

Strategic Management for Eco-Tourism Destinations: Pindari and Roopkund areas of Nanda Devi Biosphere Reserve of Uttarakhand

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Introduction

NANDA DEVI BIOSPHERE RESERVE (NDBR)

The interest for mountains, amazing common resplendency, princely social assorted variety, financial conventions, history and way of life polarize mountain dwellers, trekkers, naturalists, religious zealots, pilgrims and social voyagers from everywhere throughout the world to Nanda Devi Biosphere Reserve (NDBR) in the Uttarakhand Himalayas. NDBR is among 19 beginning locales in 13 nations that have been incorporated to UNESCO's reality system of biosphere holds. The hold incorporates the Nanda Devi National Park, a World Heritage site, and the Valley of the Flowers National Park in its center zones. Through advancement and aegis of the biosphere hold, nearby networks in the Lata-Tolma-Malari and Pindari territories are profiting by the improvement of elective wellsprings of salary, for example, eco-the travel industry, and from the change of a rich assortment of rural exercises. It includes parts of three Districts, viz. Chamoli, Pithoragarh and Almora of Uttarakhand state. The main portion of the Biosphere falls in Chamoli District of Garhwal Himalayas. It includes, on its eastern side, some portion of Pithoragarh District, and, on its southern side, some portion of Almora District.

The area of NDBR is approximately 1560 sq km, including 630 sq km of the present Nanda Devi National Park, which forms the core zone of the Biosphere. About 930 sq km area surrounding the Nanda Devi National Park from all directions forms the buffer zone of the NDBR. The Biosphere is situated between Latitude 79⁰ 12' E and 80⁰ E and Longitude 30⁰ 8' N and 30⁰ 2' N the altitude of the Biosphere varies from 1,000 m to 7,816 m. The mountain rim of the core zone

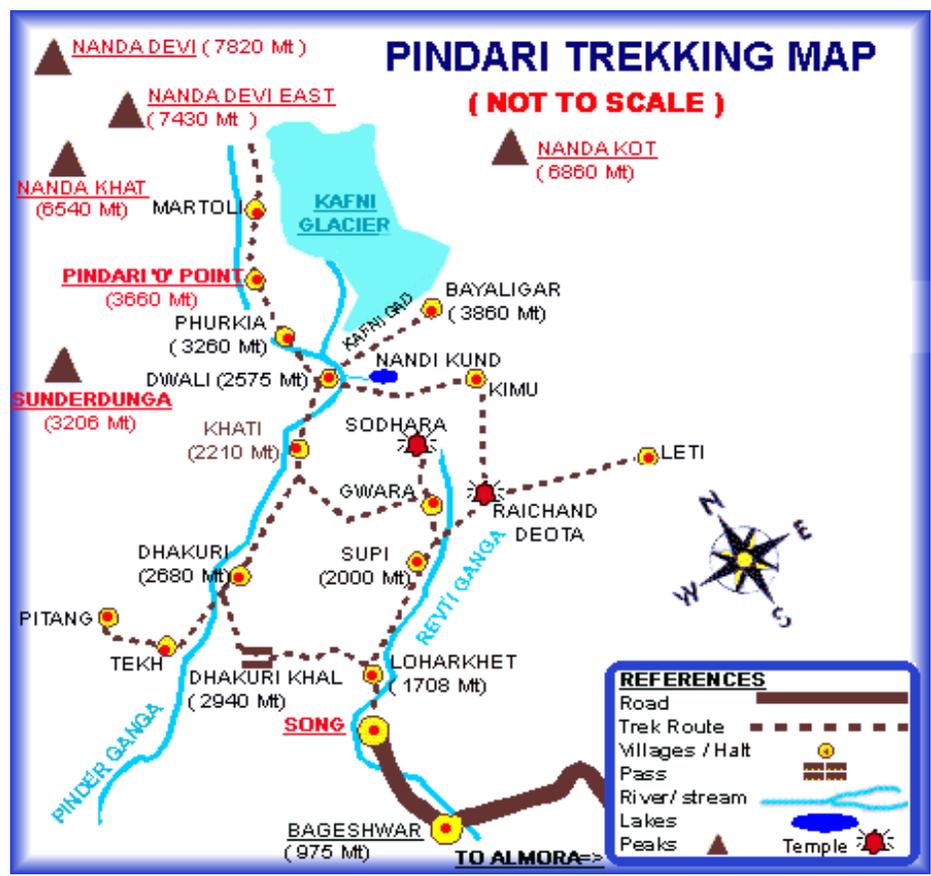
includes several major peaks, the most important ones being Dunagiri (7066 m), Changbang (6864 m), Kalanka (6931 m), Rishi Pahar (6992 m), Nanda Devi east (7434 m), Nanda Khat (6611 m), Mrigthuni (6855 m), Trishul (7120 m) and Nanda Devi (7816 m). Nanda Devi is India's second highest mountain. In order to promote ecotourism in this region it is required to conduct studies on the impacts of tourism on natural resources as well as on socio-economic conditions of the area.

