherwise people will be used and harassed by FD staff and local elite for their illegal interest. Ownership of land followed by motivational programmes can ensure successful peoples participation.

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প্রশ্নপত্র

[জনগনের অংশগ্রহণের মাধ্যমে টেকসই (Sustainable) বন ব্যবস্থাপনা সম্ভব কিনা সে সম্পর্কে আপনার মতামত সংগ্রহের উদ্দেশ্যে এই প্রশ্নপত্র তৈরী করা হয়েছে। আপনার উত্তর গবেষণার জন্য সহায়ক হবে। যার ভিত্তিতে বন ব্যবস্থাপনায় জনগনের অংশগ্রহণ নিশ্চিত করার লক্ষ্যে কার্যকর পদক্ষেপ গ্রহণের প্রস্তাব করা হবে।]

- ১.০ নাম (ঐচ্ছিক) :
২.০ লিঙ্গ : পুরুষ ☐ মহিলা ☐
২.১ : গারো / অ-গারো / অন্যান্য (উল্লেখ করুন)
৩.০ বয়স (জানা না থাকলে, আনুমানিক):
৪.০ ঠিকানা (ঐচ্ছিক) :

- ৫। বনাঞ্চলে অবস্থানের মেয়াদঃ (ক ৫ বৎসর পর্যন্ত
(খ) ৫-১০ বৎসর
(গ) ১০-১৫ বৎসর
(ঘ) ১৫-২৫ বৎসর
(ঙ) ২৫-৫০ বৎসর
(চ) ৫০ বৎসরের উপরে

৬.০ পেশাঃ

৭.১ আপনি কিভাবে এই অঞ্চলে বসবাস শুরু করলেন

- ক) পৈত্রিক সূত্রে ☐
খ) অন্য স্থান থেকে অভিবাসিত (migrated) ☐

৭.২ অভিবাসিত হয়ে থাকলে কেন আপনি এইখানে বসতি স্থাপন করলেন

- ক) বনে চাষাবাদের সুবিধা ☐
খ) বিভিন্ন বনজদ্রব্য সংগ্রহ ☐
গ) কাঠ সংগ্রহ ☐
ঘ) অন্যান্য (ব্যাখ্যা করুন) ☐

৮.০ আপনার আয়ের কত অংশ বনভিত্তিক উৎস থেকে আসে ?

ক) ৫% - এর নিচে

খ) ৫% - ১০%

গ) ১০% - ২৫%

ঘ) ২৫% - ৫০%

ঙ) ৫০% - ৭৫%

চ) ৭৫% - ৯০%

ছ) ৯০% - ১০০%

৯.০১ ক) আপনার মতে কোন কোন পেশার লোক বনের উপর নির্ভরশীল ?

i)

ii)

iii)

৯.১ খ) তাঁদের নির্ভরশীলতার ধরণ উল্লেখ করুন

i)

ii)

iii)

১০.০ আপনার মতে বনের উপর নির্ভরশীল লোকের সংখ্যা সম্পর্কে নিচের কোন বক্তব্যটি সঠিক ? [প্রযোজ্য স্থানে টিক (✓) চিহ্ন দিন।

বাড়ছে

কমছে

অপরিবর্তিত রয়েছে

১০.১ ১০.০ নং প্রশ্নের ক্ষেত্রে আপনার পদত্ব উত্তরের স্বপক্ষে কারণ উল্লেখ করুন (গুরুত্বের অনুসারে)

i)

ii)

iii)

১০.২ এতে কি সুবিধা / অসুবিধা হচ্ছে বলে আপনি মনে করেন ?

