UNESCO-IUCN Enhancing Our Heritage Project:
Monitoring and Managing for Success in Natural World Heritage Sites

Technical Report No. 07

Opportunities and Limitations for Benefit Sharing in Select World Heritage Sites:

Kaziranga National Park
Keoladeo National Park
Royal Chitwan National




UNITED NATIONS FOUNDATION

Project Team

Dr. V.B Mathur
Professor & Project Coordinator

Sh. P.R. Sinha
Director, WII & Project Leader

Consultant

Ms. Seema Bhatt

Contents

Summary

A major portion of biodiversity in India and Nepal is conserved through their respective protected area systems, which range from National Parks, Wildlife Sanctuaries, and Wildlife Reserves to Conservation Areas. Some of these areas, through international conventions have also been designated Ramsar Sites, World Heritage Sites etc. However, it must be kept in mind that there are several million people in these countries who live in and around these areas and continue to depend (in small or large measure) on these areas to meet their livelihood needs. Legally, extraction of any natural product from national parks is banned. Despite this, there are benefits that local communities do and can derive from these areas. This study looks at two national parks, Keoladeo Ghana and Kaziranga, in India and the Royal Chitwan National Park in Nepal. All three are also World Heritage Sites. The study examines the benefits local communities are getting, as also potential benefits from these areas, within the purview of existing legal systems. The study also looks at existing benefit sharing mechanisms, suggests how these could be strengthened and recommends how other mechanisms could be developed where they do not exist.

Methodology

The study is based on field visits to these World Heritage Sites in India and Nepal, discussions with park personnel and many other stakeholders ranging from local community members, hoteliers, lodge owners, rickshaw pullers, tour guides and NGO members to tourists. The study has also relied on secondary information, which includes management plans for the parks, project reports, meeting/workshop reports and other research material (See **Annexe 1** for details about field visits).

I owe my gratitude to many people who made this study possible. My thanks to the two Park Directors, Shri KCA Arun Prasad in Keoldaeo Ghana, Shri N.C Vasu in Kaziranga and Shri Kamal Jung Kunwar, Shri Ramji Shibakoti and Shri Meghnath Kafle in the Royal Chitwan Park for their kind hospitality, for answering innumerable questions very patiently and for all the support during field visits. My thanks to all the park staff that accompanied me on field visits and translated, where necessary. My heartfelt thanks to all the local community members who took time out to talk to me and share their experiences. Special thanks to Kishore Rao, UNESCO; Shruti Sharma, former Director. Keoladeo Ghana and to Haren from WWF India (Keoladeo Ghana field office) for their insights. Thanks to Nidhi, J.B. Giri and M.Kali Durai from the WII Diploma Course for sharing their data and experiences with me. Thanks finally to Mr. Manoj Misra and Dr.V.B.Mathur for their support.

Introduction

Benefits to Local Communities[1]

[1] The term 'communities' here is used to denote both distinct groupings and individuals within them. It is recognised that communities in this sense are by no means homogenous entities, and that caste, class, gender, and other internal differences can have substantial impact on conservation of biodiversity

The present conservation model being used in India, Nepal and many other developing countries is such that most often, while local communities end up paying the cost of conservation (loss of access to resources etc.), it is the non-local national/ international communities that enjoy the benefits.

Local communities, on the other hand could be made partners in conservation if they do get tangible and sometimes even intangible benefits from protected areas. There are several kinds of benefits that local communities have been and can continue to derive from protected areas. A range of benefits is discussed (Kothari et al 1998 and Kothari 2000):

Subsistence Benefits

As mentioned earlier, rural communities living in and around protected areas still depend quite heavily on these areas for their subsistence needs ranging from food, fodder, fuel wood, medicine, housing material etc. Restriction to the access of these areas has led to serious conflict and it would be important to look at providing alternate livelihood sources if these areas are to survive. There is a huge cost that these communities pay for conservation, which unfortunately most often goes unrecognised.

Economic Benefits

i) ***Forest and Other Produce***: Important to the economic survival of local communities has been the collection and sale of Non-Timber Forest Produce (NTFP) and aquatic and grassland products. According to one estimate NTFP income accounts for 55 per cent of the total employment in the forestry sector in India (Pachauri, undated). It is no wonder then that a curb on NTFP collection has led to increasing hostility from local communities.

ii) ***Employment***: Conservation and management of protected areas have the potential to generate substantial employment through various activities such as removal of exotic species, construction within these areas etc. At present local people are hired as labour and the selection is a random process. Benefits from these activities are mainly to individuals who are hired. No mechanisms exist to share benefits from park related activities.

iii) ***Tourism:*** Perhaps the biggest revenue earner and the biggest benefit local people could derive from protected areas is through tourism. There are significant tourism initiatives in various protected areas, however very few generate revenue for local communities. There are few mechanisms to train and hire local community members for tourism related activities. There are even fewer enterprises that are community owned and managed.

iv) ***Compensation for Wildlife Damage***: Damage to crops, livestock and human health/life is a common problem faced by almost all communities living in and around protected areas and this causes considerable resentment against conservation authorities. Claims for compensation involve tedious procedures and often compensation itself is delayed. Compensation against damage caused needs to be enhanced and the process made much simpler. Timely compensation will actually be beneficial for people, who in turn will be more positive towards conservation.

v) ***Financial Rewards for Reporting Illegal Activities***: Local communities could become very good informants to report illegal activities such as timber felling and poaching. A scheme, which offers financial remuneration for any such reporting will act as a positive incentive for local people.

vi) ***Direct Revenue from Sale of Products:*** Local people could also benefit from the sale of products such as handicrafts and value added food products such as processed honey.

Appropriate Livelihood and Developmental Benefits

Many communities situated in and around conservation areas are in need for development inputs. These could be decentralised measures for water harvesting, better housing, schools, toilets etc. Schemes, which link conservation to development could support such measures, thereby creating a stake for the people and also acting as a positive incentive.

Capacity Building, Training, Education Benefits

Communities could also benefit if technical inputs are provided to upgrade resource use skills. Capacity building of local communities could help in enhancing their ability to get better jobs in the protected area itself.

Benefits from Social Recognition and Sense of Pride

It is important to recognise that for communities non-material benefits are as important as material ones. Despite restrictions, local communities do feel a sense of pride in the protected area in their vicinity. They also feel very encouraged when acknowledged for their contribution towards conservation. Communities, by and large feel a sense of empowerment if they are involved in conservation and development activities. This also helps them indirectly to build their confidence and ability to interact with outsiders.

People still depend on forest resources for subsistence

India

One of India's most sign wildlife and biodiversity has been the establishment of National Parks and Wildlife Sanctuaries (generally called 'Protected Areas' or PAs). These areas have been set up under the Wildlife (Protection) Act, 1972. At present there are 89 National Parks and 500 Wildlife Sanctuaries (a total of

589 PAs) occupying 156,000 sq.kms. of India's geographical area (MoEF 2003). Many of these areas also fall under other categories of recognition on the basis of several International Conventions. Many wetlands, for example have been declared Ramsar Sites under the Ramsar Convention. Similarly, five PAs have been declared World Heritage Sites under the World Heritage Convention.

Over 70% of India's population lives in rural areas, many of which fall under the jurisdiction of areas, which have now been declared as 'protected'. A major part of their livelihood depends on natural resources for survival. Studies done by the Delhi based Indian Institute of Public Administration (IIPA) in the 1980s had conservatively estimated that between three and six million people (about the entire population of Denmark) were either living in or around PAs and were crucially dependant on their resources for survival.

Forests provide the main source of food particularly for the tribals and the rural poor. One estimate suggests that 60 per cent of forest products are consumed as food or as a dietary supplement by forest dwellers (Khare 1998). A World Bank report (1993) states that about 30 per cent of the diet of tribal groups living in and around the forests for Maharashtra is derived from forest products. Several tribes in the Andaman and Nicobar islands depend entirely on food derived from forests and the sea (Saigal et al 1996). In many areas of the country, fuel wood and fodder are important for the subsistence of people. 70 per cent of the rural and 50 per cent of the urban people still use fuel wood for cooking purposes, most of which comes from forests (Saigal et al 1996). Livestock also plays an important role in the local economy. People are also mainly dependent on forests for fodder. Besides this, a number of Non-Timber Forest Products (NTFP) are collected by people and several sold on a commercial basis. Biomass harvests from common land account for up to 23 per cent of household income from all sources (Rangachari and Mukherji 2000). A large percentage of the Indian population still relies on traditional medicine. Traditional health systems of medicine meet the health care needs of more than 70 per cent of India's population. Over 7,500 species of plants are estimated to be used by ethnic communities for human and veterinary health care across the country (Shankar 1998). In the recent years the demand for herbal products has increased voluminously the world over.

However, people's access to PAs is limited. According to the Wildlife (Protection) Act 1972 (subsequently amended in 1991 and 2002), National Parks are legally granted a high degree of protection. No human activity such as firewood collection or grazing is allowed within the park. Wildlife Sanctuaries are accorded a lesser level of protection and certain types of activities are allowed within these areas.

A relatively recent Supreme Court judgement has further curtailed the rights of people within PAs. In February 2000, the Supreme Court passed an order restraining state governments and their agencies from removing dead, dying or wind-fallen trees and grasses etc. from any national park or sanctuary in the country. The Ministry of Environment and Forests (MoEF) interpreted this order as a complete blanket ban on extraction of timber and other resources from all protected areas. Further, the Supreme

Court appointed Central Empowered Committee (CEC) in a letter dated July 2, 2004 to senior administrative and forest officials of all States and Union Territories, has stated that: "Even the removal of grass etc. from national parks and sanctuaries has been prohibited (Sekhsaria and Vagholikar 2004).

Benefit Sharing Mechanisms through Existing Schemes

Ecodevelopment Committees (EDCs)

In 1991, the Government of India launched a new concept in protected area management through a centrally sponsored scheme. This concept was that of ecodevelopment and was focussed on developing site-specific packages of measures for conserving biodiversity through local economic development. The main aspect of ecodevelopment is to substitute people's dependency on protected areas by providing sustainable alternatives outside of these areas (Khare 1998). The government launched ecodevelopment in 80 protected areas across the country. The project received a big boost when the Government of India negotiated a larger ecodevelopment project with a loan component from IDA and a GEF grant (Khare 1988). This particular project was implemented in seven protected areas. All ecodevelopment activities are administered through Ecodevelopment Committees (EDCs).

