

NATIONAL FOREST POLICY REVIEW



BANGLADESH

by

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Introduction

Bangladesh is situated in South Asia and bounded by India to the west, north and northeast. The Bay of Bengal is in the south. In the west of the country, are the expansive Gangetic Plains of India. The hilly forests of Myanmar and India are on the eastern border. The Sundarbans, the world's largest continuous area of mangrove forest is located in the southwest. The other major forest areas are situated to the northeast and southwest. Degraded sal (*Shorea* spp.) forests are found in central Bangladesh.

Current situation of forest resources and the forestry sector

Land area

Bangladesh with a total land area of about 0.14 million km² has one of the world's largest deltaic plains. About 12 percent of the land area comprises tertiary hills that reach up to 600 m. The low hills (below 100 m) are dissected by moderate to steep slopes. Most of the valleys are suitable for farming. Shifting cultivation, conversion of marginal and forestland to agricultural use, overharvesting of fuelwood and timber, overgrazing, improper collection, transport and use of water and construction of roads put pressure on the natural resource base of the hilly areas. The plains are cultivated both in the dry and rainy seasons depending on the land condition (Khan 1997). There are sizeable wetlands especially in the larger districts of Sylhet and Mymensingh. Irrigation and the use of surface water and water from deep tubewells are common. Land utilization patterns and changes are shown in Table 1.

Population, density and growth rate

Bangladesh's population was about 126.9 million in 1999 and is expected to reach 130 million by the end of 2002. Almost 80 percent of the people live in rural areas. The annual population growth rate between 1995 and 2000 was 1.7 percent. In 1999, the population density was approximately 975 persons/km². The gender ratio was 106 males for 100 females. There are 19.4 million households in the country distributed over 59 990 villages. About one million tribal people live in the hilly regions of Sylhet, Mymensingh, Chittagong, Bandarban, Khagrachari and Rangamati.

GNP per capita and annual growth rate of GDP

During the 1984/85 fiscal year, the GDP at current prices was Tk.362 970 million (US\$7 259). The per capita GDP was Tk.3 702 (US\$74). The GDP growth rate was 15.5 percent and the per capita GNP growth rate was 13.2 percent. The primary, industry and service sectors contributed 51.2, 8.5 and 40.3 percent, respectively. Agriculture was the major activity and its share of the GDP is about 37.6 percent (Forestry Master Plan 1990/91); the forestry sector contribution was 2.5 percent. However by 1999, there were substantial changes in the sectoral composition of the GDP. During the fiscal year of 1998/99, the GDP growth rate was 4.56 percent. The primary, industry and service sectors contributed 31, 16 and 57 percent respectively. Changes in sectoral composition from 1985 to 1999 indicate economic development and growth as well as industrialization and urbanization.

Forests and forestry

Forests cover about 14 percent of the country and the per capita forest cover is 0.016 ha. The major forest products are timber, bamboo and cane. Bamboo grows almost everywhere. Although village groves meet the major local timber demands, quality wood is produced from public forests

under the management of the Forest Department. Large areas in the hills and along the coast have been planted. Plantation forestry is practised widely, except in the Sundarbans. Many private rubber plantations have been established in tea garden areas and in the hills, but have also encroached on forest areas.

Table 1. Land use ('000 acres)

Year	Forest	Unavailable for cultivation	Cultivable waste (a)	Current fallow (b)	Net cropped area	Area sown more than once	Total cropped area
1971/72	5 507	6 566	734	2 101	20 371	7 798	28 169
1972/73	5 507	6 572	681	1 679	20 840	8 199	29 039
1973/74	5 507	6 575	672	1 550	20 977	8 447	29 424
1974/75	5 466	6 576	670	2 009	20 559	8 078	28 637
1975/76	5 438	6 622	662	1 591	20 968	8 718	29 686
1976/77	5 449	6 626	661	2 100	20 445	8 534	28 979
1977/78	5 425	6 669	665	2 838	20 693	9 009	29 702
1978/79	5 423	6 674	623	1 760	20 801	11 045	31 846
1979/80	5 427	6 686	615	1 706	20 873	11 100	31 973
1980/81	5 416	6 712	619	1 404	21 158	11 363	32 521
1981/82	5 298	6 837	611	1 350	21 212	11 426	32 638
1982/83	5 296	6 876	572	1 196	21 369	11 761	33 130
1983/84	5 205	7 156	810	1 124	21 442	11 571	33 013
1984/85	5 297	7 193	721	1 221	21 353	11 143	32 496
1985/86	5 237	7 220	670	997	21 667	11 798	33 459
1986/87	4 910	8 141	660	973	21 878	11 097	34 883
1987/88	4 703	7 685	890	2 913	20 478	13 670	34 148
1988/89	4 703	7 645	888	3 285	20 148	13 739	33 887
1989/90	4 703	7 783	863	2 686	20 633	14 117	34 750
1990/91	4 693	7 958	1 442	2 379	20 198	14 482	34 680
1991/92	4 674	9 885	1 532	862	19 716	14 405	34 121
1992/93	4 674	10 137	1 512	928	19 418	14 438	33 856
1993/94	4 674	10 355	1 566	984	19 090	14 225	33 310
1994/95	4 861	10 128	1 547	1 000	19 133	14 280	33 413
1995/96	5 317	9 788	1 314	969	19 281	14 110	33 391
1996/97	5 329	9 681	1 295	963	19 401	14 688	34 089
1997/98	5 572	9 268	1 241	898	19 690	15 210	34 810
1998/99	5 572	9 141	1 100	1 115	19 741	14 752	34 493

Notes: (a) Cultivable waste is land suitable for cultivation but lying fallow for more than one year.
 (b) Current fallow is the area already brought under cultivation, but not cultivated during the year.
 (c) Total cropped area is the sum of the net cropped area and the area sown more than once.
 (Statistical Year Book of Bangladesh 1999)

Forests in Bangladesh

The forest cover of Bangladesh decreased from 17.3 percent (1981/82) to 13.6 percent (1995/96). The total area of forest cover decreased from 24 939 km² in 1981/82 to 21 914 km² in 1995/96. The area under reserved forests increased from 11 474 km² (1975/76) to 14 615 km² (1995/96). Most of the area has no tree cover. Between 1960 and 1980, the forest cover has declined by 2.1 percent annually. The growth in hill forests is 0.5 to 1.5 m³/ha/yr. The growth in mangrove and sal forests is lower. The increment in teak plantations in the hill forests is 2.5 m³/ha/yr (Forestry Master Plan 1993). The area under different forest types is shown in Table 2.

From the ecological standpoint the forests may be divided into the following types:

1. Tropical wet evergreen forests
2. Tropical semi-evergreen forests
3. Tropical moist deciduous forests
4. Freshwater wetland forests
5. Mangrove forests

All major forests are owned or controlled by the government, although the tea gardens have some small areas covered with forest. The tea garden forests are used mostly to meet local needs and are not scientifically managed. The Forest Department owns all the reserved, protected, acquired and vested forests. The government owns the unclassed state forests (USF) but most is under the

control of district administrations. Only a small portion of the USF is under the control of the Forest Department and under some form of scientific management. A large portion of the USF is affected by shifting cultivation practised by tribal groups. Slightly more than 16 317 km² of the forest are under Forest Department management. These public forests have been managed according to forest management plans by the Forest Department for decades. The Forest Department has objectives for the management of forestland, but they are evaluated rarely, and thus are seldom achieved.

Table 2. Forest types in Bangladesh (square miles)

Year	Reserved for forests	Acquired forests	Vested forests	Protected forests	Unclassified state forests	Percent of total area
1975/76	4 430	365	41	222	3 502	15.48
1976/77	5 104	365	41	222	3 502	16.70
1977/78	5 101	367	41	222	3 513	16.71
1978/79	5 129	341	43	222	3 517	16.73
1979/80	5 427	346	42	222	3 521	17.28
1980/81	5 422	399	41	222	3 440	17.22
1981/82	5 422	397	42	222	3 498	17.32
1982/83	5 425	311	42	222	1 553	13.67
1983/84	4 893	306	41	222	1 440	13.83
1984/85	5 644	268	35	231	1 768	14.38
1985/86	5 718	262	35	207	2 443	15.68
1986/87	4 882	361	35	206	1 578	13.40
1987/88	5 097	447	35	206	6 823	13.45
1988/89	4 353	492	97	193	1 390	12.53
1989/90	5 063	156	87	143	1 313	12.60
1990/91	5 028	157	87	202	1 335	12.81
1991/92	5 092	496	54	197	1 433	13.08
1992/93	4 689	603	31	145	1 417	13.16
1993/94	5 109	515	31.82	193	1 371	13.16
1994/95	5 643	372	32.95	149	1 840	13.60
1995/96	5 643	372	32.95	149	1 840	13.60

Source: Statistical Year Book of Bangladesh 1999

Management plans for different areas have slightly varying objectives. In general, the objectives of recently expired forest management plans are to:

- Convert the existing irregular forests into normal forests with better species;
- Provide a sustained supply of forest products to meet the demands from agriculture and industries;
- Meet the demand for forest produce of the local population;
- Prevent denudation of hills and soil erosion to maintain the natural flow of rivers and streams;
- Derive maximum economic benefits from the existing tracts of forests; and
- Provide forest cover for the preservation wildlife.

Village forests

Village forests provide a significant portion of the wood supply. They produce fruit for human consumption purposes, fodder for livestock, raw materials for cottage industries, wood for furniture, construction, carts, boats and agricultural tools. The mixture of cultivated plants allows regular production throughout the year. The flow of small quantities of various products helps the farmers to maintain economic stability and food security. Production in village forests is decreasing because of land shortages. The village forests supply large quantities of bamboo. According to the village forest inventory made in 1981, village forests supplied 528 million

bamboo culms (Hammermaster 1981). The community forestry activities introduced by the Forest Department have enhanced the rural forests by raising plantations along the roads and railroads.

Plantation area

Between 1991 and 1998, the Forest Department established forest plantations on about 149 000 ha. Another 23 800 km of strip plantations have been raised along the roads and railways. The details of the plantations are given in Tables 3 and 4.

