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EXAMINING TOURISM IMPACTS FROM AN INTERDISCIPLINARY PERSPECTIVE: THE HIMALAYAN CASE STUDY

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1. Introduction¹

The growing concern for the potential harmful effects of tourism on the environment, socio-economic systems, and cultural values of destination areas have preoccupied tourism professionals and policy analysts to search for better approaches to tourism planning and development. This has given rise to concepts such as ecotourism², alternative tourism³, and sustainable tourism⁴—concepts that have been heavily criticized for their ambiguity and lack of depth in analyzing tourism processes and impacts. Some of them are not new, for example, as early as 1965 Hetzer had called attention to the idea of “ecological tourism” with emphasis on integrating culture, education and tourism.⁵ What is new about these concepts is that they depart significantly from the traditional views of tourism, which is mainly concerned with economic development. Cultural integrity, environmental conservation, and people’s perceptions and attitudes towards tourism development are the focal concerns of these recent concepts. As such, the concepts are heavily influenced by the idea of “sustainable development”.⁶ According to Our Common Future, the concept of sustainable development is based on principles of equity, ethics, and quality of life, and is a process to meet the needs of the present without compromising the ability of future generations

1 The author gratefully acknowledges the funding support from the Swiss Foundation for Alpine Research, Zurich, Switzerland. In particular, he wishes to thank Dr. Jürg Marmet and Dr. Fritz Hans Schwarzenbach for their relentless support for the research project..

2 CEBALLOS-LASCURAIN, 1996.

3 SMITH & EADINGTON, 1992.

4 BUTLER, 1991.

5 HETZER, 1965 cited in MILLER, 1993.

6 DE KADT, 1990; NEPAL, 1997.

to meet their own needs.⁷ Sustainable development has been interpreted as a holistic concept, as it integrates the three essential elements of sustainability: environment, economics, and social systems. By virtue of its definitions and the parameters that it seeks to measure, it is an interdisciplinary concept. It has strongly influenced current debates and discussions on issues such as biodiversity conservation, protected area management, forestry, rural development, and recreation and tourism, thereby stressing the significance for integrated natural resource planning and management. The justification for integration and interdisciplinary research is relevant for tourism too, which crosses several disciplinary boundaries.

This calls for attention to initiate tourism research/study from an interdisciplinary perspective. In such a research design, the focus of the impact study would begin at the micro-level (site) and comparisons made at the local, regional, national and international levels. A comprehensive analysis would include inter-linked issues related to the economy, culture, society, politics, ecology, and the environment. This might be referred to as the horizontal integration, while the vertical integration would refer to the levels of analysis, i.e., studies at the various levels mentioned above. Such a research framework would allow for a comprehensive understanding of tourism issues. The depth of analysis may, however, vary at each level. While ecological impact study may be much more detailed at the site and local levels, environmental impact ought to be more detailed at the local, regional and national levels. Likewise, economic impact should be studied in greater detail at the local and regional levels, and less detailed at the national level where macro-level data becomes more relevant. The social and cultural impacts should be analyzed in greater detail at the local and regional levels, and the political including administrative aspects at the regional, national and international levels.⁸

With the above background and rationale, the Nepal Tourism Study Group based at the Centre for Development and Environment (CDE), University of Bern, and coordinated by this author, completed a five-year tourism research project in the Nepal Himalayas. Funding for this five-year project was provided by the Swiss Foundation for Alpine Research, Zürich, Switzerland. Under this Project, five masters theses and one PhD dissertation

7 WCED, 1987.

8 NEPAL, 1994.

were completed.⁹ The theses were written in German, and the dissertation in English. Although volumes have been written in the past on tourism related issues in the Nepalese Himalaya, this is the first attempt to provide a detailed, comparative, and interdisciplinary approach to tourism impact study in Nepal. The Nepalese Himalaya illustrates a wide range of problems and potentials of tourism, and offers an insight into how different policies and institutional frameworks dictate the nature of tourism development and environmental management.

This paper provides a summary of the key findings of that research project, with the objective of demonstrating the relevance and utility of interdisciplinary research in tourism. The paper briefly introduces the themes and issues covered under the study, and the framework for analysis. It then summarizes the key findings on the tourism-induced environmental, economic, and social changes. Finally, it identifies the key elements of change and compares the economic and environmental benefits and costs of tourism in the Nepalese Himalaya.

2. Issues in Tourism, Environment, and Society in the Nepalese Himalaya

The Nepalese Himalaya has been a focus for tourism and environmental studies for over two decades. Although, tourism related impacts in Nepal are severe and wide spread, studies have been mainly concentrated in the Khumbu region where the highest national park, the Sagarmatha (Mt. Everest) National Park is located.¹⁰ Most of the studies have paid particular attention to problems related to waste disposal, deforestation (as a result of tourists' fuelwood demands), changes in land use and agricultural practices, physical environment and social and cultural traditions of the local community. Despite the volumes of literature on aspects of tourism, environment, and economy in the Nepalese Himalaya, there are hardly any studies that present a comparative and holistic perspective of the challenges and opportunities for sustainable development in the Nepalese Himalaya. The Nepal Tourism

9 BICHSEL, 1999; MATTLE, 1999; NEPAL, 1999; SALAMI, 1999; STOCKER, 1999; JANPER, 2000.

10 BJØNNES, 1980; FISHER, 1990; BROWER, 1991; BYERS & BANSKOTA, 1992; STEVENS, 1993.

Study Project, the source of this paper, attempts to fill this gap by providing an analytical perspective on various dimensions of tourism. The main objective of the project was to assess the current state of tourism development in three popular destinations namely, the Khumbu, Annapurna and Upper Mustang, and how tourism might have affected the local environment, economy, and society (Table 1). The environmental issues that were covered under the study include the dynamics of land degradation, particularly forest and trails, tourism-induced energy demands, physical expansion of human settlements, and solid waste disposal. Economic issues include the growth and development of tourism infrastructure, the role of tourism in improving local livelihood conditions through income and employment opportunities, linkages between tourism and other economic sectors, particularly trade, and differential income between tourism-affected and not affected households. Similarly, social issues included role of women in tourism and conservation activities, women's strategies and adaptations in tourism-affected and not affected households, and mechanisms for institutional capacity building and local participation.

Table 1: Dimensions covered in the Himalayan Tourism Study

<i>Theme</i>	<i>Issues</i>
Environmental changes	Forest degradation <i>Tourism induced energy demands*</i> <i>Physical expansion of settlements</i> <i>Trail degradation</i> <i>Solid waste disposal</i>
Economic changes	Infrastructure development Tourism-trade linkages Local benefits - income & employment Benefit sharing mechanisms Household-level income differentiation
Social changes	Institutional capacity building Level of community participation <i>Gender issues in conservation & tourism</i> Adaptation in resource management Visitor perceptions of tourism services

* Items in italics were examined in detail

The three destinations were deliberately selected because not only have they experienced different levels of tourism development, but the policy and management approaches are very different also. While the Khumbu region

has experienced more than 30 years of tourism development, Annapurna and Upper Mustang have seen almost 20 years and eight years of tourism, respectively. All three destinations are also protected areas, for example, Sagarmatha National Park (SNP) in Khumbu, Annapurna Conservation Area in Annapurna (ACA), and Upper Mustang Conservation Area in Upper Mustang (Fig. 1). It should be clarified here that Upper Mustang is an extension of the Annapurna Conservation Area Project (ACAP). SNP is managed by the Department of National Parks and Wildlife Conservation (DNPWC), a government agency with a rather top-down approach, ACA is an undertaking of the King Mahendra Trust for Nature Conservation (KMTNC), a national non-governmental organization (NGO) with emphasis on participatory approach at the local level. Similarly, the tourism development approach in Mustang is a combination of the above two approaches, and is managed by ACAP. The difference in the duration of tourism development and various management approaches offer a useful analytical framework for examining the relationship between tourism, the environment, and socio-economic developments.