EDCs could potentially serve as benefit sharing mechanisms. Hundreds of EDCS have been formed in protected areas across the country. They are also working very effectively in some of these areas. In the Great Himalayan National park, for example, there are 18 EDCs with over 1000 members each[2]. These EDCs are active to some extent in the participatory management of the park. In the Corbett National Park so far 12 EDCs have been formed and Ecodevelopment Committee members are being trained in participatory methods for microplanning and monitoring[3]. In Periyar, presently there are 72 EDCs, in different categories. These include village EDCs in tribal settlements and hamlets (for the socio-economic upliftment of the groups); user group based EDCs for graziers, fuel wood collectors, thatching grass collectors (for reduction on negative impact on the protected area) and EDCs for professional groups such as ex-Cinnamon Bark Collector EDCs, Tribal Tracker cum Guide EDCs, Watcher Welfare EDCs etc. (for the promotion of long term positive interaction of the group with the protected area[4].

EDCs seem to perform different functions in different protected areas. However, as institutions they do exist and could serve as potential benefit sharing mechanisms in protected areas, if adequately supported and the capacity of members adequately built. But, it must also be kept in mind that EDCs are not always equitable. Poor and marginalized people are often inadequately represented in these bodies and even if represented, are unable to influence the decision-making process. Most often there is very little scope for women to even attend EDC meetings[5].

[2] http://www.greathimalayannationalpark.com/GHNP_commorganiz.htm.
[3] http://www.sanctuaryasia.com/projecttiger/corbett.doc
[4] http://www.periyartigerreserve.org/html/iedp_components.htm
[5] http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/x3030E/x3030e05.htm

Forest Development Agencies (FDAs)

Forest Development Committees (FDAs) are relatively new institutions primarily set up to achieve interconnectivity between rural development, forest conservation and employment generation in villages adjoining forests through a decentralised set up. FDAs will have within them, village forest committees, ecodevelopment committees, forest officials and officials from other departments like agriculture, animal husbandry, soil conservation, tribal welfare, public health, education etc. It is visualised that FDAs will have greater flexibility in project formulation and identification of funding sources, thereby meeting local requirements effectively. FDAs are also seen as institutions through which funds will be channelised to EDCs and can also be considered mechanisms for benefit sharing. FDAs, at present are not functioning in too many places and their effectiveness as institutions is yet to be tested.

Self Help Groups (SHGs)

The term Self Help Group (SHG) is used to describe a wide range of financial and non-financial associations. In India SHGs are usually seen as groups that manage or lend their own accumulated savings or funds leveraged through external sources. SHGs are by and large promoted by government agencies, NGOs or banks mostly as part of integrated development programmes. The apex bank for rural development, The National Bank for Agriculture and Rural Development (NABARD) supports one of the largest programmes of promoting SHGs in the country. This programme covered 7.8 million families with 90 per cent women members by March 2002. It also involved 2,155 non-government organizations (NGOs) and other self-help promoting institutions. There are also several other banks, and donor agencies, which lend support to SHGs. SHGs, although not promoted by the Forest Department, are important bodies to be considered as benefit sharing mechanisms. Their operation in many parts of the country has been very successful and they are used as benefit sharing mechanisms in several sites[6].

Keoladeo Ghana National Park

The Keoladeo National Park (KNP) lies in the Bharatpur district of the State of Rajasthan, nestled at the confluence of the rivers Banganga and Gambhir. It is named after the Keoladeo (Shiva) temple located in the centre of the park. It was earlier known as " Ghana, " meaning dense forest. The wide diversity of habitats ranging from marshes,

[6] http://www.microfinancegateway.org/files/3736_SHGREPORT.pdf

woodlands, scrublands, and grasslands to denuded saline patches in the park, support an amazing variety of plant and animal species.

The strategic location of the park makes it extremely significant from the ornithological point of view. It provides an ideal habitat for migratory waterfowl arriving in the Indian subcontinent before dispersing to various areas. It is a particularly important site for waterfowl converging before departing to breeding grounds in the western Palaearctic region. The park has also been the only regular wintering area in India for the central population of the rare and endangered Siberian crane. In the colonial times, this park was a haven for bird shoots.

About 21 villages and hamlets are located around Keoladeo National Park with an approximate population of 14,509 people. Bharatpur city, with a total population of 1,50,017 is also on the periphery of the park. The economy of these villages is primarily pastoral, dependent on milk sales and agriculture.

Keoladeo Ghana's location within the golden triangle of Indian tourism (New Delhi-Jaipur – Agra) attracts a large number of domestic as well as international visitors each year. KNP is not only India's internationally acclaimed park but is also a famous Ramsar site and UNESCO's World Heritage site as well.

The area that the park occupies constitutes a natural depression and could be part of the riverbed of the river Yamuna, which then changed its course. This water body was modified in the 18th century. Water was regulated from the rivers Gambhir and Banganga and a system of dykes and canals built for the dual purpose of flood control and irrigation. Somewhere between 1726 and 1763, the then ruler of the erstwhile princely state of Bharatpur constructed the Ajan (*bandh*) dam. In 1899 the area was developed into a duck shooting reserve. Lord Curzon formally inaugurated this with an organised duck shoot on 2nd December 1902.

In 1919 the boundaries of this duck shoot reserve were notified for the first time and the rest of the land was allotted for cultivation. Old and infirm cows were left in Ghana forests. Some of these cows survived and their new generation became feral. 1925 saw the first Bharatpur Forest Act being passed. Rules for the protection of forests and wild animals were framed. By 1956, the (*Maharaja*) ruler of the state decided to hand over the reserve to the Government of Rajasthan and it was then notified a Bird Sanctuary. The rulers however still retained their hunting rights up until 1972. In the year 1967 the area of Keoladeo Ghana was finally declared as a protected forest under the provisions of Rajasthan Forest Act, 1953 and the area of Keoladeo Ghana finally notified as a Sanctuary with an area of 28.723 sq.km.

In 1981, the conservation status of this wildlife sanctuary was raised to that of a national park under the Wildlife (Protection) Act, 1972. In accordance with the provisions of the Act, grazing of livestock inside Keoladeo National Park was banned overnight in 1982. Violence erupted in opposition to the ban. Seven villagers lost their lives. Villagers living

around the park were denied access through the park and gates along the boundary wall were closed. This resulted in the alienation of people from the park and its management.

Resource Dependency

The reserve was initially created as a hunting ground for waterfowl. However, it also served as the grazing area for the village cattle. Besides, it prevented feral cows from raiding the village crops and protected Bharatpur from the floods that frequently occurred. Local people's lives were closely linked to the reserve. While the reserve was with the erstwhile rulers, they still permitted villagers to harvest grass for a nominal fee from it and also collect timber, wood and dung.

Villagers were also permitted to harvest grass, fruit for consumption and medicinal herbs for primary health care. Before the declaration of this reserve as a national park, it was a major source for the grass *khus (Veteveria ziznoides*), the roots of which are highly sought after for the extraction of perfume. An outsider was usually given the contract for getting these roots dug. The contractor in turn hired local people to dig the roots. A mobile extraction unit used to be set up in the reserve itself and the oil extracted. This provided significant employment for local people. Bharatpur was famous for its *khus* perfume. The grasslands were auctioned every year for the removal of *Khus* (*Veteveria zizanoides*), before the reserve was declared a national park.
(Source: Keoladeo Ghana Management Plan)

The declaration of the reserve as national park in 1982 curbed all resource use by local communities from inside the park. However, a ten-year (1980-1990) intensive study of the park ecology concluded that the withdrawal of cattle from the system had led to an increase in vegetation, thus reducing the ideal habitat meant for many species of waterfowl. The study recommended that buffaloes be allowed to graze inside the park, because they were actually good for the ecosystem. Since the Wildlife (Protection) Act, 1972 provides for the removal of biological resources from the national park by a permit system with the approval of the state government, this clause was availed of and permits were granted to people for the removal of grass for four months of the year (WWF India 1996).

However, this system has been withdrawn in the wake of the Supreme Court judgment regarding the non-removal of any forest product from any protected area. People are forced to access many of the resources illegally from the park today.

A study carried out by Murty and Menkhaus (1994), found that almost all of the income derived from tourism (about Indian Rs. 24.5 lakhs or US$55,000) goes to private or public sector tourism agencies, while the local communities suffer a loss of about Indian Rs. 20 million (US$60,000) per year due to agricultural losses by water logging related to the water management in the Park, restrictions on fuel and fodder, etc.

Benefits and Opportunities/Limitations for Sharing of Benefits

Water

Over the past few years, water has become an issue of prime concern for the community living around this park. The only source of water for the park and the villagers (for

irrigation) for many years has been the Ajan dam. However, with the drying up of the rivers that originally supplied water to this dam, the only source of water is now the Panchna dam, which is built on the Gambhir river, upstream near Karuali. This dam is about 90 km from the Ajan dam. The amount of water received is totally dependent on the amount of rainfall. The years 1997,2000,2001 and 2002 have been drought years and the park and the villagers, as well felt the brunt of it. In a dramatic turn of events this year (2005), only the surplus water from the Panchna dam was released. When the Park authorities asked for the release of more water, they were informed that the water was required by the farmers upstream of the river and would not be released. The park and the people living downstream are both bereft of water. This today is the primary source of concern (Varshney 2005).

Subsistence Needs

Fuel wood

Fuel wood continues to remain a problem since its collection is not allowed from inside the park. Discussions with people during village visits and meetings organised by the park authorities revealed that local people wanted subsidies for Liquefied Petroleum Gas (LPG) gas connections. However, women made known the fact that fuel wood would continue to be used for providing warmth during the winter months, even if LPG cylinders became commonplace. At present, the Forest Department does have funds allocated specifically to provide LPG connections in the villages around the park, but not enough for a LPG connection per household. The question then remains as to how these will be distributed in villages. Conversations with the Forest Department staff indicated that they would use the families 'Below Poverty Line' as the criterion for distributing LPG gas cylinders. It is not clear if the selected families will be able to afford to replace these cylinders, once they are to be refilled. Few biogas plants have also been installed in some villages but have not really been very successful.

Fodder Collection

For many years now, park authorities have been issuing permits to cut fodder grass inside the park. Each family on request used to get a permit on payment. Two people could go inside the park to cut grass and bring it back for the cattle. This practice has been however been discontinued as a result of the recent Supreme Court order, and is ironic since grass removal from the park is essential to maintain the ecosystem of the area.