Table 3. Plantation development from 1975 to 1996 (in ha)

Year	Hill forest	Sal forest	Coastal forest	USF	Total
1974/75	2 644	81	1 969	287	4 981
1975/76	3 092	522	4 864	1 214	9 692
1976/77	3 361	1 140	6 727	1 781	13 009
1977/78	4 339	1 023	4 943	1 651	11 956
1978/79	4 619	957	6 607	1 123	13 306
1979/80	5 986	809	6 518	2 225	15 538
Subtotal	24 041	4 532	31 628	8 281	68 482
Second five-year plan					
1980/81	7 367	688	6 242	1 983	16 280
1981/82	8 207	1 194	6 323	6 151	21 875
1982/83	7 223	1 059	8 094	3 845	20 221
1983/84	7 437	1 038	10 118	3 743	22 336
1984/85	5 233	615	9 996	6 961	22 805
Subtotal	35 467	4 594	40 772	22 683	103 517
Third five-year plan					
1985/86	4 106	-	8 114	6 253	18 473
1986/87	3 477	-	8 094	4 644	16 215
1987/88	3 368	-	8 195	4 553	16 116
1988/89	3 699	-	3 806	3 669	11 174
1989/90	6 249	-	4 330	3 274	13 953
Subtotal	20 899	-	32 539	22 393	75 831
Fourth five-year plan					
1990/91	N.A.	N.A.	N.A.	N.A.	24 887
1991/92	N.A.	N.A.	N.A.	N.A.	26 190
1992/93	N.A.	N.A.	N.A.	N.A.	36 961
1993/94	N.A.	N.A.	N.A.	N.A.	47 582
1994/95	N.A.	N.A.	N.A.	N.A.	45 862
1995/96	N.A.	N.A.	N.A.	N.A.	21 185
Subtotal	-	-	-	-	202 667
Grand total					450 497

Note: Hill forest: reserved forests of Chittagong Hill Tracts, Cox's Bazar, Sylhet, Chittagong. Sal forest: Greater Dhaka, Mymensingh, Tangail, Rangpur, Dinajpur and Rajshahi. Noakhali and new formations of Chittagong. USF: USF of Chittagong Hill Tracts. Minor differences in data are due to rounding effects (Reza *et al.* 1992).

Table 4. Plantations established by the Forest Department

Year	Plantations in ha		Strip plantations in km
	Inland	Coastal	
1990/91	7 209	2 887	2 859.19
1991/92	7 062	3 567	4 437.60
1992/93	10 331	4 325	3 598.85
1993/94	14 271	4 805	5 556.00
1994/95	14 717	3 848	4 038.58
1995/96	5 845	2 730	1 665.91
1996/97	6 601	1 850	3 953.09
1997/98	6 090	2 875	1 719.00
Total	72 125	76 887	23 828.26

Source: Forest Department

Coastal plantations

Until 1999, over 138 740 ha of newly formed mudflats had been planted with various mangrove species, of which *Sonneratia apetala* is the most common. Recently, the destruction and encroachment of plantations have become a serious problem. The underlying cause is land tenure conflicts. The sites were donated to the Forest Department to stabilize the land by planting trees for 20 years. Only then would the land become available for agriculture. The land was not declared as reserved forest under the Forest Act. Most plantation sites have accumulated silt and apparently have become suitable for fisheries and agriculture. However, they are not sufficiently stabilized to withstand regression tillage on a long-term basis. Most sites in Chittagong and Cox's Bazar Districts are encroached by fisheries whereas those in Noakhali District are being encroached for agriculture and construction of homesteads. The district land administration officials have joined with local encroachers for personal gain. This has aggravated the situation further and intensified the conflict between the Forest Department and the district administrations. To avoid serious degradation and permanent damage, institutional arrangements should be established for their participatory management. Activities such as "silvo fishery", "deer ranching", and small-scale agroforestry may be stipulated under such arrangements. The Ministry of Environment and Forests (MOEF) and the Land Ministry should issue joint orders and regulations in this context to avoid the complete loss of the plantations.

Status of protected areas

The government has declared seven wildlife sanctuaries, four national parks and one game reserve in forest areas through notification in the official gazette. In addition, there are two wildlife sanctuaries in forest areas, which have not been notified under the Wildlife Order. The 14 protected areas (Table 5) cover about 225 000 ha, which translates into 1.56 percent of the total land area. All the protected areas are part of the reserved forest. Public entry into the reserved forests, without the permission of the Forest Department, is prohibited. There is no commercial harvesting in the protected areas. Reserved forests that are not declared as a protected area may be managed for regular forest products but require an approved forest management plan.

Table 5. Protected areas of Bangladesh (in ha)

Name	Location (district)	Year of establishment or notification	Area	Remarks
Sundarbans East Wildlife Sanctuary	Bagerhat	1960/1996	31 227	First notified in 1977 and expanded through notification in 1996
Sundarbans South Wildlife Sanctuary	Khulna	1996	36 970	
Sundarbans West Wildlife Sanctuary	Satkhira	1996	71 502	
Rema Kalenga Wildlife Sanctuary	Habiganj	1996	1 796	First notified in 1981 and expanded through notification in 1996
Pablakhali Wildlife Sanctuary	Rangamati	1962/1983	42 087	
Char Kukri Mukri Wildlife Sanctuary	Bhola	1981	40	
Chunati Wildlife Sanctuary	Chittagong/ Cox's Bazar	1986	7 761	
Hazarikhil	Chittagong	1974	2 903	To be notified under the Wildlife Order
Rampahar Shitapahar	Rangamati	1974	3 026	Ditto
Bhawal National Park	Gazipur	1974/1982	5 022	
Madhupur National Park	Tangail	1962/1982	8 436	First protected area of the country
Himchari National Park	Cox's Bazar	1980	1 729	
Lawachara National Park	Moulavi Bazar	1996	1 250	
Teknaf Game reserve	Cox's Bazar	1983	11 615	

Source: Forest Department

Production, trade and consumption

Timber and fuelwood production from government-owned forests has declined in the recent past because of harvesting restrictions (Table 6). The wood produced in the country is consumed domestically. Bangladesh imports wood and cane (Table 7). Timber imports are increasing rapidly. Most of the wood traded domestically is derived from village wood groves. Village forests supply 54 percent of the timber and 65 percent of the fuelwood consumed in the country. Most wood derived from village groves is of poor quality. The domestic wood demand is high and there is a serious shortage. The per capita consumption of wood and fuelwood is 0.01 m³ and 0.05 m³ (Forestry Master Plan 1993). The total number of wood-based industries was 1 277 in 1990/91 and increased to 1 642 in 1995/96. The wood-based industries provide employment for more than 33 000 people (Statistical Year Book 1999). Over eight million people are involved in processing wood nationwide.

Table 6. Forest products production

Year	Timber in million cu. ft	Fuelwood in million cu. ft	Golpatta in '000 MT	Bamboo in million culms	Sungrass in million bundles	Honey in MT	Fish in '000 MT	Wax in MT	Cane in million cu. ft
1985/86	19.8	35	62	75.8	0.9	224	8.1	56	3.9
1986/87	12.8	23.7	71	92.6	1.7	229	6.9	NA	3.9
1987/88	14.1	26.1	80	105.1	1.5	224	6.3	56	1.3
1988/89	12.4	27.8	68	140.6	1.4	100	7.8	NA	NA
1989/90	6.8	13.3	67	119.1	1.1	146	5.1	NA	NA
1990/91	8.4	38.2	72	84.2	0.6	210	8.5	NA	NA
1991/92	6.6	13.0	72	80	0.5	159	4.7	44	2.4
1992/93	8.1	6.7	67	119.2	1.0	182	5.5	36	0.7
1993/94	6.8	9.5	68	90.5	1.1	107	5.1	26	2.9
1994/95	6.1	5.7	62	73.3	2.1	90	5.3	NA	NA
1995/96	NA	3.7	62	65.8	NA	109	NA	NA	NA

Source: Statistical Year Book of Bangladesh 1999

Table 7. Import of wood and cane

Year	Wood in '000 m ³	Cane in '000 numbers	Form and species of wood imported	Exporting countries
1989/90	9.5	NA	Roundwood and sawntimber Teak, gorjan, karoin, balaw, campus, maranti, Douglas fir, red hardwood, pinkado, rangus, holdu, sal, civit, champaphool, thaita, kerisin, beech, telshoor, thaowkan, boilam, thinkadoo, jarul, gamar, etc.	Myanmar, Malaysia, Nigeria, Denmark, Singapore, Indonesia, New Zealand, China, South Africa, Sweden, etc.
1990/91	7.7	NA		
1991/92	0.9	NA		
1992/93	14.7	NA		
1993/94	13.9	NA		
1994/95	10.2	NA		
1995/96	19.9	NA		
1996/97	21.5	NA		
1997/98	31.0	95.2		
1998/99	52.0	99.0		
1999/00	67.5	93.0		
2000/01	91.0	194.0		

Economic importance of the forestry sector

In 1994/95, the value of the forestry sector was estimated to be Tk.18.8 billion (US\$376 million) according to the Statistical Year Book (1999). It grew steadily to Tk.25.5 billion (US\$510 million) in 1998/99. The Forestry Master Plan (1993) indicates that 85 percent of the value is derived from primary roundwood, 11.5 percent from secondary roundwood processing and 3.5 percent from NWFPs (as in 1992). The proportion might have changed over time but it is almost certain that the major share is primary wood. Among the NWFPs, bamboo plays a vital role.

Current and emerging issues, trends and critical problems

Bangladesh was created in 1971. It was under British rule from 1757 to 1947 and emerged as East Pakistan in 1947. Forest management was initiated under British rule, which promulgated Act VII in 1865. This was the first forestry-related act in Asia. Many reserved forests were declared under this act and placed under the control of the Forest Department for their management. Most existing Sundarbans was notified as reserved forests during 1875/76. Professional foresters of the Forest Department had key roles in the management of these reserved forests.

