



**MANAGING DEMAND FOR PROTECTED AREAS IN BANGLADESH:  
POVERTY ALLEVIATION, ILLEGAL COMMERCIAL USE AND  
NATURE RECREATION**

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## **MANAGING DEMAND FOR PROTECTED AREAS IN BANGLADESH: POVERTY ALLEVIATION, ILLEGAL COMMERCIAL USE AND NATURE RECREATION**

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**Abstract:**

*Bangladesh's protected area system is small (0.5 percent of surface area) and its population density is high (893 persons per square kilometer). An economy that has grown at 4-6% per year for eight years is placing increasing demands on natural resources, including the timber that is found in protected areas. While economic growth has provided some relief, poverty levels remain high, with 23 percent of the country consuming less than 1805 calories per day. Protected areas are surrounded by poor households, many of them landless, who rely for day-to-day survival on produce from the forest. Policy-makers in Bangladesh would have it that provision of money or in-kind transfers to these poor is the secret to successful conservation. But this assumption -- that the poor are the cause of protected area loss and that poverty reduction is the solution -- ignores two other significant demands being placed on protected areas. The more rapid loss of protected areas has been due to illegal commercial demands placed on forest products, especially timber and fuel for brick fields. In both cases these commercial demands are highly organized and sometimes politically supported. The protected area conservation challenge, then, is to organize resources in a way that allows the local poor to benefit from conservation and to empower those poor, and other local interests, to counter the vested power and influence behind illegal commercial use. This short paper explores the process of balancing competing demands through a co-management framework.*

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## Introduction and Objective

Bangladesh's protected area system is small (0.5 percent of surface area) and its population density is high (893 persons per square kilometer). An economy that has grown at 4-6% per year for eight years is placing increasing demands on natural resources, including the timber that is found in protected areas. While economic growth has provided some relief, poverty levels remain high, with 23 percent of the country consuming less than 1805 calories per day.<sup>i</sup> Protected areas are surrounded by poor households, many of them landless, who rely for day-to-day survival on produce from the forest. The combination of these forces are compounded by levels of corruption that have led Transparency International to rank Bangladesh as the "Most Corrupt" country in the world for three consecutive years.<sup>ii</sup>

In such difficult conditions, the protected areas of Bangladesh have been under intense pressure for tree felling, fuel wood collection and land conversion. While exact figures are not available, the rate of loss is rapid and stark. The protected areas of the Hill Tracts have been heavily denuded. The Chunati Wildlife Sanctuary has gone from some 30 percent forest cover 10 years ago to nearly 1-2 percent tree cover now. Even the most intact forests in the protected areas of the northeast of the country -- Lawachara National Park and Rema Kalenga Wildlife Sanctuary -- are suffering from intense demands for felling and conversion. The Forest Department estimates (in their *Vision 2010*<sup>iii</sup>) that without rapid change in management approaches, even these protected areas will be cleared of mature trees within five years.

Policy-makers in Bangladesh would have it that provision of money or in-kind transfers to these poor is the secret to successful conservation. But this article will argue that the larger threat comes from organized and powerful interests that first cut the available timber illegally and then work to convert the protected area lands for private use. An important, but often neglected, counter to this illegal commercial demand is emerging in Bangladesh from demand for nature recreation. This article will review these and other related demands for conservation, and discuss the implications for the country's new Nishorgo Program for protected area management, managed by the Forest Department.

We begin with a brief quantitative and qualitative summary of poverty in the country, and at major protected areas. We then present the framework for the paper: the supply and demand for PA conservation. Finally, we briefly present the Nishorgo Program conception and contents, and discuss how it has been shaped by this need to turn the focus from a narrow one on poverty reduction to a broader one on sustainable economic growth.

## The Supply of Protected Areas

At present, there are a total of 22 protected areas in Bangladesh, of which 17 fall into the legally recognized classes of Wildlife Sanctuary, National Park or Game Reserve. In recent years, the Government has acted to increase the supply of protected areas, principally through the creation of Eco-Parks and Safari Parks on Reserve Forest land, but these newly created areas are extremely small by comparison to other protected areas and are more urban parks than conservation areas.