Several limitations of research related to environmental impacts of tourism have been discussed elsewhere.¹¹ In addition to the problems of defining a base level against which changes are measured, there are other issues such as distinguishing between human-induced and natural damage, spatial and temporal discontinuities of cause and effect, and incorporating the full complexities of direct and indirect effects.¹² Furthermore, there are problems in differentiating local impacts from visitor impacts. For example, impact on hiking trails and local forests cannot be attributed to tourists alone. Therefore, the findings and discussions in this study are based on the general premise that tourism causes part of the overall environmental and socio-economic impacts. This research does not quantify the exact amount of tourism's share of the impacts.

11 MATHIESON & WALL, 1982; BRIASSOULIS & STRAATEN, 1992.

12 WALL, 1989.

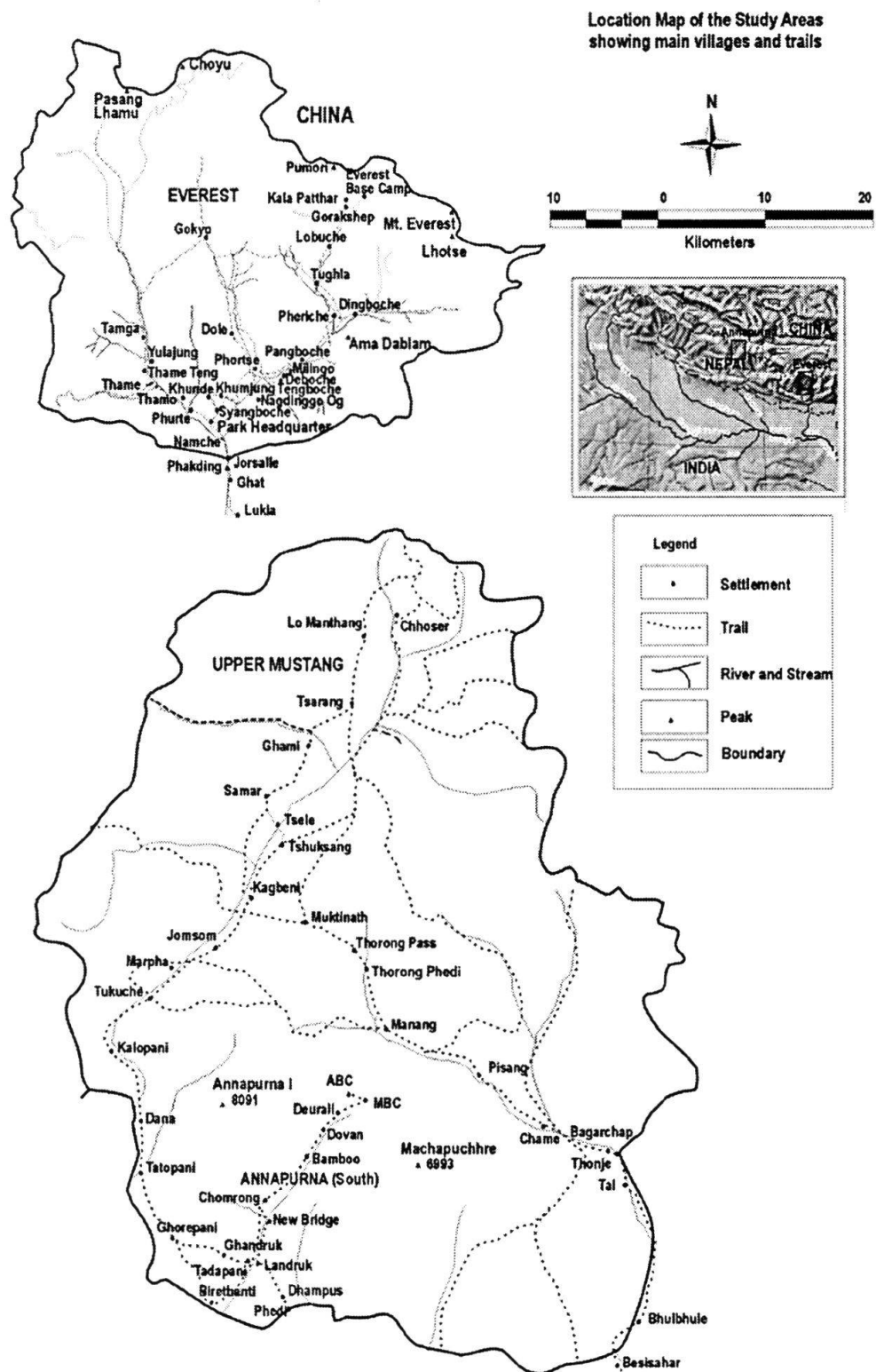


Figure 1: Location map of the study areas showing main villages and trails; from NEPAL, 2000, p. 85.

3. Tourism-induced Environmental Changes

3.1 Human Settlements

Except for the Upper Mustang region where the official policy is to discourage lodge-based and instead promote tent-based accommodation, both Everest and Annapurna regions have experienced significant growth of newly constructed lodges, tea-shops, and family dwellings (Table 2). The development of lodges has occurred mainly in two ways: construction of new building units resulting in changes in the spatial character of the settlements; and changes in the usage of some traditional houses. While significant modifications in housing design and space utilization have occurred, the focus here is on physical expansion of the settlements and changes in functions.

Table 2: Lodge development over time (cumulative)¹³

<i>Year</i>	<i>Annapurna</i>		<i>Everest</i>	
	<i>Number</i>	<i>Index</i>	<i>Number</i>	<i>Index</i>
Until 1979	45	100	17	100
1980-89	203	451	75	441
1990-94	331	736	160	941
1995-	518	1151	225	1324

The village of Namche Bazaar in Khumbu vividly illustrates this. Based on the aerial photographs taken in 1955 and 1982, series of ground photos taken during the last three decades, and several photographs and field sketch prepared in 1997, it is feasible to examine the expansion of the built up area, and changes in the utility of the buildings. The top sketch is that of the pre-tourism settlement of Namche in 1955 (Fig. 2). By 1982, significant housing development had already taken place, with expansion mainly towards the east (middle sketch). It is interesting to note that the construction of new houses has slowed down, however, a significant number of existing houses have changed their utility, i.e., from a family house to a combination of family and guest house (bottom sketch). Overall, five main settlement types can be traced in Khumbu and Annapurna: (i) permanent settlements, which have experienced tourism development for almost two decades; (ii) erstwhile non-tourist settlements, which experienced tourism early, however, signifi-

13 Sources: MATTLE, 1999, and JANPER, 2000.

cant involvement occurred only recently; (iii) older settlements solely as a result of tourism; (iv) erstwhile temporary settlements, now permanent; and (v) most recent tourist settlements.¹⁴ Gokyo in Khumbu is a perfect example of a herding village turned into a tourist resort village. Until the late 1980s, very few visitors to the Everest region included Gokyo in their itinerary. It was a herding village, a preferred area for local Sherpa to drive up their yak during summer. Today, Gokyo boasts of seven lodges and receives a high number of visitors.

