

Chapter 2

The CBFM in Bangladesh: A Historical Background

This chapter describes the evolution of CBFM in Bangladesh. Although Bangladesh forest has a history of more than 100 years of scientific forest management, CBFM is a recent intervention. In Bangladesh, this approach has been evolved from a policy emphasis over commercial production toward a more people-centric model designed to support the conservation of forest resources. First introduced in the late 1970s, community forestry, a form of CBFM, has proven a successful model for reforestation, afforestation, and diversifying economic opportunities in rural communities. The 1994 Forest Policy, the Forest (Amendment) Act of 2000, and the 2004 Social Forestry Rules are considered milestone achievements for the implementation of CBFM in Bangladesh. The CBFM has succeeded in reducing distrust and conflict between forestry officials and local people, encroachment on forest lands, and the deforestation rate. But, program implementation has faced roadblocks that stem from a top-down bureaucratic approach and poor governance system.

2.1 Introduction

Bangladesh is a small (147570 km²) South Asian country that borders India on the west, north, and northeast, Myanmar on the southeast, and the Bay of Bengal on the south. It lies between 20°34' and 26°38' north latitude and 88°01' and 92°41' east longitude. The country is characterized by a minimal natural resource base and high incidence of natural disasters, including cyclones, floods, and droughts. Forests in Bangladesh are deteriorating at an alarming rate because of various socioeconomic threats, biotic pressure, and competing land uses. Major problems that affect natural resource management in Bangladesh include high economic and spatial incidence of poverty, a high population growth rate, scarce financial resources, inappropriate application of technologies, institutional weakness, poor human resources, poor quality of data about the resource, and declining productivity and sustainability of forest resources (FAO 2000). While forests have always played an important role in

human history, their rational management became a key social concern in the 1980s in both developed and developing countries (Biswas 1992). Faced with increasing rates of deforestation, and the attendant problems of loss of biodiversity and other socioenvironmental costs, the issue of conservation and rational management of forests became an important item on the agenda of many national and international organizations. In recent years, forest management practices have shifted from an emphasis on maximizing yield to maximizing sustainability through increased participation of local forest communities, conserving biodiversity, and maintaining forest-based ecosystem services (BFD 2011).

To address the degradation of tropical forests, policy and management regimes have been revised to reflect the change from centralized government management toward more participatory management systems (Biswas and Choudhury 2007). A key drawback of the centralized management system is lack of ownership over forest resources, which often results in illegal cutting, forest encroachment, etc. Thus, participatory forestry has evolved with the broad aim of giving forest-dependent people ownership and a stake in managing forest resources, so they have an incentive to protect the resource. Though these efforts have produced some promising results, many have failed to provide local people meaningful and enduring involvement; thus, such efforts often collapse once the program ends. Participants naturally expect genuine involvement, as opposed to a purely “ceremonial” role in the management process. Effective participatory forestry efforts must also include short-term income-generating activities because traditional forest management activities often require long rotation periods before there is no return on an investment.

2.2 Forests of Bangladesh

Bangladesh has only 2.52 Mha (million hectare), 17 % of total land designated as forests (BFD 2011), although FAO (2011) estimates 1.44 Mha (11 %) as effective forest cover. The per-capita forest area in Bangladesh is very low (0.009 ha) compared to average values in Asia (0.145 ha) and the world (0.597 ha) (Jashimuddin and Inoue 2012). Distribution of forests in the country is considerably skewed, with 29 out of 64 districts having no official forest area at all and only 12 with an area of 10 % or more (Jashimuddin 2011). Deforestation rates around the world show signs of decreasing, but are still alarmingly high at an average of 5.211 Mha (0.1 %) per year (FAO 2010). Bangladesh has also shown some positive progress reducing the rate of annual deforestation from 2.1 % during 1960–1980 (Chowdhury 2003) to about 0.2 % between 1990 and 2010 (FAO 2011). Looking at public forestland in Bangladesh, about 15 % can be considered as closed canopy (more than 40 % crown density), 19 % is open forest (10–40 % crown density), 12 % is plantation, and the remaining 54 % is used for non-forestry purposes (FAO 2000). The growing stock of forests in Bangladesh is also low ($48 \text{ m}^3 \text{ ha}^{-1}$) compared to average values in South and Southeast Asia ($99 \text{ m}^3 \text{ ha}^{-1}$) and the world ($131 \text{ m}^3 \text{ ha}^{-1}$) (FAO 2010). There is also a big gap between the supply and demand of wood in Bangladesh,