Forest depletion

According to the Forestry Master Plan (1993) actual forest cover of the country will not exceed six percent. Annual deforestation is reported to be 8 000 ha or 3.3 percent and is considerably higher than in other South Asian countries (Gain 1998). Population pressure is viewed by the government as the main underlying cause of forest depletion. However, many people believe that wealthy and influential individuals are also to blame. In general, the major causes of forest depletion include:

- Lack of proper monitoring;
- Lack of accountability;
- Weak administrative support;
- Inadequate legislation;
- Low salary for government servants in the forestry sector;
- Corruption;
- Low government priority for forests, forestry and the Forest Department;
- Increasing population pressure, land hunger and very low living standards;
- Deteriorating law and order;
- No strengthening of the Forest Department;
- No people's participation in forest management;
- Forest Department animosity towards NGOs.

Management-related problems

There are numerous forest management problems:

1. Gaps between management plans: For most areas there is a gap between two successive management plans. New plans are not prepared in time and are replaced by “advanced prescriptions” or “schemes”. This causes discontinuity in operational plans.
2. Lack of monitoring: There is no built-in mechanism to monitor the impact of prescriptions, which impedes improvements in forest management.
3. Incompatibility between the approved management plan and development programs and projects: Often projects are launched with loans from the World Bank or the Asian Development Bank (ADB). These projects mostly fund plantation development and infrastructure support. To meet plantation targets, many plantations are established on denuded sites at random. Frequently, areas under different cropping patterns are used, which is not commensurate with the allocations made under the current management plan. Also, project objectives sometimes do not fit the prescriptions of the current management plans. Examples include:

- Buffer zone: The forest resource management project, funded by ADB from 1980 to 1987, provided for the delineation of peripheral areas of reserved forests as buffer zones. The current management plan does not classify buffer zones, which makes it difficult to meet the provision. Priority is often given to project activities, which jeopardizes the goal and application of management prescriptions. To obtain foreign funds, incompatible projects are accepted at the policy level, which causes serious difficulties in the implementation of management plans.
- Monoculture plantations: Under development project and programs, single-species plantations are established contradicting the provisions and principles of current management plans. Some plantations perform below expectations, clash with biodiversity conservation objectives or have been destroyed during extreme events such as the 1991 cyclone.
- Agroforestry and block fuelwood plantations: There are no provisions in current management plans to accommodate these activities.
- The lack of funds to operationalize management plans is a serious constraint. Thus, the annual plantation targets cannot be reached. Instead, development project funds are used for establishing plantations.
- 1971 moratorium and its extension: Immediately after independence a moratorium was imposed on tree felling. The restriction was heavily criticized by the public when there was a need for construction timber especially after natural disasters. It also obstructed the development of participatory forest management.
- Declining prices for wood obtained from strip plantations: Strip plantations were raised under social forestry projects. Buyback agreements were made according to the provisions of the projects. The rotation was fixed at 15 years but the felling was delayed because it took time to obtain permission from the MOEF. Now that the permission has been given people fear that the market will be flooded and prices will drop. The problem is likely to affect the future involvement of people in tree planting.
- Infrastructure: Due to a lack of funds forest roads, office buildings, staff housing and vehicles could not be provided as required in the management plan prescriptions. The situation has caused serious problems to the proper management of the forests.
- Shortage of human resources: Due to low salaries, there is a lack of interest in working for the Forest Department. Consequently, there is a serious shortage of professionals and technical forestry staff.
- Protection of forests, pilfering and corruption: Adequate forest protection is a serious problem in Bangladesh. The Forest Act has been tightened in an attempt to check theft and pilferage. However, law enforcement remains weak, mostly because it has failed to earn people's confidence. Presently, foresters spend over 95 percent of their time in futile attempts to protect the forests. The media often reports the rampant pilferage from government forests with indications of corruption at the highest levels of forest administration. This makes it extremely difficult to achieve sustainable forest management.

Management-related issues

The following issues require urgent attention to improve forest management:

1. Incorporation of forestry-related International Conventions, Treaties and Protocols (ICTPs), signed by the government, in forest management;
2. NGO and people's participation in forest management;
3. Poverty alleviation;
4. Continued forest depletion;
5. Remuneration of Forest Department staff;

6. Capacity building.

Implications from international conventions

Incorporating forestry-related ICTPs into forest management plans and policies is important. Islam (1996) listed 44 environmentally related ICTPs that have been signed by the Government of Bangladesh. The following ICTPs may affect forest management (a complete list is provided in Appendix 1):

1. International Convention for the Protection of Birds, Paris, 1950.
2. Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar, Iran, 1971.
3. Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Paris, 1982.
4. Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, 1972.
5. Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973.
6. Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979.
7. Conservation of Biological Diversity, Rio de Janeiro, 1992.
8. International Convention to Combat Desertification, Paris, 1994.

The signing of such protocols meant new responsibilities and required the reformulation of forest management plans to meet international commitments. However, many have yet to be acted upon properly.

Current national policies

Forest Policy (1894)

The first forest policy provided basic guidelines for the formulation of acts and rules for forest management. Its salient features were:

1. State forests are to be administered for public benefits through regulating the rights and privileges of the local people.
2. Forests are categorized as:
 - (a) Hill forest/protection forest
 - (b) Economically important production forest
 - (c) Minor forests
 - (d) Pasturelands
3. Forests situated on hillslopes should be conserved to protect the cultivated plains.
4. Valuable forests should be managed to yield state revenue.
5. Land suitable for cultivation within the forest should be made available for cultivation, provided that such conversion does no harm and is permanent.
6. The local population should be accorded grazing rights in low yielding forests.

Under this policy, agricultural cultivation had priority over forest management. However, the Forest Act of 1927 was formulated under this forest policy. Most reserved forests were declared and most rules drafted under the act.

Forest Policy (1955)

In 1955, the Government of Pakistan announced its first national forest policy and Bangladesh (East Pakistan at the time) came under its purview. The salient features were:

1. Forestry should receive priority and increased allocations should be made available to increase forest cover.
2. Forests should be classified on the basis of their utility.
3. Intangible benefits from forests should be recognized.
4. All forests should be managed scientifically under approved management plans.
5. Timber and fuelwood supply may be enhanced through plantations along roads and canals.
6. Sound management of private forests should be ensured through government legislation and support.
7. Control of adverse land use and conserving soil.

This policy emphasized revenue generation and clear felling followed by artificial regeneration, which became a general practice.

Forest Policy (1979)

The first National Forest Policy for Bangladesh was announced in 1979. Its salient features were:

1. Forests should be preserved carefully and managed scientifically.
2. Government forest should not be used for non-forestry purposes.
3. Timber resources should be increased by establishing large-scale plantations.
4. Modern technologies should be employed for extraction and utilization of forest produce.
5. Forest-based industries should be set up.
6. Research, education and training should be re-organized to meet the scientific, technological and administrative needs of the country.
7. A cadre of officers should be developed to manage the forestry sector.
8. The forestry sector should be recognized and relevant laws should be updated.
9. Steps should be taken to conserve forest and wildlife and utilize the recreational potential of the forestry sector.
10. Mass motivation should be initiated and technical assistance extended to those interested in forestry.

The National Forestry Policy of 1979 was somewhat vague and not implemented fully.

The current national Forest Policy was promulgated in 1994. Except for the Forest Policy, there are no additional declarations or directives from the government related to forestry. There are no specific directives related to forest conservation for other government agencies. To the contrary, the local administration in Noakhali remained silent when local people encroached the 1 000 ha mangrove plantations at Boyar Char, although local forest officials made several approaches to assist the district administration. Obviously, forestry at the national level is not a priority concern.

Forest Policy 1994

The present Forest Policy is the result of an arduous exercise to meet present day needs. The salient features of the policy are:

1. The government shall endeavour to bring 20 percent of the land area under forest by 2015 to maintain the ecological balance and attain self-sufficiency in forest produce. To achieve this objective the government shall work jointly with NGOs and ensure people's participation.

2. Since the area under government-managed forest is very limited, the afforestation activities shall be extended to village areas, newly built up mudflat areas and in the denuded areas of USF of the Chittagong Hill Tracts.
3. People will be encouraged to plant trees on fallow and marginal lands, on the banks of rivers and in homesteads. Technical advice and assistance will be provided for agroforestry practices, Appropriate attention will be given to producing fodder and maintaining herb and shrub cover.
4. The government will encourage people to plant trees on the premises of public institutions such as union council offices, schools, mosques, temples, orphanages and their surrounding areas. Both technical and other assistance will be provided.
5. On state-owned land such as roadsides, railway tracksides and embankments, the government will undertake afforestation with people's participation and with the assistance of NGOs.
6. To ensure pollution control in the cities, the government shall promote special afforestation activities in municipal areas. To achieve this goal, the municipalities, town development authorities and other related autonomous bodies shall help the government in the implementation of the programs by setting aside specific sites for planting trees.
7. In the hill districts of Banderban, Rangamati and Khagrachari massive afforestation programs will be undertaken in the USF by public and private agencies. The local governments, keeping the land rights retained by the land ministry, will execute the program.
8. In order to preserve soil, water and biodiversity, the natural forests of the hilly areas and the catchments of the rivers within the country shall be declared as protected areas, game sanctuaries and national parks. The government will endeavour to keep 10 percent of the national forests as protected areas by 2015.
9. An integrated management plan will be prepared for the Sundarbans incorporating the management of forest, water and wildlife.
10. State-owned hill and sal forests will be managed as production forest except those declared as protected areas. The production forests will be managed on a commercial basis with due consideration for the environment.
11. Critical areas like steep hill slopes, vulnerable watersheds and wetlands will be designated as "forests" and will be managed as protected areas.
12. Denuded and encroached government forestland will be identified and brought under the afforestation program with people's participation using the benefit-sharing approach preferably adopting agroforestry with NGO association.
13. Modern and appropriate technologies will be introduced to minimize loss in the collection and processing of forest produce.
14. Steps will be taken to modernize the extraction methods of forest produce to minimize loss and increase efficiency.
15. Steps will be taken to introduce competitive and profit-oriented management of the state-owned forest-based industries and to increase wood-processing efficiencies.
16. Labour-intensive small and cottage forest-based industries will be encouraged in rural areas.
17. Forest transit rules will be simplified to meet present-day needs.
18. Since a wood deficit exists, the ban on export of logs will continue. Processed wood products can however be exported. Import of wood and wood products will be liberalized, but reasonable import duties will be levied on forest products that are abundant in the country.
19. Owing to the small forest area in the country, forestland will be used for afforestation only; any other use will require the permission of the head of the government.