Further analysis of the lodge data shows that, currently, there is a declining trend in constructing new lodges in the major settlements of Namche Bazaar and Lukla in Khumbu, and Jomsom, Ghorepani, Ghandruk, and Muktinath in Annapurna. This may imply that lodge construction in these villages has saturated, whereas in other areas it is an on-going activity. A fundamental shift in settlement patterns, utilization of physical space, and land use changes are bound to occur if the rate of development proceeds unchecked. The implication of significant housing construction is that there has been tremendous pressure on local forests for timber supply and firewood requirements.

3.2 Impacts on Local Forests

Deforestation in the Nepalese Himalaya has been a well-publicized issue.¹⁵ The establishment of a park in the Everest and a conservation area in the Annapurna regions were primarily in response to the increasing impacts on forests. Prior to the influx of tourists, local people were managing partly-modified landscape under a system of social and community controls which ensured wisest use of forest resources and minimized long-term forest degradation. The local system broke down, particularly in villages directly affected by tourism. Forests no longer received the best community protection, and were manipulated by the interests of local lodge owners and firewood/timber suppliers.

As a result of increased number of visitors, the demands for firewood, which is the principal source of energy in the high Himalayas, have increased significantly. Although tourism should not be blamed for widespread deforestation, it is considered one of the major factors for declining availability of

14 See NEPAL, 1999, for details.

15 IVES & MESSERLI, 1990.

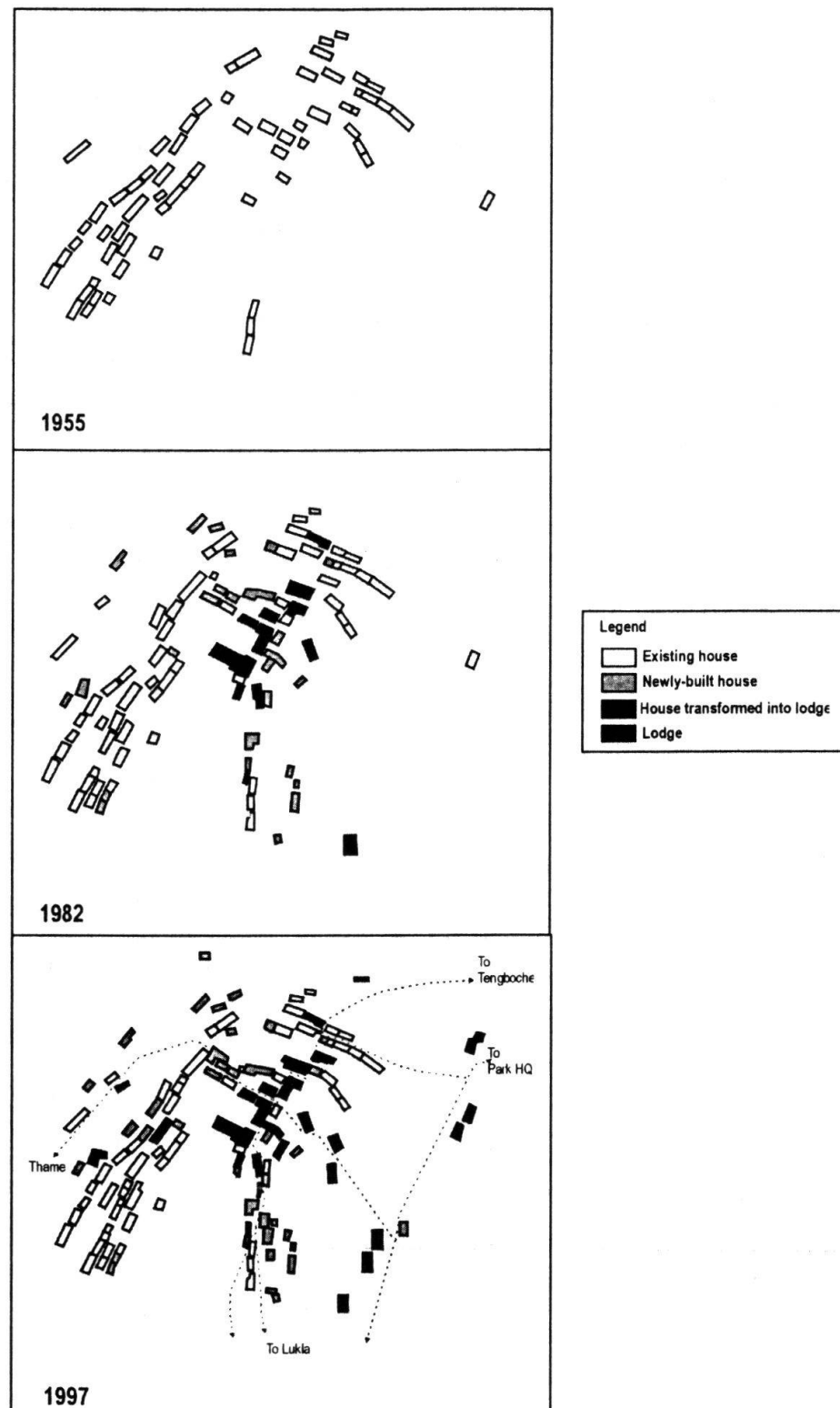


Figure 2: Expansion of Namche Bazaar (1955-1997)¹⁶

16 Source: NEPAL, 1999, p. 62.

firewood in certain locations in Khumbu and Annapurna. The shortage of firewood has resulted from both natural and human factors. Natural factors such as arid climate, drought, and high elevation have limited forest cover to high mountain valleys and basins. Mustang and areas north of Manang are arid zones where except for some hardy brushes and plants, forest cover does not exist. Over-harvesting of forest products in the past in certain parts of Mustang and Manang have now created shortage of firewood there. In other areas, restrictions imposed by the State and local authorities do not allow collection of firewood for protection purposes even where forest cover is adequate at present. The latter is the case in the Sagarmatha National Park and the Annapurna Sanctuary.

In Khumbu, the cumulative effects of the demands for firewood is that many villagers collect firewood and harvest timber from forests outside the national park boundary, particularly in the Pharak region. Villages such as Monjo and Phakding have become major firewood and timber supply centers for Namche Bazaar. Illegal tree felling and uprooting dwarf juniper brushes are common inside the national park. In the Annapurna region, collection of firewood is allowed under the supervision of the Conservation Area Management Committee, which is also the responsible body for making decisions concerning timber harvest. There are designated areas such as the trail corridor to the Annapurna Sanctuary and the Special Management Zone between Ghorepani and Ghandruk, where firewood collection is strictly prohibited. However, where there is inadequate supervision or control from ACAP, illegal harvesting of forest products is common.

