



PARK PEOPLE CONFLICTS: STUDY OF SELECTED VILLAGES OF CHAMOLI DISTRICT IN THE VICINITY OF NDBR

**Gupta S. P. ,
Bhatt Vijay P.**

HNB Garhwal University, Garhwal

ABSTRACT

Since the British Colonial time the surrounding area of India's second largest peak Mt. Nanda Devi, blessed with immense natural beauty and a rich plethora of floral and faunal wealth has witnessed local people's agitation towards the Government Policies which has become the reason d'être for the world famous Chipko Movement in 1970s to save the regions forest from commercial clean felling. With the creation of Nanda Devi National Park in 1982 and its up-gradation to Nanda Devi Biosphere Reserve (NDBR) in 1988, local Bhotia villagers living in the vicinity of the protected area have faced an uphill battle to recover their social, cultural and economic rights. The complete ban on harvesting, grazing, hunting, trekking and mountaineering in order to protect the reserve from further ecological degradation has an adverse impact on local economy, that has already suffered from a blow by the closure of Indo-China border in 1962 led to a struggle to regain communal rights over park land.

Even though the opening of the NDBR in 2003 to limited tourism activities for the first time in 20 years could not satisfied locals towards the Park Policies. The official 2003 plan of the government envisioned balancing biological conservation, economic development and sustainable eco-tourism practices. These include development of a cottage level wool industry, cultivation of medicinal plants, poultry, apiculture and promotion of Eco-friendly tourism. Active participation of locals is to be ensured at all levels of implementation. Research, interpretation and conservation education and infrastructure development have all remained only in the papers.

The present paper is based on the quantitative methods to evaluate the level of satisfaction of locals towards the park policies as well as to find out the local perception towards the co-management of the park in Reni, Lata, Tolma and Paing villages in the Niti Valley of NDBR.

KEYWORDS: *Park-people conflict, Chipko movement, NDBR, Bhotia tribe, Co-management*

Introduction

In many regions, including the Himalayas, the networks of National Parks, Biosphere Reserves and Wildlife Sanctuaries have often destroyed the traditional way of life of the communities living there resulting in socio-economic degradation and consequent conflict between the local people and the park management and wildlife (Hough, 1988; Ghimire & Pimbert, 1997). The need to highlight the significance of conservation in areas that harbor indigenous communities has brought about debates. The focus of these debates is centered on the divergence or harmonious considerations of conservation and human development particularly within protected areas. Protected areas as defined by the International Union of Nature and Natural Resources (IUCN) are areas of land or sea especially dedicated to the protection and maintenance of biological diversity, natural and associated cultural resources and managed through legal or effective means (Howe 2005). The central objective of protected area management in various countries of the world have for long over-looked the role of local people in the conservation process. Unfortunately, the role of local people in the conservation process is ill -defined both in policy and practice, leading to conflicts between land managers and local people living within reserves (Kuhn 2000; Lynagh & Urich 2002).

The consequences have been the series of conflicts experienced in such areas which tends to undermine the conservation drive not only for the present, but also, for the future generations. In spite of the function of preservation of natural resources, it is seen that establishment of protected areas within various communities has been received often with little or no excitement. This is attributed to the lack of understanding of the significance of the conservation scheme. The resulting effects have been accelerated conflicts. Various case studies suggest that the parks were established without the due knowledge of the communities. As the indigenous people proceeded to etch out their living, they were arrested and in some cases open combat ensued (Njiforti et al 1993). Further, it was discovered that the national parks in their conservation strive had hunting grounds from which indigenous communities were barred, but constituted educational and recreational grounds for visitors. The feeling of marginalization, loss of source of livelihood and lack of concern from the park authorities triggered the incidences of conflicts

In addition to this, it is seen that the differing cultural value systems between protected area managers and their support communities have frequently resulted in incidences of conflicts particularly as many of the native societies within protected areas believe that the natural environments within these areas are sacred habitats which connect them to their religious inclinations. Hence, such areas are consciously protected from any form of intrusion. The objectives behind the conservation scheme is to conserve natural resources for long-term benefits, while the concern of the inhabitants of protected areas is the need to have a means of livelihood for survival. The different functional interpretations given to protected areas have generated the varying degrees of conflicts experienced (Howe 2005).

It is experienced that the efforts of conservation has often alienated local people from the resources on which they were depended for their survival. Although local people may be capable of abusing land and hunting wild-life, these people have some of the richest and healthiest ecosystems in their control. This could be attributed to the fact that these people have intimate knowledge of the natural environments which arises from years of interacting with the environment.

