

Ecotourism as a Means of Sustaining Livelihood, Wildlife Management and Biodiversity Conservation-A case in Nameri National Park of Assam: India

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Abstract

Community-based Ecotourism (CBET) is an emerging concept. It is being discussed as an important tool for economically benefiting communities that have a feature that fulfils a tourist's desire for uniqueness. Ecotourism is potentially important for communities reside nearby protected areas. Here, an attempt has been made to evaluate ecotourism initiatives in Nameri National Park, steps that have been introduced by the Assam (Bhorelli) Angling and Conservation Association (ABACA). This association began nature-based tourism ventures in 1956, bringing benefits to the local populace in terms of income, improved infrastructure, employment opportunities and exposure. The community's capacity to facilitate resource-related conflicts has improved following support from development institutions along with facilities provided by the organization. An expanding livelihood base and sustainable biodiversity management measures are reducing locally the vulnerability of resources and man-animal conflicts. The present research is based on data collected using semi-structured interviews, updated using information gathered during successive local meetings. A process of triangulation was followed whereby key informants and focus groups were interviewed and different sites (e.g., homestead, ecocamp, village market, river bank and in the forest) visited. A snowball sampling procedure was used to collect information. Interview questions touched on livelihood options, wildlife conservation and tourist resource management. The evidence collected confirms that the numbers of wildlife (including charismatic species) in the park have either remained stable or increased. The number of White Winged Wood Duck (*Cairina scutulata*), a critically endangered avian species, now stands at 424, having risen from low numbers at the time of project inception in 1981. Elephant, bird species and bush-loving wildlife have more than doubled following an increase in plant biomass plus anti-poaching campaigns spearheaded by community members who reside near the park. This paper confirms the concept of community-based ecotourism as a means of promoting sustainable management initiatives and producing benefits for communities that live on the fringe of Nameri National Park.

Introduction

Protected areas have great potential for recreation and ecotourism. Recreation and ecotourism have been introduced into protected areas which have helped to retain reveal the ecological value and counter the fragility of the area (Brechin, *et. al.* 1991). The impression of Nameri National Park on tourists and visitors has always been associated with outdoor recreation. Despite being small in area, this Park has a significant array of landscape and scenery features as well as the cultural variety of communities residing near the park. This natural setting embraces a variety of ecological habitats for various animals and plant species, essential for the development of ecotourism (Bhattacharya, 2004).

Ecotourism tries to preserve cultural integrity because human values cannot be easily separated from natural value. Most potential ecotourism sites are inhabited by ethnic minorities (Nepal, 2000). The principle of 'encouraging community participation in ecotourism activities' creates income and helps maintain the cultural identity of the host communities. These communities have a deep understanding of traditional festivals, cultivation and land use customs, culinary culture, traditional lifestyle, handicrafts and history (Zurick, 1992). The success of ecotourism depends on the elements available in a particular tourist destination. The strength of these elements directly affects the flow of tourists into the spot (Gee, 1959). The objectives of the present study are to highlight the resource base of the Nameri National Park, and to evaluate the impacts of ecotourism on the livelihood, wildlife management and biodiversity conservation of the park.

Methods and Study Area

The present reserach is based on data collected between January and April 2020 using semistructured interviews, updated using information gathered during successive local meetings. During the first phase of collecting informations from the area Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal

(PRA) procedure were followed to get first hand information. Based on the preliminary survey, a process of triangulation (more than one method of collecting information) was followed whereby key informants and focus groups were interviewed and different sites (e.g. homestead, ecocamp, village market, river bank and in the forest) visited. A snowball sampling procedure was used where the information of the unknown or hidden respondent were collected with the help of known respondent. Interview questions touched on livelihood options, wildlife conservation, and tourist resource management. The operation of homestays, ecocamp and the tourism management committee was also investigated. A total of 28 individuals (10 local tour guides, 6 women's groups, 14 boatmen, 14 gardeners and 12 forest persons) were interviewed during the visit. The respondent was also interviewed regarding the sustainability of the tourism resources in the area and man animal conflict. The forest dwellers in the buffers of the park try to maintain the biodiversity through minimizing their dependencies on forest-based livelihood rather promoting tourism in a sustainable manner.

The study region covers Nameri National Park of Assam located in 26°50'48''N to 27°03'43''N Latitudes and 92°39'E to 92°59'E Longitudes covering an area of 200 km² in the northern bank of river Brahmaputra, in Sonitpur district of Assam (India). Nameri is covered by tropical evergreen, semi-evergreen and moist deciduous forests with cane and bamboo breaks and narrow stripes of open grassland along rivers. Grassland occurs on less than 10 per cent of the total area of the park while the semi-evergreen and moist deciduous species dominate the area. The Park is enriched with threatened plants and animal species in the International Union for Conservation of Nature's (IUCN) Red List categories (Barua et al. 1999). Parts of the area were declared as Nameri Reserve Forest (Present East Buffer) in 1876 and Nameri Wildlife Sanctuary in 1985. The Nameri National Park was established in 1998.

Results

The Assam (Bhorelli) Anglers and Conservation Association (ABACA) is a joint venture between the local community and the tourism entrepreneur. Since its inception in 1956, ABACA has created employment opportunities and promoted the natural resource management initiatives of the local community in several ways. The community has benefitted from a fee that is paid by ABACA for the lease of land. About 10 hectares of land have been leased at a fee of INR 150,000 per year. The community also receives amounts nearing INR. 5000 per year as bed charges for local accommodation for the tourists who visit the area. The community uses these earnings to support different community livelihood initiatives such as funding self-help groups, construction of schools, community houses, roads and facilities for community festivals.