The lodge survey conducted in 1997 in the Everest region indicated that a total of 9.2 metric tons of firewood is burned daily during tourist seasons by the 224 lodges located in the Khumbu and Pharak region.¹⁷ This is equivalent to 43 kilograms of firewood burned daily by a lodge. If firewood consumption in all lodges and households are combined, the annual total within the national park boundary is 4158 metric tons. 24 percent of this is for lodge consumption. This figure when compared with past estimate shows that tourism's share of firewood consumption is increasing. This is because both the number of visitors and the number of lodges have considerably gone up since the late 1980s.

17 NEPAL, 1999.

Table 3: Energy consumption in Annapurna and Everest regions¹⁸

<i>Energy source</i>	<i>Units</i>	<i>Regions</i>	
		<i>Annapurna</i>	<i>Everest</i>
Fuelwood	Kilogram (lodge/day)	30	43
Kerosene	Liter (lodge/day)	4	2
Solar installation	% of lodges	30	37
LPG	Cylinder/month	0.3	NA
Back boiler	% of lodges	41	NA
Dung	Kilogram (lodge/day)	No use	7.1
Electricity	% of lodges	70	32
No firewood	% of lodges	18	8.5
No kerosene	% of lodges	14.2	18.5

Although significant progress has been made in alternative fuel energy sources, their adoption as cooking fuel lags far behind the increased levels of firewood consumption, primarily because firewood is still the cheapest source of energy and in most areas easily available. A comparison of the various sources of alternative energy consumption indicates that the situation in Annapurna is better compared to that in the Everest region (Table 3). However, firewood still occupies more than 81 percent of total energy consumed in the region, as some 500 lodges burn 3,600 metric tons of firewood per year.¹⁹ Where firewood is scarce and costs more, for example, villages at higher altitude, lodge owners have naturally opted for alternative energy sources such as kerosene and dung.

3.3 Garbage Disposal

Garbage pollution in the Nepalese Himalaya has been an overwhelming concern since the late 1980s. Several local and international media have highlighted this concern. Some of the garbage-related statements are exaggerated, but the severity of the problem is real. Garbage problems are more severe in the Everest region than in Annapurna mainly because of its remoteness from any major cities where garbage could have been recycled. Since its inception, ACAP has been actively involved in motivating the local population in keeping their village free from any garbage. Some recycling is also done locally. However, because of the sheer volume of visitors and the

¹⁸ Sources: MATTLE, 1999, JANPER, 2000. NA: Data not available.

¹⁹ JANPER, 2000.

accompanying porters and guides, effective control and management of garbage remains a challenge.

In Khumbu, the increasing number of visitors poses a major challenge to the local environment. The total volume of garbage is increasing every year, even though in the last few years the number of climbing expeditions has decreased.²⁰ Trekking related garbage now far exceeds expedition garbage. Indeed, it is an irony that the accumulation of garbage has encouraged a new type of tourism, i.e., garbage clean up expeditions, and provided local employment opportunities too. Earlier, it was estimated that an average trekking group of 15 generates 15 kg of non-biodegradable, non-burnable garbage in 10 trekking days.²¹ Much of the earlier estimations of garbage are based on either one single clean up expedition or mere estimates. Only when the Sagarmatha Pollution Control Committee (SPCC), a Sherpa run NGO based in Namche Bazaar, started to collect systematic data on garbage types and volumes that the severity of the garbage problem is accurately known. The garbage data prepared by SPCC when correlated with this author's trail data indicates that, on average, there is almost 2 tons of garbage per kilometer of a tourist trail.²² The heaviest concentration of garbage is around Namche Bazaar, which is the main tourist center and has a large concentration of tourist lodges as well as houses. There is a strong correlation between garbage concentration and visitor traffic (Table 4).

Table 4: Garbage and trekkers by trail routes²³

<i>Trail Corridors</i>	<i>Garbage (kgs/km)</i>	<i>Trekkers* (number/km)</i>
Lukla-Jorsalle	3741	1385
Jorsalle-Namche & Vicinity	12138	1309
Namche-Thame	889	430
Namche-Kala Patthar/Base Camp	249	289
Namche-Gokyo	78	326
Dingboche-Island Peak BC	112	370
Lobuche/Djongle-Thangnag	16	252
Average	1932	147

20 NEPAL, 1999.

21 SHARMA, 1995.

22 NEPAL, 1999.

23 Source: NEPAL, 1999. * Trekkers data collected during September and November 1997.

No systematic record of garbage disposal is available from the Annapurna region. Earlier, it was estimated that trekking tourism generates approximately 9,300 *doko* (bamboo basket) of waste per season.²⁴ In high density areas such as Ghandruk, it is estimated that during peak seasons, 230 empty beer bottles, 281 plastic mineral bottles, 27 assorted glass items, 75 assorted tins and cans, almost ten *doko* of plastic bags and 17 *doko* of paper are generated weekly.²⁵ Tourism generated garbage problems are not severe in Mustang, however, even the low volume of tourist garbage has not been managed properly. Proper disposal of household garbage is a major problem, particularly in Lo Manthang.

3.4 Trail Degradation

Another significant environmental issue, but one that has received very little attention, is the impact of tourism on trail degradation. Trails in Khumbu, Annapurna, and Mustang are one of the most important tourism infrastructures. However, proper assessment of trail conditions in the Nepalese Himalaya has never been carried out. A detailed survey of trail conditions was conducted in Khumbu to illustrate the range of trail-related problems and the severity of trail degradation. Data on 12 different types of impact features were collected, which include trail incision, exposed soil, exposed bedrock, trail width, multiple treads, trail expansion potential, trail displacement, landslide scar, running water, wet/muddy trail conditions, tree root exposure, and absence of ground litter.²⁶ Based on the measurements of the individual impact features, trails were classified into four types. Class I trails exhibit very little damage, Class II trails are moderately damaged, Class III are highly damaged, and Class IV are severely damaged trails.²⁷ Based on the survey, a trail assessment map was prepared which gives an overview of the state of trails in the Sagarmatha National Park.²⁸

Trails were found to be more degraded in higher altitude, in areas where ground vegetation is poor, on steep gradient, and in areas with high visitor density and high concentration of tourist accommodation. Altogether, 65 "hot spots", i.e., segments of a trail that need immediate maintenance and

24 SOWERNINE & SHRESTHA, 1994.

25 SOWERNINE & SHRESTHA, 1994.

26 NEPAL, 1999.

27 See NEPAL, 1999, for the methodology for the classification of trails.

28 NEPAL, 1999.

restoration, and 16 potential “hot spots” were found (Table 5). Almost 11 percent out of 90 kilometers of the main tourist trails in the Park is in severely degraded state, while a further 5 percent has the potential to degrade severely. The main route to the Everest Base Camp has the highest frequency of “hot spots”. Impacts on less popular routes such as Gokyo and Chukhung are relatively less severe than on the main route indicating the relationship between use levels and impacts. Further analysis shows a clear association between heavily impacted routes and high visitor and packstock traffic, higher lodge density, and high volume of garbage. For example, the Jorsalle-Namche and Kala Patthar trail in the Everest region have the highest visitor traffic, highest concentration of lodges, largest volume of garbage, and most heavily impacted trails.²⁹

*Table 5: Severity of trail damage*³⁰

<i>Condition Class</i>	<i>Damage Category</i>	<i>No. of Segments</i>	<i>Total (km)</i>
Class I	Slightly damaged	69	10.8
Class II	Moderately damaged	58	10.4
Class III	Highly damaged	16	4.0
Class IV	Severely damaged	65	9.8

Very little evidence of trail maintenance is found in Khumbu, unlike in the Annapurna region where trail maintenance is a regular activity. When trail conditions are compared between those two areas, it appears that trails in Annapurna are relatively in stable state. Only two percent of the 285 kilometers of main trails in Annapurna were found to be severely degraded.³¹ Trails in the vicinity of major villages and on slopes susceptible to erosion are stone paved. ACAP has supported local people to pave some 30 kilometers of trail in the southern Annapurna.