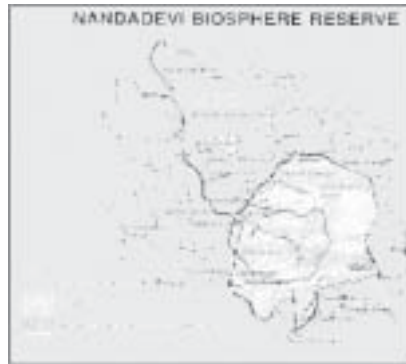
Conflicts are struggles over values and claims to status, power and resources in which the aim of the opponents is to neutralize, injure, or eliminate their rivals. It is also defined as the arousal of two or more strong motives that cannot be solved together (Coser, 1956). Conflicts within protected areas can be seen to be the result of diverse interests, goals and aspirations that individuals or groups within legally established and secluded environments have, which all too often resulted in either positive or negative impacts on the use value of the area. (Howe 2005).

The Study Area

Established on 18 January 1988 under UNESCO's Man and Biosphere Program (MAB), Nanda Devi Biosphere Reserve (NDBR) occupies a special place in the biosphere reserve systems of the high altitude Himalayan region of India and is characterized by its unique and inaccessible terrain. Its core and buffer zones comprise of a unique combination of temperate forest, alpine meadows, very high peaks (the highest, Nanda Devi West, is 7817 m) and glaciers. In geomorphological terms, the core zone occupies the entire Rishi Ganga Catchment (a tributary of the Dhauliganga). In 1992 it was declared as one of the World Heritage Site by World Heritage Committee. Almost all the reserve forests within the Nanda Devi Biosphere

Reserve are in the Chamoli district. All the areas of the biosphere reserve in the Bageswar and Pithoragarh districts are civil areas outside the limit of the reserve forests.

Fig-1



Source: NDBR Annual Plan for operation 2006-2007

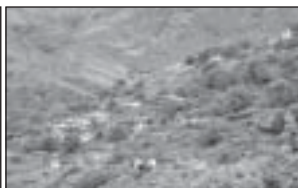
Nanda Devi National Park lies in eastern part of Uttarakhand State, near the Tibetan border in the Garhwal region in western Himalaya, 300 km northeast of Delhi. The main entrance to the Park is via Lata and Tolma villages, 25 km and 31 km east of Joshimath Township. It leads through the almost inaccessible gorge of Rishi Ganga to a basin surrounded by high mountain ridges and peaks except to the west, lying between 30°16' to 30° 32'N and 79° 44' to 80° 02'E.

Fig-2



Village: Tolma

Fig-3



Village:Reni

Fig-4



Village: Lata

The Nanda Devi region was first explored by western mountaineers in the 1880s. However, attempts to access the core of the region were unsuccessful. Finally, in 1934, British mountaineers Eric Shipton and Bill Tilman negotiated the precipitous Rishi Ganga gorge and gained access to the inner sanctuary at the foot of Nanda Devi. Having found a route to access the peak, Tilman returned with fellow mountaineer Noel Odell and made the first ascent. Mountaineering continued in the region until 1962, when the Indo-China war closed the border between India and Tibet.

Between 1965 and 1968, a series of joint expeditions between India and the United States was launched to plant a nuclear-powered listening device on Nanda Devi. This device was lost somewhere on the mountain

The present study is restricted to the Lata, Tolma, Paing and Reni villages in the buffer zone of NDBR in Niti Valley of Chamoli District. The buffer zone is inhabited by 47 villages which are distributed in Chamoli, Bageshwar and Pithoragarh districts of Uttarakhand. The area is inhabited by people of Bhotia tribe having very unique culture, tradition and the life style. Situated quite close the boundary of Nanda Devi National Park, nestled in calm, serene and undisturbed environment these villages are undeveloped and the economic condition of the residents is poor. Agriculture and animal husbandry being main occupation of the villagers they totally depend on the forests for their daily needs.

The Nanda Devi Biosphere Reserve is one such protected area where local people inhabited in the buffer zone areas have been deprived of the traditional uses of the natural resources from the reserve. Ignoring the dependence of the local people for their subsistence needs has created conflicts between protected area managers and the local people. The main issue of conflict in this reserve was the right of the people to use the forest resources which they were traditionally been collecting before the area was accorded a status of national Park and Biosphere Reserve.