At an estimated 0.5 percent of the country's surface area, the protected area network in Bangladesh is the smallest in Asia, in both percent of surface area and area per capita.<sup>iv</sup> Neighboring Sri Lanka has over 10 percent of its surface area in protection, while India has an estimated 5.1 percent of total surface area in protection.

**Table 1: The Protected Areas of Bangladesh**

No.	Name of the Protected Area	Declared Status	Area in ha	Year of Notification (Year of establishment in parenthesis)
1.	Sundarbans East	Wildlife Sanc.	31227	1996
2.	Sundarbans South	Wildlife Sanc.	36970	1996
3.	Sundarbans West	Wildlife Sanc.	71502	1996
4.	Chunati	Wildlife Sanc.	7761	1986
5.	Pablakhali	Wildlife Sanc.	42087	1983
6.	Rema-Kalenga	Wildlife Sanc.	1795	1981
7.	Char Kukri Mukri	Wildlife Sanc.	40	1981
8.	Bhawal	National Park	5022	1982
9.	Madhupur	National Park	8436	1982
10.	Himchari	National Park	1729	1980
11.	Ramsagar	National Park	28	2001
12.	Nijhum Dweep	National Park	16352	2001
13.	Kaptai	National Park	5464	1999
14.	Lawachara	National Park	1250	1996
15.	Medhakachchapia	National Park	396	2004
16.	Satchari (proposed)	National Park	240	proposed
17.	Teknaf	Game Reserve	11615	1983
18.	Dulhazara	Safari Park	600	(1999)
19.	Bashkali	Eco-Park	n/a-	(2003)
20.	Madhupkunda	Eco-Park	125	(2001)
21.	Sitakunda	Bot. Garden & Eco-Park	1000	(2000)
22.	Mirpur	Bot. Garden	84	(1961)

## The Demand for Protected Areas in Bangladesh

Demand for this protected area network in Bangladesh can be divided into demand for consumption of the produce inside protected area boundaries and demand for conservation or sustained management of those resources. At present, the two principal sources of demand for consumption of protected area resources include the neighboring poor on the one hand and those commercial operations that desire to consume PA resources on the other. These two areas of demand are reviewed below as two of the major demands that need to be managed in order to achieve conservation goals in Bangladesh. Areas of potential demand for conservation or sustained management of PA resources stems from the Bangladeshi public, with their desire to visit nature sites, and also from other sources, such as multi-lateral (GEF) and bilateral (e.g., USAID) financing institutions, as well as private market mechanisms such as carbon markets. In addition, international conservation NGOs (BirdLife International, WWF, Conservation International, IUCN, etc.) represent important another source of demand for conservation of PAs.

In the following three sections, we review the three principal demands in Bangladesh: poverty alleviation for those living in and around PAs; illegal commercial demands for produce from the forest for timber and brick kilns; and the demand for recreation by the Bangladeshi citizens.

## **Demands on Protected Areas from the Poor**

By most estimates, Bangladesh has witnessed a modest poverty reduction rate of around one percentage point a year since the early nineteen nineties. Two alternative estimates based on the Household Income and Expenditure Surveys (HIES) of the Bangladesh Bureau of Statistics show poverty declining from 58.8% in 1991/92 to 49.8% in 2000, and alternatively, from 49.7% in 1991/92 to 40.2% in 2000.<sup>v</sup> Although these increases represent progress, the overall levels of poverty measured in different ways remain high. Those that were defined by food intake measures as "extremely poor" (less than 1805 calories per day) totaled 23 percent of the country as a whole, while those "absolute poor" (less than 2122 calories per day) accounted for 49 percent of the country.

At the protected areas, typically located far from urban centers, the poverty levels are more severe. Exact estimates of the value of benefits accruing to local households from protected area are being researched now. Evidence from field appraisals at five protected areas suggests that the total value is not high at any one time, but that the number of beneficiaries is large, probably in the order of 30 percent of surrounding population. If one stands at any entry point to the PAs, one finds a constant stream throughout the day of women and men removing biomass from the forest. At the Bhawal National Park near Dhaka, the floor of much of the forest under the Sal Trees has been cleaned of leaves, all of them packed into bags by women for use in stoves.