Despite the above-mentioned environmental changes in the Nepalese Himalaya, tourism posits itself as a significant development potential, mainly because of the lack of other economic resources. Indeed, the local Sherpa in Khumbu, and the Gurung, Thakali, and Manangi in the Annapurna region have significantly benefited from various income and employment

29 NEPAL, 1999.

30 Source: NEPAL, 1999.

31 NEPAL, 1999.

opportunities made possible by tourism. The following section focuses on tourism-induced economic changes.

4. Tourism-induced Economic Changes

One of the unique characteristics of tourism in the Nepalese Himalaya is the mass involvement of local population. No where there is a good example of locally controlled tourism as in Khumbu and Annapurna. Except in Mustang where the government policy is not to encourage any local involvement in tourism, local benefits from tourism have been very significant.

4.1 Local Employment

Various forms of tourism-related employment are available for local people including jobs as sirdar (expedition/trekking leader), guides, kitchen staff and porters working for a trekking agency or freelance individuals; merchandise porters (porters carrying goods for local businessmen and traders); owners of trekking agencies and lodges; hired laborers for lodge keeping; tea shop, souvenir shops and grocery store owners; timber and firewood carriers; owners of pack stock; construction workers (lodge related); and local administrative staff directly or indirectly involved in tourism management. In the accommodation sector alone, more than 700 persons in Khumbu and 2000 in Annapurna are employed.³² Employment opportunities in Khumbu and Annapurna are strong pull factors for people from neighboring districts. The overwhelming majority of lodge owners are local inhabitants, some of whom own more than one lodge. A survey in the Khumbu region showed that porters come from 17 different hill districts, while in Annapurna tourism attracted job seekers from as many as 21 districts.³³ It is estimated that there are almost the same number of porters and guides than there are visitors. For example, in Khumbu, during the 12 months period between 1996 and 1997, there were 13,389 trekking related porters, 14,279 merchandise porters, 2645 guides and 2791 packstock carrying trekking and merchandise loads.³⁴

32 MATTLE, 1999; JANPER, 2000.

33 NEPAL, 1999; JANPER, 2000.

34 NEPAL, 1999.

In Annapurna, it is estimated that some 50,000 trekking porters are gainfully employed during the five-month tourist seasons.

The effects of local employment and income are felt at three levels, i.e., the main destination (major villages), transit points (minor villages), and sub-regional nodes (entry points with important trail links to other areas; usually with a single or couple of dwellings). The strongest and most visible effects of tourism employment are seen in the main tourist villages such as Namche Bazaar and Lukla in Khumbu, and Ghandruk, Ghorepani, Jomsom and Manang in Annapurna. In the transits and sub-regional nodes, the effect tends to diminish with declining intensity of tourism-related business activities.

Tourism has also induced other economic activities. Tourism has increased the purchasing capacity of local inhabitants and increased the demand for products that are consumed by tourists. For example, Khumbu has once again emerged as a principal trading center because not only a wide range of goods are needed on a daily basis to run lodges and restaurants in the region, but Khumbu households themselves have increased their consumption levels. The following section elucidates the changing role of trade in Khumbu in the context of present day tourism.

4.2 Trade in the Context of Tourism

The collapse of the trans-Himalayan trade in Khumbu and Annapurna region in the late 1950s and early 1960s would have had devastating effect on the local economy if mountaineering and trekking did not evolve as a viable tourist enterprise. However, tourism did not immediately replace trade, as stated by some authors.³⁵ Recent research in Khumbu has indicated that trans-Himalayan trading ceased to exist only when trading was no longer seen as profitable as tourism-related businesses.³⁶ Development of Khumbu tourism and ease of restrictions by the Chinese authorities on cross-border trade have given a new meaning and context to the trans-Himalayan trade. Khumbu has regained its status as a trading center, as traders from lowland Nepal and highland Tibet congregate to sell their goods at the two weekly markets located in Namche Bazaar (Saturdays) and Lukla (Wednesdays).

The easing of restrictions in Tibet in the early 1980s had an adverse impact on the trade carried out by a small group of Khumbu Sherpa. Traders

35 FURER-HAIMENDORF, 1975.

36 BICHSEL, 1999.

from Tibet were once again allowed to cross over Nangpa La (a high pass along the Tibet-Nepal border) and visit Khumbu for business. The Tibetan traders sold traditional products such as barley, *tsampa* (barley flour), salt, dried sheep meat and fat in Khumbu at a cheaper price than the Khumbu Sherpa traders. Therefore, trading no longer was a lucrative business for the Sherpa. By the end of 1990 these traders stopped going to Tibet and focused their business on tourism. A few Sherpa from Thamicho are still involved in trade, but only as a supplementary activity to tourism. Unlike in the past, when the Sherpa traders used to go to Tibet two to four times per year, they travel only once a year, usually during late Autumn when the tourist season is over in Khumbu.³⁷

Tourism has created a new demand for various consumer products and luxury items. Because of increased tourism activity in Khumbu, the demand for foodstuff for tourist as well as household consumption is high. As a result of higher living standard and the influence of westerners, Sherpa have developed new consumption habits. Much of the consumer goods sold in Khumbu comes from the south, whereas Tibetans bring in Chinese clothes, blankets, shoes, thermal-flasks, dried sheep meat, carpets, and assorted handicrafts. As a result of tourists' interests in Tibetan handicrafts including carpets, many Tibetan traders now sell these goods directly to tourists or at the Saturday market in Namche Bazaar. Hardly any items are imported into Tibet, all Tibetan traders take home cash, and occasionally, *zopkios* and buffalo hides.³⁸ In the past, most transactions would have been based on barter, today it is based on earnings mainly from tourism. The crucial motivation for the Tibetan and lowland traders is the need for cash earnings and the lack of income opportunities in the villages where they live. Lured by a good mark up price in Namche Bazaar, some lowland Nepalese traders come from distant places—some ten days' walk away. Indeed, the number of merchandise porters exceeds that of trekking porters. Thus, tourism has not only revived the historical trade but has also impacted the economy of faraway places, even if the overall impacts may be minimal.

Without mountaineering and trekking tourism, it is hard to imagine the present volume of trade in Khumbu. The relative affluence of Khumbu Sherpa has also contributed to increased trading activity in the region, eventually benefiting people from other ethnic groups from neighboring

37 BICHSEL, 1999.

38 BICHSEL, 1999.

lowland districts. In that sense, trade and tourism both have led to some dispersal of wealth from Khumbu to the neighboring regions including Tibet. The revival of trade with Tibet reestablishes Khumbu's economic and cultural links of the past, in a much limited scope and role though. The economic disparity between Thamicho and Namche Sherpas, in the past, was mainly due to the latter being a major transshipment center. This economic disparity continues to prevail, as Thamicho receives very little tourists compared to Namche Bazaar, essentially the tourism hub of Khumbu. However, tourism has also introduced several positive social changes, particularly the interests of women in tourism and conservation activities, which is the focus of the next section.