20. In the absence of clearly defined land ownership, tribal people inhabit and cultivate forestland in some parts of the country. Clearly delineated forestland will be set aside for them through forest settlement operations. The rest will be brought under permanent forest management.
21. Training, technical assistance and financial support will be enhanced for private afforestation and tree-based rural development programs, from funds received as international grants and from donors.
22. Women will be encouraged to participate more in programs such as homestead afforestation, rural tree farming and participatory forestry.
23. Ecotourism will be encouraged, bearing in mind the carrying capacity of the forest and the environment.
24. To increase awareness on afforestation, protection and utilization of forests and forest products, mass media campaigns shall be promoted by the government and NGO channels.
25. Under forestry programs, fruit tree planting shall be encouraged in communities.
26. The Forest Department will be strengthened to achieve the objectives and goals of the policy and a new social forestry department will be established.
27. The research, education and training institutions related to forest management will be strengthened to achieve the policy targets and their roles will be enhanced and integrated.
28. In the light of the aims, objectives and targets set up in the policy statement, the acts and rules related to forestry shall be modified, amended and if necessary new acts and rules will be promulgated.

Forest policy has evolved centrally. The government implements policy nationwide and has no different regional interpretations. The Forest Policy of 1994 is elaborate and for the first time clearly incorporates the participatory forestry concept. It provides opportunities for cooperation between NGOs and government agencies in social forestry.

A brief review of existing Bangladesh forest policy in relation to common elements of international and national standards of sustainable forest management is given in Appendix 2.

The Forest Act

The Forest Act was first passed in 1865 and was based on the rules proposed by the Chief Commissioner of Burma (now Myanmar). The Indian Forest Act of 1878 was a reformatted and well-written document that corresponded with other country legislation. This was largely revised in 1927. Since then the Forest Act has been amended many times; the last amendment was in 2000.

A Private Forest Act was introduced in 1945, which was followed by the promulgation of the Private Forest Ordinance (1959), to regulate forest management on privately owned land. Private forests had no official forest management at that time. The only practice was to harvest wood or to clear the forest for conversion to agriculture. The management of privately owned forests was taken over by the government under the provisions of the Private Forest Act and Private Forest Ordinance.

In 1959, the State Acquisition Tenancy Act was promulgated. Its main aim was to negate the control of landlords over their tenants and to bring tenants under the direct control of the government. Under its provisions many private properties were declared non-retainable, including forestland. Thus private forests were acquired by the government and brought under the management of the Forest Department as reserved forest under an order passed by the Board of Revenue.

In 1989, the Forest Act was amended to strengthen forest protection by providing for stiffer penalties for offenders and restricting the discretionary powers of the forest officials and local magistrates. The revised act relies on traditional forest protection and does not favour social

forestry. The strict provisions did not, however, achieve the desired results. To accommodate social forestry, the act was amended in 2000.

Rules

No new rules have been framed yet under the revised Forest Act 2000. The existing rules framed under the Forest Act of 1927 are still in force. The major rules under the Forest Act that deal with people are the Forest Transit Rules for various districts. These rules regulate the movement of forest produce irrespective of its origin. The movement of timber or other forest produce collected or harvested from private land also comes under their purview. The crux of the transit rules with respect to forest produce collected from privately owned land is to obtain a charge-free certificate, from the Forestry Department, regarding private ownership. However, the details for the collection and sale of forest produce from privately owned areas are sometimes prohibitive.

The existing rules do not accommodate participatory forestry activities. The Forest Department continues to manage forestland according to traditional forestry management concepts. While the Forest Department is raising new plantations, mostly on denuded tracts of land under its control, many areas with existing forest cover are not only being depleted gradually, but in many locations the forestland is converted to other land uses.

Forest policies and thrust areas

The Forest Policy promulgated in 1994 is the existing forest policy. The main thrusts are to:

- Increase forest cover to 20 percent of the total land area by 2015, to maintain the ecological balance and to attain self-sufficiency in forest produce;
- Extend afforestation in village areas;
- Involve NGOs and horticultural institutions in planting on marginal lands;
- Encourage wood-based small industries and continue the log export ban;
- Encourage people's participation and raise awareness.

The Forest Policy of 1994 has failed to introduce any change in land use. The government has urged the public to plant trees on many occasions by providing free seedlings. This has had some impact on planting home gardens. The present Prime Minister has urged the public to plant trees and medicinal plants. She has advised the Forest Directorate to ensure that seedlings of medicinal plants are available at government nurseries during June, the next tree-planting season. This is expected to enhance the planting of medicinal plants, especially in rural homestead areas. Although the government periodically announces forest policy thrusts, very little is being achieved in the field. If this continues, reaching a 20-percent forest cover by 2015 is unlikely.

Forest management and timber harvest

Most management plans prescribe clear felling followed by plantation establishment. The Sundarbans is an exception, where selective felling is practised. The government has imposed a moratorium on the extraction of timber from all natural forests. Under this moratorium, timber extraction from government forest has been restricted except on the grounds of sanitation and emergencies. Recently, Integrated Management Plans have been drafted for forest areas such as Sylhet and the Sundarbans. However, they pay little attention to the ecosystem management approach.

Biodiversity conservation

In Bangladesh, biodiversity conservation is still in its infancy, although a biodiversity project has been initiated recently for the Sundarbans. The impacts of various management activities on biodiversity are not understood very well and a monitoring tool is needed. In early 2002, IUCN-Bangladesh started to work on the identification of indicators and the development of a biodiversity monitoring system for the Sundarbans under the ADB-assisted Sundarbans Biodiversity Conservation Project. The monitoring component is the only activity that has been launched so far. For other areas, biodiversity conservation has yet to be contemplated. The existing Forest Policy has a clear mandate regarding the enhancement of biodiversity but field activities are yet to be tabled.

Forest industries

Of all the forestry-based industries, pulp and paper top the list in the global context. The Bangladesh Chemical Industries Corporation (BCIC) plays a dominant role in the production of pulp. Private industries have a major role in sawmilling and furniture production. The mandate of the Bangladesh Forest Industries Development Corporation (BFIDC) is to promote forest industries in the country, although it has not expanded much. The major wood-based or forestry related industries are:

- Pulp and paper;
- Sawmills;
- Plywood factories;
- Veneer and wood board mills;
- Match factories;
- Composite panel products; and
- Furniture making.

Sawmills (about 10 000 sawmills including pit saws) are the principal wood users (Forestry Master Plan 1993). There are over 34 000 furniture makers, which includes many small-scale rural establishments. According to the Statistical Year Book of 1999, under the three following categories there were about 1 642 wood-based industries in 1995/96. It appears that the statistical yearbook has not taken small rural carpenters into account. The categories are:

- Wood and cork products;
- Furniture manufacturing (wood); and
- Paper and paper products.

Non-wood forest products

Although NWFPs play a vital role in rural Bangladesh, very little importance is attached to them by decision-makers. The Forestry Master Plan (1993) has underscored this issue. The products identified for development include medicinal plants, bamboo, murta, hogla, sungrass, golpatta, hantal, honey, beeswax, fish, prawns, shells, lac and catechu. The existing Forest Policy does not attach adequate importance to NWFPs.

Trees outside forests

The existing Forest Policy has the mandate to encourage planting on private land. According to the existing rules, a permit needs to be procured from the Forest Department for the transport of logs. Although they are free of charge sometimes it is difficult to obtain them without some payment. Given existing socio-economic conditions, the present control system, while possibly unfair, may be the only option to control transport.

Wood energy

The per capita consumption of fuel during 1989/90 was 6.48 GJ/yr, which is one of the lowest in the world (Forestry Master Plan 1993). The energy supplied by traditional fuels is detailed in Table 8. In 1998/99, 4.5 million tonnes of wood were used for energy. Generally, 75 percent of the country's fuel requirement is met by local supply. The existing Forest Policy has no specific mention on wood energy.

Table 8. Energy supplied by traditional fuels

Year	Fuel (Million MT)								Total
	Cow dung	Jute sticks	Rice straw	Rice husks	Bagasse	Fuelwood	Twigs and leaves	Other waste	
1990/91	6.3	1.0	20.74	5.9	2.6	1.8	2.5	2.5	43.34
1991/92	6.6	0.9	20.34	6.1	2.5	1.9	2.5	2.4	43.24
1992/93	6.7	1.0	20.33	6.2	2.6	1.9	2.5	2.5	43.73
1993/94	6.6	0.9	19.97	6.2	2.4	2.0	2.6	2.6	43.27
1994/95	6.7	1.0	18.14	6.2	2.3	2.1	2.5	2.7	41.64
1995/96	7.8	1.5	18.75	18.7	1.3	2.2	2.5	2.6	55.35
1996/97	8.0	1.8	18.95	19.9	1.4	2.3	2.5	2.6	57.45
1997/98	7.7	2.1	15.18	14.9	1.4	2.2	2.5	2.6	48.58
1998/99	7.9	1.9	16.12	15.2	1.2	2.1	2.4	2.5	49.32

Source: Statistical Year Book (1999)

People's participation in forestry

Although some activities related to community forestry were undertaken in the early 1980s it was only in 1987/88 that the Forest Department implemented the first Social (Participatory) Forestry Project or Thana Bonayan and Nursery Development Project with ADB support. It was launched nationwide, except for the Chittagong Hill Tracts. The rules and regulations that existed then did not conform with the requirements of this social forestry project. Thus during implementation, the government issued orders and notifications to overcome barriers and to bridge the legal gaps to accommodate people's participation in forestry.

The National Forest Policy of 1994 declared that the opinions of those who are dependent on forests and forestry should receive due consideration in forestry projects. People's participation in decision-making has been incorporated in the policy, although details still have to be elaborated. The proposed Social Forestry Rules are given in Appendix 3.

Forestry training and education

The low level of human resource development is seriously constraining progress in Bangladesh. According to the Human Resource Development Index (HDI) of 1993 compiled by UNDP in 1996, Bangladesh ranks 143 out of 174 countries. Recognizing that human resource development can make a major contribution to poverty alleviation, economic growth and sustainable development, the government has given it high national priority.

