

Green Tourism in Mountain Regions - Reducing Vulnerability and Promoting People and Place Centric Development in the Himalayas

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Abstract: In recent years, mountain regions are attracting great attention to Indian tourists in general and foreign tourists in particular. The potential mountain resources for promoting green tourism are enormous in the form of natural and cultural heritage such as biosphere reserves, flora and fauna, lakes and rivers and traditional rural resources. In order to utilise tourism industry market, uncontrolled numbers of tourists and related haphazard infrastructural facilities in the vulnerable mountain regions pose serious environmental implications. The ecological pressures are threatening land, water and wild life resources through direct and indirect environmental impacts together with generation of solid and liquid wastes, so green tourism is emerging as an important task in order to develop new relationship between communities, government agencies and private sectors. The strategy focuses on ecological understanding, environmental protection and ecodevelopment. The major attributes of the green tourism include environmental conservation and education and distribution of income to local people based on strong partnership. Various knowledge systems go a long way for achieving the goals of the green tourism, which creates awareness about the value of environmental resources.

Mountains have ecological, recreational, educational and scientific values, which need to be utilised in sustainable way. Various tourist activities and facilities need to be diversified in order to achieve multiple benefits including scientific field excursion, recreation in natural and cultural areas, community festivals and sport tourisms. Green tourism considers tourism development as an integral part of a national and regional development. The paper discusses the social, economic and environmental dimensions of the green tourism with particular reference to village tourism development programme taking empirical evidences from the Himalaya. Such programme also minimises biophysical and human vulnerability and risks in mountain regions. The environmental consciousness campaign and introduction of code through multi- purpose Tourist Resource Centres are gaining currency in above context.

Keyword: Mountain region; green tourism; development programme; Kullu Himalaya

Introduction

In recent years, mountain regions are attracting great attention of Indian tourists in

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general and foreign tourists in particular. The potential mountain resources for promoting ecotourism are enormous in the form of natural and cultural heritage, such as biosphere reserves, flora and fauna, lakes and rivers, and traditional rural resources. In order to utilise the tourism industry market, uncontrolled numbers of tourists and related haphazard infrastructural facilities in the vulnerable mountain regions pose serious environmental implications. The ecological pressures are threatening land, water and wildlife resources through direct and indirect environmental impacts together with generation of solid and liquid wastes (Singh 2002). So ecotourism or green tourism is emerging as an important task in order to develop a new relationship among communities, government agencies and private sectors. For assessment of an environment, one can assess the survival of some species, but for the urban habitat it must encompass all species, local population, tourists and others. In a resort town, several types of such species exist in their own environs. In urban situations where environmental inputs are enough for survival but not for optimum growth of species, a slight change in ambient conditions can be disastrous because these species had reached their carrying capacity (Gardner 1996, Singh 1992). This paper discusses the social, economic and environmental dimensions of the ecotourism with particular reference to tourism development programme, taking empirical evidences from the Kullu Himalaya.

The study area, Manali, is a small town situated in the Kullu District of Himachal Pradesh. It is one of the famous tourist places in the world. Large numbers of tourists visit this place in summer as well as in winter; as a result, this town has been experiencing environmental degradation on many accounts. Some of the factors which have contributed towards degradation of Manali's environment are: over population, acute shortage of water and civic amenities, over crowded roads, heavy traffic and resultant pollution, excessive garbage, unplanned growth and illegal constructions, sewage and sanitation problems, which are threatening the very beauty and life of the Manali Town (Chetwode 1972, Singh and Haigh 1995).