5. Tourism-induced Social Changes

5.1 Institutional Collaboration for Community Development

Since the mid-1980s there has been a realization that without the support from local communities any government sponsored environmental conservation programs is bound to fail. Many cases of conflicts between government authorities and local people have been documented in the Nepalese Himalaya.³⁹ The importance of providing greater opportunities for local participation was realized when the management of Annapurna Conservation Area was entrusted to the King Mahendra Trust for Nature Conservation (KMTNC), a non-governmental organization. This indicated a major shift in government policy, i.e., from strict conservation imposed in a top-down fashion to a more grass-root approach in managing protected areas. Instead of deploying military to enforce protection, as was the case in national parks and wildlife reserves, support and co-operation from local communities was sought while accommodating their livelihood needs. The Annapurna Project successfully demonstrated that conservation and development were not exclusive, and need not be compromised in favor of one or the other.

In 1989, the government amended the Conservation Act to provide a legal basis for establishing conservation areas. Under the amended statute, "conservation areas" are defined as "areas to be managed according to the

39 NEPAL & WEBER, 1993.

integrated plan for the conservation of the natural environment and the balanced use of natural resources".⁴⁰ Following the success of ACAP, a similar project was launched in Upper Mustang in 1992. The Upper Mustang Conservation and Development Project (UMCDP) was initiated in 1992 with a joint collaboration between the Ministry of Tourism and Civil Aviation (MoTCA), and the ACAP. This was to set an example of government/NGO collaboration. Prior to that, in 1991, the Makalu-Barun National Park and Conservation Area (MBNPCHA) was established, which is a joint undertaking of the DNPWC and The Mountain Institute (TMI), a NGO based in the U.S.A. This is yet another form of institutional arrangement where a foreign NGO has been invited to work directly with the government agency. The approach taken by this project is similar to ACAP's community-based conservation projects. Following the success of the joint collaboration between the government and TMI, the Kanchanjunga Conservation Area was declared in 1997, which is managed jointly by the DNPWC and WWF, U.S.A. All of the above-mentioned projects have considered tourism as a major catalyst to economic development of the rural areas. Local communities are encouraged to initiate and be involved in sustainable tourism projects.

Local communities have actively responded to tourism-generated problems of garbage disposal, firewood scarcity and trail damage. They have made significant efforts in heritage conservation. For example, in Khumbu, SPCC was established in 1991 with initial support from WWF, U.S.A., and has been very successful in garbage clean up programs. SPCC now receives substantial funding support from the Ministry of Tourism, which provides almost four percent of the climbing fees collected from the Everest region.⁴¹ Similarly, ACAP has helped create several local-level institutions, which are entrusted with the responsibility to plan, execute, and manage community-based tourism and conservation projects. For example, during the past decade ACAP helped in forming 159 village-level conservation and development committees, 288 mothers' groups, and 19 lodge management committees. These and other committees are the backbone of ACAP's grassroots approach to conservation and development activities. ACAP has successfully demonstrated the effectiveness of tourism-based programs in creating village-based income and employment opportunities. Participation of women has been particularly encouraged. The following section illustrates the various

40 MEHTA & KELLERT, 1998.

41 SPCC, 1998.

opportunities and challenges in involving women in tourism and conservation projects.

5.2 Women, Tourism, and Conservation in Annapurna

Since the beginning of ACAP activities in Ghandruk, women's role and responsibilities towards conserving natural resources had been identified and their due participation in the planning and decision-making process acknowledged. Thus, the idea of Ama Toli (mothers' group) came into existence. In a way, it was not a new idea because similar organizations such as Mahila Sangathan or Mahila Samuha did exist in the Annapurna region, particularly in its Gurung villages. The new model was highly popular and successful in Ghandruk. As such, a similar group was created in Chomrong, a neighboring village on the main trail to the Annapurna Sanctuary.

The Ama Toli in Chomrong, led by the President and the Vice President together with five other executive members make the majority of decisions regarding women's activities in the village and involvement in local resource management and conservation. A general meeting is called every month where various local issues are discussed. All village women are general members of the Group. Since its inception, the Group has been engaged in various activities including path and trail repairs, cleaning campaigns in villages, support for drinking water project, and reforestation. They are also involved in mediating family conflicts, controlling excessive gambling and drinking habits of the men, and organizing social and religious events.⁴² Funding for Ama Toli activities comes mainly from the cultural events performed for tourists as well as locals. Indeed, collecting donations had been a tradition in the village, particularly during special occasions such as birth of a son in a family, marriage, return of a soldier, etc. Women's group not only capitalized on this tradition but also added a tourism dimension—they started performing cultural dances for tourists as well. Funds collected by Ama Toli are now the major sources of investment for Chomrong women.

Ama Toli is a village-level, community-oriented organization, which has made remarkable improvements in the social, environmental, and cultural aspects of the village. The majority of women is positive about their organizational strength. They consider themselves as a Group entrusted with serious local responsibilities. Women's role and responsibilities in village development has been recognized also by the men, many of whom are also

42 STOCKER, 1999.

involved in providing guidance and strengthening the organization. ACAP has played a catalyst role through the entire process of initiating, structuring, and consolidating women's position in the village. What had not been possible in the past, i.e., addressing issues of gender sensitivity and gender relations, has become a reality, although there are several problems within the organization and the module itself, which has not proved to be very successful in other villages.⁴³

The women in development model tried in the Annapurna region raises several important questions. For example, it assumes that the village development activities such as trail repairs and clean up programs are tasks best performed by women. One might argue that the model does little to empower women in local-level resource conservation and management, and instead burdens them with additional responsibilities. There are also questions with regard to sharing benefits, for example, why is it that funds generated by women's groups should be invested in projects which do not directly benefit the women but rather the whole community and the tourists as well? It is in the interests of lodge operators to keep the village trails sturdy and clean. This does not benefit a poor mother who has to seek loans to feed and provide clothing for her children. This concern was openly expressed by several poor women in Chomrong.⁴⁴ The President, Vice President, and several other executive members of the Ama Toli are from affluent households. They do not have to brew *rakshi* (local liquor) for earning a living. It is the poor women who consider it as an alternative opportunity to make some cash income. Prohibiting these poor women to make *rakshi* without the provision of alternative means of cash cannot be justified. Because they are from richer households and influential, the President and Vice President are successful in persuading villagers to support women's activities. However, their decisions and judgement on particular issues seem to be prejudiced against those who are not in similar rank and social status.

Nevertheless, ACAP has done a commendable job in raising awareness concerning gender issues and uplifting the status of women in the village. Many women in Chomrong have expressed that unlike in the past, suggestions on village issues made by women are now given some consideration, and men increasingly solicit suggestions from the village women.⁴⁵

43 See details in STOCKER, 1999.

44 STOCKER, 1999.

45 STOCKER, 1999.

Women have successfully demonstrated that given the opportunity they can make significant contributions towards community development and improving the image of their village.