which has been forecasted to increase by 2020 (FAO 2000). The forest sector's contribution to GDP is underestimated at 5 % because this figure does not include the value of fuelwood and other minor forest products used by rural people or the role of forests in harboring biodiversity, buffering watersheds that supply irrigation and hydraulic infrastructure, protecting coastal areas from natural disasters, and surrounding environment from pollution (BFD 2011).

2.3 Forest Management: Law and Policy

The history of forestry in Bangladesh can be characterized as a classic example of continued deforestation and degradation. The forests were exploited to earn revenue and supply raw materials for the ship and rail industries during the British colonial era (1757–1947) and generate revenue and supply raw materials for forest industries during the period of Pakistan's rule (1947–1971), which also continued into the current period of independent Bangladesh sovereignty (Iftekhhar 2006). The conventional central forest management system in Bangladesh has been deemed unsuitable for the resource base and the country's socioeconomic situation. Because of an inability to prevent widespread overexploitation of forest resources, many state forest areas have been rapidly degraded under population pressure and increasing demands for forest products (Biswas and Choudhury 2007). That said, the forests of Bangladesh have been under planned management—that includes formal policies and laws—for more than a century.

Scientific forest management started with the establishment of the Imperial forest department in 1864 during British colonial period (BFD 2011). The forest department (FD) initiated plantation programs since 1871 with first teak plantation at Sitapahar in Chittagong Hill Tracts. Forests in hilly terrain were initially managed on a care and maintenance basis, while the lowland *Sal* forests came under the Department's jurisdiction during the 1950s (FAO 2000). Forest management plans were prepared for each management division. These plans guided managers' day-to-day activities, outlining where trees should be cut, how many should be cut, and what should be replanted on an annual basis (BFD 2011). The first working plan was implemented in the Sundarbans in 1893. In those days, forests were managed primarily for revenue collection under control of the Revenue Department. Thus, the forest department focused mainly on the extraction and replanting of valuable trees without considering local people needs or their participation in managing forests (Hossain 1998).

Although traditional forest management techniques included both economic and ecological objectives, Bangladesh experienced rapid deforestation because of various socioeconomic and sociopolitical factors (Muhammed et al. 2005). These factors have minimized the utility and use of traditional forest planning and management. Unplanned and unforeseen human pressures have exceeded planned conservation efforts, leading to widespread deforestation and fragmentation of forest resources (FAO 2000). Dense population and limited land area compelled

policymakers to consider alternative management practices. One such alternative, social forestry was introduced in Bangladesh in the late 1970s and has proven to be successful. The forest department has shifted its role from custodian to a more participatory model that includes local people in forest protection and reforestation activities, as well as a benefit-sharing mechanism (BFD 2011). At the same time, development objectives at the national level have come to focus on forestry as a means for positively impacting social, economic, and environmental conditions, further underscoring the need for a socially oriented system of forest management.

2.3.1 Forest Law and Policy

The first forest law on the Indian subcontinent was enacted by British colonial rulers in 1865 which was subsequently amended in 1878 and in 1927. In Bangladesh, period after being independence in 1971, the Forest Act was first amended in 1989 to strengthen forest protection by providing stiffer penalties and restricting the discretionary powers of forest officials and local magistrates. This amendment increased traditional forest protection measures without introducing social forestry. It was not until 2000, when another amendment was introduced, that the concept of social forestry began to take shape (Alam 2009). The Forest (Amendment) Act of 2000, under which the government formulated the landmark 2004 Social Forestry Rules (SFR), is considered a milestone for the implementation of community forestry in Bangladesh. The SFR were subsequently amended in 2010 to support more equality in participant selection criteria—opening the process to women and the poor—and increasing benefit sharing by adjusting Participatory Benefit Sharing Agreements (PBSA).

