

# **A journey towards better governance: status and prospects of collaborative management in the protected areas of Bangladesh**

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## **Abstract**

Establishment of protected areas, in the face of rapid deforestation, forest degradation and climate change is one of the modest efforts to expedite conservation of biodiversity worldwide. Protected area coverage in Bangladesh, however, is amongst one of the lowest in the world, covering nearly 11% of country's total forest area. Due to high population density and striking poverty, protected areas of the country also subject to various anthropogenic pressures that made its' management merely challenging. Where Bangladesh is prominent in the world for its' successful social forestry program, the concept of collaborative protected area management is rather new in the country, initiated on 2004 by Bangladesh Forest Department in five protected area sites with financial assistance from the USAID. This unique program initially known as *Nishorgo* is currently scaled up for further expansion through its' second phase (as *IPAC*), is a comprehensive effort to conserve country's declining forests through ensuring access to diverse local stakeholders in parks management decisions, as well as providing opportunities to local people for their economic sustainability which in the long run will help building a better governance mechanism which is the pre-requisite of sustainability. This paper based on empirical evidences from three of the initial pilot sites here elaborated the first hand achievement of co-management program in the areas, with major challenges and future prospects.

**Key-words:** Protected Area, Co-management, Nishorgo, IPAC, Governance

## **Introduction**

Establishment of protected areas (PAs) have long represented a key conservation strategy in the face of rapid deforestation and biodiversity loss worldwide (Ormsby and Kaplin 2005; DeFries et al. 2007). IUCN (1994) defines PAs as 'areas especially dedicated to the protection and maintenance of biological diversity and associated cultural resources, which are managed through legal or other effective means'. Over the last few decades, the number and coverage of PAs has increased dramatically in most parts of the world (McNeely and Scherr 2003; Kaimowitz and Sheil 2007), and currently there are more than 100,000 PA sites worldwide, covering nearly 12% of the land surface (Chape et al. 2003; Scherr et al. 2004). Many developing countries in the tropics, where biodiversity is greatest and where local communities rely on nature for sustaining livelihoods, have also expanded markedly their amount of land under PAs, as an attempt to address growing concerns on conservation (Ghimire 1994; Koziell and Saunders 2001). However, in many cases simply setting aside PAs has failed to achieve the desired conservation goals due to pure ecological focus and poor recognition of local and indigenous people's traditional forest rights and practices (Ormsby and Kaplin 2005; Craig, 2002; Nepal and Weber 1995). Such exclusion has also

led to conflicts and mistrust between PA managers and local forest user communities, resulting in the failure of meeting management goals of PAs (Borrini-Feyerabend 2002).

Experiencing the consequences, local peoples support and involvement for PA management has been viewed as an important element of enhanced conservation in recent years, especially in developing countries (Wells and McShane 2004; Nagothu 2003). This new intervention, commonly known as co-management in PAs, under the broad canopy of community-based natural resource management (CBNRM), is a major emerging issue for conservation policy in many developing regions that has also been widely promoted by various international conservation agencies (Fisher 2003; Jeanrenaud 2002; Kothari et al. 2000). This strategy enables local peoples to participate in PA management up to a certain extent, and most often offers local communities some direct and indirect benefits related to park management (Nagothu 2003).

Bangladesh, as one of the most densely populated countries in the world, had significant forest cover until the British colonial period, with about 20% forest cover, and even until 1980 was home to about half the bird species and a quarter of all mammal species of South Asia (Poffenberger 2000). Even though the beginnings of the government's conservation efforts in the country can be traced back to 1966, before independence, very few of the goals were actually met and today the actual forest cover is estimated at 6% of country's total land mass (FAO 2009). Till to date government has declared 28 PAs comprising of 261,891.50 ha (according to IUCN PA management categories IV and V). Of them 18 PA's have so far been taken under the umbrella of co-management approach (BFD, 2011), that covers approximately 1.67% of the total land area of Bangladesh (Mukul et al. 2008). These figures are among the lowest in the world (WRI 2007), despite country's exceptionally rich biodiversity favored by its' unique geo-climatic conditions (Appanah and Ratnam 1992). At the same time, a large numbers of the rural poor are either forest dwellers or forest dependent for their subsistence (Roy and DeCosse 2006). Under such circumstances "Co-management" or "Collaborative management" is indispensable to maintain Bangladesh's vanishing forests and biodiversity through sustaining local livelihoods (Mukul and Quazi 2009).