1 Ecotourism in the Himachal Himalaya

About four decades ago, hardly any one imagined the tremendous speed at which tourism would expand and grow. Today it has become a global phenomenon and is one of the world's leading industries. Within the tourism industry, the fastest growing sector is that of ecotourism, which has generated great interest in the travel trade in recent years. The term may be defined as the following: *Ecotourism is a form of tourism based on the natural ecological attractions of a destination area. It differs from mass tourism by having a lower impact on the environment and by requiring limited infrastructure development. Ecotourism stresses the need to conserve the natural environment, thus offer an opportunity to capitalize on underdeveloped natural attractions without incurring the adverse effects of conventional mass tourism.*

Tourism is also Himachal's most promising industry, which formed a modest beginning in the early 1970's. But there has been much concern justifiably expressed in recent years about the undesirable environmental impacts of unplanned and uncontrolled mass tourism. Past experiences suggest that tourism has a mixed blessing. The thrust of the tourism policy is to increase arrivals by diversifying into non-traditional areas, which will help alleviate the pressing problems of the saturated hill stations. State government is making such efforts to develop tourism in the area:

- 1) Dispersing tourism in rural areas to preserve the fragile ecology and to integrate with wide development plans
- 2) Promotion of rucksack tourism (adventure sports) for trekking, skiing, camping, paragliding, angling, river rafting and mountaineering in turbulent rivers, clear mountain lakes, sparkling snow-fed streams and glaciers
- 3) Biosphere reserve and wetland development
- 4) Sponsoring various training courses in adventure activities
- 5) Publication of literature to promote the public awareness on environmental protection.

Table 1 Annual Tourist Flow

Month	Domestic	Foreign	Total	% of growth
January	10738	108	10846	15.6
February	12414	120	12534	121.4
March	27509	238	27747	64.0
April	44763	743	45506	122.4
May	100519	700	101219	22.2
June	123015	652	123667	-72.2
July	31966	2387	34353	-65.4
August	8637	3265	11902	-31.8
September	5774	2428	8202	242.7
October	25761	2348	28109	-45.2
November	15125	274	15399	39.1
December	19657	593	20250	—

Source: Department of Tourism, Simla.

2 Development of Tourism Industry at Manali

The arrivals of tourist annually in Manali reached 5,51,000 in 1994 ~ 1995. In the year of 1985, it was around 135,109. Arrivals from other nations except Pakistan and Bangladesh were about 3.0% of the total. Growth of tourist arrivals over one decade was averagely 14.1% per annum. However, the average figure marks a period of rapid growth. There was a 20% decrease in tourist traffic in the year of 1995 because of weather conditions, poor road infrastructures and flood situations. From the last three decades a 270% increase per decade in tourist influx has been observed.

2.1 Growth of tourists

The tourist arrivals from the neighboring states and other states of India are due to the attraction of weather, hill station and natural beauty of Manali. Most of the domestic tourists come from Delhi, Punjab and Rajasthan. Foreign tourists of different nations come to Manali usually for enjoying weather, trekking and mountaineering. The maximum proportion of foreign tourists to the total foreign tourist arrivals is from U.K. and France. Domestic tourist percentage is higher as compared with the other nations (Table 1).

2.2 Tourist season

According to the tourist arrivals, it has been assessed that the peak occurs from mid April to mid July. About 60 ~ 65% of the tourists visit in the peak summer days and the second season from September to October. In Manali, most of the domestic tourist average stay is about 2 ~ 3 days and the foreigner average stay 4 ~ 7 days, and the intended stay of foreign tourists is about 20 ~ 30 days.

2.3 Expenditure patterns

The different spending groups give their expenditure percentage breakdowns for various items. Generally, the major expense goes to food and accommodation. The average per capita maximum expenditure is Rs. 600/day and the minimum Rs. 200/day under different heads like food, accommodation, transportation, shopping and others (Table 2).

Table 2 Expenditure Patterns (%)

Item	High spending group	Medium spending group	Low spending group
Food	30	25	30
Accommodation	40	30	20
Transport	20	30	35
Shopping	10	15	15

Table 3 Projection For Tourist Traffic

Year	Total number of tourist arrivals	Number in the peak month	In a single day of the peak month	% of total	For intended stay (days)		
					3	4	5
2001	769535	192384	6413	-	-	-	-
2006	1099335	274834	9161	25	27483	36644	5805
2011	1429136	357284	11909	25	35727	47636	9545

2.4 Projection of tourist traffic

Taking the average decadal growth rate of 270% and the present annual growth rate of 15% for projection, the year of 1995 has been taken as base year (Table 3). The built-up space required per bed or person is 20 m². This standard poses a requirement of space for the future development in consideration of environmental constraints and also for better development of the other facilities. However, considering the limit of resources, the desirable minimum should be at least 8 ~ 10 m².