And protected areas are often home to ethnic "tribal" populations, typically migrants brought to live in the Reserve Forests near the turn of the century. While not "indigenous" in the strict sense of the word, these ethnic groups are a minority in the country, and often face discrimination at field level by the broader population.

At present, access by the poor to many protected areas is regulated by local Forest Department Guards, who can at times extract rents from the poor in the form of payments for permission to remove forest products. Payments for a load of firewood might be in the order of 10 Taka, or USD 0.15. These fees, though small, represent a burden to local poor and an important source of "alternative income" to the Forest Guards, who can significantly increase their monthly salaries from such fees.

## **Demands from Illegal Commercial Use and Subsequent Land Conversion**

While the pressure placed on protected areas by the poor is pervasive and constant, the net effect of extraction of resources by the poor is modest compared to extraction by illegal commercial demand. In the two largest protected areas of the south -- Teknaf Game Reserve and Chunati Wildlife Sanctuary -- brick "fields" (kilns) cause far more rapid loss of forests. Although the Brick Fields Act explicitly forbids it, many brickfields are located inside or next to protected areas, precisely because the fuel wood energy is considered free. Eight brick fields are located inside or immediately bordering the Teknaf Game Reserve, while six brick fields are located at Chunati Wildlife Sanctuary, of which four are directly inside Sanctuary boundaries. All of these brickfields are owned or protected by powerful local officials, sometimes with the backing of national figures.

In the northeastern protected areas of the country, remaining stands from hardwood plantations make these Areas target of organized and powerful logging interests. According to the Forest Department's register of illegal felling, the average annual number of trees illegally felled in Lawachara National Park in 1999 and 2000 was only 44. In the past two years, in this small Park of only 1250 hectares, the average number of trees illegally felled has risen by twenty seven times to an annual average of 1,188. The cumulative biomass loss and visual impact of such large-scale logging interests is far greater than the removal by low income households of head loads of firewood and other non-timber forest products.

The dramatic impact of these two commercial demands is being followed by a third, and even more permanent threat: the organized encroachment of protected area land. In many of the Reserve Forests of the country, commercial felling of forests is undertaken with a view not only to sell the wood products, but to claim that the degraded forest land should be proposed for conversion (or "declassification") from Reserve Forests (which are protected under the Forest Act) to khas lands, which are managed locally and can be used for leasing. Thus degradation of forests through commercial demand, in the minds of local elites, is a perfect prelude to laying claim on the land as degraded forest with which "something more productive can be done". While low income households are the ones that actually set up homesteads on these encroached areas, it is widely accepted that they are paid to do so by more powerful interests that hope to obtain eventual ownership or lease authority on the lands.

## **Demands for Nature Conservation and Recreation**

While the poor need PAs for their livelihoods and commercial and political interests use PAs for economic ends, the demand by common citizens for an experience of nature represents another significant area of demand in Bangladesh. At present, there is no widely recognized system of protected areas or National Parks, as exist in many countries. Even the term "Protected Area" in Bangla carries little resonance. But available evidence makes it clear that when conservation sites are made available for citizens to visit, they do so in large numbers. The Dulhazara Safari Park is a case in point. The Safari Park began as a deer breeding area. Initially, in 2001, a wall was built to enclose some 100 hectares of forest. Since then, and especially in the past year, many other facilities have been added, including nature interpretation center, orchid house, elephants (in their own enclosure), lions and some 50 other species of animals, many of them in cages. The total area is now 600 hectares. While this Safari Park is more a zoo than a National Park, the numbers of visitors to it and other EcoParks is but one indication of the demand. Although it opened its doors for paying visitors only a year ago, the Park is already receiving some 3,500 visitors per day, all of them paying 10 Taka, and Dulhazara is not close to any urban centers. A similar dramatic increase in visitors occurred with some of the infrastructure improvements at the Sitakunda Eco Park north of Chittagong. Although the basic infrastructure was only completed to visit the EcoPark and botanical garden two years ago, the Park can receive as many as 25,000 visitors in a single weekend.