Table-1 The area of NDBR as per revised notification

Sl. No	Name of Zone	Details of Land (Sq. Km.)				
		Total Area (Sq. Km.)	National Parks (Core zone)	Reserve Forest (Buffer zone)	Forest Panchayat (Buffer zone)	Revenue & Other (Buffer zone)
1	Old NDBR	2236.74	624.60	141.06	45.78	1425.28
2	Valley of Flowers (Kagbhuyshandi zone)	1874.28	87.50	337.80	12.14	1436.84
3	Malari Laptal zone	1600.00	-	11.31	-	1588.70
4	Sundher Dhunga zone	149.66	-	-	-	149.66
	Total	5860.69 (100 %)	712.12 (12.15%)	490.17 (8.36 %)	57.92 (0.98 %)	4600.48 (78.49%)
5	Transition Zone (additional)	-	-	-	-	546.34

Source: NDBR Annual Plan for operation 2006-2007

**Table-2 List and Number of villages in previous NDBR
(Before notification no. 1/6/80-CSC/BR Dt. 07-02-2000)**

Sl.No	District	Name of the Village	Total Number
1	Chamoli	Reni,Lata, Paing, Tolma, Sigri/ Suraithota Phagti-Paingrasu,Jamgavar-Dunagiri, Kaga, Garpag & Malari.	10
2	Pithoragarh	Kurkuli, Milam, Martoli & Sandu	04
3	Bageshwar	Phurkia, Dwali & Khati	03
		Total No. of Villages	17

Source: NDBR Annual Plan for operation 2006-2007

**Table-3 List of the villages added in present NDBR
(After notification no. 1/6/80-CSC/BR Dt. 07-02-2000)**

Sl. No	District	Catchment	Name of Villages	Total Number
1	Chamoli	Alaknanda	Khirao, Mana, Bamni,Hanuman Chatti, Lam-Bagar,Pulna, Bhyundar, Painka & Badrinath	09
		Dhauli ganga	Aira,Suki,Naung, Juma, Kosa, Farkia, Bampa, Mahargaon, Ghamsali, Niti, Kailashpur, Jugju, Bhalgaon & Bhangyul, Jelam	15
2	Pithoragarh	Pithoragarh Goriganga	Mapa, Ganghar, Pachchu, Burfu, Bilju & Tola.	06
			Total No. of new villages added	30

Source: NDBR Annual Plan for operation 2006-2007

Table -4 Demography of Study Villages

Name of Village	Lata	Tolma	Reni	Paing
No. of Households	120	28	105	32
Population	356	165	224	115
Literacy rate	65%	62%	69%	60%
Occupation*/ (Persons involved in percentage)				
* Agriculture	63	90	85	92
* Tourism related business	32	34	35	38
* Animal husbandary	10	5	10	18
* Service	12	11	17	11
* Other	05	05	07	02 [b2]
Crops	Rajma, Chaulai, Wheat, Potato, Barley, Mandua, Jhangora			
Schools	2 Primary, 1 High School	1 Primary	1 Primary 1 Interme- diate	1 Primary
Post office	Lata	Suraithota 2.5 km.	-	Reni 3 km.
Bank	N.A.	N.A.	N.A.	N.A.
Hospital	1 Ayurvedic	N.A.	-	-
Motorable Point	Lata	Suraithota	Reni	Reni 3 km.
Hotel/Lodge	N.A.	N.A.	N.A.	N.A.
Family accommodation/ Paying guest houses	Available	Available	Available	N.A.
Restaurant/Eatery	2	N. A.	N. A.	N. A.
Telephone/Internet	N. A.	N. A.	N. A.	N. A.
Electricity	Yes	Yes	Yes	Yes
Drinking Water	Yes	Yes	Yes	Yes

Source: Primary Data

- * most of the villagers are involved in more than one occupation simultaneously as a person involved in agriculture is also involved in animal husbandry and a part time tourism job (on availability) as well.

Objectives of the Study

1. To find out the residents satisfaction level towards the park management policies
2. To analyze how the local traditional livelihood practices have been affected by the creation of Biosphere Reserve

3. To evaluate the degree of compensation to the local traditional livelihood practices by Community Based Ecotourism Plan
4. To find out the local perception towards the co-management of the biosphere Reserve

Research Methodology

The study was carried between August, 2008 and May 2009. A household survey has been conducted in order to gain a general picture of local people's resource use patterns and their attitudes toward NDBR. Five to eight households were chosen randomly for interview within each village. Data have been collected with the help of a structured questionnaire with the resulting sample of 60 residents in four buffer zone villages namely Lata, Tolma, Paing and Reni. Besides this, field observation and on spot discussion with local opinion leaders, tour operators and park authorities have also been conducted. The questionnaire had been translated in Hindi and data have been analyzed to achieve the desired objectives.