Though, Bangladesh is one of the leading country in south Asia for its' successful social forestry program (Zashimuddin 2004), the concept of co-management in PAs is quite new but a very timely approach that could better promote the issues of conservation and sustainable local development apart from delivering better options for governance. In 2002, Bangladesh Forest Department (BFD) developed a program of forest co-management in five PAs on pilot basis through an initiative called Nishorgo Support Project (NSP), with active support from USAID. After the completion of this pilot project in 2007 it scaled up further under the name 'Integrated Protected Area Co-management' (IPAC) with broader magnitude covering wetlands along with the forest PAs. During the NSP period, five PAs (i.e. Lawachara National Park, Satchari National Park, Rema-Kalenga Wildlife Sanctuary, Chunati Wildlife Sanctuary and Teknaf Game Reserve) were considered as pilot sites to apply the concept of co-management. These sites are unique from the perspectives of biodiversity richness as well as for the high level of exploitation. The aim of this paper is to share the experiences of different 'co-management' initiatives from three of these pilot sites and their effectiveness and acceptance to local communities, and finally put some recommendation based on the flaws of these initial initiatives.

### **Organization of the paper**

This paper is based on the field experiences from three (i.e. Satchari National Park, Lawachara National Park and Chunati Wildlife Sanctuary) of the five pilot PA sites. Field visits and systematic households' surveys in the study sites were conducted between 2007 and 2010. Several focus group

discussion (FGD) and in-depth interviews with community people and FD personnel's were also performed to get insights of the scenario.

The first part of this paper tries to give an overview of the PA systems in Bangladesh, their coverage and efficacy for biodiversity conservation. The next part emphasizes on key lessons from three of the pilot study sites in response to various initiatives to promote co-management and equity in the areas, following by a generalized conclusion on challenges and prospects of PA management in the country.

### **Protected areas of Bangladesh – its role in biodiversity conservation**

Three types of PA are defined under the Bangladesh Wildlife Preservation Act, 1974(amended in 2010), with the objective of conserving biodiversity (*in situ*) and the natural environment within various forest types. These include – national parks, wildlife sanctuary and game reserve. The first PAs had been established in the 1960s and 1970s; a second group of PAs were declared in between 1980 and 1986, and a third group since 2000. At present, there are twenty eight PA's declared through gazette notification – entailing fifteen national parks, twelve wildlife sanctuaries and one game reserve under the jurisdiction of the FD (IPAC report, 2010). Other category of PAs managed by the government includes eco-parks, safari parks, ecologically critical areas (ECAs), World Heritage sites, and Ramsar sites. The PAs (IUCN categorized) of the country represents an area of 261,891.50 ha covering a tiny proportion of country's total land mass (i.e. 55,598 sq. miles); this is the second lowest per capita PA coverage in the world (Sharma et al. 2005).

In order to satisfy conservation role, PA system must be representative of all ecosystem types (Dudley and Parish 2006). Even though, the PAs of Bangladesh represent around 11% of the country's total forest area, they do not effectively represent all ecosystems, and thus do not include all habitats and species important for conservation. The proportions of each of the three major forest types - hill forests, deciduous *Sal* (*Shorea robusta*) forests and mangrove forests represented in PAs are 5.2%, 11.2% and 23.3%, respectively (Mukul et al. 2008).

