An evaluation of the effectiveness of the co-management approach in selected Protected Areas of Bangladesh

Abstract

This study takes a qualitative method approach to evaluating the perceptions and attitudes of stakeholders to the effectiveness of planning and management in three protected areas in Bangladesh. A complex socio-economic context was revealed within which there were diverse views leading, in some cases, to ongoing conflict and difficulty in law enforcement. While the co-management approach in theory takes the interests of local people into account and so has a better prospect for long term, sustainable, forest protection, this research revealed that community participation is not currently effective and recommendations are made to remedy this and so increase the potential to achieve the management objectives for these protected areas.

Keywords: Co-management; protected areas; Bangladesh

Introduction

Historically Protected Areas (PAs) have been seen as an important tool in wildlife conservation however in many cases this marginalised local people, and in some forced them to vacate the area (Pimbet and Pretty, 1995, Hutton *et al.,* 2005). This approach has been questioned, regarding both achieving conservation objectives and humanitarian justice (reviewed in Martin, 2017). At the World Parks Congress the IUCN called for a new paradigm, a community-based approach, respecting social, economic and cultural rights of people to their land and resources (IUCN, 2003). This increased awareness of the vital importance of community participation for successful conservation initiatives and for co-operation among all stakeholders in PA governance (Niedzialkowski *et al.,* 2012; Borrini-Feyerabend *et al.,* 2013; Chowdhury *et al.,* 2014). This approach has been widely – and successfully implemented, for example in

Annapurna, Nepal, where giving local people control of their natural resources had significantly reduced deforestation (Bajracharya *et al.,* 2005), and has now been incentivised across the country (Adhikari et al, 2014).

The 'co-management' approach has been adopted in Bangladesh to promote active collaboration between protected area management teams and local stakeholders (Parr *et al.,* 2013). This began in 2003 when the Forest Department, in collaboration with the United States Agency for International Development (USAID), developed the Nishorgo Support Project (NSP) to provide alternative sources of income to counter excessive extraction of forest resources (Roy and DeCoss, 2006). This improved relations between the Forest Department and local communities by involving them in discussions around forest management and their livelihoods. In 2008 this was replaced by the Integrated Protected Area Co-management (IPAC) project, which was more ambitious, aiming to increase co-management to achieve full integration of communities in PA management planning (IRG, 2010). This continued until 2013.

The Forest Department, directed by government guidelines (Forest Department of Bangladesh, 2006a & b), is the convenor of the Co-management Committee, in each PA, and 19 community representatives, both male and female, are required to be included on the Co-management Council (Chowdhury, 2008). The primary responsibility of both of the Committee and the Council is to promote sustainable biodiversity conservation by facilitating effective partnerships across all stakeholders (Chowdhury, 2008). For this to be successful requires on effective involvement of the community and full participation in the co-management process. This research was undertaken to evaluate how effective this has been in Bangladesh.

Materials and Methods

Three PAs, Lawachara National Park, Teknaf Wildlife Sanctuary and the Sunderbans Wildlife Sanctuary were selected from the 37 in Bangladesh as case studies. The rationale for this was that, after extensive desk based research these were identified as being distinctly different from one another in character as well as geographic location (Figure 1). Four villages in the proximity of each PA, 12 in total, were identified for in depth research. The criteria for selection was:

- High livelihood dependency on the forest

- Proximity to the PA boundary,

- Accessibility

Three investigative techniques were employed in fieldwork; in-depth interviews with key contacts, and focus group discussions and provided data for subsequent analysis.

The key contacts were drawn from different stakeholder groups i.e. Forest Department and IPAC staff, and community members who had specific interest in PA management issues.

The focus group participants were invited, after discussion with local stakeholders, to attend informal sessions in non-threatening environments such as tea stalls, house and school yards. The researcher facilitated lively discussion and interaction between the participants, with the permission of participants, wrote up reflections immediately after each focus group (Remenyi, 2011). A total of 21 focus groups were conducted, (5 in Lawachara; 8 in Teknaf and 8 in Sunderbans) most consisted on mixed genders but in some villages separate discussions were conducted for males and females. Group size varied between six and eleven people, lasted from one to two hours, and discussion focused on management of the PA and the degree of community involvement.