Literature Review

Much of the research concerning biosphere reserves has focused on problems of ecosystem management and biodiversity conservation rather than the preservation of an ecosystem in which humans play an integral part (Batisse 1997; Brown 2002). The case of the Nanda Devi Biosphere Reserve (NDBR) provides an example of one of many people/PA conflicts occurring worldwide. (Keith Bosak, 2008). NDBR is one such reserve where local people inhabiting in the buffer zone (particularly in the lower areas of Niti valley i.e. Lata, Paing, Reni, Zugzu, Tolma, Phagti villages etc.) areas have been deprived of the traditional uses of natural resources from the reserve. Ignoring the dependence of the local people for their subsistence needs have created conflicts between protected area managers and local people. (Maikhuri et al, 2000). The effective management of relationship between Protected Areas and local communities is of paramount importance to sustainability of any activity that is based on protected Areas. (Lea M. Scherl and Stephen Edwards, 2007). The historical relationship between indigenous peoples and governments, and the degree to which these are characterized by conflict over land and resources, also play a role in determining how protracted or successful these struggles will be (Caddy, 2005). Researchers like Oviedo and brown (1999), Beltran and Phillips (2000) have the opinion that professional in the field of protected areas

management are moving away from the notion that interests and rights of local and indigenous communities are in conflict with the objectives of protected areas.

Different researchers like Maikhuri, R.K. Nautiyal, S. Rao, K.S. and Saxena, K.G. (2001, 2003), Gupta, S. K. (2002, 2007), Keith Bosak, (2008), Sahai and Kimothi (1996), Caroline Howe(2005), Bagri, S. C. and Mishra, J. M.(2005), Bagri, D. S., Babu, A. S. and Nayal, B.(2008), Rawat, R. (2004), Badola R and Silori C. (1999), Bajracharya, P. (2004) have worked on different aspects of the study area.

Park V/s People

Conflicts between local people and protected area managers are a common problem in developing countries, but in many cases there has been little attempt to comprehensively characterize the underlying problems. Resource uses, management practices, economy and people's perceptions are the key issues. The main issue of conflict in the Nanda Devi Biosphere Reserve (NDBR) is the right to use the forest resources to which the inhabitants of buffer zone villages are traditionally entitled before a particular area is accorded the status of a national park and biosphere reserve. There are several reasons for the increase in conflict between local people and the government. These include failure to consider the question of alternative means of livelihood following curtailment of people's usufruct rights in the area, loss of economic opportunities due to abandonment of tourism in the core zone, and livestock and crop depredation caused by wildlife.(Rao, K. S. et. al.2000) Despite the best intentions of NDBR management, its top-down style of functioning, belatedness in response, inappropriateness of proposed remedies, and the inability of authorities to enforce their own regulations, all combined to turn people decisively against the reserve.

The locals' inability to access forest resources, their lack of understanding of the reasons for PA declaration, and the absence of any positive interaction with PA management have led to hostility toward management.(Badola, R. and Hussain, S. A., 2003). A close talk with the villagers reveals that the restriction on the collection of high altitude medicinal plants such as Kida Jadi (Yarsa Gambu), Hatha Jadi, Morchella etc., is a major cause of conflict because of the high prices of these forest products. Yarsa Gambu is a medicinal herb, grown in the upper Himalayas, and harvested during May and June, only. Exported to China, it is sold for Rs 3.25 lacs per kg. The incredible price of the herb has showered prosperity on the region.

Violence is latent as the stakes are high. During the Yarsa Gambu harvest season of 2007, there were similar clashes. The Uttarakhand state government had authorized the Kumaon Mandal Vikas Nigam and the forest panchayats to purchase the herb. An inter-village conflict is going on between Suki and Lata villages for claiming the high altitude land on the east of Lata village for the right to collect these medicinal plants.

Ultimately, the success of a protected area is dependent on minimizing people-protected area conflicts. These conflicts can weaken the efficiency of protected areas through the separation of natural resources from human considerations (Ormsby and Kaplin, 2005).

Scenario of Tourism in NDBR

**Table- 5 Profile of Trekkers visiting Nanda Devi
Biosphere Reserve (Buffer Zone)**

Year	Indians	Fore-igners	Porters	Total	Amount received from the tourists (INR)	Amount given to Mahila Mangal Dal/ EDC	No. of Mahila Mangal Dal Covered
2003-04	1276	264	689	2229	204120.00	126930.00	60
2004-05	547	317	774	1638	1,56,425.00	150000.00	77
2005-06	1128	404	952	2484	2,26,860.00	200000.00	80
2006-07	775	336	664	1775	1,65,480.00	500000.00	80
2007-08	1629	358	860	2847	1,94,945.00	50000.00	74
2008-09	1774	529	1040	3343	2,75,860.00	N/A	N/A

Source: NDBR Forest Division, Joshimath.

Table- 6 Profile of tourists visiting Nanda Devi National park

Year	Govern-ments	Indians (Including Porters & Guides)	Foreigners	Total	Total Amount Received from the tourists
2004-05	48	118	18	184	7420
2005-06	-	159	32	191	11000
2006-07		157	32	189	11080
2007-08		106	17	123	11150
2008-09		130	31	161	17350

Source: NDBR Forest Division, Joshimath.