Community Assets

Discussions with village women revealed that a primary matter of concern for them was the absence of toilets in their respective villages. One reason pointed out for this was the lack of community land for this purpose. Village women are left with no choice but to go to the park for the lack of any alternatives and also the lack of privacy. This is an issue of real concern and needs to be addressed.

Revenue Generation

Employment

Unemployment is rampant in this area, despite it being in the centre of a major tourist zone. This is also one reason why people's expectations from the park in terms of getting

employment are very high. Local community members do get employment for various park management related activities. These range from labour for construction works, removal of exotics such as water hyacinth and *Prosopis juliflora* to perhaps most importantly employment as guides and rickshaw pullers and in the hotels and restaurants situated around the park (details in the next section). There are no benefit sharing mechanisms for these activities since revenue earned through employment by the park is given to the individual who carries out a certain activity.

Tourism

Given the legal status of national parks, the most significant benefit the local communities derive in terms of revenue is from tourism. In an innovative move, this park is perhaps the only one where there been a conscious effort to involve local community members in tourism related activities by training and employing them as guides and rickshaw pullers. This move generated a very positive feeling among the communities towards the park authorities, when this was first initiated. However, in a meeting with rickshaw pullers and guides a feeling of anger was perceived. Local community members feel that only people from the peripheral villages should be taken for these jobs. At present many of the people are hired are from the town of Bharatpur. A break up of the people hired as rickshaw pullers indicates that the ratio of villagers to people from Bharatpur is more or less half (49 people from Bharatpur and 45 from villages). In terms of guides, 59 are from Bharatpur and 33 from the villages.

Today there are a total of 26 hotels in the vicinity of the park. Out of these local people own half of the hotels/ lodges and the other half are owned by people from nearby cities. In a meeting with hoteliers, owners of these enterprises were candid to admit that they prefer hiring trained staff from outside the area. Local villagers are hired only as labour. There is no move on the part of hoteliers to invest in the capacity building of villagers. Consequently the hotel sector, although dependent on nature tourism, retains an essentially urban character (Goodwin et al 1998).

It must be kept in mind, that tourism is a seasonal activity for Keoladeo. Local communities do benefit, but cannot afford to make this their only source of income. During the course of the research around Keoladeo National Park it became increasingly apparent that despite the significant potential for increasing tourist spending at Bharatpur, there were few mechanisms that could orientate revenue and employment benefits towards rural communities[7].

The recent years of drought, for example took a heavy toll on local people who were hired as tourist guides and rickshaw pullers. A suggestion that emerged as a result of this discussion was the development of satellite wetlands in the surrounding areas as tourist's spots. There were many village wetlands that did have water and have now become a refuge for birds. It was discussed that if the villagers were interested, they could develop these into tourist spots and also benefit from tourism revenues. The possibility of developing home stays, which could provide tourists with a village experience and also

[7] www.commerce.otago.ac.nz/tourism/current-issues/homepage.htm

earn some revenue for local communities, was discussed and local community members seemed amenable to these enterprises. Innovative ideas like these need to be also developed to ensure that a bad year at the park does not ruin the economy of people dependent on tourism revenues.

Compensation to Wildlife Damage

One of the biggest expectations local communities have from park authorities is timely compensation for wildlife damage. Mechanisms such as crop insurance could become a benefit that people actually derive from the park. A 32 km long and six-foot high boundary wall was constructed around the Park in 1981. This wall was constructed at the request of the community to prevent damage to its crops by wild animals from the park. This wall has however not been able to prevent animals, particularly Nilgai from jumping over and damaging the fields. In stakeholders' meetings held over the years, the community has repeatedly requested that the wall height to be increased by another two feet. This is yet to happen.

Ecodevelopment

Ecodevelopment, although part of the management plan of the park has not really been carried out in a very planned manner. Ecodevelopment Committees (EDCs), formulated almost six years ago are practically non functional. Park entry fees have an ecodevelopment surcharge. This fund is supposed to be routed back into the village economy for ecodevelopment activities. However, the money is yet to reach the villages. Villagers in villages visited are fully aware of this and are actually demanding to see this money.

In 2000, the Keoladeo National Park Development Society was formed under the chairmanship of the District Collector. This society was set up with the objective of working with local communities on ecodevelopment activities. At present some funds do go towards these activities, but this are not substantial. The society runs a bookshop at the park entrance and sells books and other mementos to tourists.

Self Esteem and Sense of Pride

This reserve has had a history of conflict with local communities ever since its status changed to that of a national park. This conflict still persists as local people continue to feel alienated and deprived. However, people do realise the importance of this park and despite everything are still proud of it. There is a sense of pride, which will only increase if people could derive more benefits from the park. Perhaps one way of doing this is by involving people in the management of the park. Another way of increasing people's stake within the park is to encourage and acknowledge their role in reporting on illegal activities from within the park. There are examples from the world over and from within India where local communities, given the right incentives have turned informants and helped in the protection of the area in question.

Discussion

The national park status of Keoladeo Ghana, does not allow for too many material benefits to flow from the park to local communities. However, it is clear from the above

description that there are benefits that still do accrue to communities. These benefits could be enhanced, provided there are mechanisms in place to distribute these benefits equitably. Meetings with local communities over the years have recorded the aspirations of these people, but very little has been to put these into concrete action.

Tourism is seen as one of the key activities from which local communities could derive benefits. In September 1996, a series of workshops were held in Bharatpur in order to discuss the tourism potential of the park[8]. There were a range of participants and these included, representatives from all sections of the local tourist industry, park staff and village headmen from communities adjacent to the park. Three schemes for routing benefits derived from tourism back to rural communities were discussed. One suggestion was to raise the entry fee, part of which could go for village development. However, the village representatives present were not very enthusiastic about this, given their experience with the ecodevelopment funds. The main objection from village representatives was the lack of appropriate institutions to administer this kind of fund. There was also a suggestion for an increase in other enterprises like the manufacture and sale of handicrafts particularly by local women. This again would need institutions to build capacity and then market these products. Research, relating to tourism around the Keoladeo National Park in the mid 90s, indicated that despite the tremendous potential for increasing the revenue from tourism at Bharatpur, there were few mechanisms that could orientate revenue and employment benefits towards rural communities[9].

Institutions such as EDCs do exist, but are not really functional. The challenge, in this case is to strengthen the functioning of these or look at other innovative ways to institutionalise benefit sharing in Keoladeo Ghana national park. If this is achieved, there is every possibility that the level of conflict between local communities and park authorities will decrease. Key to all this is to first build the capacity of local communities to be able to support and finally manage these institutions.

Despite many programmes and projects carried out in this park, continued dialogue with local communities is still not forthcoming. In 1995, WWF India with the collaboration of WWF International and the Rajasthan Forest Department and representatives from other state government and non-governmental organisations conducted a comprehensive Participatory Rural Appraisal (PRA) exercise in select villages surrounding the park. This exercise was conducted mainly to facilitate a process of participatory park management. It was felt that dialogue with local people would help reduce the antagonism people had towards the park. This exercise was extremely useful and did pave the way for more fruitful interaction (WWF India 1996). Unfortunately there was little follow up to it. Again in the year 2003, two meetings were organised with representatives from village communities. However, it is important that people see some concrete results from these dialogues. The component relating to community interaction needs to get incorporated into the management plan of the park. Meetings need to be had at regular intervals to

[8] www.commerce.otago.ac.nz/tourism/current-issues/homepage.htm

[9] www.commerce.otago.ac.nz/tourism/current-issues/homepage.htm

discuss relevant issues. Local communities will then feel a greater responsibility ownership towards the park and also help towards its better management.

Cattle inside Keoladeo Ghana National Park

Rickshaw Pullers in Keoladeo Ghana National Park

Kaziranga National Park

Kaziranga National Park is situated in the state of Assam, in northeast India. It is spread over the districts of Nagaon and Golaghat districts and has the mighty Brahmaputra river on the north and verdant Karbi Anglong hills towards the south.

There are many stories associated with the origin of the name 'Kaziranga'. The word *Kazi* in the local language *(Karbi*) means 'Goat' and *Rangai* means 'Red'. Kaziranga thus means the "Land of red goats (Deer)". Another legend says that a disciple of the founder of the *Vaishnava* Religion and a saint in his own right, Mahapurus Sankardeb was camped near a lake called *Narmora Beel* (which is now situated inside Kaziranga National Park). An old couple namely *Kazi* and *Rangai* with other devotees met with this disciple to express their grief for not having children. The saint consoled them and advised them to dig a big pond. He gave them a blessing that their name will be known for generations. Subsequently, the then ruler of Assam state, Swargdeo Pratap Singh was passing through the area and was offered fish. He liked the taste of this fish immensely and enquired about its origin. He was told that it came from an area called Kaziranga (named after the old couple).

Kaziranga National Park is formed by the alluvial deposits of the Brahmaputra river and its smaller tributaries, which carry a great amount of silt during the rainy season every year. These silt depositions and the changing course of the Brahmaputra have resulted in the formation of '*Beel*s'(water bodies/ lakes) of various sizes and depth. This process of erosion and deposition is continues along the Northern Boundary of Kaziranga National Park.

In the year 1903-04, the Government of Assam initiated the proposal to declare Kaziranga as a Reserved Forest for the primary purpose of conserving wildlife in general and the rhinoceros in particular in 57,273.6 acre area. Finally, in 1908, an area of 56,544 acres of land was declared as 'Reserved Forest'. In November 1916, the area was declared as a 'Game Sanctuary' and in 1950 renamed 'Kaziranga Wildlife Sanctuary'. In the year 1974, the area was declared as 'Kaziranga National Park'. During mid eighties the Government of Assam notified a number of areas for addition to the Kaziranga National Park. These additions were suggested mainly to secure corridors for migration of wild animals, and escape routes in case of high flooding. They were also meant to be included to extend the park and compensate for loss of park area due to erosion. In total six proposed additions have been notified three of which are pending finalization due to legal, administrative and financial reasons. The total area of Kaziranga National Park is 429.93 sq. km. The park has four ranges namely, Kohora, Agaratoli, Bagori and Burra Pahar.