Data analysis

The interviews, conducted in Bengali, were transcribed, translated into English and then analysed. The first step was open coding to identify ideas, themes, and concerns (Neuman, 2006), similar codes were then grouped together as concepts; finally these were grouped into themes. This enabled a narrative account to be constructed describing, interpreting and collating results from the different investigative techniques, the in-depth interview and focus group discussions. Triangulation was used to verify accuracy using data from different sources enabling rich description to be used to express the findings (Creswell, 2009).

Results

Interviews with key informants

All the key informants interviewed were aware of the co-management approach and majority felt this was positive particularly in reducing illegal tree felling and crime such as deer poaching. It was revealed that in both Lawachara and Teknaf the co-management committees had formed Community Patrolling Groups comprising former timber fellers responsible for protecting the forest. The success was debatable, with a village elder from Baghmara reporting subsequent serious damage; this was corroborated by a village headman from Magurchara punji, (Lawachara), and a journalist who said this effectively endorsed illegal felling. However, Forest Department staff explained that the rationale for including timber thieves, and providing them with an income was that tree theft would stop. In fact, the opposite happened as some members of the community patrolling group collaborated in the illegal harvesting and selling timber. It was suggested that Forest Department staff were subject to blackmail reducing their ability to take action. The CEO of IPAC put this into perspective saying that *"In*

social work 100% success is hard to achieve, 60% or 70% can be considered progress. There are many complaints about the community patrolling group despite the fact that the tree felling in Lawachara, has now reduced to only 400 trees a year from the 1800 recorded previously."

Teknaf Wildlife Sanctuary:

Despite some reporting that activities of the Co-management Committee were limited others felt that it was not realistic to raise awareness of the need for forest protection in every village. However the IPAC coordinator felt that they had been effective saying *"We are around 70% successful in this area. We have explained to local communities that the forest is their friend and that they should tell us if anyone cuts trees. We are providing different training, education, and grants and are able to raise awareness among people; even illiterate women can now talk about carbon trading."* This was *corroborated by a* local journalist who said that previously trees could be cut and transported out of the forest openly but since the formation of the Co-management Committee everyone was on the lookout and news would spread quickly even if only one tree was cut down. However, it was also suggested that politics was spreading into every village and it was increasingly difficult to keep forest improvement programmes and the work of the Co-management Committee, free from political influence; lack of transparency regarding funding was also raised as an issue.

The Sunderbans Wildlife Sanctuary:

In terms of raising awareness the Co-management Committee was felt to have been effective, despite lack of financial support. Reported achievements included stopping the sale of deer meat in the bazaar, the closure of four brick fields, reducing demand for fuel wood (despite this resulting in loss of local jobs) as well as repairing roads and

bridges. However, the difficulty of keeping the Co-management Committee free from "political influence" was also mentioned.

Focus groups discussions

The responses of the focus group participants in the three case study areas are given in Table 1. The results suggest that the effectiveness of the co-management approach is subject to local influence and political pressure. Governance issues were raised in some of the discussions, for example: *"The current co-management committee president is the brother of the chief whip of the present Government. He became the president by the power of the Government not by selection by villagers, so he does not know the situation and tricky issues used by the notorious people of the village."* (Lawachara). Similarly, in Teknaf, *"If a tree feller is caught red handed stealing a tree, they can get released through the actions of influential people, who are in fact involved in this crime."* In the Sunderbans it was stated that *"The president of the Co-management Committee is the Union Parishad Chairman. He can do everything he wishes."* These statements suggest that political pressure, lack of transparency and accountability and – potentially - corruption may limit the effectiveness of co-management. Despite this there were positive impacts, with Co-management Committees perceived as responsible for some infrastructure development and to ave been instrumental in providing some facilities for local communities.