Table-7 [b3]

Attractions		Ecotourism Resources of the Area
Natural	Peaks	Dunagiri (7066Mt), Changbang (6864 Mt), Nanda Khat(6631Mt), Maiktoili (6803Mt), Trishul-1 (7120 Mt), Trishul-II (6319Mt), Nanda Devi main (7817Mt), Hanuman (6070 Mt.)
	Flora	Fir (Abies pindrow), Rhododendron (Rhododendron campanulatum) Birch (Betula utilis) Juniper (Juniperus pseudosabina)
	Fauna	Bear (Sus scrofa), Black bear (Selenorctos thibetanus), snowleopard (Panthera uncia) Musk Deer (Moschus chrysogaster) Bharal (Pseudois nyaur), Himalayan Tahr (Hemitragus jemlahicus)
	Rivers	Nandakini, Dhauli Ganga, Rishi Ganga
	Pastures	Lata Kharak, Saini Kharak
	Trek routes	Tolma -Jhandidhar- Latakharak- Sainikharak- Dharansi- Lata
Cultural	Temple	Nanda Devi Temple in the Villages
	Festival	Brahm Kamal Festival on Nandaashtmi
	Dress Pattern	Traditional Bhotia style
	Handicrafts	Woolen Fabrics and Bamboo based handicrafts

Source: Authors Observation

NDBR ANNUAL PLAN OF OPERATION YEAR 2007-2008

Eco-Development Activity

- Distribution of Fruit Plants
- Purchase and distribution of locally produced raw wool
- Solar Light
- Gas connection

Value Addition Activity

- Grass land improvement and management

Rehabilitation of Landscapes (Habitat Management)

- Maintenance of Forest Nurseries
- Maintenance of Medicinal Plant Nurseries Plantation in degraded forest lands

- Advance soil work in degraded forest lands
- Soil Conservation Works
 - a. Check dam/Spur
 - b. Retaining/Side Wall
- Propagation of medicinal plant growing on unused agricultural fields

Pilot Plots

- Endangered medicinal plants and forest plant conservation plots (Auli & Joshimath)
- Maintenance of previous year pilot plots

Eco-Tourism Infrastructure Support

- Development of Trek Routes and Nature trails (in the buffer and transition zones)
- Maintenance of old trek routes
- Development of Community Based NDNP Eco- Tourism zone-CBT planning, Capacity building, training, exposure visit and start up activity for local and staff

Social Welfare Activity

- Immunization for domestic cattle
- Drinking Water facility to village to reduce drudgery of women
- Establishment of Poly houses for production of off-season vegetables and medicinal/aromatic plants in High Altitude areas for income generation activities

Protection and Communication Systems

- Maintenance of wireless sets and communication systems
- Setting up of a high frequency gain repeater station
- Forest Guard Chaukis

Capacity Building and Awareness

- Education programs in local school
- Capacity building training programmes for the staff
- Capacity building programmes under income generation activity
 - a. PRA based eco-development plants

- b. Medicinal and aromatic plants
- c. Handicraft development training with equipment
- d. Vermi Compost programs training with equipment
- e. Horticulture products processing
- f. Advance techniques of animal husbandry
- Educational materials and tools for nature centre at Joshimath and Biodiversity conservation centre at Ghangaria

Changes in Traditional Livelihood Style

Without adequate understanding of the local land use and culture, the conservation authorities of the day failed to recognize that the Bhotia had been an inseparable part of the landscape for at least a thousand years, and rather than recognizing them as Nanda Devi's guardians, instituted a draconian ban on access to the park's core zone. More than simply an economic catastrophe, the foundations of their culture have been threatened by these restrictions. (Rawat, R., 2004)

The centuries-old occupation of the Bhatia community was trade with Tibet. Using pack goats as the means of transport they ferried goods from the plains to Tibet. The main occupation in the villages above Juma was trade, while the villages downstream assisted in trade. Villagers often worked as small businessmen or retailers. The villages above Juma (revenue area Malari) only grew summer crops, mostly cereals and pulses. In winter they migrated to lower areas. Villages downstream depended mainly on agriculture and animal husbandry, growing mainly cereals and pulses in summer, and wheat in winter. For many villages, sheep herding and woolen enterprises were the main occupation while the residents of Reni, Paing, and Jugju managed pack goats for the transportation of goods. The main exports were barley, jaggery (unrefined brown sugar made from palm sap), rice, and cloth. Imports included sheep, goats, salt, and wool, while trade continued. With the closure of trade with Tibet after the Indo-China conflict of 1962, the Bhatia community opted for other sources of livelihood. The pack goats were sold and the focus became sheep, woolen products, and agriculture. The growing popularity of the Nanda Devi Sanctuary as a mountaineering destination provided ample alternative employment opportunities for the villagers. This continued until 1982 when the area was notified as a national park with a complete ban on mountaineering and grazing in the core zone, which includes the Nanda Devi peak. (Kainthola, S. 2006).