3 Driving Forces of Tourism Development

If a sufficient infrastructure capacity exists, then tourism can be developed with little additional cost. However, this requires that the infrastructure capacity be matched with tourism, which does not expand beyond capacity levels. The impressive performance of the tourism sector depends on considerable infrastructure improvements like new roads, electrical power plants and improvement in telecommunications for meeting the needs of the tourism industry together with giving benefit to all members of the host community as well.

3.1 Tourism, taxes and economic development

Changes in land prices are often the first indicator of the economic impact of tourism. Property taxes increase land speculation, which rarely benefits local populations as they enjoy only a small share of land value increases. Taxes generated through tourism development can help

to reduce the local tax burdens. Tourism is often touted as an economic stimulus agent for regional development. Any industry that creates opportunities and brings money into an area is an economic development stimulus. As services increase and further infrastructure development proceeds due to tourism, other infrastructure and economic development activities take advantage of existing transportation networks, growing populations and available resources. Economic development brought by other industries can stimulate tourism. Economic systems should function according to prescribed cultural conditions. Issuing liquor licenses and hours of operation, providing highway maintenance, regulating architectural designs, public funding promotions, and making other decisions that affect a business operation in tourism are the responsibility of the local level administrators.

3.2 Accommodation

Accommodation has a direct link with service industries like hotels, restaurants, lodges and guesthouses etc. Indirectly it helps in generating more employment opportunities to cater to the needs of the tourists and secondly in trade and commerce. The revenue collected in terms of taxes from the services is indirectly helping in the development of state economy and regional economy. The status of accommodation in Manali at present is in the form of private hotels, state tourism bungalows, huts / cottages, tourist hotels, rest houses of Forest Department and PWD etc. About 985 rooms were available in 1985, which were much less than the required number of 1462. The present tourist accommodation is inadequate for the peak season. The status of accommodation in Manali Valley is in the form of private hotels,

state tourism bungalows, huts, cottages, guesthouses, rest houses and dharmasalas. At present, the total number of beds available is 8800, compared with the required number of 9487, the shortage is 688 beds.

3.3 Transport

The local transport mode gives direct benefit in terms of accessibility. It directly saves the travel time of the tourists as well as local community. It directly connects all the tourists' attractions with destination. Indirectly this infrastructure creates employment in terms of private tour operators, auto-rickshaws, and taxi drivers etc. There are no local city-level bus services. No adequate space for parking is available. The public bus service for visiting local sites is not sufficient and the other available mode is very expensive. At present,

transportation vehicles entering into Manali per year are approximately 250,000 compared with 163 in 1983.

Other driving forces for tourism development include shopping segments like local craft bazaar or arcade, commercial complex, catering services, recreation and entertainment provision, and water supply and sanitation facilities.

4 Status of Infrastructure Development

There are many problems regarding basic infrastructure facilities, which are being looked after and managed by different departments and agencies (Table 4).

Table 4 Basic Infrastructure Use and Management Analysis

Tourist infrastructure	Days			Provision	Level of satisfaction
	1	2	3	Adequate (A) / inadequate (I)	Good(G)/fair(F)/ Poor (P)
Tourist information & reception	0	0	0	A	P
Travel and trekking	0	0	0	A	F
Roads	0	0	0	I	P
Parking facilities	0	0	0	I	P
Local transport modes	0	0	0	A	P
Drinking water & sanitation	0	0	0	A	P
Public convenience	0	0	0	A	P
Medical facilities	0	0	0	A	F
Communications		0	0	A	F
Petrol and service stations	0	0	0	A	F
Accommodations	0	0	0	I	F
Accessibility	0	0		I	F
Entertainment		0	0	I	P
Administration	0	0	0	I	P
Banks / exchange	0	0	0	A	F
Emergency facilities	0	0	0	A	F
Shopping segments	0	0	0	A	F

Note: TCPO Planning Standards followed to analyse the above matrix.