Discussion

This research was initiated to explore the way the co-management approach, fundamental to the aims of Protected Area management was implemented in three case study areas in Bangladesh. In both Lawachara and Teknaf PAs the management plan included an objective to develop and implement a co-management approach to ensure

long-term protection and conservation of biodiversity, while permitting sustainable use in designated zones by local stakeholders (FDB, 2006 a & b:16). In the management plan for the Sunderbans the equivalent objective was to support and improve co-management activities in both the PA and surrounding landscape (FDB, 2010:18). This research confirmed the existence of active co-management committees in all these Pas although determining the impact on forest protection and conservation was challenging.

While all the key informants were aware of the co-management approach the degree of participation differed across the case study areas. Some acknowledged benefits such as repairing and constructing roads and bridges, arranging tourist trails inside the parks, providing some economic benefits to local people, and conservation education programs that increased public awareness. In Lawachara and Teknaf, the majority of key informants reported the failure of the community-patrolling groups, set up by the co-management committee, to conserve the forest. The logic was that illegal tree felling would stop if convicted timber thieves were given responsibility – and paid – to protect the forest. It was reported that owners of furniture shops, local administration and some Forest Department staff have effectively created a supply chain making this easier to carry out. Initiatives such as the setting up of Community Patrolling Groups have been extensively criticised in the media and by the public and, as a result, the CMC has been compelled to reform the CPG, without involving former criminals. New Forest Department staff were brought in to overcome the perception that, when tree felling had taken place, the Forest Department tended to automatically charge previously convicted tree fellers rather than carrying out a full investigation.

In Teknaf the impact of the CMC was restricted to some, rather than all, the villages and, as in the Sunderbans, some significant achievements had been made. However, it was universally felt that, although awareness had been raised among communities about the need for PA management and conservation of natural resources, to be effective CMCs should be free of political influence.

The women in South-east Asian countries, for example India, Nepal and Bhutan, are involved in traditional farming and forest management, playing a key role in reducing deforestation (Kiorboe *et al.,* 2005; Wuyep *et al.,* 2014). However, in Bangladesh women have rarely been part of local participation initiatives, despite the fact that it is unlikely that success will be achieved without them. Shiva (1989) argued that women tend to be more 'environmentally friendly' than men and, as Bangladeshi women are very knowledgeable about their natural resources, it is perhaps surprising that they are not more actively included in CMCs and empowered to use their traditional ecological knowledge to support sustainable natural resource management and increase employment opportunities (Little, 1994). While there are designated categories of stakeholders to be included on both co-management councils and committees these do not specify the number or proportion of women (Table 2)

Money was a theme in all interviews, and it seems that the current approach, based on revenue sharing, with some of the PA income supporting community development, has resulted in positive attitudes among local people encouraging – and empowering - them to engage with conservation. However, it was clear that there are issues in implementing the co-management approach, notably inclusion, equity, empowerment and integration. Schroter *et al.* (2014), working in Brazil found that negotiation and good

communication significantly improved the implementation and enforcement of PA rules. In this research the extent to which discussions in co-management committee meetings were fed back to local residents was unclear.

Achieving biodiversity objectives through co-management appears promising, despite challenges in turning local people's awareness of the need for this into the positive actions necessary. The incentives and benefits from the PA to the local residents are simply not sufficient to prevent practices such as fish poisoning, illegal deer hunting and, while public awareness campaigns and education undoubtedly part of the solution, change will only result when socio-economic issues are addressed. Roe *et al.,* (2000), have argued that community-based conservation can complement, but not replace, enforcement. The role of central government and strict protection will always be required (Lockwood *et al.,* 2006). In the case of Tsimembo-Manambolomaty, a wetland and dry forest in Madagascar co-managed by the Peregrine Fund and local communities, the focus has been on empowering traditional users to manage their resources more sustainably; income from fishing is thought to have increased as a result (Gardner *et al.,* 2013). This exemplifies that, for co-management to be sustainable and effective, those with most local knowledge and experience should be recognized and actively involved in management and the benefits derived from it must be shared equitably with those who depend on the forest.