Although most national sectors have succeeded in following a suitable approach for human resource development, the approach has yet to be established in the Forest Department. Working norms as well as a needs' assessment of skilled and qualified personnel in specialized fields are still lacking. The shortage of staff in terms of number, skills and capability in all government forestry institutions is common. NGOs engaged in forestry activities suffer even more from weak capacities.

Bangladesh has nine institutions offering education and training in forestry. Four offer university-level professional education, one offers sub-professional education, three afford technical-level education and one deals with vocational-level education and training in forestry. The institutes are:

1. Institute of Forestry, Chittagong University, offering university degrees in forestry.

2. Forestry and Wood Technology Discipline, Khulna University, offering university degrees in forestry.
3. Bangladesh Agriculture University Mymensingh (BAU), offering university degrees in forestry.
4. Shah Jalal University of Science and Technology, Sylhet, offering university degrees in forestry.
5. Bangladesh Forest College, Chittagong, offering in-service sub-professional training to Forest Department personnel.
6. Sylhet Forest School, Sylhet, offering a diploma, certificate courses and technical training for Forest Department personnel.
7. Rajshahi Forest School, Rajshahi, offering a diploma, certificate courses and technical training for Forest Department personnel.
8. Chittagong Forest School, Chittagong offering a diploma in forestry.
9. Forestry Development & Training Center (FDTC), Kaptai, offering technical training for Forest Department personnel and others.

Apart from these formal institutions, the government has made considerable efforts to develop and promote training in social/participatory forestry. Most training events were conducted under different projects. In the past, such training was for government officials who were sent abroad. But with the implementation of the social forestry projects, various training courses were offered for government officials and communities, NGO workers and others in the country.

Forest fires

Forest fires are very common in parts of Bangladesh. In most cases thatch grass and bamboo stands are destroyed and sometimes plantations are engulfed. During the dry season, especially in March, forest fires are often observed in the Chittagong area. The thatch grass management and regeneration technique adopted by the locals and the slash-and-burn practices of the tribal people are the root causes of most forest fires in the Chittagong area. The reporting procedure in the Forestry Department is quite complicated and fire occurrences are usually not reported to the higher authorities. The Forest Department has no forest fire fighting equipment or trained staff to control fires. Very little importance is attached by the government to bushfires.

Climate change and watershed management

The Forest Department has no special program on the issues of climate change and watershed management. Although in the early twentieth century, the headwaters of the Sangu and Matamuhari rivers were declared as reserved forests, very little has been accomplished at these sites with regard to watershed management.

Forest policy and implementation strategy

There is no tool to monitor Forest Policy implementation. Thus many of the important themes of the policy are ignored at the field level, which seriously jeopardizes its implementation.

Cross-sectoral policies influencing forestry

Besides the 1994 Forest Policy, there are other national policies that may have direct or indirect impacts on the forestry sector; they include:

- National Environment Policy;
- National Agricultural Extension Policy;
- National Water Policy;
- National Industrial Policy; and

- National Land Use Policy.

National Environment Policy

The National Environment Policy was declared in 1992. Its major objectives are to:

1. Maintain a balance in nature by preserving and improving the environment.
2. Protect the community from natural disaster.
3. Identify and control all kinds of pollution and activities degrading the environment.
4. Ensure environmentally sound development of all sectors.
5. Ensure environmentally acceptable use of all national resources on a sustainable basis.
6. Be a partner in all international environmental endeavours.

To achieve these objectives the National Environment Policy has guidelines for 15 sectors including agriculture, industry, health, energy, flood control, land and forest. It stipulates environmental impact analysis (EIA) for new projects, especially industrial ones. It controls a wide range of activities and is quite elaborate. Eventually, the implementation of this policy will impose restrictions on and further control the activities of these sectors.

The policy has yet to be implemented fully. While providing responsibilities for tree planting, conservation of wildlife and biodiversity and erosion control to the Forest Department, *inter alia*, it may interfere with production forestry such as clear felling and the raising of short-rotation plantations.

National Agricultural Extension Policy (1997)

The National Agricultural Extension Policy was declared in 1997. Its main objective is to encourage all service agencies in agriculture to provide efficient, effective and coordinated services to their clients. Its salient features are to:

- Help all categories of farmers.
- Provide an efficient and demand-oriented extension service.
- Decentralize the process.
- Include farmer groups in the provision of the extension service.
- Strengthen the cooperation between agricultural research and extension.
- Train extension workers.
- Use appropriate extension methods.
- Use an integrated approach.
- Have a coordinated extension approach.
- Have an environmentally compatible approach.

This new agricultural extension policy does not contradict forestry sector activities. Policy implementation may sometimes lead to conflicts between forestry and agriculture with respect to fallow lands (see also land-use policy below).

National Water Policy

The National Water Policy has seven chapters. Its salient features are:

- Before undertaking any planning with respect to water resources a comprehensive assessment of the resource should be undertaken.
- Unplanned, haphazard construction of roads, railways and other infrastructures alter the drainage patterns of basins. The development of infrastructure should be consistent with the overall development plan of the area so that the natural drainage pattern is not jeopardized.
- Emphasis is given to the conservation of groundwater.
- Erosion control through cost-effective methods is highlighted.

- In the planning, implementation and operation of water-resource projects, the preservation of the quality of the environment and the balance of nature should be maintained.

This National Water Policy does not contradict forestry activities; rather it has favourable clauses regarding afforestation and tree planting.

National Industrial Policy

The latest National Industrial Policy was declared in July 1991. Export-oriented industrialization, a secure five percent GNP growth by the sector and transfer of government-owned industries to the private sector are the major goals. The objectives of the policy are:

- National production, income, resource and job opportunities are to be enhanced through improvement of the industrial sector.
- National and international investments are to be encouraged in establishing industries
- Export-oriented, export-linked and import substitution industries need to be developed
- Small and cottage industries are to be encouraged
- Improvements of labour-intensive industries are to be expedited through the procurement of appropriate technology.
- Industries based on domestic raw materials or domestic technologies are to be encouraged;
- Investments in intermediate and basic industries are to be encouraged.
- Equal distribution of industries nationwide is to be encouraged.
- Rehabilitation of ailing industries.
- Quality control of industrial products needs to be more effective.
- The environmental balance needs to be maintained via pollution control in industries.

The National Industrial Policy does not contradict forestry activities, although industries may compete with forestry for land. It may overexploit the forestry resource as well.

National Land-use Policy

The long awaited National Land-use Policy was promulgated in June 2001. The lengthy policy attempts to address crucial issues with respect to land and land use. Its objectives are to:

1. Prevent any decrease of cultivable land.
2. Introduce a zoning system.
3. Ensure best utilization of char (new formations of riverine areas) land.
4. Ensure the protection of government-owned land, especially for future public needs.
5. Ensure land use is in harmony with the environment.
6. Use land resources to enhance employment opportunities.
7. Protect natural forests and combat erosion.
8. Prevent pollution.
9. Ensure minimal use of land for government or non-government offices.

The salient features of the policy are:

- Serious emphasis on the protection of declining cultivable land, which decreased from 8.24 million ha in 1983/84 to 7.14 million ha in 1997;
- Guidelines for intensive agriculture and expansion of fisheries; at the same time it declares that forestry can play a significant role in poverty alleviation;
- Ample emphasis on zoning; it indicates that elected bodies such as the City Corporation, Upazilla Council, can be entrusted with this. It suggests principles that may be adopted for zoning and the formulation of zoning laws;

- While expressing concern over the exploitation of cultivable land by rural housing it emphasizes the planning of housing in rural areas and suggests the formulation of a Village Improvement Act;
- It emphasizes limited land availability and suggests providing only limited land for government or non-government office buildings;
- It expresses concern over misuse of acquired lands;
- It re-emphasizes the strict adaptation of National Agricultural Policy directives regarding land use;
- It advises settling of landless people on new chars;
- It notes that forestry can help to combat pollution and suggests afforestation while preserving the existing forest areas and creating new reserved forests;
- For coastal belt areas, it aims for agricultural activities and rehabilitation but advises that afforestation may be necessary for reclamation. At the same time, it includes the need for a functional green belt along the seaboard;
- It notes the importance of controlling land fragmentation;
- To release pressure on land it advises locating roads on flood prevention dams;
- While expressing concern over the illegal occupation of government land, it recommends a Certificate of Land Ownership scheme to combat unauthorized occupancy; and
- It recognizes that people's awareness is essential for successful implementation of the policy.

Conflicts and compatibility among the various national policies

Before the promulgation of the National Land-use Policy, various land laws and reforms were formulated mostly with an agricultural and industrial bias, which sometimes contradicted forest policy. There is a definite lack of coordination between the Land Administration Agency and the Forest Department especially at the field level. Deputy commissioners deal with the land on behalf of the land ministry. They frequently ignore forestry or environmental aspects of land use and are more interested in leasing the land to private individuals without considering the environmental consequences. Thus, mangroves are leased out for fisheries, and hilly tracts with steep slopes for horticulture or farming. This leads to conflicts with local forestry officials, but deputy commissioners usually prevail, and their decisions are seldom queried by senior government officials. Thus many forest areas have been converted to non-forestry use.

Since the Industrial Policy of 1991 emphasized the establishment of export-oriented joint ventures, steps may be taken to use forest produce as raw material for these industries. Such cooperation between the industry and forestry sectors is possible. The agricultural and environmental policies are compatible with the Forestry Policy. The National Water Policy emphasizes erosion control and afforestation and does not undermine the Forest Policy. In general, the National Land-use Policy does not contradict the current Forest Policy but has some loopholes that may sometimes create a conflict with forestry.

Policy formulation

Policy formulation process

In the past, policy formulation was almost a unilateral activity of the government. The participation of stakeholders was unknown. Over time, this has changed considerably. Today, the ministry in charge formulates policy with assistance from the professionals under its direct control, more or less using a participatory approach. Dialogue is often held with stakeholders, experts, professionals, NGOs and the private sector. Ministers are responsible for policy formulation at the national level. Prevailing socio-economic, environmental and political factors largely influence such policy decisions.