### **The Nishorgo protected area co-management initiatives**

Most of the PAs of Bangladesh are part of some reserved forest (RF) and are subject to massive exploitation by neighboring people for subsistence and income for years. One of the key challenges for Nishorgo in these PAs was therefore, to provide people with alternative income generating (AIG) options to divert their dependency on forests and forest products. However, as the effort was limited by resources it was obviously impossible to bring the entire forest dependent community under the umbrella of AIG. To promote participation in park management and decision making process *Nishorgo* formed some legal institutions in the name of Co-management Councils and Co-management Committee (CMC) in each of the pilot sites taking representatives from all stakeholder groups including representatives from government. There were regular monthly meetings in these sites where members of the committee were informed any progress or initiatives taken in their respective PA and had chance to share their views, needs and/or any recommendations for better management of the park. Some key experiences and lessons from three of these sites are briefly described hereafter.

### **Local people's response to different AIG initiatives in Satchari National Park**

Satchari is one of the smallest but strategically important PA in the country with an area of about 243 ha. Because of its' unique location and biodiversity richness it demands amid importance by the policy makers. Before government declaration as a national park on 2005, the park was part of the Raghunandan Hill Reserved Forest. More than sixteen outside villages and an inside village

inhabited by indigenous *Tripura* community had stakes of different levels on the national park. *Nishorgo* apart from its CMC's had taken initiatives to create alternative income generating sources in the villages with major stakes, that includes support for cattle fattening, promotion of local *Tripura* handicrafts, pig rearing, support for aquaculture, vegetable gardening, nursery raising, training as eco-tour guide, credit for purchasing of rickshaw etc. Table 1 below shows respondents (N= 101) dependency on key forest products in Satchari during 2006 and 2007 (Mukul and Quazi 2009). Though these initiatives were not sufficient enough to address the actual number of people however, the experience showed that only AIG activities that provided households substantial continuous income, and made them feel closer to local forest governance worked better. In Satchari, for example eco-tour guide, support for nursery and inclusion as a community petrol group (CPG) member seems more effective than AIG strategy that ensures both conservation and development in the area. It is worthwhile to mention that inclusion as a CPG member creates a feeling of ownership to the PA that may work positively towards better PA governance.

**Table 1.** Respondents collecting forest products from Satchari for sale in 2006 and 2007

Village	Timber*			Firewood			NTFPs		
	January 2006	January 2007	change*	January 2006	January 2007	change*	January 2006	January 2007	change*
Tiprapara (n = 22)	1 (4.55)	0 (0.0)	-1 (4.55)**	6 (27.27)	2 (9.09)	-4 (18.18)	1 (4.55)	0 (0.0)	-1 (4.55)
Ratanpur (n = 16)	8 (50.0)	3 (18.75)	-5 (31.25)	5 (31.25)	4 (25.0)	-1 (6.25)	4 (25.0)	3 (18.75)	-1 (6.25)
Deorgach (n = 32)	6 (18.75)	7 (21.88)	1 (3.13)	3 (9.38)	4 (12.5)	1 (3.13)	2 (6.25)	3 (9.38)	1 (3.13)
Goachnagar (n = 33)	4 (18.18)	1 (3.03)	-3 (9.09)	2 (9.09)	2 (6.06)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
<b>Total</b>	<b>19</b>	<b>11</b>	<b>-8 (42.11)</b>	<b>16</b>	<b>12</b>	<b>-4 (21.05)</b>	<b>7</b>	<b>6</b>	<b>-1 (14.29)</b>

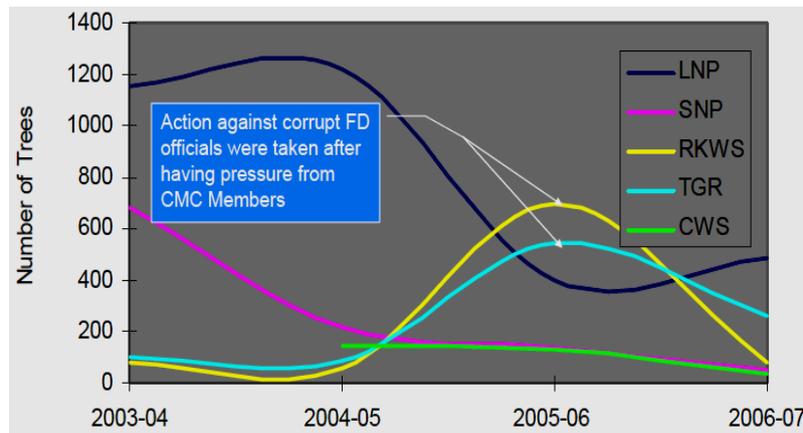
\* values in the parenthesis indicate percentage of the sample collecting forest products from respective villages

\*\*negative values imply positive changes and vice-versa.

