

Integrating biodiversity conservation and livelihood provisions in protected area management: understanding stakeholders view on the role and prospects of non-timber forest products

A Bangladesh case study

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Abstract

In the last few decades non-timber forest products (NTFPs) gains renewed importance to researchers due to their immense potentiality as a poverty reduction strategy. In fact, NTFPs are still a vital means of livelihood for a large number of rural people living in most developing countries. It has also perceived that, collection of NTFPs is ecologically less benign than timber harvesting that eventually enhances forest conservation. Protected areas (PAs) on the other hand represent a key strategy in biodiversity conservation worldwide. A main challenge however facing while managing PAs is the local resource dependency which has sometimes disregarded or poorly recognized by the local governing authorities. The present study collects and analyses the community views (n = 101) on the prospects of NTFPs for enhanced conservation within PAs and its present role in sustaining forest-based livelihoods. Study was performed between January 2006 to January 2007 in a north-eastern PAs of Bangladesh- Satchari National Park. Respondents were interviewed using a semi-structured questionnaire from various forest dependency categories. From the study it appears that, majority of the people (67%) of the area holds a strong and positive perception about NTFPs and their probable conservation value which surprisingly sometimes found in accordance with the arguments of various authors. The study also identified 14 NTFPs commonly used by the local inhabitants of the area of which 5 were reported critically important for supporting their livelihoods. Besides, collection, processing and sale of NTFPs constitute primary occupation for approximately 18% of households of the area among which 76% were poor to ultra poor and which accounts an estimated average of 19% of household's cash annual income. Finally study concludes for a allowable limit for harvesting of commercially important NTFPs from the PA as well as their massive plantation in buffer zones which should be managed under a participatory regime and where all the harvesting activity should be maintained under a strict regulation and monitoring system.

Key words: NTFPs; biodiversity conservation; poverty alleviation; forest-based livelihoods; protected area; Bangladesh.

Challenges of PA management in Bangladesh

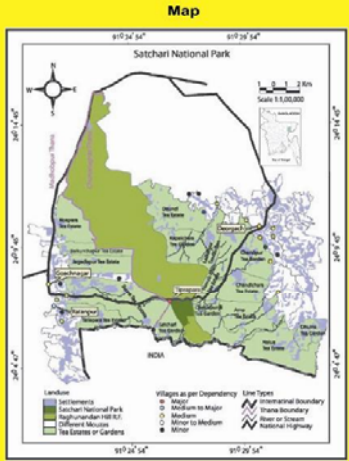


(a) Ethnic forest dependent livelihoods are most susceptible to declaration of PAs and are also responsible for extensive fuelwood collection



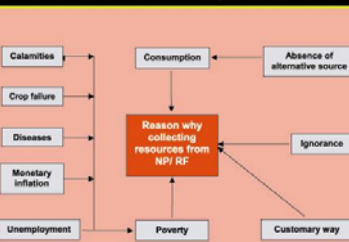
(b) Illegal logging using unrecognized trails; one of the main reason of deforestation in the area

(c) Unsustainable resource collection from PA due to unawareness and lack of proper monitoring are another key challenges of PA management in the country



Basic information:  
Size and location: 243 ha; north-eastern part of Bangladesh  
Vegetation type: evergreen to semi-evergreen; natural to semi-natural hill forest  
Conservation status: National Park (IUCN category V) since 2005  
Dependent village: 19 (1 major; 2 medium-major; 4 medium; 6 minor-medium; 6 minor)  
Major use: timber (illegal); fuel wood; bamboo; spice; medicinal bark; sand

Causes of resource depletion in PAs

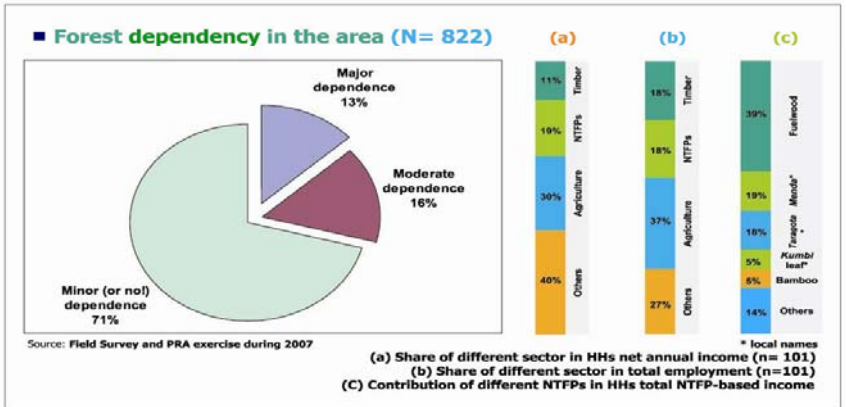


Study findings

Products	Origin	Source	Extent of collection	Present status	Income on forest	Future potential
Rambutan	Rambutan uddiya, Satchari, Melastoma baccifera, Road.	NP, RF	Medium	High	Low	High
Broomstick	Thyrsanthus maximus Road.	NP	Medium	High	Low	Low
Bushmeat	All woody species	NP, RF	High	Low	High	Very low
Forage and fodder	Artocarpus heterophyllus Lamk, Artocarpus chaplasha Road, Artocarpus lacucha Road, Citrus limon L., Syzygium sp., Apia rosea, Apia darsala, Camellia arborea Road.	NP, RF	Low	Medium	Low	Low
Honey	Apis mellifera, Apis dorsata	RF, NP	Very low	Low	Very low	Medium
Kumli leaf	Camellia arborea Road.	NP	Medium	Low	Low	Low
Medicinal plants	Albizia monnina, Citrus limon L., Camellia arborea Road.	NP, RF	Low	High	Low	High
Menda bark	Albizia monnina, Citrus limon L., Camellia arborea Road.	NP, RF	Medium	Medium	Medium	High
Rattan	Daemonorops jenkinsiana Mart.	NP, RF	Medium	High	High	Low
Sand	Ipomoea cylindrica L., Annonum acuminatum Road.	NP, RF	Medium	High	Low	High
Sun areas		NP	Medium	High	Low	High
Tarapata		NP	Medium	High	Low	High

\* NP: national park; RF: reserved forest, sequence indicates their contribution

\*\* Based on respondents perception



HHs view on the prospective role of NTFPs in enhanced conservation : some explicit findings

- HHs founds hold some understanding about conservation - 76%
  - HHs used and have clear ideas about NTFPs - 96%
  - HH reports NTFPs as a potential tool for balancing conservation and livelihoods within PAs - 47%
- Negative view - 31%  
No comments - 22%

NTFPs prevent illegal logging— 66%  
Collection of NTFPs retains parent individual in the forest floor— 40%  
Ecologically less harmful forest land-use practice— 61%

Selected public opinions on NTFPs

"Illegal loggers when gets legal permission to collect particular amount of NTFPs from the forest; found a secured market and enough profit from their products they will definitely rely on NTFPs that ultimately contributes to conservation of forests (Ratanpur village)."

"We have collected NTFPs from Satchari since prehistoric times, but it doesn't damage the forest ecosystem as illegal felling does. Moreover we collect NTFPs seasonally, so it has enough time to recover (Tiprapara village)."

Concluding remarks

- NTFPs, if properly managed in and outside (i.e. in buffer zones) the PAs, could be a potential tool for PA management. A sustainable harvesting limit, monitoring system and the following additional things however essential to ensure the success;
- secured market and marketing channel
- financial assistance to establish small processing units
- technical support
- willingness and true commitments