A recent economic analysis of the willingness to pay for the Bhawal National Park north of Dhaka indicates people's interest in paying for the nature experience. An estimated 100,000 visitors go to Bhawal each year, and pay 6 Taka for their entry fee. Even without any improvements, the study estimates that 76 percent of visitors would be willing to pay an additional 4-9 Taka per visit, and with minimal improvements to the Park, 92 percent said they would be willing to pay more than double the current fee.<sup>vi</sup>



Although these scattered cases of increased expenditures by households on nature recreation can be identified, the overall awareness levels in the populace of protected areas is extremely low. Surveys conducted in Dhaka and Rajshahi in 2004 asked respondents to name three protected areas in the country. While more than 90 percent could identify the Sunderbans as one, an estimated 5 percent could name Bhawal National Park and close to zero percent could identify any other. Even the Bangla translation of "Protected Area" has none of the connotations or emotional resonance of "National Park System" in an American or Canadian context or "Aires Protegees" in places like Madagascar or France. In effect, the populace of the country has a strong desire to experience nature, and the income to undertake those visits, but there is almost no infrastructure or visitor services at existing sites, nor any awareness that such sites might even exist.

## **The Nishorgo Program for Protected Area Management**

Recognizing the need to manage these three areas of demand, the Forest Department created a new protected areas management Program entitled Nishorgo in 2004. The focus of the Program is on building partnerships with local, national and international stakeholders interested in the conservation of protected areas. At the heart of Nishorgo is an emphasis on development of viable models for co-management of protected areas in ways that provide poverty alleviation incentives to poor households around PAs while stopping the illegal commercial extraction that is now so rampant. One of the critical countervailing forces that is to be engaged to ensure success is the wide interest and demand of the public in ensuring conservation.

## Bangladesh's Nishorgo Program for PA Management

The specific expected outputs of the Nishorgo Program are the following:

- A marked slowing of biodiversity loss in targeted Protected Areas;
- Active and formalized participation of local communities dependent on forest resources;
- An increase in the number of Protected Area sites and the capacity to receive visitors;
- Formalization of a Protected Area management system;
- Strengthening of local economy and betterment of living standard of local stakeholder

Activities of Nishorgo include the following, among others:

- ⇒ Development of co-management models at five specific Protected Areas;
- ⇒ Sharing of economic benefits from protected areas with local participating stakeholders;
- ⇒ Formalization of processes for reducing local conflicts over protected areas;
- ⇒ Making PAs more visitor-friendly (while ensuring conservation goals are met);
- ⇒ Refinement of the policy framework for protected areas management;
- ⇒ Facilitation of eco-friendly private sector investment;
- ⇒ Support to ecosystem rehabilitation and regeneration;

The Program is managed by the Forest Department, and receives support from USAID in the form of a Project focusing specifically on developing co-management models for five pilot PAs (called the Nishorgo Support Project). The Program also receives indirect support from the ADB Forestry Sector Project, which includes a component focusing on improving social forestry around seven Protected Areas.

Since the launch of the Program in February 2004, a number of milestones of note have been reached, including the following:

- √ Multiple levels of Government have accepted the principle of co-management, and a general governing structure including Council and Committee, for the Protected Areas;
- √ Initial Council meetings and awareness raising have taken place at all five initial sites to inform participants of their rights and opportunities to take a more active role in PA management;
- √ Baseline surveys have been undertaken, including participatory monitoring by communities using eight recognized and known species of birds;
- √ A new name, imagine and logo for the Protected Areas activities at the Forest Department has been developed, with the name "Nishorgo" itself being proposed by a student after a national competition;
- √ Fifteen hiking trails have been identified in an initial five Protected Areas;
- √ Developed a public-private partnerships program -- called the Nishorgo Conservation Partnerships Program -- in support of Protected Area conservation, including one with the Bangladesh Scouts and another with the Radisson Water Garden Hotel;
- √ A Vision of Protected Areas Management in 2010 has been developed by the Forest Department and presented to multiple parties, including the Prime Minister;
- √ Mechanisms for local participant benefits sharing in PA conservation have been developed for all PAs. These include social forestry in buffer zones, nursery enterprises, ecotourism enterprises and other activities.

Further information about the Nishorgo Program can be found at [www.nishorgo.org](http://www.nishorgo.org).