\*\*\*percentage change of in respect to total people collecting forest products during 2006

### Working together for conservation in Lawachara National Park

Lawachara is famous for its' rich faunal diversity, particularly for one of the largest population of critically endangered *Hollock gibbons* in south-east Asia. The park is also inhabited by several indigenous communities including *Khasia* and *Tripura*, who enjoyed the usufruct right to use a limited forest area within the park for their traditional betel vine (*Piper betel*) and lemon (*Citrus limon*) cultivation. One of the *Nishorgo* initiatives in the park was, recruiting former illegal loggers as CPG member to protect poaching of valuable timber from the park area. All the participants were paid lump sum remuneration and basic gears for their protection service, and the effort brought a noticeable change in the area whereby significant reductions in illegal forest activities were experienced. Furthermore such effort also adds a vibrant impact in enriching floral and faunal biodiversity (Nishorgo report, 2007). However the enthusiasm and the efforts have started to get faded with time due to several reasons i.e. absence of monitoring by CMC, lack of support from the project and reluctance of the field staffs belonging to the FD. Such limitations regarding the concept of co-management at the end adversely affect the governance mechanism. Figure 1 below shows the illegal logging (in terms of no. of trees felled illegally) in Lawachara National Park (blue line) with other *Nishorgo* pilot sites between four different periods. It is clear from the graph that, the number of trees illegally felled during 2003-04 period was about 1,200 ,being highest amongst the pilot sites, which fell down to about 400 during 2006-07 period (Mazumder et al. 2007).



**Figure 1.** Illegal tree felling at different *Nishrogo* pilot sites (Source: Mazumder et al. 2007)

### **Governance in protected areas- experience from Chunati Wildlife Sanctuary**

Chunati Wildlife Sanctuary (CWS) is particularly important as it is the habitat and an important corridor for Asian elephants. Furthermore, a significant number of community people directly or indirectly dependent on this sanctuary for their livelihood. CWS is part of the southern cluster of IPAC managed protected area where co-management is in practice from NSP period. From the recent field work conducted during the period of July, 2010-January, 2011 it revealed institutional and legal framework in support of the co-management approach significantly influenced the governance issue. Currently two CMC are in existence in CWS (one in Chunati range and the other in Jaldi range). Based on the physical follow up of the monthly meeting of CMC, FGD and in-depth interview with the various stakeholders at both range, it revealed that CMC are embraced with following challenges:

1. CMCs are still dominated by the elite group. No voice of the community people is noticed, although the number of members in CMC has been increased through gazette notification to ensure more representation of the vulnerable group (i.e. FUG, CPG, ethnic minority, woman etc.)
2. Trust and performance are key to governance which deemed absent in the study area. Local forest officials in general do not own the concept of co-management. Monthly meetings are still arranged and initiated by the IPAC staffs whereas being a member secretary it is the responsibility of the respective Range Officer to take all initiatives regarding this.
3. Encroachment is a critical issue in CWS, whereby one third of the area is already encroached and has been turned to agricultural land. Due to this experiencing forest dependent people still lacking in confidence to participate actively in the co-management initiatives. Local FD also failed to create their image that can invite community with assurance.
4. Political management is growing concerns in any NRM project like co-management. Donors do not allocate any budget for that, which is adversely affecting the overall governance.
5. Legal aspects like acts, rules, policies etc. are not clearly and widely circulated to the community. Such limitation is creating a conflicting situation between FD and community. With the promulgation of SF Rules of 2004 (amended in 2010), a vast forest area further goes under the control of local political elites in the name of public-private partnership as optioned in the amendment.
6. Ambiguity of both FD and CMC regarding transparency and accountability is further deteriorating the situation.