6. Tourism, Environment, and Society: Key Processes

Various dimensions of tourism-induced changes have been discussed above. Tourism has had profound negative impacts on the environment, however, it is now a central concern for local communities to respond to these problems. As a result of increased awareness of the harmful effects of tourism, and its appreciation for making a positive impact on local livelihood, tourism-related issues have been of particular concern and interest to local communities. Innovative programs such as ACAP, collaborative arrangements between the government and various non-governmental agencies for tourism related projects, policies in favour of strengthening local-level capacity to resolve local issues, and greater involvement of women in conservation and development projects have succeeded in bringing positive changes in the Nepalese Himalaya. Despite the fact that several issues remain to be resolved, tourism's overall impact on improving livelihood conditions should be appreciated. Tourism in the Nepalese Himalaya has become a conservation tool, a social catalyst, and income and employment provider (Table 6).

Tourism led development is highly favored by local communities in all three destinations. It constitutes a vital component of rural livelihoods in the Everest and Annapurna regions, while future prospects in Mustang look good, provided that there is a change in the government's tourism policy. Tourism has been a good source of revenue for all three destinations but revenues have not remained in the hands of the protected area agency, except in Annapurna. In Annapurna, local community were consulted in all aspects of development programs; in Khumbu and Mustang, there was no such consultation, which was one of the reasons for local people's indifference attitude towards government sponsored conservation activities.

Table 6: Some key processes and indicators of tourism-induced changes

<i>Key Processes</i>	<i>Indicators</i>
Tourism as a conservation tool	<ul style="list-style-type: none"> – Resurgence in the belief that local people can manage resources sustainably. – Improvement in environmental conditions—forests, energy, garbage, etc. – Local awareness concerning environmental and social problems. – Biodiversity conservation. – Local culture and heritage strengthened—museums in Ghandruk, Jomsom, Sikles, private museum in Namche Bazaar, restoration of monasteries. – Substantial revenues for the government to invest in conservation and development. – Village-level community development projects.
Tourism as a social catalyst	<ul style="list-style-type: none"> – Those at the bottom of the social strata have moved up. – Class structure redefined—people with tourism and without tourism. – Self-reliance, confidence, and motivation for community development – Increase in people's participation in conservation. – Women and lower class people participating in the planning process.
Tourism as an income and employment opportunity	<ul style="list-style-type: none"> – Young people are moving back to their village, for example, in Annapurna. – Significant local economic benefits, particularly in strategically located villages. – Some economic benefits in the neighboring region; spread effects. – Some impacts in other economic sectors, such as trade.

A qualitative evaluation of economic benefits and environmental costs for the three areas suggests that the Khumbu region has significant positive economic benefits at the local level, however, its environmental costs are also high. Similar is the situation in Annapurna, however, compared with Khumbu it has less negative impacts on the environment. The Mustang region has no economic benefits at the local level, and it has hardly any negative environmental impacts (Fig. 3).

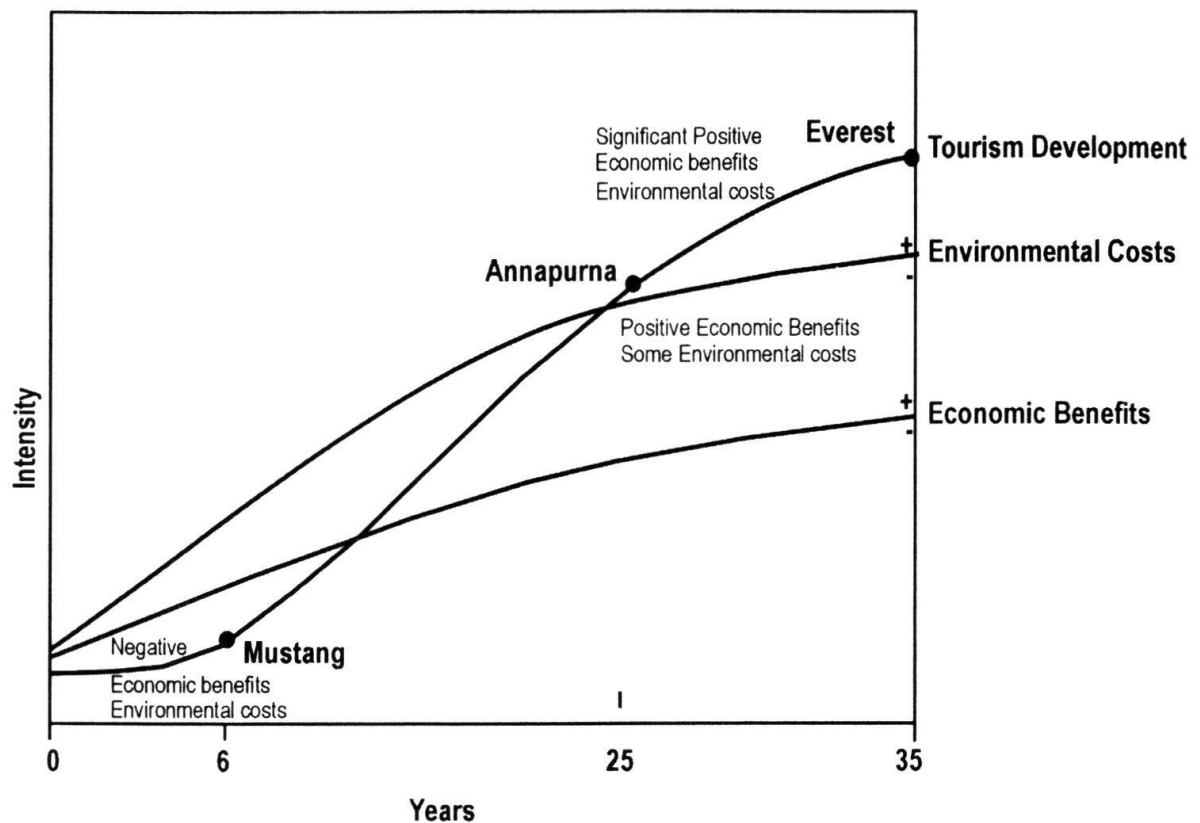


Figure 3: Tourism: Economic benefits and environmental costs in three Himalayan destinations⁴⁶

7. Conclusion

The research, on which this synthesis paper is based, highlights the importance of a comprehensive, interdisciplinary research. It clearly indicates that tourism is an issue, which should be examined from various dimensions. Only after a thorough and critical examination, one should make conclusions about the overall impact of tourism for local communities. Several authors, in the past, have reached to conclusions that the tourism's environmental and social carrying capacities in the Nepalese Himalaya have already been exceeded.⁴⁷ This author does not support this perspective. Overall, trends in tourism and environmental management in the Nepalese Himalaya are positive. Tourism has positively contributed to the well being

46 Source: NEPAL, 2000. p. 179.

47 BROWN et al, 1997; SHACKLEY, 1997.

of highland ethnic communities. Remote regions such as Khumbu and Annapurna would have lagged behind in terms of economic development had there been no potential for tourism development. Today, these are one of the most prosperous highland areas in the Nepalese Himalaya. Local communities have realized the potential of tourism in improving their livelihood conditions, therefore their concern for the environment has also increased to a higher level of awareness and mitigation. Government policies, which ensure local autonomy in resource management decisions and strengthen local-level institutions in their capacity to plan and implement projects are crucial for the sustainable development of the highland regions. Tourism has provided the necessary platform for policy-making and the incentives for local communities and organizations to address not only tourism-induced negative environmental impacts but also broader concerns for environmental management and sustainable development.