At present the major occupation of the people of these villages is agriculture; few people are practicing animal husbandry and few are in the Govt. or private jobs and majority of the people can be seen working as labors in and around the villages and occasionally as porters. In the villages, homespun wool and woollen items have long been produced and knit by women to supplement family income. In addition, staple crops such as wheat, barley, millet, and local pulses and grains, and some cash crops such as kidney beans and potatoes have been grown in the terraced hills overlooking the many river valleys. Unfortunately, due to the core zone's closure, access to many medicinal plants traditionally used by indigenous healers was lost.

Results and Analysis

A structure questionnaire of four sets of questions had been developed in order to achieve the desired objectives of the study. The section 'A' of the questionnaire was related to the general demographic profile of the respondents while the First set of questions was related to the respondents perceptions about the changes in the traditional subsistence system while the second set was focused on the local people's satisfaction towards the park policies. The third set of question was focused to analyze the respondents' perception towards the co-management of the Biosphere Reserve and the last set was an attempt to know the satisfaction level towards the ecotourism development and management in the area. A total of 60 respondents have been interviewed from four villages, namely Lata, Tolma, Paing and Reni, in the buffer zone of NDBR with a sample size of fifteen from each village.

Table-10 Demographic Profile of Sample Population

Demographic Variables	Frequencies	Percentage
Sex		
Male	39	65
Female	21	35
marital status		
married	54	90
unmarried	06	10
Age		
20-35	18	30
35-50	27	45
50-65	09	15
Above 65	06	10

Occupation		
Agriculture	48	80
Animal Husbandry	06	10
Related to tourism	03	05
Other	03	05
Income(in Rs per month)		
Below 5000	45	75
5000-10000	15	25

In response to the question if the establishment of the NDBR was necessary 45 % of respondents were agreed to the statement while 40% was disagreeing. 70% respondent were disagree with the statement that creation of NDBR has brought significant positive changes in the livelihood practices of the villagers similarly 70% of the respondents felt that restrictions imposed by park authorities have brought changes in the livelihood style of the locals. In response to the statement that changes in livelihood practices was responsible for the deterioration of the socio-cultural edifice of the village 60% of the respondents were agreed. 60% of respondent population was against the statement that the endeavors of park authorities towards sustaining the traditional livelihood style is appreciable a mere 25% were agreed to the statement while 60% of respondents were disagreed that tourism compensates the livelihood practices of the villagers.

On asking if biodiversity of the NDBR must be must be valued and protected 90% of the respondents were agreed to the statement which shows that they are well aware for the conservation of the bio diversity. When asked that consent of local people have been sought for formulating and improving the park policies 78.3% were disagreed to the statement. In response to the statement that park policies have been formulated for the welfare of the residents 45% of the respondents were disagreed to the statement, 65% have opposed the statement that due to NDBR region become important to the government resulting in the improvement to infrastructure. 80% respondent felt that creation of Van Panchayat was an important step for the welfare of people and nature both while 70% have the opinion that NDBR authorities and residents should co manage the reserve on the other hand 70% of the respondents were against the statement that management of NDBR should be the responsibility of the Govt. /Forest Department Only.

In response to the statement that NDBR authority has the ability to manage ecotourism 70% of the respondents were disagree, which reflects

Overall Responses

Variables	N		Mean	Std. Devia- tion	Mini mum	Maxi mum	Percent lies 60
	Valid	Missing					
1. Establishment of NDBR was necessary	60	0	3.00	1.27559	1.00	5.00	4.00
2. Creation of NDBR has brought a significant positive change in the livelihood practice of the villagers	60	0	2.40	1.07672	1.00	5.00	2.00
3. Restrictions imposed by park authority have brought changes in the livelihood style of the locals.	60	0	3.60	.97772	1.00	5.00	4.00
4. Changes in livelihood practices have deteriorated the socio-cultural edifice of the village.	60	0	3.65	.86013	2.00	5.00	4.00
5. The endeavors of park authority towards sustaining the traditional livelihood style is appreciable.	60	0	2.50	1.03334	1.00	4.00	2.60
6. Tourism is complimenting the livelihood practices of the villagers	60	0	2.75	1.00212	2.00	5.00	2.60
7. The bio-diversity of NDBR must be valued and protected	60	0	4.35	.65935	3.00	5.00	5.00
8. Consent of locals have been sought for formulating and improving the Park policies	60	0	4.40	.92425	2.00	5.00	5.00
9. Park policies have been formulated for the welfare of residents.	60	0	2.60	1.16735	1.00	4.00	3.00
10. Due to NDBR region has become important to government resulting in the improvement to infrastructure (e.g.- roads)	60	0	2.35	1.02221	1.00	4.00	2.00
11. Creation of Van Panchayat was an important step for the welfare of people and nature both	60	0	4.05	.59447	3.00	5.00	4.00
12. NDBR authorities and Residents should co-manage the Reserve	60	0	3.65	1.20486	1.00	5.00	4.00