The detailed steps and benchmarks for policy formulation in Bangladesh are:

1. The formation of a working or expert group with representation from the concerned agency or department to prepare the draft. Sometimes experts are employed to assist.
2. A review of existing sector policy and legislation.
3. Data collection and studies for preparation of the policy draft.
4. Preparation of a discussion paper on future policy direction.
5. Workshops, inter-ministerial meetings and similar fora on future policy direction, which are attended by various interest groups including ministers.
6. Formulation of the first draft using feedback obtained during workshops and meetings.
7. Circulation of the first draft to different ministries, agencies, groups, institutions and organizations for review and written comments.
8. Consultation or a workshop with wider representation after incorporating the comments and observations into the first draft.
9. Finalizing the draft policy through an inter-ministerial session after discussing the comments and observations received.
10. Submitting the draft to the concerned officer of the ministry.
11. The concerned officer submits the proposal to the cabinet of ministers for approval.
12. The cabinet of ministers gives formal approval to the proposal after discussion.
13. Publishing the document as a gazette notification for public appraisal.
14. Initiating institutional and administrative reforms to facilitate the implementation of the policy.
15. Implementing strategies and programs.

The entire process including obtaining approval by the cabinet of ministers can take up to two years. Newspapers and other media, workshops and discussions with various stakeholders are used to keep the process transparent and to obtain feedback. The main stakeholders in initiating changes in forest policy in Bangladesh are international donors, forestry professionals, politicians and NGOs.

Forest policy implementation and impacts

Once formulated, the MOEF is primarily responsible for the implementation of Forest Policy although direct responsibility is with the Forest Department. An act is formulated in such a way that it does not contradict policy. Since little attention is paid to publicizing the new policy, many agencies and organizations are not aware of goals and objectives. Therefore, it will be difficult to reach the expressed goal of 20 percent forest cover by 2015. The activities of the forestry sector alone will not be sufficient to achieve this goal.

There are no arrangements for monitoring and evaluating the policy implementation. In addition there is a serious lack of enforcement.

Forest policy implementation can only be made effective through adequate provisions that enable its translation into strategies, programs and activities. The recently revised Forest Act contains some inadequate provisions and should be revised especially in relation to the following issues:

- Involvement of communities in forest management; and
- Decentralization of power, especially with respect to finance and authority.

Impediments to policy implementation

The absence of provisions that foster people's involvement is the main impediment to the implementation of forest policy. Two years after the promulgation of the Forest Act, the Forest

Department has only recently sent some draft rules to the MOEF. There are many reasons for the slow progress of which the following are paramount:

- **Lack of human resources:** The human resources of the Forest Department are far below the numbers required. Although recent reorganization has enhanced the staff numbers, most posts remain vacant. Since 1984, no cadre officer has been recruited. This vacuum has delayed many activities.
- **Archaic thinking:** The Forest Department continues to operate along the lines of traditional forestry geared at production and revenue generation. The government also sets targets for earning revenue. In general, departmental staff do not like to share their domain with others. This attitude needs to be changed to promote people-oriented approaches. Lack of proper training and orientation further undermine any change.
- **Frustration:** Most of the reliable officers are frustrated because their contributions are not appreciated.
- **Weak performance of the MOEF:** The MOEF also lacks initiative. The ministry cannot deliver technical outputs, because its personnel are non-professional.

Overcoming impediments

To overcome the impediments requires reorganization. The Department of Environment (DOE), Forest Department and Bangladesh Forest Research Institute (BFRI) may collaborate in activities under the following six headings:

- Production Forestry, dealing with production and revenue generation;
- Social Forestry, dealing with the community and natural resources;
- Natural Resource Research and Education, dealing with research, training and education on natural resources;
- Park Services, dealing with all protected areas, wildlife sanctuaries, national parks, botanical gardens and ecologically critical areas;
- Pollution Control, dealing with control related to people and the environment; and
- Impact Analysis and Research on the Environment, dealing with environmental research and conducting impact analysis of all projects.

All personnel involved need to be professionals. A senior person may coordinate activities.

Conclusions and recommendations

Policies, however good they may be, will bring no benefits to the members of the public unless they are implemented properly. In less developed countries such as Bangladesh, policies are often very well formulated – sometimes with foreign assistance – but are not properly implemented because of interference by influential interest groups. Promulgation of acts and rules that support policy implementation is very important but often difficult. The commitment of the government to implement the acts and enforce rules uniformly is vital to achieve policy goals and objectives.

Frequently forest policy conflicts with the policies of other sectors. A firm land-use policy could provide clarification. Unfortunately the recent land-use policy does not support forestry sufficiently. The serious and continuing demand for agricultural land is a major constraint for expanding forest cover. Forestland that does not have the legal status of reserved forests is highly susceptible to conversion. Although the existing Forest Policy aims to increase forest cover, over the last two years 3 000 ha were lost to unauthorized cultivation and occupation in the coastal belts of Noakhali and Chittagong districts alone. This indicates that there is no coordination among the concerned government agencies and no joint effort to implement the Forest Policy.

Given the existing situation, the following actions are recommended:

1. The government should appraise its field agencies periodically, especially the administrative machinery, with regard to policy implementation.
2. A cell should be constituted within the MOEF to:
 - Manage the implementation of the existing Forest Policy;
 - Monitor the impact of field activities of the Forest Department and other government agencies;
 - Address issues that need to be resolved with other ministries or government agencies; and
 - Evaluate achievements in policy implementation.
3. A task force may be entrusted to review the implementation strategy of the Forest Policy at least once a year.
4. The Forest Department should hold meetings at least once every two years with concerned stakeholders to review issues, problems and achievements with respect to policy implementation.
5. Involve environmental groups to create a discussion forum on the issues of policy implementation and release findings to the media.
6. The media may assist in raising awareness of the public.

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Appendix 1. ICTPs signed, ratified or accessed by Bangladesh

Convention/treaty/protocol related to the environment	Signed	Ratified/accessed
International Convention for the Protection of Birds, Paris, 1950		
International Plant Protection Convention, Rome, 1951		1 September 1978
International Convention for the Prevention of Pollution of the Sea by Oil, London, 1954 (as amended on 11 April 1962 and 21 October 1969)		28 December 1981 (entry into force)
Plant Protection Agreement for the South East Asia and Pacific Region (as amended), Rome, 1956		4 December 1974 (entry into force)
Convention on the Continental Shelf, Geneva, 1958		
Convention Concerning the Protection of Workers Against Ionizing Radiations, Geneva, 1960		
Vienna Convention on Civil Liability for Nuclear Damage, Vienna, 1963		
Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water, Moscow, 1963	13 March 1985	
Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and other Celestial Bodies, London, Moscow, Washington, 1967		14 January 1986 (accepted)
International Convention on Civil Liability for Oil Pollution Damage (as amended), Brussels, 1969		
International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Brussels, 1969		4 February 1982 (entry into force)
Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances Other than Oil, London, 1973		
Convention on Wetlands of International Importance, Especially as Waterfowl Habitat, Ramsar, 1971		20 April 1992 (ratified)
Protocol to Amend the Convention on Wetlands of International Importance, especially as Waterfowl Habitat, Paris, 1982		
Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea Bed and the Ocean Floor and in the Subsoil Thereof, London, Moscow, Washington, 1971		
International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (as amended), Brussels, 1971		
Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on their Destruction, London, Moscow, Washington, 1972		13 March 1985
Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, 1972		3 August 1983 (accepted) 3 November 1983 (ratified)
Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (as amended), London, Mexico City, Moscow, [Washington], 1972		
Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, 1973	20 November 1981	18 February 1982
International Convention for the Prevention of Pollution from Ships, London, 1973		
Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, London, 1973		
Convention Concerning Prevention and Control of Occupational Hazards Caused by Carcinogenic Substances and Agents, Geneva, 1974		
Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques, Geneva, 1976		3 October 1979 (accepted) (entry into force same day)
Convention Concerning the Protection of Workers Against Occupational Hazards in the Working Environment Due to Air Pollution, Noise and Vibration, Geneva, 1977		
Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979		
Convention Concerning Occupational Safety and Health and the Working Environment, Geneva, 1981		
United Nations Convention on the Law of the Sea, Montego Bay, 1982		10 December 1982
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985		2 August 1990 (accepted) 31 October 1990

		(entry into force)
Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987		2 August 1990 (accepted) 31 October 1990 (entry into force)
London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, London, 1990		18 March 1994 (accepted) 16 June 1994 (entry into force)
Convention Concerning Occupational Health Services, Geneva, 1985		
Convention on Early Notification of a Nuclear Accident, Vienna, 1986		7 January 1988 (ratified) 7 February 1988 (entry into force)
Convention on Assistance in the Case of a Nuclear Accident of Radiological Emergency, Vienna, 1986		7 January 1988 (ratified) 7 February 1988 (entry into force)
United Nations Convention on Conditions for the Registration of Ships, Geneva, 1986		
Agreement on the Network of Aquaculture Centres in Asia and the Pacific, Bangkok, 1988		15 May 1990 (ratified)
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 1989		1 April 1993 (accepted)
International Convention on Salvage, London, 1989		
Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, Geneva, 1989		
Convention Concerning Safety in the Use of Chemicals at Work, Geneva, 1990		
International Convention on Oil Pollution Preparedness, Response and Co-operation, London, 1990	30 November 1990	
United Nations Framework Convention on Climate Change, New York, 1992	9 June 1992	16 February 1994
Convention on Biological Diversity, Rio de Janeiro, 1992	5 June 1992	20 March 1994
International Convention to Combat Desertification, Paris, 1994	21 June 1994	

Appendix 2. Brief review of Bangladesh Forest Policy in relation to common elements of international and national standards of sustainable forest management