Kaziranga National Park represents the largest undivided area of Brahmaputra Valley flood plain grassland and forests with associated large herbivores, avifauna and wetland values. Besides this, it also provides an entire range of habitat from the floodplains to grassland to hill evergreen forest communities. Kaziranga has the world 's largest population of Indian one horned Rhinoceros (*Rhinoceros unicornis),* Wild Buffalo (*Bubalus bubalis*), Swamp Deer (*Cervus duvauceli ranjitsinghi*). It also a high ecological density of Tigers (*Panthera tigris*), and a significant population of Asiatic Elephant (*Elephas maximus*). It is at the junction of the Australasia and the Indo-Asian flyway and thus exhibits considerable diversity in avifaunal species.

150 villages are located on the boundary of the Park. This excludes the northern boundary. The livelihood of the villagers is agriculture, tea plantation and poultry/dairy related activities. Out of these, 46 are located in very close (less than 5km.) of the park. (Source: Kaziranga Management Plan)

Resource Dependency

In the earlier years people living in and around this national park did have customary rights and some amount of exploitation was allowed through what were called Fishery *mahals* (Customary rights), Thatch *mahals* and Semul *mahals.* This practice was however, stopped long time ago. As the status of Kaziranga changed from being a Reserved Forest to a National Park, rights of people to harvest resources from the park diminished until today no harvesting of any resource is allowed from the park. Today, the Karbi Hills just south of the park are the single most important source of fuel wood and timber for local communities residing in this area. These hills are also used by local communities for collecting medicinal plants, fruits, tubers, bamboo and other non timber forest produce (Shrivastava 2002). However, the regular annual flooding of the area, does force the people to illegally harvest some resources from the park.

Benefits and Opportunities/Limitations for Sharing of Benefits

Subsistence Needs

Grazing

Despite the ban on grazing by local communities inside the park, grazing does continue illegally in some of the Addition areas within the park. For example, although the 1st Addition was notified in 1998, cattle camps still exist. Cattle rearers are reluctant to move to the alternative site identified. The 6th Addition area, which has also been notified, still has a large cattle population. It is anticipated that even after the 2nd Addition area is finally notified, the grazing problem will still remain. It is not clear whether this is due to the fact that the cattle population has grown, or there is a lack of alternate grazing grounds or there are many encroachers in the area, who have illegally occupied land.

Fishing

Fish are an important part of the diet for local people. The Karbi Hills, private farms, village commons are the main source of fish, but local communities still depend to some extent on the park for fishing. However, this fishing is mainly for subsistence. Most of the fish sold commercially, comes from water bodies outside the park.

Fuel wood

The Karbi Hills are again the most important fuel wood source for local communities. Private farms also provide fuel wood to local people. Addition areas, particularly, Addition Area 4 is still used by the people to some extent to meet their fuel wood needs (Shrivastava 2002).

Community Assets

At a meeting of stakeholders held in 2002, local community members expressed the need for more medical facilities in the form of a mobile medical clinic and free medical camps. They also requested for improved veterinary care for their cattle. This would also lower

the risk of disease transmission to wild herbivores (WII and ATREE 2003). These needs have yet to be addressed.

Revenue Generation

Employment

Local people do get some amount of employment from the park in the form of labour and other activities. Labour requirements for the park include, labour for anti poaching activities and building of bridges, culverts etc. A lot of labour is hired during the annual floods. This is a time when local people do need the income, since all other work comes to a standstill. Weeds, primarily, *Mimosa*, have been and continue to be a major source of concern for the park. *Mimosa* is a quick growing herb and not only destroys the grasses, but also hampers the free movement of wild animals. Moreover, Mimosin, a harmful toxin is known to affect herbivore population particularly ruminants. *Mimosa* is an exotic brought in by tea garden owners for the purpose of rehabilitating the degraded soil. At present *Mimosa* eradication is being carried out by the Wildlife Trust of India (WTI, a Delhi based NGO). WTI pays the people directly for their labour. This also ensures the timely payment to the local people involved in this task. Approximately 100-200 people are hired for this task per range.

The park authorities also hire local people as security guards to accompany each jeep that goes into the park with tourists. There are fifteen such guards at present. Each guard is paid individually since no other mechanism of benefit sharing exists.

A key focal point of park management is the prevention of rhino poaching. The park to its credit has developed a very good network of intelligence throughout the villages surrounding the park. There are key informants in every village who are monetarily compensated for information they provide to the park authorities. Many informants have been weaned away from poaching and are proud to be working on the other side of the fence.

Tourism

Tourism in Kaziranga National Park has grown over the years. A total of 58,431 tourists have visited the park in the year 2004-2005, so far (Kali Durai pers.comm.). The most relevant benefit the people living around the park seem to derive is from tourism. It must be noted that at this point of time, tourism is restricted to only one range (Kohora range) of the park. There are at present, 35 hotels/lodges of various kinds located in this range, outside the park. Four out of these are government run lodges. There are also a few home stays in villages located at the boundary of the park. A total of 299 local people are employed by the hotels around the park. Very few hotels/lodges are owned by local people. Local community members own 70 vehicles, which are allowed to be taken into the park. On the highway that cuts across the park, 12 local community members own and run public phone booths. There are also 26 shops selling souvenirs etc. that are owned and/or managed by local community members (Kali Durai pers.comm.). Many local women also regularly perform traditional dances at some of the larger hotels.

There is tremendous scope for the sale of handicrafts in and around the park. The tradition of weaving is prevalent even today in almost every household. Many people do sell some of this woven cloth to tourists at select hotels/lodges. At present all benefits from tourism go to individuals. There is no mechanism for the sharing of benefits derived from tourism. Self Help Groups do exist and could very well provide a platform for such mechanisms.

The Ministry of Tourism and the United Nations Development Programme (UNDP) are jointly supporting rural tourism initiatives at 31 sites across the country. The vision of this project is to support community owned and managed efforts with the complete participation of women, youth and disadvantaged groups. The project will include activities highlighting the arts and crafts, history and culture and the natural heritage of identified sites. Where appropriate, the project will also support specific initiatives to promote locally sensitive and appropriate tourism. The project also hopes to bring on a common platform, many stakeholders such as local communities, crafts people, local and state authorities, NGOs and private entrepreneurs.

The village of Durgapur, which falls in the periphery of the Kohora range of this park has been identified as one of the sites for the promotion of endogenous/rural tourism. This is a very relevant and significant move. The project is still in the preliminary stages of planning. But it would be important to learn about the specific benefit sharing mechanisms the project would use[10].

Compensation for Wildlife Damage

Perhaps the biggest disadvantage that local communities face by living in the vicinity of the park is damage to their fields and homes by wild animals. There is regular crop raiding by deer, wild buffalos, and elephant. Tigers occasionally resort to cattle lifting. Wild buffalo sometimes injure and even kill humans. Moreover, wild elephants cause lot of damage to house and property and injury to human beings. There is scope for less conflict with local communities if timely and adequate compensation is paid for this damage. Unfortunately this is not the case and this results in a lot of anger and sometimes even poaching by local community members.

There are some efforts by the park authorities and NGOs to provide deterrents like fire crackers to chase wild animals (particularly) elephants away. In some cases, park authorities did also set up joint committees to address this problem but these initiatives lasted only while there were interested individuals from the forest department involved. In a very recent move the office of the Chief Conservator of Forests, Government of Assam, has issued, "Guidelines for grant of ex-gratia for loss of human lives and damage to crops and properties caused by wild animals under the centrally sponsored scheme Project Elephant" (Government of Assam 2004). These guidelines lay down the procedure to claim compensation in the case of damage by elephants. It is yet to be seen how these guidelines will be operationalised.

[10] http://www.undp.org.in/ccf2_prodoc/livelihood/

Ecodevelopment

At present ecodevelopment is being implemented through 33 ecodevelopmemt committees (EDCs) covering 41 villages. These villages are situated on the fringe of the park within a five kilometre radial distance from the park boundary. Several activities have been carried out in these villages from 1998 to 2002. Activities have included plantation in private lands for fuel mitigation; human health and sanitation camps; cattle immunisation camps; construction of community halls and distribution of water filter tube wells (Giri 2005 unpublished).

Ecodevelopment activities will now be executed through the Kaziranga Forest Development Agency (FDA). The proposed FDA will operate in the already existing EDCs and plans to: "i) improve the socio-economic condition of the fringe villages by generating employment opportunities ii) create durable community assets iii) minimise man-animal conflict in the fringe areas iv) develop community/individual wastelands v) generate awareness among the rural people for conserving forests and wildlife vi) create employment generation for the needy section of the society particularly those belonging to women, scheduled caste/scheduled tribes and landless rural labourers inhabiting the adjoining forest areas" (Eastern Assam Wildlife Division, Kaziranga National Park 2002). The park's management plan also lists several initiatives, which would help in creating benefit-sharing mechanisms for community members. However, this FDA is not yet operational since funds have not been released.

Self Esteem and Pride

Local communities living in the vicinity of the Kaziranga National Park do feel a sense of pride in the park. Community enthusiasm and pride is further enhanced by their involvement in park related activities. The park management's initiative to hire community members as guards and informants has gone a long way in achieving this. An additional suggestion that came from the people was recognition along with a cash award for rescuing wild animals from flooding. Many animals seek refuge in nearby villages during flooding every year. The people of these villages rescue the animals and also inform park authorities about them. Monetary incentives in such cases may further enhance people's pride in their contribution to park management.

Discussion

Kaziranga National Park is fortunate because the pressure on its resources from the local communities living on its periphery is minimal compared to many other protected areas. This is a result of strict protection measures and the availability of resources in areas outside the park. However, local communities living on the periphery cannot be ignored and if due consideration is not given to them at this point of time, there will be increasing conflict in times to come. At present, local communities may not be dependent on the park for their subsistence needs, but they have to contend with crop depredation as also harm to their homes and self from wild animals that venture beyond park boundaries.

Tourism in particularly one range of the park is on the increase. Local communities do derive some benefit from these activities, but in a random and individualistic manner. No mechanisms to share benefits from tourism exist. Park authorities are considering

expanding tourism related activities to other ranges as well. Although, this would potentially mean more benefits for local community members, increased tourism could actually become a threat to the park, if not well regulated. Also, if benefit-sharing mechanisms are not in place, there is a fear that benefits from tourism will increasing get captured by outside entrepreneurs.

Finally, there needs to be more activities within the park itself, which will involve local communities. Existing mechanisms such as Ecodevelopment Committees and Self Help Groups need to be energised and supported for better and more efficient functioning.