4.1 Carrying capacity of Manali town

The carrying capacity of a hill resort town refers to the threshold elements of the natural environment and infrastructure, emerging out of life cycle, population growth, land use succession, ecosystem and ecological process for sustaining the urban development load. A threshold of a given area, say “x” of a resort town during a given period of its lifecycle, is a number that is a sum of beds in a residential use and hotel / guest house use “n”, such that the next bed can not be augmented at the previous cost per unit. This additional cost is required to extend the ecosystem-based area for urbanization. In other words, if “n” is a threshold during one stage of the life cycle, then the cost beyond the previous cost per unit (viable bed) that will be necessary for constructing the next viable bed is the threshold cost for overcoming the threshold “n”. The beds or viable beds are measures of carrying capacity, and the urban threshold theory gives the capacity value for locating these areas in urban space.

4.2 Boundary thresholds for carrying capacity: critical areas

The existing natural environment needs to be protected first. This includes areas of outstanding landscape values, forest, orchards and wooden lands including deodar reserve forest, rivers, Manali wildlife awareness park and wildlife sanctuary. Using the slope analysis map, Manali planning area is broadly divided into five categories of slopes, namely less than 10%, 10% ~ 20%, 20% ~ 30%, 30% ~ 50% and greater than 50%. Above 20% slope is considered unsuitable for urban development.

1 The built-up areas considered unsuited for further redevelopment because of historical, cultural and environment values and unique scenic beauty and necessary for protection are to be

identified among areas of importance for the tourists. The nine important tourist spots within Manali include Hadimba temple complex, Vashisht temple complex, Nehru Kund, Buddhist monastery, log huts, Manu temple complex, the mall road and areas with great scenic beauty in Manali is log huts. No further expansion shall encroach on these areas that are also considered as boundary thresholds.

2 The area for redevelopment, namely Manu market area, has been considered as a boundary threshold.

3 Lands, which are inaccessible but on a slope of 20% ~ 50%, may be considered for horticulture; lands on a slope of 10% ~ 20% for agriculture and lands on a slope of above 50% for forestry use.

4 The area uniquely qualified for tourist development shall be isolated as a boundary threshold (the Clubhouse area, the picnic spot near the riverbed at Bahang Village).

5 The area uniquely qualified for mineral or sulphur spring development shall be a boundary limit. Adjoining areas near the sulphur spring may be considered unsuitable for urban development. It may adversely affect the hot water spring.

6 There is a need to evaluate major urban development areas of Manali in relation to their carrying capacity in order to hold more residential and tourist beds. The development capacity of the total number of beds in the major urban development area is to be computed.

4.3 Analysis of carrying capacity:

Application of the maximum density demands considerable care for urban development. The built-up space per hotel bed and per residential bed is equal, amounting to 10m²/person or bed, which is not desirable. So the desirable carrying capacity requires 20m²/person or bed of developable land will be required by 2011 (Table 5).

Table 5 Carrying Capacity of Manali

Slope	Area (ha) 1st threshold	Area (ha) Intermediate Threshold	Density (ppha)		Computed carrying capacity	
<10%	1908	1378	500	600	16430	19716
10~20%	-	6374	450	525	28683	33464
Total	1908	7752	950	1125	45113	53180

Source: Calculated through the topological sheets.

In 1991, there were a population of 9133 and 4859 hotel beds, totaling 13,992. The additional carrying capacity is 45,113. This works out a total of 59,105. This is the ultimate desirable carrying capacity. Based on the tourist population and resident population in 2002, the total hotel beds plus residents work out 38,151 (= a population of 17,032 + 21,119 hotel beds).

5 Ecotourism Strategy for Sustainable Development

5.1 Immediate strategy

Accommodation strategy

1) Cheap accommodation facilities should be provided to medium spending group category of tourists.