The main objectives of this paper are:

- * To developing strategies for eco-friendly trekking in these areas.
- * To develop awareness among villagers for reducing environmental impacts and ensure involvement of stakeholders.

Trekking sites:

1. Pindari (In District: - Bageshwar of Kumaun Himalaya) and **Roopkund** (In District: - Chamoli of Garhwal Himalaya) are two important tourist places of Nanda Devi Biosphere Reserve (NDBR), where number of tourists visit for different purposes. In Pindari tourists visit for trekking to Pindari Glacier, whereas in Roopkund the tourists visit the area for its mysterious skeletons, picturesque beauty and for Nanda Devi Raj-Jat, a religious function attended by visitors along with local people.



The **Pindari** area or Pinder valley is situated in the northernmost interior part of Bageshwar district, in the Kumaun Himalayas. This area is well known for the famous "*Pindari Glacier*". It is a standout amongst the most easily available of all the Himalayan ice sheets and has baited mountain climbers and trekkers since the only remaining century. The Pindari Glacier is situated in the Pinder Valley between longitudes 79° 13' - 80° 2'E and scopes 30° 15'N and possesses a territory of 339.39sq.kms. It lies between the Nanda Devi and Nandakote tops and ends at a height of 3627 m. The Glacier is 5 km long; the nose is about 6m high and 2.5m wide or more the nose the icy mass prolongs for about 3km long and 300-400m in width, between an altitudinal scope of about 3600m to 5000m. Pindari's rough resplendency offers an amazing visual recognition, particularly for the trekker who is enamored with nature in the entirety of its perfect wonder.

The Pindari Glacier is a phenomenal and an elating knowledge. The Pinder waterway that rises up out of the Pindari Glacier depletes the valley. The stream, in its underlying course, saturates sedimentary rocks. Further toward the south, it wanders through quartz schist's. Rock is found in plenitude around there. The Pinder waterway has cut a crevasse in thick frigid stores up to proximately 10kms, bringing about the development of roomy icy porches spread on the two sides of the chasm.

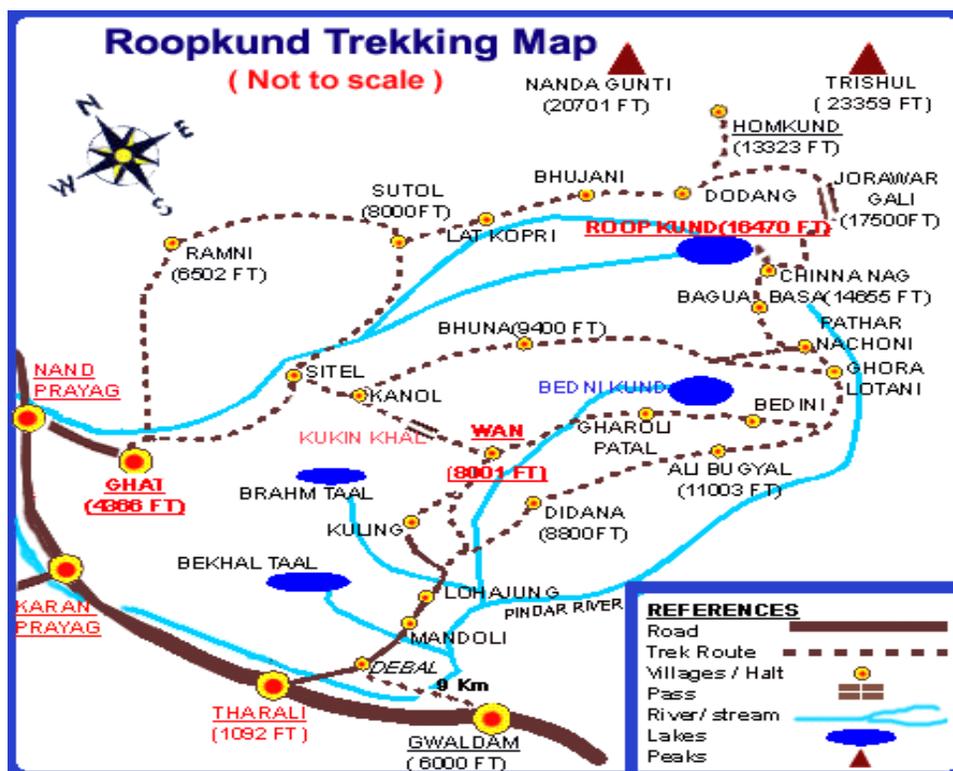
The Pindari valley is possessed by around 14 - 15 towns. The general population are by and enormously huge poor and lead to exceptionally straightforward life. The locals practice negligible subsistence farming, back dairy cattle for milk and sheep/goat for fleece and horses for voyagers. Maybe the best kenned trekking course in Kumaun, the trail pursues the Pindari stream to its source on the ice sheet are Nandakote (6,860 m). Chhanguch (6,322 m) and Nandaghunti (6,310 m). On the east and west of Pindari icy mass are the Kaphni, at the foot of Nandakote and Sunderdhunga ice sheets. Further west at the nose of the Namik icy mass lifts the Ramganga stream. Among these Pindari ice sheet is 3 km long and ¼ km wide associated with the southwestern incline of the external dividers of Nanda Devi Sanctuary.