Potential for Sale of Handicrafts Made by Local Community Members

Community Owned and Managed Tourism Enterprise Outside Kaziranga National Park

Nepal

Nepal's protected area network is aimed at conserving the country's genetic resources and natural habitats. This system came into being effectively during 1970 when the late King Mahendra endorsed the establishment of the Royal Chitwan Park and the Langtang National Park. This also led to the establishment of a Conservation Section within the Department of Forests. The National Parks and Wildlife Conservation Act was passed in 1973 and the Department of National Parks and Wildlife Conservation (DNPWC) came into being in 1979 (Kothari et al 2000).

Two categories of protected areas are provided for in the National Parks and Wildlife Conservation Act of 1973. These are 'National Parks' and 'Reserves'. A National Park is defined as, "an area set aside for the conservation, management and utilisation of animals and vegetation on lands together with the natural environment". The category of 'Reserves' is further divided into (Kothari et al 2000):

Strict nature reserve (SNR): an area of ecological or other significance, set aside for purpose of scientific study.

Wildlife Reserve (WR): an area set aside for the conservation and management of animals and other resources and their habitats

Hunting Reserve (HR): an area set aside for the management of animal resources for purposes of sport hunting

In the years that followed the establishment of the National Parks and Wildlife Conservation Act in 1973, it was realised that the support of local communities in developing countries like Nepal was crucial for the success of protected area management. Subsequently, the National Parks and Wildlife Conservation Act was amended in 1989 to provide a legal basis for establishing multiple use conservation areas with the help of NGOs to manage them (Kothari et al 2000).

Protected Areas (PAs) in Nepal include eight national parks, four wildlife reserves, one hunting reserve and three conservation areas and five buffer zones covering an area of 26,666sq.km that is 18.11% of the total area of the country. The Department of National Parks and Wildlife Conservation (DNPWC) is responsible for the management of these areas[11].

Dependence of local communities on forests in Nepal is significant. Over 75 per cent of people in rural areas are still dependent on fuel wood from the forests for their daily energy requirements of cooking and heating. The annual per capita fuel wood consumption in the hilly region of the country is about 708 kg whereas it is 689 kg in the foothills or *Terai* region. The livestock sector in Nepal also largely depends on forests and grasslands to meet its requirements. It is estimated that approximately, 42 per cent of

[11] http://www.biodiv-nepal.gov.np/national_park.html

the total TDN (Total Digestible Nutrients) requirement is met from the forestry sector. Forests also supply timber for housing purposes in Nepal. The timber consumption in 1991 was estimated at 0.04 cubic meters per capita for housing purposes[12]. Local communities also depend on these forests for several non-timber products as also medicinal plants.

Benefit Sharing Mechanisms through Existing Schemes

Buffer Zone Management Regulation and Guidelines

The most significant mechanism for benefit sharing with local communities living in the periphery of national parks in Nepal is through the Buffer Zone Management Regulation and Guidelines. Buffer zone in Nepal is the peripheral area of a national park or wildlife reserve where local communities still retain usufruct rights over natural resources. Traditionally, the buffer zone is only a protective layer surrounding a protected area. However, Nepal's buffer zones have been developed to focus on the requirements of local communities likely to be affected adversely by conservation measures taken as a result of an area being declared as protected. The concept of buffer zones in Nepal has been inspired by the concept of 'Impact zones' developed by Sharma and Shaw (1992). The concept involves the strict control of forests within and around the protected area along with agriculture in the surrounding area, combined with forestry on public and private lands to increase production of natural resources in local demand. Buffer zones therefore, include agricultural lands, village open spaces and other land use forms. The idea is to develop these zones in such a way that pressure is taken off the protected area in question, and local communities that still depend on resources from the area, are provided with these from these zones (KMTNC 1998).

The buffer zone concept was introduced in 1993 through an amendment to the National Park and Wildlife Conservation Act, 1973. The Act defines the buffer zone as, "a peripheral zone of a national park or reserve which can provide the local inhabitants with the privilege of regular consumption of the forest products" (Kothari et al 2000). The amended Act also included the concept of revenue sharing. This was revenue generated from parks and reserves. According to the Act, 30 to 50 per cent of the total revenue collected could be used towards local community development in coordination with local institutions. The percentage of revenue to be spent on community development is fixed by the government (Kothari et al 2000).

The Buffer Zone Management Regulation of 1996 contains detailed provisions for the management of these buffer zones, through management plans. The regulation also details the establishing of user committees for operationalising these plans, and revenue sharing. The Protected Area warden can hand over areas as Buffer Zone Community Committee Forests. The user committee is then responsible for the management of these forests and is eligible to claim revenue earned from them.

[12] http://www.nepalhomepage.com/development/unced.html#RES

The Buffer Zone Management Guidelines, 1999 further elaborate the roles and responsibilities of community institutions, which range from User Groups, Functional Groups, User Committees and Sub-Committees to the Buffer Zone Development Council (New ERA 2004).

His Majesty's Government of Nepal has implemented the buffer zone development programme since 1994. Since then there have been other key partners who have been involved in conservation and development programmes in designated buffer zones. These are: United Nations Development Programme (UNDP) through its Park People Programme (PPP); World Wide Fund for Nature (WWF); CARE/Nepal and the King Mahendra Trust for Nature Conservation (KMTNC).

The National Conservation Strategy of Nepal (NCS 1987) also endorses the sustainable use of natural resources while giving opportunity and responsibility to the users to do so. The Master Plan for the Forestry Sector (MPFS 1988) identifies conservation of ecosystems and their genetic resources as a long-term objective. However, it recognizes that meeting the basic needs of people through forestry production is a prerequisite to reduce people-park conflict. The Eight Five Year Plan (1992-1997) reiterates the role and involvement of local communities in the conservation of ecosystems as also the equitable sharing of benefits with them. The Ninth Five Year Plan (1998-2002) discusses legal measures for the involving people in biodiversity conservation (HMG/DNPWC 2001).

Royal Chitwan National Park (RCNP)

The Royal Chitwan National Park (RCNP) was established in 1973 as the first national park of Nepal. The Chitwan valley wherein lies RCNP spans 100km east-west and approximately 40km at its widest. The valley presented a very different picture in the 1950s. It was almost all forested, and it is believed that only the *Tharu* tribals (said to have natural resistance to malaria) lived in these malaria-infested areas (KMTNC/WWF US 1993). Royalty visited the area occasionally to hunt tiger, rhinoceros and sloth bear. Traders also moved in the area to bring supplies from India during winter (KMTNC 1996).

With the eradication of malaria in the 1950s, the landscape of the Chitwan valley changed drastically. Many people migrated from the hills and cleared the forests to free land for settlements and agriculture. This spelt doom for wildlife in the area. Habitat was lost and indiscriminate hunting increased.

The first significant move towards conservation was the formation of the Wildlife Conservation Act 2015 (1957), which provided legal protection to forest animals including the rhinoceros. The Act directed the establishment of a 'rhinoceros sanctuary' in the Chitwan area. This was followed a few years later, by the deployment of a 'rhino patrol' specifically to protect the rhinoceros. The patrol was a special unit of armed forest guards of the Forest Department (KMTNC 1998).

The National Parks and Wildlife Conservation Act 2029 replaced the Wildlife Conservation Act 2015 and was enacted in 1973. RCNP was established under this Act. The Royal Nepalese Army replaced the rhino patrol and has been deployed in the park since 1975 to enforce park regulations. RCNP is however, managed by the Department of National Parks and Wildlife Conservation (DNPWC). RCNP is also one of the two World Heritage Sites in Nepal, declared by UNESCO in 1983.

RCNP lies in the southern part of the mid-central development region of Nepal and spreads over the four districts of Chitwan, Nawalparasi, Parsa and Makawanpur. The area of RCNP, when established was 544 sq.km. It was extended to 932 sq.km. in 1977. The park area at present is 1182 sq.km. The park itself is divided into four sectors, which are, Sauraha (East), Kasara (Central), Amaltari (West) and Madi/Bagai (South).

The buffer zone of RCNP was declared in 1996 and is estimated to be 750 sq.km. This area has extended to 767 sq.km at present (HMG 2001). The buffer zone of RCNP extends across the districts of Chitwan, Nawalparasi, Parsa and Makawanpur. It covers entirely or parts of 35 Village Development Councils (VDCs) and two Municipalities with an estimated population of 223,260 (HMG 201). The total number of households is 36193.

A separate unit of the Royal Nepal Army has been deputed to RCNP since 1975. There still remains a battalion of the army with 331 personnel at the park headquarters at Kasara. There were also 307 additional armed forces personnel in 32 of the 37 posts within the park until a few years ago (HMG 2001). However, since the escalation of the insurgency problem in the country, these posts have now been reduced drastically to eleven at present.

The vegetation of RCNP is of three types. The sal (*Shorea robusta*) forest dominates the park, covering approximately 70 per cent of the area. The understorey consists of mainly tall grasses with some shrubs. Seven per cent of the park land is taken up by riverine forests, which occur along rivers, oxbow lakes and on islands in the rivers. Grasslands constitute about 20 per cent of the park.

Diverse vegetation in RCNP harbours an exceptionally diverse wildlife population. The grassland and riverine forest harbour a very high ungulate population along with their predators. The most sought after animal in the park is the one-horned Asian rhinoceros (*Rhinoceros unicornis*). Count Rhino 2002 gives a population of figure of 544 individuals in and around the park (HMG/DNPWC 2001). Other ungulate species include sambar (*Cervus unicolor*), chital or spotted deer (*Axis axis*), hog deer (*Axis porcinus*), barking deer (*Muntiacus muntjak*), and wild boar (*Sus scrofa*). A transient population of wild elephants (*Elephas maximus*) visits the park occasionally. Two endangered species, namely the wild water buffalo (*Bubalus arnee*) and swamp deer (*Cervus duvaceli*) are not found in the park any more.

There is also a substantial number of carnivorous species in the park. It is estimated that there is a minimal population of 100 tigers (*Panthera tigris*) in the park. RCNP also

supports a healthy leopard population. The Narayani River harbours a healthy gharial (*Gavialis gangeticus*), thanks to the successful breeding programme. Sighting of the Gangetic dolphin (*Platanista gangetica*) has now become a rare occurrence. Over 500 species of birds have also been recorded from the park (HMG/DNPWC 2001).

The gradual eradication of malaria in the Chitwan district resulted in a very high rate of migration into this area from other parts of Nepal. A socio-economic study carried out by KMTNC (1998) found that approximately 57 per cent of the sampled households reported that they had migrated from the hills.