7. Sustainability of CMC is a vibrant question as there is no provision of resources support either internally or externally yet.

### **Concluding remarks**

From the field experiences as well as from the view of the various stakeholders, it is quite evident that, co-management activities in PA sites has brought slow but explicit changes whereby decentralized, site specific and community based activities are gradually taking the place of centralized classical approach to some extent. Households who were previously plunderers are now active forest protectors. Now communities are more aware regarding conservation attributes which needs further and long term nourishment to bring positive changes. To ensure long term sustainability in conservation and better forest governance, it is very essential to focus on generous socio-economic upliftment of the communities living on forests, and ensure equity in benefit sharing. Attitudinal changes of the forest department and its official's towards the shifting paradigm of PA management is crucial in this regard. To avoid conflict, and promote traditional livelihoods of the communities there is also the need to allow people harvesting certain amount of forest products ensuring ecological sustainability (Mukul et al.2010). Financial and technical sustainability of the CMC's must be ensured through innovative mechanism (i.e. continuous training for capacity building, provision of direct grants to CMC; linking with external and internal funding agencies, funding through international negotiable instruments viz. REDD,) followed by constant supervision and monitoring. Finally legal and policy support to adore the concept is important since it is the precondition to bring better governance in management.

### **References**

- Appanah, S. and Ratnam, L. 1992. The importance of forest biodiversity to developing countries in Asia. *Journal of Tropical Forest Science* 5(2): 201-215.
- Bangladesh Forest Department.2011. [<http://www.bforest.gov.bd/conservation.php>]
- Borrini-Feyerabend, G. 2002. Indigenous and local communities and protected areas: rethinking the relationship. *Parks* 12(2): 5-15.
- Chape, S., Blyth, S., Fish, L., Fox, P. and Spalding, M. (eds.). 2003. United Nations list of protected areas. The World Conservation Union (IUCN), Gland, Switzerland, and UNEP-WCMC, Cambridge, UK.
- Craig, Donna.2002.Recognizing indigenous rights through co-management regimes: Canadian and Australian experiences. *New Zealand Journal of Environmental Law* Vol.6:199-254.
- DeFries, R., Hansen, A., Turner, B.L., Reid, R. and Liu, J. 2007. Land use change around protected areas: management to balance human needs and ecological function. *Ecological Application* 17(4): 1031–1038.
- Dudley, N. and Parish, J. 2006. Closing the Gap- Creating ecologically representative protected area system (CBD Technical Series: 24). SCBD, Montreal, Canada.
- Fisher, R.J. 2003. Innovations, Persistence and Change: Reflections on the State of Community Forestry. In: The Community forestry current innovations and experiences, pp. 16-29. Regional Community Forestry Training Center (RECOFTC) and FAO-Regional Office for Asia and the Pacific (FAO-RAP), Bangkok, Thailand.
- Food and Agriculture Organization of the United Nations (FAO). 2009. State of the World's Forests 2009. FAO, Rome, Italy.
- Ghimire, K. B. 1994. Parks and people: livelihood issues in national parks management in Thailand and Madagascar. *Development Change* 25: 195–229.