From Phurkia up to Khati, places enroute to the Pindari icy mass, one goes over various cascades, hanging valleys and colossal moves bluffs as the one at Dwali. One needs to pass by street up to melodic creation which can be gotten to from Almora, Bageshwar and Kathgodam and from there on one needs to trek 45 km up to zero point (Pindari Glacier). There are many routes for trekking to Pindari Glacier as can be seen in the map given below. The popular / commonest route followed by the tourists will be taken for the present study, which starts from Loharkhet (1708m) to Dhakuri (2680m) then to Khati (2210m) to Dwali (2575m) to Phurkia (3760m), then to Pindari '0' point at 3660m. There are PWD Rest Houses in all these villages enroute. At Dhakuri and Khati there are

Private Hotels also. Some villagers also rent their rooms to tourists. Ponies are used for transportation.

The stoppage points are at/nearby Dhakuri, Khati, Dwali, Phurkia and Pindari Glacier.

2. Roopkund:



Arranged at a height of 5029 m in the inside of the Chamoli locale, Roopkund is celebrated for the enigmatic shallow pool of around 2 mts., with the edges secured with snow for all intents and purposes consistently. The lake is settled in the midst of all encompassing mountain view. After the snow dissolves, number of skeletal remains can be optically perceived. There is a plenty of discussion about the puzzle of Roopkund. As per some according to the convention, the Royal group of Garhwal directed Nanda Raj Jat to satisfy their Isht-Devi, with the goal that their kingdom would be prosperous and the adversaries would be oppressed. As indicated by another legend the illustrious family attempts the journey alongside their purohits to look for pardoning from Nanda Devi and to offer 'tarpan' to one of their ancestors who passed on at Roopkund alongside his enceinte spouse and prostitutes. Rajah Yashodhaval of Kannauj went ahead a journey to the dev bhoomi. His enceinte spouse and ladies of the imperial family went with him. He chose to go to Homkund alongside his company. He didn't make a beeline for guidance that ladies were not authorized past Bedni-Kund. He broke the convention and proceeded.

At Roopkund the Rajah and his company died deeply, most presumably in a snow-snowstorm. Many skeletons still untruth dispersed in and around Roopkund. Another story verbally communicates that they are the remaining parts of the Dogra General Zorawar Singh's military from Jammu, who attempted to attack Tibet in 1841, was beaten off and constrained to discover its way back home over the Himalayas. Alongside bones of people, bones of ponies have withal been found there. In any case, this hypothesis does not clarify the nearness of female skeletons. Cell based dating of the skeletons, done by Crane and Griffin in 1958 demonstrates that the bones are in reality between 500 to 800 years of age. Amid the Raj Jat even today, 'tarpan' is performed for Rajah Yashodhaval and his escort. Roopkund is visited not only for its mysterious skeletal remains but also for its picturesque beauty and the famous Nanda Devi Raj Jat. The approximate number of tourists other than religious (Nanda Devi Jat) visiting the area is 700 Indians and 250 foreigners per year (2004). The past most popular route is followed by the tourists which starts from Mandoli to Loharjung then to Wan (2433m), which is the last village in this route. There is FRH and GMVN rest house at Wan. Then visitors halt at Gharoli Patal then at Bedni, then comes Pathar Nachoni then Roopkund at 5029m. At Bedni there are two snow huts of Forest Deptt and a small rest house of Distt. Panchayat. After Bedni Bugyal tourists have to use tents.