The formulation of a forest policy in Bangladesh dates back to the colonial period of British rule, with the first forest policy being enacted in 1894 and subsequent modifications in 1955, 1962, 1979, and later in 1994. Throughout the British colonial era, forest policy was oriented toward revenue generation and maximum resource exploitation. Forest policy established under Pakistani rule (in 1955 and 1962) showed a high degree of continuity with its colonial heritage and maintained an emphasis on commercial and industrial interests. This trend continued even after independence of Bangladesh in 1971, with limited revenue collection and industrial use, and imposing ban on timber extraction in selected forest types. The first national forest policy of Bangladesh was enacted in 1979. This policy clearly established a participatory approach for the management of government-owned forestland and plantations on marginal lands (Muhammed et al. 2005). It also paved the way for social forestry in Bangladesh, but failed to effectively address the issue of broader participation in forest management (Millat-e-Mostafa 2002).

Negative social impacts from years of excessive government-sponsored commercialization of forest interests include the systematic alienation of local communities, disregard for local economic and subsistence needs, and the progressive

diminution of traditional rights. However, the current forest policy formulated in 1994 represents a significant move toward people-oriented forestry and demonstrates the government's determination to protect and develop forest resources through popular participation. In an effort to better integrate community forestry into forest management practices, the government also formulated the 2004 Social Forestry Rules. These policy reforms have (i) increased opportunities for local communities to participate in forestry activities and share experiences with the FD, (ii) changed FD officials' attitude toward the participation of local communities in forestry activities, (iii) made people more aware of and confident in the FD, (iv) made it possible to involve the poorer sectors of society in forestry activities, thereby contributing to poverty reduction, (v) increased the transparency of the FD's operations, and (vi) created a social forestry wing and new technical positions within the FD's operating budget. However, additional reforms are urgently needed to further increase the efficiency of the FD and improve its governance capabilities (ADB 2007).

2.4 The CBFM in Bangladesh

The community-based forest management, popularly known as community forestry (CF), social forestry (SF), participatory forestry (PF), or agroforestry (AF), has been practiced in Bangladesh for more than three decades. The SF programs have been initiated to meet local populations' forest product needs, reverse ecological degradation, and improve the socioeconomic condition of rural populations (BFD 2011). Such programs have become highly attractive and acceptable to many rural people, especially the landless and small farmers. The basic principle is integration of local people in reforestation activities with multiple objectives that include ecological, economic, and social benefits (Ahmed and Akhtaruzzaman 2010). Community forestry has generated sufficient resources and income to raise the rural poor above-subsistence levels and proven that it can play a significant role in rural poverty alleviation in Bangladesh (Zashimuddin 2004). Apart from making resources available and generating employment and income, community forestry is also playing a vital role in conserving the environment.

The forest policies that institutionalize the CBFM in Bangladesh are considered to be the most elaborate in the country's history. However, progress remains slow because inadequate institutional support, political instability, and poor governance hinder policy and program implementation (Muhammed et al. 2008). Khan and Begum (1997) showed that participatory forestry in Bangladesh has reduced distrust and conflict between forestry officials and local farmers, encroachment on government lands, and rates of deforestation. In CBFM programs, locals are involved in tree plantation activities, while unauthorized settlers have been given usufruct rights in designated forest areas through benefit-sharing agreements (BFD 2005). Participation in resettlement programs has increased household incomes, employment opportunities, and financial and non-land assets. Safa (2004) found

that participatory management regimes contribute to sustainability and improve settlers' standard of living, suggesting it is an efficient management option for sustainable forest management in Bangladesh.

The CBFM is not a very old concept in principle, but indigenous and other forest-dependent communities have shown remarkable success in managing forest resources for centuries in Bangladesh and other parts of the world. The Village Common Forests (VCF) managed by indigenous communities in the Chittagong Hill Tracts (CHT) is one such example of sustainable forest management. Community forestry projects in Bangladesh can be classified into three categories based on who initiated the program—the government, an NGO, or the local community. Regardless of the initiating organization, these initiatives are unique and have their own stories of success or failure that depend on management practices and local conditions.