This is not currently the case in Bangladesh. Conservation practices are not linked to the subsistence and/or livelihoods of the communities represented on the CMC, particularly when villages are distant from the PA boundary. In Vietnam multi-level co-management committees have encouraged unified PA management, including both

core and buffer zones, providing institutional bridges to link conservation and community development agendas (Parr *et al.,* 2013).   However, in the three case study PAs this research focused on in Bangladesh there was no system to facilitate a similar approach. Government rhetoric supports the idea of a bottom up approach, with local views effectively incorporated into planning and management however, this research found the reality to be rather different.   Additional instruments are required to bring together conservation and development objectives such as conservation education programmes and training opportunities to stimulate small business development such as tailoring, gardening, poultry farming and weaving.   This willonly be achieved with effective negotiation between CMC members, IPAC workers, local people and Forest Department staff to enable a multi-faceted approach. This would enable the CMC to play a more effective role, particularly if all those involved were honest, open and sincere, and the activities of the CMC was kept free from political influence.

Conclusions

Effectiveness of the co-management approach

Each case study area had specific underlying problems and requirements but all the co-management initiatives need adequate and enduring financial support and strategies to improve their capacity to represent and empower local communities, particularly as locally influential people may have vested interests. Adequate funding is a basic component of effective management and good governance in Pas as this enables strengthening governance, building administrative and technical capacity in both protected area personnel and community organizations, long-term planning and transparent decision-making.

The co-management approach has not been effective in educating local villagers about the value of wildlife conservation. If it is to be successful, all stakeholders from local governments, socio-economic elite, sawmill operators, brickfield owners, charcoal producers, and furniture shop owners all need to engage with this ot it will be difficult to convince them to support forest protection and sustainable natural resource management. Timber is important to a wide variety of livelihoods, so supply chain analysis is needed to understand scale of use and whether this could be substituted by other materials or timber from other sources. A robust monitoring system is required, involving Forest Department representatives, the co-management committee and all those concerned for conservation of the forest resources to measure progress.

Recommendations:

Participation of stakeholders

A co-management planning approach that includes wider stakeholder participation is required. This should cover enhanced health care and education, the rights of women, the youth and indigenous people, and promote a democratic process of engagement to achieve sustainable livelihoods. This requires a wider range of stakeholders to be actively involved and for these to be on an equal footing with representatives of government departments and international, non-governmental organizations. Empowerment of women is essential and can only be assured through education, training and policies and improving their access to assets, human and civil rights, job opportunities and participation in decision-making.

Social and economic incentives

According to the Durban Treaty (UNFCCC, 2011), good relations with local communities is crucial to effective conservation. The easiest way to encourage a positive attitude among these is to ensure they receive tangible economic benefits from the existence of

the PA (Kopylova *et al.,* 2011). This will require identification of realistic, long term sustainable resource use strategies that are effectively monitored, and to quantify the impact of these on local people's livelihoods and so the need for alternative opportunities. This could also be done by providing compensation for loss of access to forest resources. This would have to be done fairly, with benefit to all within a target community or there is likely to be long term resentment between those who have benefited and those who have not.

Sustainable forest resource management

Establishment of sustainable levels of harvesting, development of strong marketing infrastructure and building strong networks among and between producers, traders and companies are all essential elements of a productive silvicultural system. An environmental policy focusing on conservation and protection of resources without taking into account those who have historically depended on forest resources is likely to increase both poverty and illegal harvesting. It is bound to fail. Development based on indigenous knowledge and acknowledging the role of traditional livelihoods within sustainable development and the links between environmental management, science and well-being is more likely to succeed.

Development of tourism

The potential for tourism expansion is significant and could increase local incomes while satisfying ecological imperatives. Management plans should, therefore, be produced that integrate local communities into ecotourism development, and incorporate policies for diversification into this area. For this to be realised in-depth understanding is needed firstly regarding the requirements of domestic and international tourists and the potential impact of increasing numbers and secondly, how tourism could provide local livelihood opportunities.

Institutional restructuring and political will

If management plans are to be implemented effectively, devolution and decentralization of authority within and between different layers of government institutions are crucial. The existing management process involves highly bureaucratic and centralized decision-making, with power lying at the higher levels. Institutional restructuring and policy reform are essential to enable inclusion and empowerment of local communities in the co-management approach and equity in benefit sharing. This is likely to be the greatest challenge to effective co-management planning. It will require high level political support to enable reforms at the local level. Without this there is a danger that the power of entrenched local interests will hamper implementation of a genuine co-management approach and more effective Protected Area management.