Common elements	Innovations	Challenges
<i>Framework condition</i>		
Compliance with legislation and regulations.	Many of the stakeholders may exhibit more reactions if they are well acquainted with the policy details.	Control of FD on private forest produce is questionable. International interventions unethical.
Land tenure vs use rights.	Tenure approach & use rights of FD owned natural resources. Afforestation on Khasland.	Lack of such provisions in the existing Acts and Rules. FD is prey to legal complications.
Commitment to sustainable forest management.	Policy has the provisions as such, but the stakeholders are yet to be well appraised of their responsibilities and commitments in this regard.	Objectives need to be prioritized. Institutional strengthening and incentives need to be tabled for such activities.
Sustained and optimal production of forest produce		
Sustained yield of forest produce.	Integrated forest management approach.	Multiple use is being practised in the name of "Integrated Forest Management".
Management planning.	Joint management potential of FD land.	Stakeholders have very little or no role in making management decisions or planning with respect to FD land, though some of the encroached FD land brought under participatory forestry has the provisions of sharing the benefits.
Monitoring.	No arrangements of joint monitoring with the stakeholders.	Even the monitoring aspect of FD is not that well organized.
Forest protection.	Participatory forest protection is almost lacking.	Policy does not stand in the way but institutional capacity building is a major challenge.
Optimizing benefits form the forests.	Resolving of the conflicts between conservation and protection through people's participation.	Acceptance of the NGOs and the local people in this sort of activity by the FD is yet to come.
Common elements of sustainable forest management	Innovations	Challenges
Protection of environment		
Environmental impact assessment.	Dual control of FD and DOE liquidated the importance.	FD may be the only government agency for such activity.
Biodiversity conservation.	Rigid conservation provisions required.	Lack of courageous and forceful approach on behalf of the FD coupled with too many advocacies.
Sustainable ecosystem management	Policy has all the support.	Even the initial activities are challenging for the FD to table.
to combat pollution hazards.	Policy has nothing in this regard.	Not the FD's responsibility, though the FD needs to have some tool in respect to FD land.
<i>People's welfare</i>		
Participatory approach.	Well accommodated in the policy.	Yet to be adopted.
Social impact assessment.	FD may have a role.	Capacity building of FD required.
Recognition of ethnic groups.	Incorporation of indigenous knowledge in forest management.	Blending of scientific integrated forest management with indigenous knowledge and people's participation is a challenging task for the FD personnel.
Carrier opportunities for FD employees.	Policy has no say but does not stand in the way either.	"Right man in right position", "recognition of performance and punishment for wrong doers", etc. are all said but barely practised by the FD decision-makers.
Contribution to development.	Policy does not hinder.	Failures of the FD to scale the contribution need to be combated through capacity building.

Innovations: Features of the current policy that are particularly innovative.

Challenges: Features of the current policy that appear to be challenging.

Source: Mayers and Bass (1999)

Appendix 3. Social forestry rules

The Forest Department of Bangladesh forwarded a broad sheet proposal on ‘social forestry rules’ to the ministry of environment and forests with the following inscriptions.

“The draft Social Forestry Rules has been amended to reflected comments received through various consultants, including the last workshop on the 5 December, 2001 and written comments and critics offered by various persons and in particular Raja Debasish Roy and Dr. Sadeqa Halim. Words in bold italics indicate these amendments and footnotes offer brief explanation and/or justification for the amendments. Needless to say, these footnotes are not part of the rules and will be deleted from the final version. The italics underlined portions of the rule indicate the changes made after the workshop of 5 December, 2001.”

The draft final proposal is as under

Social Forestry Rules, 2002 **Unofficial English version of the Revised Rules**

No. S.R.O. In exercise of the powers conferred by sub-sections (4) and (5) of section 28A of the Forest Act, 1927 (XVI of 1927), the Government is pleased to make the following rules, namely:

Short title: These rules may be called the Social Forestry Rules, 2002.

Definitions: In these rules, unless there is anything repugnant in the subject or context –

“Act” means the Forest Act, 1927 (XVI of 1927);

“rotation” means the period described under Rule 7(1);

“beneficiary” means any person who participates in social forestry and is entitled to its benefits under these rules;

“agreement” means an agreement signed between the parties mentioned in rule 3, and includes a memorandum of understanding also;

“Fund” means the Tree Farming Fund constituted under Rule 11;

“Non-Government Organization” means any society formed under the Societies Registration Act, 1860 (Act XXI of 1860) or an organization registered under the Voluntary Social Welfare Organization (Registration and Control) Ordinance, 1961 (Ord. XLVI of 1978) or by the Non-Government Affairs Bureau under the Foreign Donation Voluntary Activities Regulation Ordinance, 1978 (Ord. XLVI of 1978) or a company registered under section 28 of the Companies Act, 1994 (Act 18 of 1994);

“LCO” means Local Community Organization comprised of the beneficiaries involved in social forestry activities in any locality;

“Management Committee” means the Management Committee constituted under Rule 6;

“Fund Management Committee” means the Tree Farming Fund Management Committee constituted under Rule 11(5);

“Social forestry” shall have the same meaning as is assigned to it in sections 28A and 28B of the Act. Further, social forestry under the rule means forestry for the people and by the people. In other words, creation and management of forests with active participation of the people in planning, execution and its conservation to met their own needs and provisions of government.

“Chittagong Hill Tracts Regional Council” and “Hill District Council” shall have the same meaning as in Chittagong Hill Tracts Regional Council Act, 1998;

“Advisors” means advisors under rule 6(3).

“Upazila Chairman” means Upazila Chairman under the Upazila Parisod Act 1998 (Act No. 24 of 1998).

Agreement for social forestry and parties thereto: The following parties, all or any number of them, may enter into an agreement for social forestry in any area, namely:

Forest Department;
Any person or public or statutory body owning or occupying land;
Beneficiaries;
Non-Government Organization

provided that the beneficiaries and the Forest Department shall be parties to any such agreement. The agreement shall be in such form as may be prescribed by the Government and may be made either separately or jointly.

Where a beneficiary is a married person, both the husband and wife shall be parties to the agreement.

The term of agreement for social forestry shall be –

in the case of a sal forest, twenty years, renewable up to rotation period;

in the case of a natural forest, for twenty years renewable up to rotation period;

in the case of woodlot, agro-forestry, charland plantation, strip plantation, plantation in Barind and any other plantations, for ten years, renewable up to thirty years.

Selection of beneficiaries:

The beneficiaries of social forestry of an area shall be selected by the Forest Department in consultation with the local government organization of that area and the non-government organization associated with the social forestry, if any, of that area.

The beneficiaries shall be selected from amongst the local inhabitants living within one kilometer of the respective plantation site of social forestry and shall preferably be from amongst the following persons, namely:

landless persons;

owners or occupants of less than 50 decimals of land;

destitute women; and

ethnic minority.

Provided that in the event of insufficient number of beneficiaries from within one kilometer of the plantation site, such beneficiaries residing in the nearest areas may be selected.

The selected beneficiaries must be willing to associate themselves with social forestry activities.

In the case of any plantation following the first rotation, beneficiaries shall be selected from amongst current beneficiaries and the persons eligible under sub-rule (2).

The beneficiaries may transfer their duties, functions and benefits under these rules and agreement to their respective wives or husbands or any other legal heir and, in the case of death of a beneficiary, his duties, functions and benefits shall devolve upon a representative of his legal heirs to be nominated by the heirs themselves.

Provided that in the case where duties, functions and benefits of a beneficiary may not be transferred under sub-rule (5) above or legal heirs do not take on the duties, functions and benefits or such beneficiary leaves the social forestry for reasonable cause, the LCO, in consultation with the Forest Department, may assign duties, functions and benefits to another person or persons under sub-rule (2) above and such new beneficiary shall be entitled to profits on a pro-rata basis.

Explanation: If, for example, the initial beneficiary dies after 5 years of his participation in the social forestry activities and his heirs are not willing to continue the duties and functions or the beneficiary has left the locality, the benefits, calculated under Rule 9 below, accruing from felling of trees after 10 years will be divided among the heirs of the dead beneficiary or the erstwhile beneficiary (who has left the social forestry activities) and the substituted beneficiary for 5 years under the preceding proviso in equal proportions.

Selection of non-government organization:

The Government may select one or more non-government organizations for each plantation site under social forestry programme.

In order to be selected under sub-rule (1), a non-government organization should have:

at least two years' experience in group formation, motivation and mobilization work in respect of social forestry or three years experience in development activities; and its own office at the district or Upazila level.

(3) A non-government organization working in the locality of social forestry concerned and having appropriate technical expertise and trained personnel shall be given preference in selection under sub-rule (1).

Management Committee:

There shall be a Management Committee from each locality of social forestry.

The Management Committee shall be constituted with the following members who shall be elected by the Local Community Organization (LCO) of the locality concerned from amongst them, namely:

one Chairperson
one Vice Chairperson
one General Secretary
one Assistant Secretary
one Treasurer, and
four members

provided that at least one third of them shall be women.

A Forest Officer or a designated government servant of the local Forest Department and one representative of the non-government organization associated with the social forestry concerned, if selected under Rule 5, shall be advisers to the Management Committee.

(4) The members of the Management Committee shall hold office for two years and shall be eligible for re-election:

Provided that any member may resign his post before completion of his tenure of office by a letter addressed to the Chairman.

(5) The Management Committee shall have the following functions, namely:

assisting the Forest Department in social forestry;
proper nursing and maintaining the forest raised under social forestry programme;
motivating the beneficiaries in performing their duties and assisting them in getting their appropriate benefits under these rules;
management and administration of Tree Farming Fund;
dispute resolution and
any other function agreed upon by the management committee.

(6) The Management Committee shall determine its own rules of procedure.

(7) If a dispute between the members of the Management Committee in performing its functions cannot be resolved by the Committee, by a decision of one-third members of the Committee the dispute may be referred to the advisers mentioned in sub-rules (3) for resolution whose decision shall be final and binding.

(8) A Management Committee may be dissolved by the Divisional Forest Officer on the written recommendation of at least one half of the members of the concerned management committee.

Rotation:

The rotation of trees produced under social forestry shall be determined by the Forest Department:

in the case of sal forest, 60 years;

in the case of natural forest, 40 years;

in the case of fruit trees, the period for which such a tree shall bear fruits normally.

No tree shall be felled before its rotation is completed.

Provided that nothing in this rule shall apply in the case of non-timber forest products or felling or uprooting any tree or pruning of branches of any tree required under development activities of the Government or for proper growth and maturity of trees or to remove any sick tree in a social forestry or for any reasonable cause as agreed upon by the Management Committee and the Forest Department.