The Bangladeshi government—primarily through its forest department—has sponsored several initiatives to involve communities in conserving state-owned forest reserves (especially in *Sal* and hill forest areas), unclassified state forests (hill forest areas owned by district administration), mangrove forests (Sundarbans and coastal areas), and marginal lands (roadsides, railways, canal embankments, etc.). It is estimated that there are about 4.65 Mha (which is about 31 % of the country's total area) of land available for social forestry in Bangladesh (BFD 2011). The first attempt at community forestry in Bangladesh can be traced back to the Betagi and Pomra community forestry projects in 1979 and 1980, respectively, in the Rangunia subdistrict of Chittagong (Zashimuddin 2004; Islam 1998). There is also evidence that the *taungya* system, derived from the Burmese terms for hill cultivation—*taung* means hill and *ya* means cultivation (Poffenberger 2000), was introduced much earlier in the CHT by the forest department. This program encouraged the hill people to produce crops and trees at the same time in an attempt to improve traditional shifting cultivation and settle the cultivators, who were also involved in some of the first teak (*Tectona grandis*) plantations as early as 1871 (Table 2.1).

Forest extension activities were also launched in 1962–1963 with the establishment of two forest extension divisions—first at Dhaka and Rajshahi, and later at Comilla and Jessore. Extension activities were primarily confined to establishing nurseries in the district headquarters to raise and sell seedlings to individuals and organizations in urban areas. Since 1982, the forest department has successfully implemented some CBFM programs and others are in development (Table 2.1). While traditional forest management resulted in a net loss of forest cover, social forestry is playing a vital role in the expansion of forest cover while benefiting thousands of poor people (Muhammed et al. 2005).

2.4.1 Components of the CBFM

Key components of CBFM projects implemented in Bangladesh include establishment of woodlot plantations, agroforestry plantations, strip plantations along roads, railways, and canal embankments, rehabilitation of landless farmers in the

Table 2.1 Historical development of CBFM programs in Bangladesh (*Source* Jashimuddin and Inoue 2012)

	Programs	Period
1	<i>Taungya</i> System	1871
2	Forestry Extension Service Phase I	1962–1963
3	Betagi-Pomra Community Forestry Project	1979–1980
4	Jhumia Rehabilitation Programme in CHT Phase I	1979–1989
5	Development of Forestry Extension Service Phase II	1980–1985
6	Community Forestry Project	1982–1987
7	Thana Afforestation and Nursery Development Project	1987–1995
8	Jhumia Rehabilitation Programme in CHT Phase II	1990–1995
9	Participatory Social Afforestation	1991–1998
10	Forest Resources Management Project: Forest Directorate Component	1992–2001
11	Extended Social Forestry Project	1995–1997
12	Coastal Greenbelt Project	1995–2000
13	Forestry Sector Project	1997–2004
14	Sundarbans Biodiversity Conservation Project	1999–2006
15	Nishorgo Support Project	1999–2008
16	Integrated protected area co-management	2004–2013
17	Char Development and Settlement Project-III (2nd Phase)	2005–2010
18	Reedland Integrated Social Forestry Project	2005–2010
19	Afforestation in the Denuded Hill Areas of Chittagong North Forest Division (2nd Phase)	2008–2012
20	Biodiversity Conservation and Poverty Alleviation Through Afforestation in the Greater Rajshahi and Kushtia Districts	2008–2012
21	Participatory Social and Extension Forestry in Chittagong Hill Tracts	2008–2012
22	Community-Based Adaptation to Climate Change through Coastal Afforestation	2009–2012
23	Re-vegetation of Madhupur Forests through Rehabilitation of Forest Depended Local and Ethnic Communities	2010–2012
24	Poverty Alleviation through Social Forestry	2010–2013
25	Management of Natural Resources and CF in Chunati Wildlife Sanctuary	2009–2015

Chittagong district and shifting cultivators in the Chittagong Hill Tracts, village reforestation, institutional planting and seedling distribution, establishment of nurseries and training centers, establishment of a plantation center, and training of various stakeholders involved in the program. Major objectives of these projects include increasing timber production, poverty reduction, and enhancing the forest department's institutional capacity. Forest-dependent local people and indigenous communities are the major stakeholders in these programs. Participatory projects generally grant each single participant one hectare for management as a woodlot, every five participants one kilometer of strip plantation, and each family two hectares for settlement and agroforestry. Participants are allowed to grow fruit and

other crops between trees, participate in wage labor for plantation maintenance, and retain intermediate products from thinning and other forest management activities.