১১.০১ মধুপুর বনভূমির আয়তন হ্রাসবৃদ্ধি সম্পর্কে আপনার মতামত কি [প্রযোজ্য স্থানে টিক (✓) চিহ্ন দিন]

- | | | |
|------|-------------------|--------------------------|
| i) | ব্যাপক আয়তন কমছে | ☐ |
| ii) | আয়তন কমছে | ☐ |
| iii) | আয়তন বাড়ছে | ☐ |
| iv) | অন্যান্য | ☐ |

১১.০ এর উত্তর (i) বা (ii) হলে এর কারণ কি টিক (✓) দিন।

- | | | |
|-------|--|--------------------------|
| i) | জনগনের বনের উপরে নির্ভরশীলতা | ☐ |
| ii) | বনবিভাগের বন ব্যবস্থাপনায় অদক্ষতা | ☐ |
| iii) | বনবিভাগের কর্মকর্তা/কর্মচারীদের দুর্নীতি | ☐ |
| iv) | কালো বাজারী কর্তৃক বন বিভাগকে ব্যবহার | ☐ |
| v) | কালোবাজারী কর্তৃক জনগণকে ব্যবহার | ☐ |
| vi) | সরকার গৃহীত বনায়ন কর্মসূচি | ☐ |
| vi) | এনজিও গৃহীত বনায়ন কর্মসূচি | ☐ |
| viii) | ব্যক্তিগত পর্যায়ে বনায়ন উদ্যোগ | ☐ |
| ix) | অন্যান্য (উল্লেখ করুন) : | ☐ |

অতিরিক্ত কোন মতামত থাকলে জানান :

- i)
- ii)
- iii)

১১.২ ১১.১ এর উত্তর হ্যাঁ হলে এ নির্ভরতা কমানোর জন্য কি কি পদক্ষেপ নেয়া যায়

- i)
- ii)
- iii)

১২.০ ক) বন বিভাগের কাজ কি বলে আপনি মনে করেন ?

- (i) বনের ব্যবস্থাপনা
- (ii) উন্নয়ন
- (iii) সংরক্ষণ
- (iv) আইন শৃঙ্খলা
- (v) অন্যান্য (উল্লেখ করুন)

খ) আপনি কি মনে করেন সংস্থাটি তার উপর অর্পিত দায়িত্ব যথাযথভাবে পালন করছে ?

হ্যাঁ না

গ) (য এর উত্তর হ্যাঁ বা না হলে) আপনার জানামতে সংস্থাটির সাফল্য/ব্যর্থতার কারন কি ? (গুরুত্বের একমাসারে লিখুন)

- i)
- ii)
- iii)

ঘ) সংস্থাটির সাফল্য / ব্যর্থতার অঞ্চলে কি ধরনের প্রভাব পড়ছে ।

- i) বনের উপর
- ii) মানুষের উপর

ঙ) সরকারী সংস্থা ছাড়া অন্য কোন বেসরকারী সংস্থা (এনজিও) এখানে কাজ করছে, নাম উল্লেখ করুন।

চ) এনজিওরা কি কি কাজ করে থাকে ?

i)

ii)

iii)

ছ) i) আপনি কি কোন এনজিও কার্যক্রমের সাথে জড়িত হা ☐ না ☐

ii) উত্তর হা হলে কি ধরনের কাজ ?

জ) এনজিও'রা কিভাবে কাজ করছে। প্রযোজ্য স্থানে টিক (✓) চিহ্ন দিন

সরকারের সাথে যৌথভাবে ☐ আলাদাভাবে ☐

চ) সরকারী সংস্থা এবং বেসরকারী সংস্থা যৌথভাবে কাজ করলে বন ব্যবস্থাপনা উন্নততর হবে বলে আপনি মনে করেন কি ?

হ্যাঁ ☐ না ☐ নিশ্চিত নই ☐

ছ) কেন ? (উত্তরের স্বপক্ষে যুক্তি দিন)

১৩.০ মধুপুর বনাঞ্চল ধ্বংস হলে এলকাবাসীর কি কি ক্ষতি হতে পারে বলে আপনি মনে করেন ?

i)

ii)

iii)

১৪.০১ ক) বনাঞ্চলকে ধ্বংস হওয়া থেকে রক্ষা করা, এর সম্প্রসারণ এবং টেকসই ব্যবস্থাপনার ক্ষেত্রে এলকাবাসীর অংশগ্রহণ নিশ্চিত করার প্রয়োজন আছে বলে আপনি মনে করেন কি ?