Nanda Devi Raj Jat Yatra:

The Nanda Devi Raj Jat, going back to the ninth century, is for the most part held in interims of 12 years, when a four-horned Ram is conceived in one of the towns in the zone. The journey initiates from Nauti town in Chamoli area and takes a few days of trekking through the bumpy territory to achieve the last goal of Homkund. The map shows routes to Roopkund with altitudes of some of the places in Feet. The stoppage sites are nearby Mandoli, Loharjung, Wan, Gharoti Pathar, Bedni Bugyal, Ali Bugyal and Pathar Nachoni/ Roopkund. The area comes in Nandakini Block, Nandprayag Range under Badrinath Forest Division.

In recent years tourist Deptt. is organising a three days Roopkund Mahotsav on the day of Nanda Devi Jat (yearly Jat, Raj Jat comes after 12 years). During Nanda Devi Jat / Raj Jat, thousands of Brahmkamal flowers (*Saussurea obvallata*) are offered to the deity 'Nanda', which are plucked from nearby areas like Bedni Bugyal, Ali Bugyal etc. This flower can grow in this type of climatic conditions only. Plucking of these flowers without any conservation measure has made the plant rare in these areas.

Some past studies from Uttarakhand State:

The continuous flow of tourists, mountaineers, trekkers etc. is likely to have positive as well as negative impacts on the natural resources to a certain extent. Mythological beliefs and tradition that are prevalent in the Himalayan regions are also responsible for adverse effects on the flora.

Religious tourists habitually collect flowers and colourful herbs to offer to temples like Gangotri, Yamunotri, Badrinath, Kedarnath etc. Consequently, many species, which are part of our cultural and religious heritage, are beginning to get wiped out. e.g. In Badrinath temple Tulsi (*Santalum album*) is offered to lord Badrinath Ji. At Roopkund Brahmkamal (*Saussurea obvallata*) is offered to Goddess Nanda Devi.

An investigation (Trivedi, 2003) reports that at Surkunda Devi (25 km from Mussoorie to Tehri), which is arranged at a most pleasant spot in the most astounding (2750m) summit of external Himalayan range, around 10,000 individuals amass for seven days on the event of Dusshera and everybody offers few blossoms/twigs of Ronsli (*Abies pindrow*) to Goddess Surkunda. Each guest generally culls 10 blooms and 2 twigs. Along these lines around 10,000 blooms and 20,000 twigs are bewildered every year. This has resulted total degradation of *Abies pindrow* forest in the nearby areas with its associated shrubs and herbs. Some of the scrub species like *Primula denticulata*, *Anemone vitifolia* etc. have started growing there. Ahmed (1990) has worked on application of environmental impact assessment in the Himalayas for resource conservation and ecological sustainable development and highlighted the environmental problems associated with human activities in the Himalayas. Singh and Yadav (1980) made a study on impact of modernization with special reference to tourism. In the study, impacts of modernization of socio-economic, cultural and educational aspects were partially evaluated while assessing effects of the visiting communities on Srinagar on microscale. Kaur (1980) started an investigation managing appraisal of picturesque asset in a scene and tweaking a foundation for a long haul future use and noteworthy sorted out improvement of the travel industry at Nainital.

Rajwar (1981) reported ecological problems of Mussoorie hill and their solution. He reported that tourism, destruction of forests and indiscriminate exploitation of certain economically important species has caused ecological imbalance and this can be conserved by promulgation of law and by people's participation. A study (Anon, 1980) covers the pilgrim personality of Rishikesh town, concentration of tourists, and measures taken to meet this challenge, besides the resources it offers. Madan and Rawat (2000) have reported that the tourists visiting Mussoorie had direct or indirect impacts on different components of its environment. In recent years tourists have visited the area more than its carrying capacity. Singh and Kaur (1983) have displayed contextual analyses from the Himalayas on the problems on style and type of the travel industry, which could give increasingly beneficial and positive outcomes, got in various natural, financial and socio-social conditions.

While mapping the vegetation in Bedni and Ali Bugyals of Roopkund Jeet Ram et al. (1995) have referenced that visit touching in these Bugyals by adjacent residents has caused corruption in the subsisting greenery. Maikhuri et al. (2000) have emphasized that the exclusion on the travel

industry in the center zone of the Reserve has induced clash between neighborhood individuals and Reserve ascendant elements. The neighborhood individuals have thorough worry about the significant salary it gave. The paper manages the historical backdrop of undertakings and the effect on the nearby economy, recognizable proof of model eco-trekking/campaign courses and potential destinations, and planning fortunate procedures/activity plans for supportable ecotourism. This won't just profit to determine the nearby human approach clashes and revise the neighborhood economy however will benefit to accomplish the biodiversity protection objective.