Experience gained from the CBFM programs in Bangladesh has helped policy-makers accommodate technical problems faced during the implementation of different projects. For example, the SFR, through Participatory Benefit Sharing Agreements (PBSA) (Table 2.2), provided program participants with the legal right to participate in plantation activities sponsored by the FD and then claim their due share of the benefits after harvest. Compliance with the SFR, particularly in signing the PBSA and providing copies to group members, seemed generally satisfactory, though in some cases certain “formalities” took an unusually long time to complete

Table 2.2 Participatory Benefit Sharing Agreements (PBSA) under SFR 2004 (*Source* BFD 2011)

	Type	Stakeholder	Share of benefit (%)
A	Woodlot and agroforestry in forest areas	Forest department	45
		Beneficiaries	45
		Tree Farming Fund	10
B	<i>Sal</i> forest conservation and development	Forest department	65
		Beneficiaries	25
		Tree Farming Fund	10
C	Strip plantation in the private or public lands other than forest department-owned lands	Forest department	10
		Land owning agency	20
		Beneficiaries	55
		Local Union Parishad	5
		Tree Farming Fund	10
D	Char land and foreshore plantation	Forest department	25
		Beneficiaries	45
		Land owner or tenant	20
		Tree Farming Fund	10
E	<i>Khari</i> (natural canal or ditch) and pond bank rehabilitation and plantation in Barind Tracts	Forest department	25
		Beneficiaries	45
		Land owner or tenant	20
		Tree Farming Fund	10
F	Plantations and natural forests except <i>Sal</i> forests	Forest department	50
		Beneficiaries	40
		Tree Farming Fund	10
G	Social forestry in the forest department-owned lands initiated by local people	Forest department	25
		Beneficiaries	75
H	Social forestry in the government, semi-government, or autonomous organization lands initiated by local people	Forest department	10
		Beneficiaries	75
		Land owning agency	15

(ADB 2007). Many believe participatory forestry cannot be sustained on government and grant money alone; the Tree Farming Fund (TFF) has been established to reduce dependency on government and grant money. The TFF is intended to cover 50 % of replanting costs, with the remaining 50 % covered by project revenue. If the TFF is unable to cover its share of the replanting cost, participants are asked to contribute volunteer labor to cover the shortfall. This combination of TFF funds and participatory labor is intended to make participatory forestry more sustainable (BFD 2011).

2.5 Making CBFM Work

The CBFM in Bangladesh has achieved notable success in terms of funds allocated for afforestation, though there is a significant controversy over the effectiveness of these programs to achieve the desired outcomes. For example, the Integrated Protected Area Co-management (IPAC) project supported by USAID (United States Assistance for International Development) in Dudhpukuria has made significant inroads protecting the forest from illegal logging through regular community forest patrols via a partnership between the FD and local community (NSP 2011). According to Islam (1998), the Betagi–Pomra community forestry model has provided employment opportunities, encouraged afforestation and more efficient cropping patterns, helped transform illegal settlers into forest stewards, opened access to more efficient market mechanisms, built community capacity and resiliency, encouraged social equity, and decreased crime, among other positive benefits. Boykoff (2011) has documented a positive impact on local peoples' understanding of forest management—quoting one community member, “If there are trees in the forest this will help our community.”

Community forestry has successfully contributed to the establishment of participatory forest resource generation and management, in the process garnering much interest among local community participants. Project activities have significantly contributed to improving relations between the FD and local communities living in and around forest areas. Local communities' confidence in the FD has increased, and they have a positive view of FD participation in plantation activities. CF projects have created beneficial opportunities for the rural poor living in and around plantation sites, especially disadvantaged women who have an opportunity to earn substantial income.