Acknowledgements

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Table 1 Participants responses in the focus group discussions

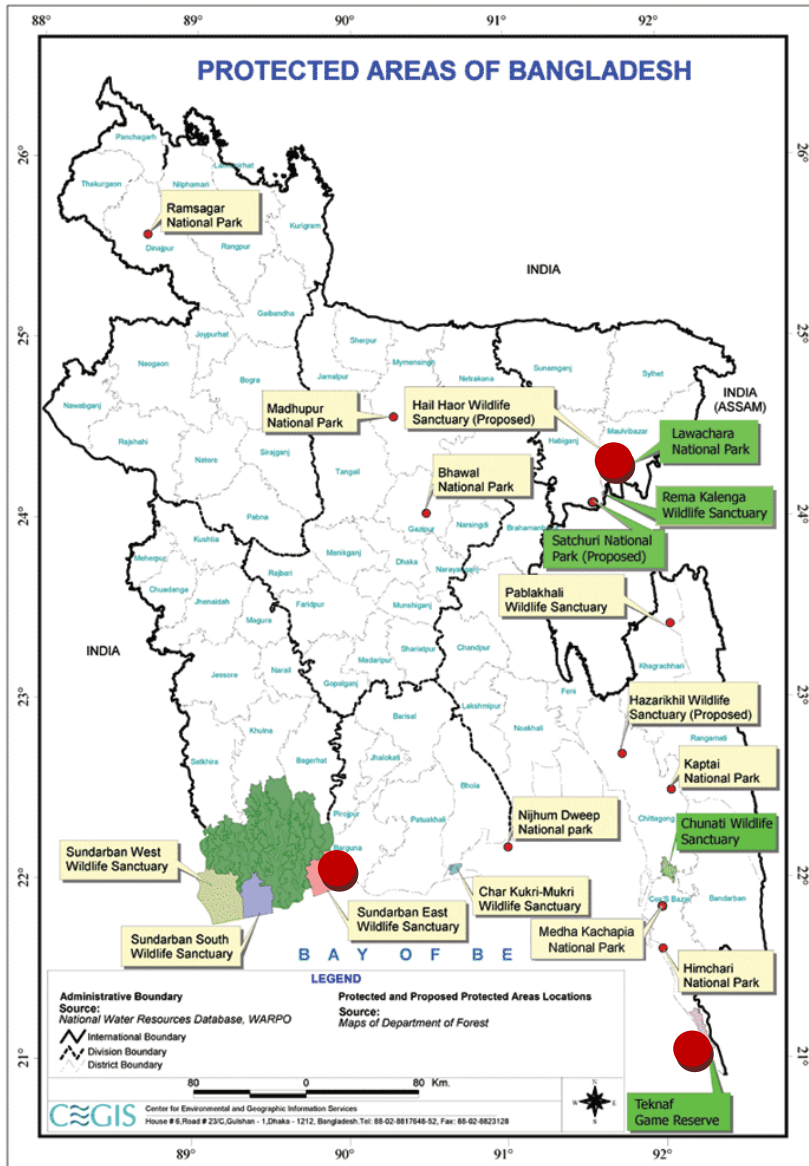| National Park/Wildlife Sanctuary	Awareness of Co-management	Perception of benefit
Lawachara National Park (N=41)	68% (N=28)	39% (N=16)
Teknaf Wildlife Sanctuary (N=62)	54% (N=33)	34% (N=21)
Sunderbans Wildlife Sanctuary (65)	61% (N=40)	43% (N=28)

Figure 1. Map showing Protected Areas of Bangladesh
(Mukul *et al.,* 2008).

Table 2 The composition of the Co-management Councils and committees

Stakeholder group	Designated number of council members	Designated number of committee members
Local government	12	4
Local elites	7	2-3
Resource owning groups	5	2
Forest users groups and federations	9	2
Local youth	2	1
Indigenous communities	3	2
Law enforcing authorities	2	1
Forest Department (ACF/RO)	2	1
Local NGOs/ CBOs	5	1
Other government agencies/departments	4	2
Total members	**51**	**18-19**