Duties and functions of parties to the social forestry agreement:

The Forest Department shall have the following duties and functions, namely:

selection of beneficiaries;

making work plan for plantations;

providing technical advice to the beneficiaries for raising social forestry and its management and where necessary, accepting co-operation of any Government or non-government organization in that respect;

making agreement with land owning person or agencies, beneficiaries and non-government organizations and others;

monitoring of social forestry activities and of management of Tree Farming Fund;

training of trainers;

marketing of final harvest and distribution of its income amongst the recipients under rule 9;

where the beneficiaries are unable to produce quality seeds or seedlings, assisting them in getting such seeds or seedlings; and

cutting the branches of trees creating obstacles to the vehicular traffic or any other obstacles;

provided that such duties and functions, particularly those mentioned in sub-rule (b) and (g), will be undertaken by the Forest Department in consultation with the concerned Management Committee.

The landowner or occupier shall have the following duties and functions, namely:

the land under agreement or any interest therein shall not be transferred during the duration of the agreement to the detriment of the agreed social forestry activities;

co-operation in safety, maintenance and management of trees planted in land under agreement; and

not to claim any rent or any money, other than the benefits laid down in Rule 9(2)(c), for the land under agreement.

The beneficiaries shall have the following duties and functions, namely:

a. participate in the development of social forestry management plan;

prepare work plans jointly with the Forest Department;

raising saplings for plantation;

plantation of trees and taking care, maintenance and protection of trees planted;

thinning and pruning of trees as per approved plan;

attending meetings related to social forestry; and

any other activity as per approved plan.

(4) The non-government organization, where involved with social forestry, shall have the following duties and functions, namely:

jointly with the Forest Department, selecting of plantation sites under social forestry programme;

assisting the Forest Department in selecting beneficiaries;

jointly with local Forest Department officials, organizing the beneficiaries in various groups and motivating them in respect of social forestry;

undertaking other social development activities among the organized group of beneficiaries;

provide training to beneficiaries as required by the Forest Department;

maintaining appropriate liaison to ensure benefit sharing agreement to the beneficiaries for effective implementation of social forestry programme;

monitoring supply of quality inputs for the beneficiaries of agro-forestry and wood-lot forestry;

assisting the Forest Department and motivating the beneficiaries in timely plantation and related activities;

providing micro-credit support to the beneficiaries under its own management for income generating and employment activities;

monitoring the share of income receivable by various parties and intermediary benefits derived from pruning, lopping, and thinning of trees and the benefits from the final harvest and assisting the beneficiaries to keep records of all benefits received by them;

providing guidance to the beneficiaries to grow different intermediary crops in different plantation sites and to ensure that the intermediary cropping is compatible with plantation activities;

assisting to resolve at the local level any allegation brought by the Forest Department against any beneficiary;

jointly with the Forest Department and in consultation with the beneficiaries and other members of the community, conducting baseline survey to understand present land use pattern and to identify both detriments and advantages for an appropriate management plan; assisting the Forest Department in selection and demarcation of appropriate areas for participatory sal forest management and other forestry.

Distribution of income derived from social forestry:

The branches pruned under proviso to rule 7(2), the trees felled during first thinning and the fruits of fruit-bearing trees and non-timber forest products shall be receivable in full by the beneficiaries.

The income derived from trees felled at anytime after the first thinning and after completion of rotation shall be distributed as follows, namely:

in the case of woodlot and agro-forestry in the forest under control of the Forest Department:

- | | |
|-------------------------|------------|
| (i) Forest Department | 45 percent |
| (ii) Beneficiaries | 45 percent |
| (iii) Tree Farming Fund | 10 percent |

in the case of sal forest:

- | | |
|-------------------------|------------|
| (i) Forest Department | 65 percent |
| (ii) Beneficiaries | 25 percent |
| (iii) Tree Farming Fund | 10 percent |

in the case of strip plantation raised on lands owned or occupied by a person or public or statutory body other than the Forest Department:

- | | |
|--|------------|
| (i) Forest Department | 10 percent |
| (ii) The person or body owning or occupying the land | 20 percent |
| (iii) Beneficiaries | 55 percent |
| (iv) Local Union Parishad | 5 percent |
| (v) Tree Farming Fund | 10 percent |

in the case of plantation in charland and foreshore:

- | | |
|---------------------------|------------|
| (i) Forest Department | 25 percent |
| (ii) Beneficiaries | 45 percent |
| (iii) Land owner/occupier | 20 percent |
| (iv) Tree Farming Fund | 10 percent |

rehabilitation and afforestation of gullies, pond and tank boundaries of Barind area:

- | | |
|---------------------------|------------|
| (i) Forest Department | 25 percent |
| (ii) Beneficiaries | 45 percent |
| (iii) Land owner/occupier | 20 percent |
| (iv) Tree Farming Fund | 10 percent |

Fees, etc. payable to the non-government organization: Every non-government organization shall, for performing its functions under these rules and providing training to the beneficiaries, be entitled to a fee and training expenditure at such rates as may be prescribed by the Government.

Tree Farming Fund:

There shall be a fund called the Tree Farming Fund for each plantation site under social forestry. Income derived from the social forestry prescribed under Rule 9 shall be credited to the Fund. The Fund shall be utilized for all plantations and their nurturing following the first rotation. After meeting the cost mentioned in sub-rule (3), the balance, if any, may be utilized for forest development activities or providing micro-credit to the beneficiaries for raising plantations, developing private nurseries and for other tree-based activities.

There shall be a Committee called the Tree Farming Fund Management Committee for administration and management of the Fund and it shall be constituted by the following members of the Management Committee, namely:

Vice Chairperson, who shall be the Chairman of the Fund Management Committee;

Assistant General Secretary, who shall be the General Secretary of the Fund Management Committee; and

Treasurer, who shall be the Treasurer of the Fund Management Committee.

The Advisers of the Management Committee shall also be the Advisers of the Fund Management Committee.

All sums credited to the Fund shall be kept in a savings account with any local scheduled bank and the account shall be operated jointly by the General Secretary and the Treasurer of the Fund Management Committee upon a resolution passed by the Fund Management Committee and endorsed by the advisers.

The accounts of the Fund shall be maintained appropriately by the Fund Management Committee and all books, statements and records relating to the account of the Fund shall be kept open for inspection by the beneficiaries and advisers.

Social forestry on private land: Government encourages social forestry on privately owned land, whereby:

Any person may make application to the Forest Department to take up social forestry programme in the land owned or occupied by him.

The Forest Department shall consider all applications received by it under sub-rule (1) and, if approved, may bring the land mentioned in the application under social forestry programme governed by these rules.

In cases of investment by Forest Department on privately owned land, sharing of proceeds of harvesting among the parties will be on the basis of mutual agreement.

In the case of tripartite agreement between the private land owner or occupier, beneficiaries of social forestry, and the Forest Department, the provisions of Rules 8 and 9 in general and 8(2) and 9(2)(c) in particular will apply.

Assignment of rights in reserved forest for social forestry:

A village community to which the rights of Government to or over any land which has been constituted a reserved forest is assigned or may be assigned under Section 28 of the Forest Act, 1927 shall be deemed to have been assigned for social forestry and such social forestry may be governed by these rules:

Provided that the beneficiaries of such social forestry in a reserved forest shall have determined by the Forest Department from amongst the villagers to which such rights have been or may be assigned and Rule 4 shall not be applicable for selection of beneficiaries of social forestry on reserved forest;

Provided further that the members of such village shall constitute the Local Community Organization and the Management Committee shall be constituted as under Rule 6(2) and the Forest Department may nominate another three persons from the Local Community Organization as members of such Management Committee;

The beneficiaries and the Forest Department shall perform functions as provided for under Rule 8(1) and (3) as practicable;

The income derived from trees felled at the end of rotation shall be distributed as follows, namely:

(i) Forest Department	65 percent
(ii) Beneficiaries	25 percent
(iii) Tree Farming Fund	10 percent

Application of these rules in the Chittagong Hill Tracts:

In the Chittagong Hill Tracts, the Forest Department shall undertake social forestry in consultation with the Chittagong Hill Tracts Regional Council and the respective Hill District Councils of the three districts of Chittagong Hill Tracts;

There shall be a District Forest Management Committee in each of the three districts of the Chittagong Hill Tracts consisting of the following members:

Chairman of the Hill District Council or his nominee;

1 Member of the Parliament from the concerned hill district or his nominee;

3 Members of the respective Hill District Council to be nominated by the Chairman of the Hill District Council;

2 Forest Officers;

1 female representative of a local non-government organization selected by the District Hill Council;

2 representatives of the civil society selected by the Forest Department, at least one of whom shall be a female.

The criteria for selection of beneficiaries for social forestry in the hill districts shall be determined by the District Forest Management Committee and the District Forest Management Committee shall monitor the selection of beneficiaries by the Forest Department for each social forestry site; and

The benefit sharing formula laid out in Rule 9 shall be modified, with consultation with the Forest Department, by the District Forest Management Committee for social forestry in the respective hill districts for different categories of social forestry.

Dispute Resolution:

Any dispute concerning interpretation or implementation of any agreement for social forestry or condition thereof, including proportion of benefits due shall be resolved conclusively by:

The Management Committee if the dispute is between beneficiaries;

The concerned Forest Officer if the dispute is between the Management Committee and beneficiary;

A Forest Officer superior to the forest official concerned if the dispute is between forest official and the Management Committee or between forest official and beneficiary.

Appeal against any resolution under clause (1) may be preferred to the concerned Upzilla Chairman whose decision shall be final.

National Consultation Forum: (1) The Forest Department, with approval of the Government, shall convene a National Consultation Forum to maintain a policy dialogue and wider participation of civil society in matters pertaining to social forestry.

Application of Transit Rules:

The forest produce from trees commonly found on farms, homesteads, and other small private or community owned properties but not commonly found in natural forest or Government plantations shall be exempt from the application of transit rules.

The Forest Department shall maintain a list of such species exempted from transit rules and shall also review and update such list from time to time.