13. NDBR authority has the ability to manage ecotourism	60	0	2.35	1.07080	1.00	4.00	2.00
14. Management of NDBR should be the responsibility of the Govt. /Forest Department only.	60	0	2.30	1.06246	1.00	5.00	2.00
15. Residents should have more rights in decision Making of park policies.	60	0	3.85	1.11728	1.00	5.00	4.00
16. Opening the park for tourism activities have benefited the local.	60	0	3.0000	1.23508	1.00	5.00	3.60
17. Tourism to NDBR is a strong economic Contributor to the community.	60	0	2.7000	.96199	1.00	4.00	3.00
18. Tourism to NDBR creates new market for our local products.	60	0	2.6000	.97772	1.00	4.00	3.00
19 Tourism to NDBR creates job opportunities for local people	60	0	3.60	.74105	2.00	5.00	4.00
20. Community members have an opportunity to be involved in tourism decision making.	60	0	2.85	1.28650	1.00	5.00	3.60
21. Tourism in NDBR is a threat to the environment.	60	0	3.9500	.98161	2.00	5.00	4.00
22. Quality of life of residents has been improved because of tourism.	60	0	3.0500	1.17061	1.00	5.00	4.00
23. Local traditions become more important due to tourism.	60	0	2.35	.91735	1.00	5.00	2.60
24. People's awareness of environmental protection has improved due to tourism.	60	0	3.90	1.18893	1.00	5.00	4.60

the attitude of the people towards the poor implementation of the park policies by the authorities. 65% were agreed to the statement that residents should have more rights in decision making of park policies. 40% have the opinion that the opening the park for tourism activities has benefited the locals while 35% were against the statement.

55% of respondents have opposed the statement that tourism is a strong economic contributor to the community, the same percentage are against the statement that tourism creates new market for local products while 65%

felt that tourism to NDBR creates job opportunities for local people. 50% of the respondents were disagree with the statement that community members have an opportunity to be involved in tourism decision making. 70% believed that tourism in NDBR is a threat to the environment. When asked if the quality of life of residents has been improved because of tourism 50% were agreed to the statement while 60% were disagreed with the statement that local tradition has become more important due to tourism. 70% of the respondents have the opinion that people awareness due to environmental protection has improved due to tourism.

Recommendations

- Proper implementation and monitoring of park policies must be ensured at the ground level.
- Community goals and participation of its members should be ensured in the planning and implementation of park policies.
- Local consent must be sought before formulating the park policies.
- Better communication must be facilitate with the local people in order to better understand the causes of conflict and to foster the trust between locals and park management
- Welfare of locals should not be compromised with conservation goals.
- A proper resource allocation plan must be formulated for buffer zone villages in order to avoid inter village conflicts.
- Capacity building programmes for local families, guides, porters and interpretators must be conducted in order to reap the maximum economic and conservation benefits.
- Policies should be developed and properly implemented for compensating the loss of traditional subsistence practices
- An effective marketing strategy should be developed to send the right message in the market area to promote and facilitate community based ecotourism to foster a viable economic base for these local communities.
- Local NGOs should be involved in ecotourism awareness programmes.