Resource Dependency

People have in the past and even today continue to depend on the park for a range of resources. This is despite efforts by the government and the park authorities to provide alternatives and also to develop the buffer zone.

Forest products are still the major source of energy for people living in the buffer zone of the park. The management plan of the park (HMG/DNPWC 2001) indicates that about 58 per cent use brushwood, while 30 per cent use green wood. The remaining 28 per cent use a range of alternatives such as biogas, LPG cylinders, electricity, kerosene and dung cakes. The park and the buffer zone still remain the major source of fuel wood for these people. 31 per cent of this comes from the park and 40 per cent from the buffer zone forests (HMG/DNPWC 2001). The management plan of the park indicates that direct human activity takes place in 30,850 ha of the park. Although the buffer zone forests do to some extent meet the fuel wood and timber requirements of the people, there is still a deficit, which is then filled by the park itself. Approximately, 23 per cent households meet their fodder requirement from the park. The rest are able to meet their requirement of fodder from agricultural fields and buffer zone forests. Illegal livestock grazing is also prevalent in the park.

People living in the buffer zone also collect a range of other Non-timber Forest Products (NTFP) from the park. It is estimated that 19.6 per cent of settlements in the buffer zone, still go into the park to collect forest products. 28 percent households collect NTFP for domestic consumption. Some amount is sold in the market. Less than one per cent collect NTFP for medicinal purposes, 4.7 per cent collect grass for making rope, which is subsequently sold in the market. Grass is also collected for sale to the Bhrikuti Paper and Pulp factory. A small percentage of people enter the park to collect edible roots and fruits etc. for personal consumption (HMG/DNPWC 2001).

Benefits and Opportunities/Limitations for Sharing of Benefits

Annual Grass Cutting Operation

One of the pioneering efforts made by the authorities of this park to address the needs of the people as also to create a bridge between park personnel and local communities was that of the annual grass cutting operation. Since 1976, villagers have been allowed to enter the park to collect thatch grass for building purposes. Traditionally, most houses in this area are thatched with this grass. The grass is also used to build walls and partitions inside the house. This grass is now available only in the park. A nominal fee was charged

to issue a permit per household. The Park was open for 20 days in January each year for this operation (KMTNC 1998).

The operation achieved several purposes. The first was that local communities realised that the park authorities were sensitive to their needs also. Communities realised the significance of conservation sine it was obvious to them that the grass so valued by them was now available only inside the park, since this area had been protected. Most importantly, the grasslands are at a certain stage of succession and have been maintained thus for many hundred years. This grass cutting operation may be considered as the one of the most effective and economic ways of maintaining this ecosystem. Several thousand people are mobilised in a mutually beneficial arrangement to maintain this park ecosystem.

Sharma (1991) indicated that almost 60,000 people (average from 1986-1990) entered the park each year to cut grass. For the year 1993, the total revenue collected from this operation was Nepali Rs. 323,925 (US $4628). More than 80 per cent of the people harvesting the grass were from villages within five kilometres of the park. Some came from as far as 50 km away.

In 1981 the grass-cutting period was reduced to 15 days and then further reduced to 10 days since 1995 (KMTNC 1998). This was further reduced to seven days and today it is only three days. Many of the local people mentioned this and wondered why this was so drastically reduced. The park is going through rough times, particularly so due to security reasons. Park officials also feel that many other illegal activities are conducted in the park under the garb of grass cutting. There is still a need for an explanation to the local community as to why their right to enter the park is being curtailed.

This operation has been perhaps the most powerful educational and public relations tool for the park.

Buffer Zone Management

The concept of the buffer zone and revenue sharing with the local communities is another extremely significant move towards benefit sharing. Buffer zone management ensures that an institutional arrangement is in place and community development takes place from the revenue generated through this programme. In the break up of total revenue to be spent, it is indicated that 30 per cent is spent on community development; 30 per cent is spent on conservation programmes, 20 per cent on skill development and income generation programmes; 10 per cent on conservation education and 10 per cent on administrative costs. To operationalise this in Chitwan, for example, there is the Buffer Zone Management Committee (BZMC), which is the apex community institution. This was formed in 1997. The User Group (UG) is the basic unit at the grass root level. UGs function in a unit called the Village Development Council (VDC).

The BZMC has played an active role in the conservation of some specific areas such as wetlands. Preventive measures against crop damage have been undertaken by the BZMC. These include, digging of trenches, barbed wire fencing (HMG/DNPWC 2001). Local

people estimate that these interventions have reduced crop damage in some areas by at least 60 per cent. BZMC also provides incentives and support to anti-poaching activities. User Groups, through the BZMC have been establishing community forest in the buffer zone. Many income generation activities have been promoted through this programme. An estimate of 1999 indicates that Buffer ZoneUser Groups generated savings worth Nepali Rs. 6.7 million (US $95,714) (HMG/DNPWC 2001).

An interesting endeavour for revenue generation is a community souvenir shop run by a female user group in the buffer zone. Trained local women supply souvenirs to this shop. However, there is a need to take this further. Women at the shop suggested that there be monthly meetings to discuss a marketing strategy. There is also a need for more publicity for the shop, which, in itself is a good venture.

The Baghmara Community Forest: A Model for Buffer Zone Development

The Baghmara Community Forest is located in the Bachhauli Village Development Council of Chitwan district and lies in the buffer zone of RCNP. Previously known as hunting ground for tiger and rhinoceros, this area was severely degraded over the years. The first community woodlots were planted here in 1989. In 1995 this area was declared as a community forest and handed over to the user groups. There are a total of 780 user group households. By the time this was handed over to the user groups, the area was already producing substantial products. Thinning operations produced 51,766 kg of woody biomass. A study showed that in 1995, the Baghmara plantation could meet at least ¼ of the total community demand of fuel wood.

Besides the plantations, the user group had decided to let some of the degraded area regenerate on its own, by ensuring that there would be no human disturbance. As a result, this area became, practically an extension of the park and provided excellent wildlife watching opportunities to tourists. A watchtower was built in this area with facilities for tourists to stay. The user group also constructed a mud filled dam in addition to clearing two patches of land to create aquatic and grassland habitats for wildlife. The Baghmara community forest was opened for tourism in 1995. For the past ten years over 1,50,000 tourists have visited Baghmara contributing approximately Nepali Rs.15 million (US$ 214285). This revenue has been spent on providing basic amenities to people in this area. The Baghmara community forest has indeed become a showcase for the whole of Nepal.

Source: Bhatt, S. 1998. Royal Chitwan National Park. An Evaluation of the BCN-Funded Project and its Conservation Impact. Unpublished

However, such progress has not been seen in other user groups. In fact, only two user groups, i.e. Baghmara and Kumrose have been able to develop tourism facilities. Even between these two, only Baghmara seems to have sustained tourism activities successfully and have made this a financially viable proposition.

It was also seen that in many areas, particularly during our visit to the park's southern range in Madi, it appeared that local communities have failed to see the link between revenue coming from the buffer zone and the park it self. The park authorities seem burdened with the task at hand and may well require more personnel as also adequate training to meet the challenges of park protection and buffer zone management. A study on "Effectiveness in the Administration and Management Aspects of the DNPWC" endorses this (CEDA 2003).

Buffer zone management, as it is being carried out at present also raises relevant questions about equity. Local people feel that buffer zone guidelines are good for the landed, but not very applicable or useful for the landless. The gender equity issues have been addressed to some extent by forming separate user groups for women, but women's representation in mixed user groups is not very significant. There are no women representatives in the BZMC (New ERA 2004). The poor and socially disadvantaged community members have failed to get the maximum out of this programme due to their lack of awareness as also lower capacity to adopt new practices.

The buffer zone programme, despite all this has been the most successful in the country. It has ploughed back the considerable large sum of Nepali Rs. 178 million (US2.5 million) during 1996-2003 (New ERA 2004).

Tourism

Tourism in RCNP started as early as 1962 with the establishment of the first lodge (Tiger Tops) inside the park. It has grown significantly since then and the number of tourists have increased from less than 1000 in 1974-75 to over 117,000 in 1999-2000[13]. The unstable political situation in the last few years has however taken a toll on tourism in Nepal as a country and consequently RCNP. The park has over 71 hotels/lodges out of which 60 are located in Sauraha itself. Seven high cost tourist lodges (concessionaires) have licenses to be located and operate from within the park.

Despite the popularity of the park and the large number of tourist arrivals, the involvement of local people in tourism related activities is negligible. Approximately 88 local people are hotel owners, 19 own restaurants and 712 own teashops. 119 people work as tour guides, 419 as drivers, and 1110 people are employed by hotels. This number varies with the number of tourists and also with the tourist season (HMG/ DNPWC 2001). Tourism activities are also focussed only in the Sauraha sector of the park. No other sector is really developed for tourism and this has led to some amount of resentment amongst the local people. Residents of Madi (located on the southern side of the park), for example would like to see their sector also developed for tourism, but seems to some extent neglected on this front. Madi still lacks even the basic amenities in the form of electricity and motorable roads.

It must also be kept in mind that complete dependence on tourism may not be a viable solution and most appropriate benefit for local communities. Political instability and insurgency in this region has resulted in tourism taking a severe beating. Complete

[13] http://whc.unesco.org/archive/periodicreporting/cycle01/section2/284.pdf

dependence on tourism would spell disaster for local communities. Also, as mentioned earlier, examples of community managed and run tourism or ecotourism initiatives are few and far between and may need to be encouraged.

Compensation for Wildlife Damage

Crop damage by wild animals, and attacks on livestock and humans continue to remain a problem in the park. Crops of all kinds seem to be damaged almost the year round. A number of measures have been tried to lessen crop damage through the buffer zone management programme. Control measures have also been experimented with to mitigate livestock predation. For humans killed or injured, the BZMC is supposed to pay compensation. However, there still seems to be dissatisfaction in the community regarding this issue.

Self Esteem and Pride

It is evident that where people have gained sufficiently from the park, there is an element of pride in the park. The people of Baghmara and Kumrose community forests are very proud of their own endeavours in promoting community ecotourism as also because they are in the vicinity of the park. Similarly, the people of Sauraha also feel a sense of pride in the park. However, the people living on the southern end of the park seem to feel neglected and there seems to be a growing sense of resentment against the park. The buffer zone management programme has nevertheless helped to a great extent in instilling in local communities a sense of pride and ownership for RCNP.