Conclusions

In the developing countries like India there is an absence of general public pressure on the state to take strong measures on environmental protection. The awareness among local people is low and the tourism and environment groups that exist are very particularistic and lack a mass base unless people feel individually threatened by environmental degradation. Unregulated tourism can cause manifold problems – unbalanced social change, and unplanned economic development, social tensions and environmental pollution, distortion of life style and cultural decay. Thus, it is need of hour to make the people aware or train them how to regulate the tourist activities in the trekking sites. Highlights the impact of tourist activities on the environment of these areas and suggest the scientific and sustainable development of mountain tourism by assessing the carrying capacity of the areas to regulate tourist activities in a sustainable way.

Some Do's and Don'ts while trekking in these ecotourism destinations are suggested as below:

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Do's:

- Avoid usage of polythene and plastics bottles, tins, polythene sacks etc.
- Observe the holiness of heavenly destinations.
- Respect neighborhood customs while taking photos, veneration protection, request earlier assent and exercise self control.
- In temporary toilets (close campground), spread it with mud or sand. Learn that the spot is at any rate 30m a long way from river resource.

DON'TS:

- Taking without end of cuttings, seeds and roots or entire plant. Assent the verdure to prosper in their indigenous habitat.
- Avoid using cleansers in streams or springs.
- Do not use wood as fuel to cook victuals at the campground and don't annihilate the timberland abundance of the Himalayas, which are our legacy.
- Do not toss lit cigarettes or make open flames in the backwoods.
- Do not expend liquor, drugs or some other intoxicant in blessed spots.

- Do not entice the nearby kids by offering them victuals stuff or desserts.
- Do not mindfully auricularly perceive melodic entertaining instruments at high volume and avoid commotion contamination.
- While setting up transitory portable shelter houses watch the land cleanness and not influence to going around natural life and timberlands.

REFERENCES

- Ahmed, Afroz (1990). Application of Environmental Impact Assessment in the Himalaya for Resources, Conservation and Ecologically Sustainable Development. *Energy Environment Monitor* 6 (1): 23-26 March.
- Anonymous (1986). Rishikesh, A Doorway to Himalayan Resorts and Pilgrimages, U.G.C. Report. *Journal of Himalayan Studies and Regional Development* Vol. 9 & 10, P. 133-139.
- Kaur, J. (1980). Re-Examining Tourist Capacity of Nainital: A case for Diffusion of Tourist Activity in the Kumaun Lake Basins. In Singh T.V., and Kaur, J. (Eds.). *Studies in Himalayan Ecology and Strategies for Development*, the English Book Store, New Delhi.
- Madan, Sapna and Laxmi Rawat (2000). The impacts of tourism on the environment of Mussoorie Garhwal Himalaya, India. *The Environmentalist*, Vol. 20 (3): 249-255.
- Maikhuri, R.K., U. Rana, K.S. Rao, S. Nautiyal, K.G. Saxena (2000). Promoting ecotourism in the buffer zone areas of Nanda Devi Biosphere Reserve: an option to resolve people-policy conflict. *Int. Jour. of sustainable Dev. & world Ecology*, 7 (4): 333-342.
- Rajwar, G.S. (1981). Ecological Problem of Mussoorie Hills and their solution. *Journal of Himalayan Studies and Regional Development* Vol. 5-6.
- Ram, Jeet, G. L. Shah and SP Singh (1995). Vegetation mapping in Higher Himalaya: Bedni – Alee Bugyal –A case. In: *Glimpses of Central Himalaya - A Socio-Economic and Ecological Perspective. Part I* (eds. BR Pant & MC Pant). Radha Publications New Delhi, pp 379-397.
- Singh, T. V. and Yadav, D. B. (1980). A cross Road Pilgrim Tour in Garhwal: Studying Impact of Modernization with special Reference to Tourism. *Journal of Himalayan Studies and Regional Development* Vol.4.
- Singh, Tej Vir and Kaur, Jagdish (1983). Mountain Tourism, How Good and How Bad-case studies from the Himalaya. *Journal of Himalayan Studies and Regional Development*, Vol. 7&8.
- Trivedi, P. R. (2003). Study material, “Eco-Tourism Destinations” M Sc Ecology & Environment. Part III. Indian Institute of Ecology & Environment, New Delhi.