Since the mid-1980s, a total of 30,666 ha of woodlot plantations, 8778 ha of agroforestry plantations, and 48,420 km of strip plantations have been established by the forest department under the community forestry programs (Table 2.3). Approximately 19,790 ha of woodlot and agroforestry plantations, as well as 8,566 km of strip plantations, have been harvested, distributing about US\$18.91 million among 85,900 beneficiaries. That equates to approximately US\$220 per participant, as well as contributions of nearly US\$4.17 million to the TFF (BFD 2011). Safa (2004) also argued that participatory management has had positive impact on peoples' livelihoods and the sustainability of forest resources.

Table 2.3 The CBFM project achievements since the mid-1980s in Bangladesh (Source: Muhammed et al. 2005)

Components	Achievement
Strip plantations	48420 km
Woodlot plantation	30666 ha
Agroforestry plantation	7738 ha
Embankment plantation	1338 ha
Foreshore plantation	645 ha
Village afforestation	7,421 villages
Seedling for sale and distribution	201 million

Experiences from Bangladesh show that community involvement in forest development and management has increased, but communities do not always fully benefit because they often lack the legal recourse to deal with dispute resolution (ADB 2003). Forest officials' attitude toward community-based initiatives is hindering proper implementation of many community forestry programs. A majority of foresters believe local people can receive benefits from the program, but are not competent enough to participate in planning decisions. They also feel that land used for community forestry should remain under government control, that their chief role is to protect forests or produce revenue for the government, and that local people are the primary cause of deforestation (Khan 1998). Forest officials are generally oriented toward traditional forest management and do not accept local people as development partners (Hossain 1998). Generally speaking, foresters feel local community involvement will undermine their legal control over nationalized resources (Poffenberger 2000). Furthermore, widespread corruption and poor governance in the forestry sector (Muhammed et al. 2008) is hindering the progress of social forestry programs.

In addition to eliminated corruption, Miah et al. (2011) suggest greater political will is needed to support community forestry, as well as initiatives that bridge the gap between policy, science, and practice. They also note many regulatory policies and measures are too vague to be of much use, creating loopholes that lead to abuse. In some cases, participatory forestry actually increased deforestation because local people were not meaningfully involved in management, lacked economic alternatives to deforestation activities, and doubted the programs would lead to any long-term economic advantage. Furthermore, some participants secretly sold their allotted plots to local elites, undermining the entire process.

References

- ADB (2003) Asian Development Bank: Forest Policy (Working paper). <http://www.adb.org/sites/default/files/working-paper-forest-policy.pdf>
- ADB (2007) Bangladesh: Forestry Sector Project. Completion report, project number: 26623 loan number: 1486, Asian Development Bank, November 2007. <http://www.adb.org/sites/default/files/projdocs/2007/26623-BAN-PCR.pdf>