হ্যাঁ ☐ না ☐ জানিনা ☐

- খ) আপনার মতে বন ব্যবস্থাপনায় কেন জনগণের অংশগ্রহণ প্রয়োজন ?
- গ) এজন্য জনগণকে কি ভাবে সম্পৃক্ত করা যেতে পারে ? [প্রযোজ্য স্থানে টিক (✓) চিহ্ন দিন।]
- i) গ্রুপ গঠনের মধ্যে
- ii) পরিবার ভিত্তিতে
- iii) ব্যক্তিগতভাবে

ঘ) কিভাবে উৎসাহিত করা যায় ?

- i) বনের আয় থেকে নির্দিষ্ট অংশ বন ব্যবস্থাপনায় অংশগ্রহণকারীদের মধ্যে বিতরণ
- ii) ট্রেনিং
- iii) প্রচারণা
- iv) সম্প্রসারণমূলক কার্যক্রম
- v) অন্যান্য (উল্লেখ করুন)

ঙ) এই কর্মসূচী বাস্তবায়নের দায়িত্ব কার উপর থাকা উচিত বলে আপনি মনে করেন ?

[প্রযোজ্য স্থানে টিক (✓) চিহ্ন দিন।]

- i) সরকার
- ii) এনজিও
- iii) জনগন
- iv) সরকার + এনজিও + জনগন
- v) এনজিও + জনগন
- vi) সরকার + জনগন +
- vii) অন্যান্য (উল্লেখ করুন)

চ) বনের উপর নির্ভরশীলতা কমানোর জন্য বিকল্প কোন কর্মসংস্থান প্রকল্প চালু আছে কিনা।

হা

না

ছ) উত্তর হা হলে কি ধরনের প্রকল্প রয়েছে ?

জ) আপনি কি আরো বিকল্প কর্মসংস্থানে প্রকল্প গ্রহণের পক্ষপাতী

হা

না

বা) উত্তর হা হলে কি ধরনের প্রকল্প গ্রহণ করা প্রয়োজন বলে মনে করেন :

উত্তর 'না' হলে কেন আর কোন প্রকল্প গ্রহণে পক্ষপাতী নন :

এও) প্রকল্প গ্রহীত হলে কি লাভ হবে ?

১৫.০ আপনার কোন অতিরিক্ত মতামত / বক্তব্য থাকলে তা অনুগ্রহপূর্বক উল্লেখ করুন।

১৬.০ আপনি কী কোন যৌথ বন ব্যবস্থাপনা কার্যক্রমের সাথে জড়িত ?

হ্যা

না

১৭.০ উত্তর হ্যা হলে কীভাবে আপনি জড়িত হলেন ?

১৮.০ উত্তর না হলে কারণ কি ?

১৯.০ আপনি যৌথ বন ব্যবস্থাপনায় কোন কার্যক্রমের সাথে জড়িত ?

- উডলট
- কৃষিবন (Agro forestry)
- রাস্তার ধারে বনায়ন
- অন্যান্য উল্লেখ করুন

২০.০ এই কার্যক্রমের ভাল দিক কি ?

২১.০ এই কার্যক্রমের মন্দ দিক কি ?

২২.০ এই কার্যক্রমের ফলে আপনার কী ধরনের পরিবর্তন এসেছে ?

- আর্থিক ব্যয় বৃদ্ধি
 - বনের রক্ষণাবেক্ষণ দায়িত্ব
 - পরিবেশ সম্পর্কে সচেতনতা
 - কোন পরিবর্তন আসেনি
- অন্যান্য (উল্লেখ করুন)

২৩.০ এই কার্যক্রমে জনগণের দায়িত্ব কি ?

২৪.০ এই কার্যক্রমে বন বিভাগের দায়িত্ব কি ?

২৫.০ এই কার্যক্রমে এনজিওদের দায়িত্ব কি ?

২৬.০ ভবিষ্যতে এই কার্যক্রম বাড়ানো সম্পর্কে আপনার মত কি ?

উচিত

উচিত নয়

২৭.০ কেন ?

২৮.০ যৌথ ব্যবস্থাপনা উন্নত করার ক্ষেত্রে কার দায়িত্ব কিরূপ হতে পারে

- জনগণের
- এনজিও
- বন বিভাগের
- অন্যান্য

আপনার মতামতের জন্য ধন্যবাদ