An eco-camp provides eco-friendly accommodation in the park and pays monthly salaries to 35 members of staff, drawn from the local community who serve at the camp. The workers include security guards, camp attendants, maintenance and clerical staff as well as cultural troops (performing local dances in the camp during tourist seasons) from nearby villages. Increasingly, local people are complementing their sources of income with payments received as casual workers. Up to 20 casual workers are absorbed by the eco-camp especially during the construction and repair phases. Individual households benefit from the sale of firewood and charcoal and the different organic foods/vegetables that are sold at the camps to tourists. Earnings received from ecotourism are used in various ways, including purchase of livestock, land and equipment, thereby contributing towards community wellbeing and local food security.

The communities that reside nearby the park are benefitting from improved infrastructure and systems. These include an 18 km earth road network that has been constructed by the forest department in the conservation area and nearby. The all-weather road has improved community access to outside markets. To increase the resident wildlife and birds, the community has constructed five small barrages on the tributaries and planted fruit bearing trees and trees to encourage wildlife habitation. These water sources and plantations have reduced competition for grazing resources between livestock and wildlife. The forest department also allowed the community to use graze livestock, especially during drought. Access to the new water sources has reduced community vulnerability to drought-related disasters. Community contact to the outside world has improved following access to electricity and telephone lines provided by the eco-camp authority and forest department.

More benefits to the local community come in a form of a contribution from the department of forest and environment, Government of Assam. The forest department has been involved in the establishment of ABACA to promote ecotourism in the park and also facilitated negotiations between the community and ABACA through workshops and exposure tours, helped to build trust for the project among the members of the community. Amounts are paid to local people in the area who have livestock and have agreed to share grazing resources with wildlife. This contribution is meant to offset the costs incurred by the

communities for living with wildlife and, build trust and ownership of wildlife resources among the local people. The major investment of ecotourism-related earnings is used for livelihood because there is no other foremost means of income generation.

Awareness and mobilization workshops that were funded by department of forestry and ABACA have improved the capacity of individuals working in different sectors. The members have been empowered through exposure tours organized to surrounding areas. Selected members were exposed to different ecotourism complementary technologies in the other parts of the states like Kaziranga, Dibru-Saikhowa, Mazuli River Island and Manas National Park etc. Tour participants identified organic fodder production, handicrafts, local cuisine eco-friendly accommodation and beekeeping as activities for inclusion in ecotourism-complementary packages, modified to the local setting and conditions.

Following familiarisation tours and consultative meetings, local members have identified various forums for sharing information on technological innovations and possible funding. Tour participants have been instrumental in facilitating negotiations on wildlife-related conflicts, using experience gained as they listened to narration by host institutions during the tours.

Discussion

Wildlife management, biodiversity conservation and sustaining livelihood practices have made little positive impact on natural resource management in Nameri National Park. This is primarily because of lack of a national policy to integrate the initiatives with resource management and conservation. Conservation is still being influenced by the premise that wildlife needs to be protected to avoid overutilization and/or through competition with livestock. Despite this orthodox practice, there is evidence that the numbers of wildlife (including charismatic species) in the park have either remained stable or increased. The number of White Winged Wood Duck (*Cairina scutulata*) stands at 424, having risen from a very small population at the time of project inception in 1981. Elephant, bird species and bush-loving wildlife have more than doubled following the increase in biomass and anti-poaching campaigns spearheaded by community reside near by the park. ABACA has plans to introduce certain floral species to meet 'customer demand'. Following familiarisation tours, the community has expressed interest to introduce an orchid sanctuary, a vermi-composting unit and an organic orchard.

Through familiarisation tours and consultative meetings, community members have been sensitized to the need to reduce livestock numbers. The membership consists of individuals who are engaged in cultivation along buffers in the Nameri National Park. To reduce pressure on natural pastures and dependence on forest, most of these members use complementary pastures such as napier grass and maize stalks. Improved maintenance of ponds, dependence on piped water and the construction of private water pans/barrages over tributaries have reduced competition between livestock and wildlife for water resources. Consequently, formerly degraded sites around community watering points are regenerating. The pressure on grazing resources also reduced following the construction of ponds and development of grassland under an eco-restoration program in the conservation area funded by Department of Forest and Environment, Government of Assam.

The different interventions have reduced competition on resources available for livestock, especially from resident wildlife species. Abject poverty, improved contact with the outside world and increased numbers of resident wildlife have contributed to poaching. This situation leads to either the community losing valuable sources of income or the numbers of the specific animal species exceeding the ecological limit leading to environmental degradation. Respondents confirmed that poaching was caused by individuals who feel that they do not own ecotourism initiatives. In a way, this reaction reflects a problem that ecotourism has either failed to address or one that is beyond its scope in the context of existing institutional frameworks.

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Conclusions

This paper has established how pilot ecotourism initiatives under the Assam (Bhorelli) Anglers and Conservation Association (ABACA) have changed local practices and attitudes towards wildlife management, biodiversity conservation and livelihood generation in the area. However, some negative impacts must be managed. These impacts include a trend to social differentiation that threatens to marginalise further impoverished groups/individuals. Young well-to-do locals are increasingly their power in the community following their exposure to the outside world and the wealth they have accumulated, thereby eroding long-established norms. This new form of marginalization has to be addressed.

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