Discussion

RCNP as one of the premier parks of Nepal also represents many aspects of park management of the country as a whole. Perhaps outstanding and most relevant to this report is the concept of buffer zone management, which facilitates the sharing of benefits from the park with local communities. The development of the buffer zone to benefit communities living on the periphery of protected areas and the inclusion of the same in the wildlife legislation of the country is indeed a landmark for conservation. However, there is still a long way to go before Nepal can rest easy with this concept. As mentioned earlier, there is a continued need to build capacity of relevant park officials to adequately deal with and address the needs of local communities. Social mobilisation requires special skills and appropriate time to help strengthen the same. Perhaps a separate cadre of park officials needs to be specifically developed for this purpose. At present, park personnel seem to have the duel responsibility of park as well as buffer zone management. Relevant donors and NGOs working on this programme have conducted several training programmes. These trainings may need to be enhanced. Subsequently, the capacity of local communities also needs to be built for them to understand and then operationalise components of the programme. Trust building exercises also need to be carried out from time to time to ensure that the local community feels comfortable with the programme. This seems to be of particular relevance for the Madi sector where at present there is a lot of resentment and distrust towards the park officials. More awareness about the buffer zone programme is also required in this region. Local communities in Madi seem to see little connection between the revenue being generated from the buffer zone programme and the park itself.

On the whole, Madi appears to be neglected as comparison to the other sectors of the park. The main issues of contention here are the access road between the park and the area and the lack of basic amenities such as electricity, roads etc. Undoubtedly, some of the issues that have attracted most concern in recent times have been the construction of the Kasra Bridge over the Rapti River; a road to connect Madi to the other end of the park and beyond, thus improving access to the villages of the Madi Valley and a transmission line to provide electricity for the area. An IUCN World Heritage Monitoring Mission (IUCN 2002) has recommended that the road as a right of way and the bridge be considered after an appropriate environment impact assessment and the road be operated under certain stipulations. For the betterment of the people of Madi the report also suggests that transmission line be permitted under certain conditions. However, there is no progress on any of these fronts. There appears at present a lot of resentment and discontentment among the people of Madi. There seems to be an impression that the park authorities are not doing enough for them. The community forests of this region have not yet been handed over to the people. Tourism has not been developed in this area, since there is a lack of basic amenities. Madi is a crucial sector for the park since it connects RCNP to India. The people of Madi feel that they have been protecting animals from being poached from across the border, but their efforts have gone unacknowledged. There is an urgent need to gain the goodwill of these people. Awareness programmes about the buffer zone and its relevance for the people need to be enhanced. Once basic amenities have been provided, the potential for tourism at some select sites may be thought of.

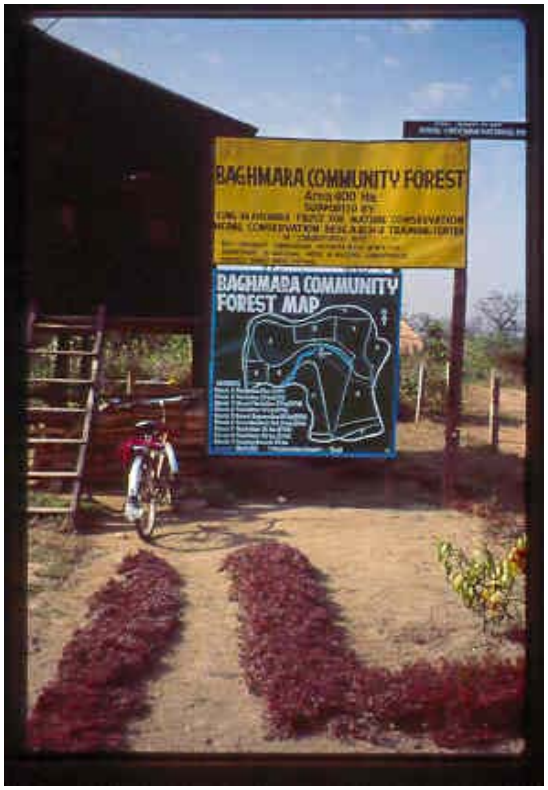
Baghmara and Kumrose community forests in the RCNP buffer zone stand out for their work particularly in promoting community-based ecotourism. It is surprising though, that this success story has not been replicated in too many other user groups. Baghmara and Kumrose received considerable support from donors as also NGOs to develop their respective programme. One wonders then whether such programmes can succeed without substantial financial and infrastructure support that these user groups received? There remains a need to develop a replicable programme of this kind, albeit on a smaller scale if the concept of community-based tourism and through it the sharing of benefits is to be promoted.

However, a word of caution for the promotion of any tourism based activity. There is no greater lesson than that of Nepal as a country, whose economy has in large part been influenced by tourism. The country has for the past few years been subject to political instability as well as insurgency. This has impacted the tourist influx into the country and subsequently also its economy. RCNP, which has had a record number of visitors almost ever since it was declared a national park, has also suffered from this crisis. Tourism had become the mainstay for many local people and this livelihood option has now to be reviewed.

Nepal and particularly RCNP has had support from many international donors as also NGOs. This is fortunate but there is a fear in a situation like this that institutions get too dependent on this support. There needs to be then a conscious effort to build the capacity

of local people and ensure that financial independence even before support from a particular donor or NGO is withdrawn.

Community Owned and Managed Watchtower *(Machaan*) in Baghmara Community Forest



Baghmara Community Forest

Recommendations

Given the legal status (National Parks) of these World Heritage sites, there are few benefits that local communities derive from these areas. However, there are many intangible benefits and many tangible ones that are significant for local communities and are equally important for the national parks themselves. Despite past conflict and damage and destruction from wild animals, local people still feel a sense of pride for the areas in their vicinity. What has led to conflict in the past is the alienation from these areas and the feeling that they are paying the price for conservation. Benefit sharing mechanisms are thus important for the well being of the people as well as the parks in question. There is also a lot to learn from other countries, Nepal being a case in point in this context.

Some suggestions on how these mechanisms could be strengthened and/developed in both the countries and how best practices could be exchanged are discussed:

Ensuring Appropriate Research and Dissemination of Research Results

To ensure that communities are benefiting from the protected area and that these benefits are being shared, it is important to first know the extent of dependence of these communities on park resources. This information would be easily available from the socio-economic baseline of villages on the periphery of each PA. However, this baseline is unavailable in majority of protected areas in both India and Nepal. Further, there needs to be adequate research and analysis of the information. Results from the analysis could be disseminated and discussed with local communities and the staff to find viable options and solutions.

Establishing Appropriate Institutional Mechanisms and Strengthening Existing Ones

As discussed, both the sites in India have existing institutions, which could potentially become mechanisms for benefit sharing in the form of Ecodevelopment Committees and Self Help Groups. At present, EDCs are practically non functional in both the parks. EDCs, if developed and given the right kind of support could become important people's institutions. SHGs wherever present, are functioning quite successfully. These need to be expanded and looked at specifically as mechanisms of sharing benefits from tourism as also for the sale of handicrafts etc.

Nepal, on the other hand through its Buffer Zone Management Regulation and Guidelines has in place several institutional mechanisms specifically for the purpose of benefit sharing. In fact the development of these institutions for effective partnerships between the communities and the park authorities is a unique achievement of this programme. There is also a conscious effort to build the capacity of these institutions through respective donors and NGOs. This needs to continue and training programmes need to be regularly be revised and updated as per the changing scenario of partnerships.

Building Capacity of Local Community Members

A crucial step for community members to be involved in any kind of enterprise is the building of their capacity to be part of the same. If tourism is considered the main source of benefits then, community members have to be trained in various aspects of tourism. The successful training of guides in Keoladeo Ghana is a good example of how training can help in communities getting more benefits from a protected area. Capacity has also to be built in basic skills like bookkeeping. Various kinds of vocational training could be made part of each park management plan.

Besides this capacity of the community also has to be built for it to be involved in any kind of programme that involves benefit sharing. This could be done through the existing institutions. In RCNP for example, the capacity of the local community has to be built for it to understand the Buffer Zone Management Regulation and Guidelines and its implications. No benefit-sharing programme can succeed until the community has a clear picture of the programme/institution in question.

Building Capacity of Park Staff

Park staff is most often not trained to address social issues. Unfortunately, social issues are still not priority for the management of any park. Training to deal specifically on issues relating to local communities need to be made part of the forest department staff training curriculum. Training needs to address conflict resolution. Also, at the park level, specific officers need to be assigned only to address issues relating to local communities. This is applicable to protected areas in India and Nepal. In the case of Nepal, the capacity of park personnel needs to be built specifically in the context of the buffer zone management regulation and guidelines. Training programmes have been conducted in RCNP for the purpose of enhancing the capacities of park personnel and these have had a significant impact on park-people relationships. These need to continue and also be modified since park personnel change over time.

Continuing Dialogue with Local Communities

Local communities living around most protected areas feel alienated because there is very little dialogue with them. There are many dedicated and sensitive forest department personnel who have and continue to make efforts at such dialogue, but unfortunately this may stop once the person concerned gets transferred. Stakeholder meetings are called when a particular project is to be launched. Very often there is no follow up to these meetings and community members start getting disenchanted when this happens. Increased dialogue will help build trust on both sides and lead to the better management of the protected area. The lack of communication may well become the greatest threat in a protected area.

A significant effort was made in RCNP in the early years when the park authorities assembled a group of villagers, schoolteachers and leaders from local communities once a year to discuss the problems related to the park and the needs of local people. This meeting was scheduled for two days at the park headquarters where local community members were hosted by park authorities. Grievances were heard and park staff would explain why demands such as grazing or logging of timber could not be permitted.

Perhaps the biggest impact of this was psychological since people began to feel that they were a part of park management. These meetings also allowed the park staff to learn more about local people's problems close at hand. Such meetings have been discontinued. But there still exists the need for them in all protected areas of all countries where local communities still depend on the park for resources.

Involving Local Communities in Park Management

The involvement of local communities not only gives people more benefits from the park, it also is a good conflict resolution mechanism. The initiative of the Kaziranga National Park authorities of developing a network of informers (to prevent poaching) involving local community members has worked successfully. Activities, which also provide monetary benefits to the community, need to be thought of, along with mechanisms to share these benefits. Recognition of local people's efforts would also make them feel that they play a role in the conservation and management of the protected area. Villagers living on the periphery of Kaziranga National Park, for example feel the need to be acknowledged in some way for saving animals from the annual floods and informing park authorities about stranded animals. The people in Madi within RCNP have also expressed the desire to be acknowledged for their efforts in preventing poaching and the movement of animals into India.