- Ahmed FU, Akhtaruzzaman AFM (2010) A vision for agricultural research in Bangladesh: Sub-sector—Forestry 2030. Bangladesh Agricultural Research Council (BARC), Dhaka, Bangladesh. <http://www.barc.gov.bd/documents/Final-Mr.%20Farid.pdf>
- Alam M (2009) Evolution of forest policies in Bangladesh: a critical analysis. *Int J Soc For* 2 (2):149–166
- BFD (Bangladesh Forest Department) (2011) The official website of the Bangladesh Forest Department. www.bforest.gov.bd
- BFD (2005) Participatory forestry newsletter. A quarterly Newsletter of Forest Department's ongoing Forestry Sector Project. Bulletin no. 4, September 2005, Bangladesh Forest Department
- Biswas SR, Choudhury JK (2007) Forests and forest management practices in Bangladesh: the question of sustainability. *Int Rev* 9(2):627–640
- Biswas AK (1992) Forest management, environment and development in South Asia. *Cont South Asia* 1(2):249–258
- Boykoff P (2011) 'Sari squad' protects Bangladesh Wildlife Sanctuary. CNN report, International edition, updated 1218 GMT on 7 March 2011. <http://edition.cnn.com/2011/WORLD/asiapcf/03/04/bangladesh.wildlife.eco/index.html>
- Chowdhury JK (2003) National forest policy review: Bangladesh. In: Enters T, Qiang M, Leslie RN (eds) An overview of forest policies in Asia. EC-FAO Partnership Programme (2000–2002), European Commission and Food and Agriculture Organization, Bangkok, Thailand. <http://www.fao.org/DOCREP/005/AC921E/AC921E00.HTM>
- FAO (2000) Forest resources of Bangladesh: country report, working paper 15, The Forest Resources Assessment Programme, Forestry Department, Food and Agriculture Organization of the United Nations, Rome
- FAO (2010) Global Forest Resources Assessment 2010: main report. FAO forestry paper 163, Food and Agriculture Organization of the United Nations, Rome
- FAO (2011) State of the World's Forests. Food and Agriculture Organization of the United Nations, Rome
- Hossain S (1998) Participatory forest management in Bangladesh. In: Isozaki H, Inoue M (eds) Proceeding of the 2nd IGES international workshop on forest conservation strategies for the Asia and Pacific region. Institute of Global Environmental Strategies (IGES), Hayama, Japan, pp 22–32
- Iftekhar MS (2006) Forestry in Bangladesh: an overview. *J For* 104(3):148–153
- Islam SS (1998) Community forestry in Bangladesh—a case study of Betagi-Pomra community forestry model. *Thai J For* 17(2):139–146
- Jashimuddin M (2011) Drivers of land use change and policy analysis in Bangladesh: theory and policy recommendations. Lap LAMBERT Academic Publishing, GmbH and Co. KG, Germany
- Jashimuddin M, Inoue M (2012) Community forestry for sustainable forest management: experiences from Bangladesh and policy recommendation. *FORMAT* 11:133–166
- Khan NA (1998) Land tenurial dynamics and participatory forestry management in Bangladesh. *Public Admin Dev* 18:335–347
- Khan NA, Begum SA (1997) Participation in social forestry re-examined: a case-study from Bangladesh. *Dev Pract* 7(3):260–266
- Miah MD, Masum MFH, Koike M, Akther S (2011) A review of the environmental Kuznets curve hypothesis for deforestation policy in Bangladesh. *iForest Biogeosci For* 4:16–24. <http://www.sisef.it/forest/show.php?id=558>. Accessed 27 Jan 2011
- Millat-e-Mustafa M (2002) A Review of forest policy trends in Bangladesh. *Bangladesh forest policy trends. Policy Trend Rep* 2002:114–121
- Muhammed N, Koike M, Haque F (2008) Forest policy and sustainable forest management in Bangladesh: an analysis from national and international perspectives. *New For* 36:201–216
- Muhammed N, Koike M, Sajjaduzzaman M, Sophanarith K (2005) Reckoning social forestry in Bangladesh: policy and plan versus implementation. *Forestry* 78(4):373–383

- NSP (2011) Success story: local communities and government collaborate to protect forests, Nishorgo Support Project, United States Assistance for International Development (USAID), Bangladesh. <http://www.nishorgo.org/pdf/dudhpukuria.pdf>. Accessed 30 Nov 2011
- Poffenberger M (ed) (2000) Communities and Forest Management in South Asia, A Regional Profile of the Working Group on Community Involvement in Forest Management (WG-CIFM), IUCN
- Safa MS (2004) The effect of participatory forest management on the livelihood and poverty of settlers in a rehabilitation program of degraded forest in Bangladesh. *Small-scale For Econ Manag Policy* 3:223–238
- Zashimuddin M (2004) Community forestry for poverty reduction in Bangladesh. In: Sim HC, Appanah S, Lu WM (eds) *Forests for poverty reduction: can community forestry make money?* FAO-RAP, Bangkok, Thailand, pp 81–94

Community-Based Forest Management (CBFM) in
Bangladesh

Nath, T.K.; Jashimuddin, M.; Inoue, M.

2016, XV, 176 p. 22 illus., 19 illus. in color., Hardcover

ISBN: 978-3-319-42386-9