## Discussion

While the challenges to the Nishorgo Program are many, the heart of the Program can be understood as an effort to manage competing demands for the protected areas, and in particular the three demands reviewed here, in a way that contributes to conservation, poverty reduction and local economic growth. It is true, as Ministers and other policy-makers are quick to point out, that the needs of the poor must be met. But it isn't enough. The Nishorgo Program has levers at its disposal to ensure that the poor households next to protected areas receive a sufficient stream of benefits from limited off take inside the PA boundaries and from economic activities in the interface landscape.

Ensuring that the poor receive alternative income opportunities is the easy part of the equation. The more challenging piece is the process of giving them a voice and rights with which they, and other actors, can work to halt the illegal commercial extraction that is the more important cause of forest loss. Effectively, the Nishorgo Program seeks to do this by empowering the local stakeholders, including the local poor, in the context of a representative Co-Management Council at each protected area, and a Co-Management Committee. If they are to be effective in giving a voice to the aspirations of local poor to secure their future and livelihoods, then these Councils and Committees must give practical and tangible rights and benefits to local stakeholders while ensuring conservation. And this is the more complex challenge.

In order to meet this challenge, the Program is taking the approach of working to capture the latent demand for the middle and upper classes to experience nature, and the interest of the private sector to project a green image through contributions to conservation causes. The nature-tourism industry is being engaged, and visitor services along with hiking trails are being established in pilot protected areas. The Program will work to see that an effective policy of "pro-poor tourism" is adhered to, one that capitalizes not only on the interest of the poor to have better livelihood opportunities, but also on the desire for tourists to have the extra "benefit" of feeling that they have supported poverty reduction and "charity" in their tourism experience.

## Conclusions

In many countries of the world, it is argued that conservation of protected areas represents a net loss to low income households. The poor need the forest for survival, the argument goes, so keeping them from it by strict conservation may end up causing them more harm than good. Bangladesh's unique context suggests that this general approach does not hold. Yes, the poor benefit from what is left of the very small protected area system, but the rapid destruction of the forests in the system are due to more wealthy and powerful economic interests. If these powerful economic interests are not stopped, the few remaining areas of forests will soon be fundamentally converted to grasslands, as has already happened in many of the protected areas. And after that, the pressure will come for encroachment of the land and permanent conversion to other tenurial forms. Within a short time, what the poor are now taking from protected areas will no longer be available, and the land may be converted to leases on which the poor will need to pay for access.

The only sustainable means for the local poor to benefit is by a process of empowerment and taking control of these forests from the current network of local economic and political interests. As that wresting of power proceeds, it will be necessary to provide replacement income to the poor in ways that allow for conservation. Improved conservation will have ancillary benefits on the local

economy via an increased number of visitors. Without a stronger and better-organized constituency for conservation, and particularly for nature-tourism, it is unlikely that sufficient counterweight to the local commercial interests can be achieved. The Forest Department has recognized that just this shift of power relations will be required, and it has established the Nishorgo Program as an effort to capitalize upon the market and non-market values of the few remaining protected areas in ways that can support poverty reduction and conservation goals. We hope that this value can be realized before it is too late, and the small system is no longer present.

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<sup>i</sup> Bangladesh Bureau of Statistics, "Analysis of Basic Needs Dimension of Poverty", August 1998, page 108.

<sup>ii</sup> Transparency International Corruption Perceptions Index (CPI) 2004 and previous years.

<sup>iii</sup> Forest Department / Ministry of Environment and Forests, "Nishorgo Vision 2010: A Vision Statement Concerning Management of Protected Areas under the jurisdiction of Forest Department through the Year 2010", February, 2005.

<sup>iv</sup> Data from the EarthTrends Database at <http://www.earthtrends.wri.org>, jointly funded by UNEP, UNDP, WRI and other donors. Figure includes data from IUCN Protected Area Categories I-V.

<sup>v</sup> "Unlocking the Potential: National Strategy for Accelerated Poverty Reduction", General Economics Division, Planning Commission, Government of the People's Republic of Bangladesh, December, 2004

<sup>vi</sup> Salma Khan, "Estimates of Willingness to Pay for Bhawal National Park", Thesis for BS in Environmental Studies, North South University, 2004.