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References

- Badola R, Silori C. (1999). *Nanda Devi Biosphere Reserve: A Study on Socio-Economic Aspects for Sustainable Development of Dependent Population. Study Report. Dehra Dun, India: Wildlife Institute of India.*
- Badola, R. and Hussain, S. A. (2003) *Conflicts in Paradise: women and protected areas in the Indian Himalayas. Mountain Research and Development, Vol. 23 No 3 August 2003: 234-237*
- Bagri, D. S., Babu, A. S. and Nayal, B.(2008) *A Study on Level and Scale of Local Community Participation in Geo cum Ecotourism Promotion and Management in Nanda Devi Biosphere Reserve (NDBR), North Western Himalaya, India. Journal of Tourism Vol. IX, No. 2 (2008)*
- Bagri, S. C. and Mishra, J.M.(2005) *Mountain Ecotourism in Lata and Tolma Villages of Nanda Devi Biosphere Reserve (NDBR): A study of stakeholders perception and forecasting future facilities and amenities. Journal of Tourism, Vol. VII (2005)*
- Bajracharya, P. 2004. *Wildlife human interaction: A case study of Shivapuri National Park. M.Sc. thesis, Central Department of Zoology, Tribhuvan University.*
- Batisse, M. (1997) *Biosphere reserves: a challenge for biodiversity conservation and regional development. Environment 39(5): 8-33.*
- Beltran, J. and Phillips, A. (Eds.) (2000) *Indigenous and Traditional Peoples and Protected Areas: Principles, Guidelines and Case Studies. IUCN, Gland and Island Press, Washington DC.*
- Brown K. 2002. *Innovations for conservation and development. The Geographical Journal 168:6-17*
- Caddy E. (2005). *Socio-political Contexts of Indigenous Common Property Tenure in Southern Belize. published in: Managing the Commons: Indigenous Rights, Economic Development and Identity, edited by L. Merino and J. Robson. Instituto de Ecologia (INE), Mexico City.*
- Ghimire, K.B. and Pimbert, M.P. (1997) *Social change and conservation: an overview of issues and concepts. In: Ghimire KB and Pimbert MP (Eds) Social change and conservation. Earth scan Publications Ltd, London.*

- Gupa S. K. et. al.(2006)- *Community Based Tourism Management In Protected Areas of Garhwal: Key Issues and Challenges*. *Tourism Development Journal*, Vol. 4, No. 1, 2006.pp 84-94
- Gupta, SK(2002) - *Tourism and Heritage Resources in Garhwal Himalayas: An Approach to Planning and Management*, Kaveri Books, New Delhi.
- Hough, J. L. (1988) *Obstacles to effective management of conflicts between national parks and surrounding human communities in developing countries*. *Environmental Conservation*, 15(2), 129-136
- Howe Caroline (2005). *Reconciling protected area management and sustainable development: a study of the socio-economics and wild food use of local communities in the Nanda Devi Biosphere Reserve, Indian Himalayas*. A report submitted in partial fulfillment of requirements for the M.Sc. available at www.iccs.org.uk/thesis/Howe%20MSc.pdf
- Keith Bosak, 2008. *Nature, Conflict and Biodiversity Conservation in the Kothari A, Pathak N, Anuradha RV and Taneja B (Eds) Communities and Conservation: Kuhn, M. 2000. Biosphere reserves as planning models for sustainable*
- Kuhn, M. 2000. *Biosphere reserves as planning models for sustainable regional development: Schorfheide-Chorin, Germany*. *Journal of resolve people-policy conflict*. *International Journal of Sustainable Development and World Ecology*, 7, 333-342
- Lea M. Scherl and Stephen Edwards, 2007. *Tourism Indigenous Local Communities and Protected Areas in Developing Nations*. In Bushell R. and Eagles P. F. J, eds. (2007) *Tourism and Protected Areas: Benefits beyond boundaries*. Cab International U. K.
- Maikhuri, R. K., Rao, K. S., Nautiyal, S., Saxena, K. G.(2000): *Management Conflicts in Nanda Devi Biosphere Reserve, India*. In *Mountain Research and Development* Vol 20, pp: 320-323
- *Natural Resource Management in South and Central Asia*. Sage Publications, New Delhi.
- *NDBR Annual Plan for Operation2006-07*. Available at http://uttara.org.in/forest/NDBR/pdf/Annual-plan/2007-2008/Annual%20Plan%20of%20Operation%20NDBR%20_2007-08_.pdf
- Njiforti, H.L and Tchamba, N.M (1993) 'conflict in Cameroon, parks for or against people' In *Indigenous people and Protected Areas the Law of Mother Earth*. London: Earthscan.
- Ormsby A and Kaplin B (2005) *Framework for understanding community resident perceptions of Masoala National Park, Madagascar* *Environmental Conservation*; 32

- Rao, K.S., S. Nautiyal, R.K. Maikhuri and K.G. Saxena (2000). *Management conflicts in Nanda Devi Biosphere Reserve, India. Mountain Research and Development* 20: 320-323.
- Rawat, R. (2004). *The Nanda Devi Campaign*. : Available at <http://bostonglobalaction.net/UK/nandadevi/contact.html> regional development: Schorfheide-Chorin, Germany. *Journal of resolve people-policy conflict. International Journal of Sustainable Development and WorldEcology*, 7, 333-342
- Sahai, H. and Kimothi, M.M.(1996). *Remote sensing for surveying, mapping and monitoring conservation areas in Himalaya. In Conservation and Management in Himalayas.* (eds. Ramakrishnana, P. S., Purohit, A. N., Saxena, K. G., Rao, K. S. and Maikhuri, R. K.). Oxford and IBH Publishing Company Pvt. Ltd. Delhi. Pp 233-258