Experience Sharing Across Countries

An in depth look at three World Heritage Sites across India and Nepal reveals that there is a lot to learn from each site and across countries. For example, India can learn a lot from Nepal's experience with the Buffer Zone Management Regulation and Guidelines. Keoladeo Ghana and RCNP could share many experiences relating to the grass cutting operation and the issuing of permits. These experiences could to be shared in many different ways. The best way would be to organise cross-site visits where park personnel and local community members can interact with their counterparts in other areas and actually see what is happening on the ground. Other ways of sharing experiences could be through written material, audio-visuals, exhibitions and other creative ways like street theatre, plays, songs etc.

Conclusion

Local communities that live in and around these areas are crucial stakeholders in protected area management in countries like India and Nepal. This was seldom recognised or even acknowledged in the past. Today, this is given due consideration and there are continuing efforts to address issues relating to this aspect. The legal status of specific category of protected area (national parks) does not allow communities any extractive use from these areas. There are however, many benefits that communities continue to derive from PAs. Most relevant among these is tourism. However, beneficial as it can be, tourism is growing at an alarming rate and if appropriate mechanisms are not in place then it is quite possible that all the benefits from tourism will flow away from the areas in question to people who do not even belong there. Also, tourism is dependent on extraneous factors beyond the control of the PA in question and should not be considered a very stable source of benefits. There is a need for greater interaction with local communities to discuss their requirements, see how best they could be made partners in conservation and finally to help support institutions for benefit sharing. It must be

recognised that community support to protected area management is essential and addressing benefit sharing from these areas, is a step towards better conservation efforts.

Literature Cited

Bhatt, S. 1998. Royal Chitwan National Park. An Evaluation of the BCN-Funded Project and its Conservation Impact. Unpublished.

CEDA. 2003.Report on Effectiveness in the Administrative and Management Aspects of the Department of National Parks and Wildlife Conservation. Centre for Economic Development and Administration (CEDA), Nepal.

Eastern Assam Wildlife Division, Kaziranga National Park. 2002. Project Report for Ecodevelopment Programme. Period from 2002-3 to 2006-7. Kaziranga Forest Development Agency, Eastern Assam Wildlife Division, Kaziranga National Park. Unpublished.

Giri, J.B. 2005. Evaluation of the Effectiveness of Ecodevelopment Measures taken in Kaziranga National Park. Unpublished.

Goodwin, H., Kent, I., Parker, K. and Walpole, M. (1998) Tourism, Conservation and Sustainable development (vol. 2). Keoladeo National Park, India. (unpublished). Department for International Development, London. On WWW at http//www.ftsl. demon.co.uk.

Government of Assam 2004. Guidelines for Grant of Ex-Gratia for Loss of Human Lives and Damage to Crops and Properties Caused by Wild Animals Under the Centrally Sponsored Scheme Project Elephant. Government of Assam, Guwahati.

HMG, (His Majesty's Government), Ministry of Forests and Soil Conservation, Department of National Parks and Wildlife Conservation. 2001. Royal Chitwan National Park and Buffer Zone. Management Plan (2002-2005). HMG (His Majesty's Government), Ministry of Forests and Soil Conservation, Department of National Parks and Wildlife Conservation, Kathmandu.

IUCN Asia Region Protected Areas Program. 2002. Report on Monitoring Mission to Royal Chitwan National Park and World Heritage Site, Nepal. IUCN, Bangkok.

Kaziranga National Park Office. Kaziranga Management Plan. Unpublished.

Keoladeo Ghana Park Office. Keoladeo Ghana Management Plan. Unpublished.

Khare, A. 1998. Community-based Conservation In India. *in* eds. Kothari, A., R.V. Anuradha, N. Pathak and B. Taneja. Communities and Conservation. Natural Resource Management in South and Central Asia. Sage Publications, New Delhi.

KMTNC/WWF US.1993. Promoting Local Guardianship of Endangered Species and Wildlife Habitats in Royal Chitwan National Park. BCN Implementation Grant Proposal. Unpublished.

KMTNC.1996. Baghmara Community Forestry Project *in* Prakriti. August 1996. pp2.

KMTNC (King Mahendra Trust for Nature Conservation). 1998. Buffer Zone Policy Analysis of the Royal Chitwan National Park. Technical Report. KMTNC, Kathmandu.

Kothari, A., R.V. Anuradha and N. Pathak.1998. Community-based Conservation: Issues and Prospects *in* eds. Kothari, A., R.V. Anuradha, N. Pathak and B. Taneja. Communities and Conservation. Natural Resource Management in South and Central Asia. Sage Publications, New Delhi.

Kothari, A. 2000. Incentives for Biodiversity Conservation at the Local Community Level. In WWF–India, Convention on Biological Diversity: Policy Papers on Crosscutting Issues, Vol.1: Incentives and Benefit Sharing. WWF-India, New Delhi: pp. 1-12.

Kothari, A. N. Pathak and F.Vania. 2000. Where Communities Care. Community-based Wildlife and Ecosystem Management in South Asia. Kalpavriksh and International Institute of Environment and Development, London.

MoEF 2003. *Annual Report 2002-200*3.Ministry of Environment and Forests, Government of India, New Delhi.

MPFS 1988. Master Plan for forestry Sector Nepal. Main Report. HMG/ADB/FINNIDA. His Majesty's Government of Nepal, Kathmandu.

Murty M.N. and Menkhaus S.M. (1994), Economic Aspects of Wildlife Protection in the Developing Countries: A Case Study of Keoladeo National Park, Bharatpur, India, draft report. 113pp.

New Era. 2004. Impact Assessment of Buffer Zone Programme in Nepal. Report submitted to UNDP. New Era, Kathmandu.

Pachauri, R. undated. Sal Plate Processing and Marketing in West Bengal. Working Paper No.12. Ford Foundation, New Delhi.

Rangachari, C.S. and S.D.Mukherji. 2000. Old Roots, New Shoots. A Study of Joint Forest Management in Andhra Pradesh. Winrock International and Ford Foundation, New Delhi.

Saigal, S. C. Agarwal and J.Campbell. 1996. Sustaining Joint Forest Management: The Role of Non Timber Forest Products. Society for Promotion of Wastelands Development, New Delhi. Unpublished paper.

Sekhsaria, P. and N. Vagholikar. 2004. Forced Displacement from Protected Areas:The Spectre Looms Large. Unpublished.

Shankar, D. 1998. Conserving a Community Resource: Medicinal Plants. *in* Communities and Conservation. Natural Resource Management in South and Central Asia. *eds*. Kothari *et al.* Sage Publications, New Delhi.

Sharma, U.R. and W.W. Shaw. 1992. Nepal's Royal Chitwan National Park and its Human Neighbours: A New Direction in Policy Thinking. Paper presented at the IV World Congress on National Parks and protected Areas, Caracas, Venezuela, 10-12 February 1992.

Sharma, U.R.1991. Park-people Interactions in the Royal Chitwan National Park, Nepal. Ph.D.Dissertation, University of Arizona, Tucson.

Shrivastava, R.2002. Natural Resource Use and Park-People Relations at Kaziranga National Park and World Heritage Site, India. Master Thesis. Unpublished.

Varshney, V.2005. Gripe Water. Bird-Brained Politics. Down to Earth. March 31, 2005.

WII and ATREE. 2003. World Heritage Biodiversity Programme for India. Project Report. Unpublished.

World Bank.1993. India: Policies and Issues in Forest Sector Development. Report No. 10965-IN.

WWF India. 1996. Participatory Management Planning for Keoladeo National Park. Report on the Participatory Rural Appraisal (PRA) Workshop held at the Keoladeo National Park, Bharatpur, November 20-December 05, 1995. WWF India, New Delhi.

Annexe 1

Visit to Keoladeo Ghana National Park
February 07-10, 2005

Villages Visited
Behnera
Malha

People Met
-Shri. K.C.A. Arun Prasad, Director-Keoladeo Ghana National Park
-Col. Shyam Singh, Hotelier
-Ms. Shruti Sharma. Former-Director- Keoladeo Ghana National Park
-Shri Vijay Pal-Ranger (Wildlife)
-Shri Haren, WWF India
-Villagers of the two villages
-Rickshaw Pullers
-Tour Guides

Visit to Kaziranga National Park
March 16-21, 2005-08-24

Villages Visited
Durgapur and Borbil Mishing (Kohora range)
Tamoli Pathai (Agaratoli range)
Baghmari (Bagori range)
Phulogudi Sang (Burra Pahar range)

People Met
-Shri N.K.Vasu, Director-Kaziranga National Park
-Mamani Bora, Krishnapur Village
-Manager, Wild Grass Resort
-Mr. Boro, Ranger
-Shri Dharmakanta Baruah, Deputy Ranger
-Shri Utpal Barua, Deputy Forest Officer
-Villagers from all five villages
-Shri J.B Giri, WII Diploma Student
-Shri Kali Durai, WII Diploma Student
-Ms. Nidhi, WII Diploma Student

Visit to Rotyal Chitwan National Park
June26-July02, 2005

Villages Visited

-Sauraha village
-Kumrose Community Forest
-Baghmara Community Forest
-Rewa User Group, Madi valley
-Baghola User Group, Madi Valley

People Met
-Shri Shivraj Bhatta, Chief Wildlife Warden
-Shri Diwakar Chhapgain, Nepal Forest Department
-Shri Chandra Gurung, CEO, WWF Nepal
-Shri Kamal Jung Kunwar, Asst. Conservation Officer
-Shri Ramji Shibakoti, Asst. Conservation Officer
-Shri Meghnath Kafle, Asst. Conservation Officer
-Lt.Col. Ajit Thapa
-Maj. G.V. Khadka
-Shri Bodhraj Bhnadari, Community Mobiliser
-Shri Krishna Lal Chaudhari, President Kumrose Community Forest
-Shri Govind Prasad Pandey, Baghmara Community Forest
-Smt. Meenakumari Chaudhary, Baghmara Community Forest
-Shri Girdhari Chaudhary, Former President Hotel Association, Sauraha
-Shri Vishnu Prasad Aryal, President Baghmara Community Forest
-Villgers of the Madi User GroupsS