- Jeanrenaud, S. 2002. People-Oriented Approaches in Global Conservation: Is the Leopard Changing its Spots? International Institute for Environment and Development (IIED), London, UK and Institute for Development Studies (IDS), Brighton, UK.
- Kaimowitz, D. and Sheil, D. 2007. Conserving what and for whom? Why conservation should help meet basic human needs in the tropics. *Biotropica* 39(5):567–574.
- Kothari, A., Pathak, N. and Vania, F. (eds.). 2000. Where Communities Care: community-based wildlife and ecosystem management in South Asia. Kalpavriksh, Pune, India and IIED, London, UK.
- Koziell, I. and Saunders, J. (eds.). 2001. Living off biodiversity: exploring livelihoods and biodiversity. IIED, London, UK.
- Mazumder, A.H., DeCosse, P., Sharma, R. and Ahmad, I.U. 2007. Forest conservation in Bangladesh: tracing its ebb and flow in recent decades, with observation for the future. Paper presented in international conference ‘The Future of Forests in Asia and the Pacific: Outlook for 2020’ held in October 16-18, 2007 at Chiang Mai, Thailand.
- McNeely, J. and Scherr, S. 2003. Eco-agriculture: strategies to feed the world and conserve wild biodiversity. Island Press, Washington DC. USA.
- Mukul, S.A. and Quazi, S.A. 2009. Communities in Conservation: Changing protected area management and enhanced conservation in Bangladesh. In: Leslie, R.N. (ed.). Proceedings of the international conference; ‘The Future of Forests in Asia and the Pacific: Outlook for 2020’ held in October 16-18, 2007 at Chiang Mai, Thailand. 143-159 pp.
- Mukul, S.A., Uddin, M.B., Rashid, A.Z.M.M. and Fox, J. 2010. Integrating livelihoods and conservation in protected areas: understanding role and stakeholders’ views on the prospects of non-timber forest products, A Bangladesh case study. *International Journal of Sustainable Development and World Ecology* 17(2): 180-188.
- Mukul, S.A., Uddin, M.B., Uddin, M.S., Khan, M.A.S.A. and Marzan, B. 2008. Protected areas of Bangladesh: current status and efficacy for biodiversity conservation. *Proc. Pakistan Acad. Sci.* 45(2): 59-68.
- Nagothu, U.S. 2003. Local people’s attitudes towards conservation and wildlife tourism around Sariska Tiger Reserve, India. *Journal of Environmental Management* 69 (2003): 339–347.
- Nepal, S.K. and Weber, K.E. 1995. Managing resources and resolving conflicts: national parks and local people. *International Journal of Sustainable Development and World Ecology* 2(1995): 11–25.
- Nishorgo Support Project. 2007. Restoration of degraded forest habitat: Monitoring report Lawachara National Park, 2005-06 & 2006-07. NSP, NACOM
- Nishorgo Support Project (NSP). 2006. Protected Areas of Bangladesh: A visitor's guide. NSP, Dhaka, Bangladesh.
- Ormsby, A. and Kaplin, B.A. 2005. A framework for understanding community resident perceptions on Masoala National Park, Madagascar. *Environmental Conservation* 32(2): 156–164.
- Poffenberger, M. (ed). 2000. Communities and forest management in South Asia. IUCN, DFID and Asia Forest Network, Indonesia. 35-46 pp.
- Roy, M.K. and DeCosse, P. 2006. Managing demand for protected areas in Bangladesh: poverty alleviation, illegal commercial use and nature recreation. *Policy Matters* 14.
- Scherr, S.J., White, A. and Kaimowitz, D. 2004. A new agenda for forest conservation and poverty reduction – making markets work for low-income producers. Forest Trends, Washington DC, USA, CIFOR, Bogor, Indonesia, and IUCN, Cambridge, UK.
- Sharma, R., DeCosse, P., Khan, M. and Mazumder, A. 2005. Co-Management of Protected Areas in South Asia with special reference to Bangladesh. Nishorgo Support Project, Dhaka, Bangladesh.
- IUCN. 1994. Guidelines for protected area management categories. IUCN, Cambridge, UK.

- Wells, M.P. and Mcshane, T.O. 2004. Integrating protected area management with local needs and aspirations. *Ambio* 33(8): 513-519.
- World Resources Institute (WRI). 2007. Earth trends: the environmental information portal [WWW document]. URL: <http://earthtrends.wri.org> .
- Zashimuddin, M. 2004. Community forestry for poverty reduction in Bangladesh. In: eds. Sim, H.C., Appanah, S. and Lu, W.M. (eds.). *Forests for Poverty Reduction: Can Community Forestry Make Money?* FAO-RAP, Bangkok, Thailand. pp. 81-94.<sup>1</sup>

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