2) Unauthorized accommodation should be checked and further development of activities of such nature should not be allowed, especially in Manali area for the tourism promotion. This will ensure the dispersal of tourists to other areas of the valley. Low-cost schemes should be promoted through shifting the focus from the already saturated destination – Manali.

3) Providing accommodation in alternate locations like tea gardens, farmhouses will reduce congestion of the town.

Transportation

1) Transportation routes should be improved towards the tourist interest places.

2) A proper hierarchy of modes of transportation should be promoted.

3) State government should have direct participation in the planning of tourist facilities. For the low-spending group of tourists, a well-defined rate structure should be provided for the state transport facilities.

Water supply and sewerage

Water supply and sanitation are basic needs, which require improvement and considerable investments. So it can be managed by encouraging private and public participation or be given to the private sector. Recycling of waste can reduce solid waste generation. Waste could be dumped/collected at specified locations.

Energy strategy

The use of non-conventional energy sources to reduce the consumption of electricity should be encouraged, e.g. solar energy for heating water and street lighting in tourist establishments.

Special tax strategies

Special taxes can be introduced for improving the basic infrastructure by the local government in addition to regular sale taxes for entrance fees, recreational activities, foods and drinks, which can be used for conservation, education and improving infrastructure development. Special taxes can be imposed on sale of gasoline and other motor fuels. It can be used for improving roads and national highway construction, which directly helps regional development.

Finance strategy

For the tourism infrastructure development, financial assistance can be available from international organization for following purposes:

1) Technical assistance for preparing development plans.

2) Loans for infrastructure development programs.

3) Loans and equity investment in private facilities.

Design and development controls

Tourism development should be designed to blend with the existing environment for the achievement of balance development in the following ways.

1) Retain the scenic beauty of the region.

2) Providing basement especially for parking in hotels and commercial complexes.

3) To prevent the unplanned mass tourism development.

4) Development of new potential tourist spots to increase the tourist attraction and to reduce the excess load of Manali.

5) There is a need for conservation of reserve forest and hot spring, water spots and scenic beauty areas like log huts.

5.2 Long Term Strategy

Theme circuits and theme clusters should be developed to reduce the infrastructure development cost, and save the travel cost and visiting time of tourists.

Industries

The yearlong industries can be developed for items which can be exported from Manali, e.g. sports goods, fruit processing, canning and handicrafts and household cottage industries.

Green houses

1) Green houses can be developed on suitable slopes for maintaining exotic species which can attract tourists and generate incomes.

2) Green houses can be a research ground for introduction and maintenance of commercial trees, crop-species and agro-forestry.

3) Poly culture can be introduced to replace monoculture and crops rotation to achieve continuous economic gains from the cultivated land.

4) The slopes less than 15% are suitable for development of bench terraces.

6 Conclusion and Policy Implications

Tourism is relatively a new industry in Himachal and the government is anxious to avoid the pitfalls of uncontrolled mass tourism by taking cautious steps to create a healthy ecotourism industry which is economically productive, socially

responsive and environment-friendly. It is trying to fulfill its share of the bargain, but in the ultimate analysis, the success of ecotourism will greatly depend on the individual responsibility of those involved in the trade and the tourists themselves.

The strategy focuses on ecological understanding, environmental protection and ecodevelopment. The major attributes of the green tourism include environmental conservation and education, and distribution of incomes to local people based on strong partnership. Various knowledge systems will go a long way for achieving the goals of ecotourism, which creates awareness about the value of environmental resources. Mountains have ecological, recreational, educational and scientific values, which need to be utilized in a sustainable way. Tourist activities and facilities need to be diversified in order to achieve multiple benefits, including scientific field excursions, recreation in natural and cultural areas, community festivals and sports tourism. Ecotourism considers tourism development as an integral part of a national and regional development. Such programmes also minimize biophysical and human vulnerability and risks in mountain regions. The environmental consciousness campaign and introduction of codes through multi-purpose Tourist Resource Centers can gain currency in above context.

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