References

BICHSEL, CHRISTINE

- 1999 *Dynamic der Handelsbeziehungen und ihre Bedeutung für den sozio-ökonomischen Wandel in der Region Khumbu, Nepal*. Diplomarbeit. Philosophisch-naturwissenschaftlichen Fakultät, Universität Bern, Switzerland.

BJØNNES, I.

- 1980 Ecological Conflicts and Economic Dependency on Tourist Trekking in Sagarmatha (Mt. Everest) National Park, Nepal. An Alternative Approach to Park Planning. In: *Norsk Geografisk Tidsskrift* 34 (3), pp 119-138.

BRIASSOULIS, H.; STRAATEN, J. (eds.)

- 1992 *Tourism and the Environment: Regional, Economic and Policy Issues*. Dordrecht, The Netherlands: Kluwer Academic Publishers.

BROWER, Barbara

- 1991 *Sherpa of Khumbu: People, Livestock and Landscape*. New Delhi: Oxford University Press.

BROWN, K., TURNER, R. K., HAMEED, H. and BATEMAN, I.

- 1997 Environmental Carrying Capacity and Tourism Development in the Maldives and Nepal. In: *Environmental Conservation* 24 (4), pp 316-325.

BUTLER, Richard W.

- 1991 Tourism, Environment, and Sustainable Development. In: *Environmental Conservation* 18 (3), pp 201-209.

BYERS, Alton; BANSKOTA, Kamal

- 1992 Environmental Impacts of Backcountry Tourism on Three Sides of Everest. In: *World Heritage Twenty Years Later*. Gland: IUCN. pp 105-122.

CEBALLOS-LASCURAIN, Hector

- 1996 *Tourism, Ecotourism and Protected Areas: The State of Nature-based Tourism Around the World and Guidelines for its Development*. Gland and Cambridge: IUCN.

COOPER, Wes

- 1999 Some Philosophical Aspects of Leisure Theory. In: Jackson, Edgar L. & Burton, Thomas L. (ed): *Leisure studies: Prospects for the Twenty-first Century*. State College, PA: Venture Publishing. pp 3-15.

DE KADT, Emanuel

- 1990 *Making the Alternative Sustainable: Lessons from Development for Tourism*. Institute of Development Studies, Discussion Paper 272. England: IDS, University of Sussex.

FEDLER, A. J.

- 1987 Introduction. Are Leisure, Recreation, and Tourism Interrelated? In: *Annals of Tourism Research* 14 (3), pp 311-313.

FISHER, James

- 1990 *Sherpas. Reflections on Change in the Himalayan Nepal*. New Delhi: Oxford University Press.

FÜRER-HAIMENDORF, C. von

- 1975 *Himalayan Traders: Life in Highland Nepal*. London: John Murray.

HETZER, N. D.

- 1965 Environment, Tourism, Culture. In: *Links* (now *Ecosphere*) 1. p 3.

HIS MAJESTY'S GOVERNMENT OF NEPAL (HMG)

- 1997 *Solu-Khumbu District, Topographical Map*, 1:50000 scale. Map sheets No. 2786 03 and 04, and 2886 15 and 16. Survey Department, Nepal.

INSKEEP, Edward

- 1991 *Tourism Planning: An Integrated and Sustainable Development Approach*. New York: Van Nostrand Reinhold.

IVES, Jack D.; MESSERLI, Bruno

1990 *The Himalayan Dilemma. Reconciling Development and Conservation*. London, UK: The United Nations University.

JANPER, Marc

2000 *Dynamische Entwicklung der touristischen Übernachtungsbetriebe in der Annapurna Conservation Area, Nepal*. Diplomarbeit, Universität Bern, Switzerland.

MATHIESON, A.; WALL, Geoffrey

1982 *Tourism: Economic, Physical and Social Impacts*. London: Longman.

MATTLE, Beatrice

1999 *Räumliche und zeitliche Entwicklung der touristischen Infrastruktur in Khumbu, Nepal*. Diplomarbeit, Philosophisch-naturwissenschaftliche Fakultät, Universität Bern.

MEHTA, Jay N.; KELLERT, Stephen. R.

1998 Local Attitudes Towards Community-based Conservation Policy and Programmes in Nepal: A Case Study in the Makalu-Barun Conservation Area. In: *Environmental Conservation* 25 (4). pp 320-333.

MILLER, Marc L.

1993 The Rise of Coastal and Marine Tourism. In: *Ocean & Coastal Management* 20: 181-199.

NEPAL, Sanjay K.

1994 Tourism and Environmental Sustainability in Parks and Protected Areas: A Research Framework for Developing Countries. Paper Presented at the Second Global Conference: Building a Sustainable World Through Tourism, held in Montréal, Québec, Canada, September 12-16, 1994: 27 pp.

1997 Sustainable Tourism, Protected Areas, and Livelihood Needs of Local Communities in Developing Countries. In: *International Journal of Sustained Development and World Ecology* 4. pp 123-135.

1999 *Tourism Induced Environmental Changes in the Nepalese Himalaya: A Comparative Analysis of the Everest, Annapurna, and Mustang Regions*. Ph.D. Dissertation submitted to the Faculty of Natural Sciences, University of Bern, Switzerland. 237 pp.

NEPAL, Sanjay K.; WEBER, Karl E.

1993 *Struggle for Existence: Park-People Conflict in the Royal Chitwan National Park, Nepal*. Bangkok: Asian Institute of Technology.

SAGARMATHA POLLUTION CONTROL COMMITTEE (SPCC)

- 1998 *Annual Report for the Fiscal Year 1997-1998*. Publisher and place published not specified.

SALAMI, Jacqueline

- 1999 *Sozioökonomische und soziokulturelle Stratifizierung ruraler Akteure in der Annapurna Region, Nepal*. Diplomarbeit, Universität Bern, Switzerland.

SHACKLEY, Myra

- 1996 Too Much Room at the Inn? In: *Annals of Tourism Research* 23. pp 449-462.

SMITH, Valene; EADINGTON, W. R. (ed)

- 1992 *Tourism Alternatives: Potentials and Problems in the Development of Tourism*. Philadelphia: University of Pennsylvania Press.

SHARMA, Pitamber

- 1995 Sustainability of Mountain Tourism in the Hindu Kush Himalayas. Towards an Agenda for Action. Paper Presented at the International Himalayan Environment Programme and Action Projects Conference held in New Delhi, India, February 10-12, 1995.

SOWERNINE, Jennifer; SHRESTHA, A.

- 1994 *Recommendation for Waste Management/Recycling Plan for ACAP and Ecotourism Development Project in the Ghalekharka-Sikles Region*. Unpublished report, ACAP.

STEVENS, Stanley F.

- 1993 *Claiming the Highground. Sherpas, Subsistence, and Environmental Change in the Highest Himalaya*. Berkeley: University of California Press.

STOCKER, Katrin

- 1999 *Frauengruppen und deren Einfluss auf eine nachhaltige Dorfentwicklung in der Annapurna Region, Nepal*. Diplomarbeit, Universität Bern. Switzerland.

WALL, Geoffrey

- 1989 Environmental Impacts. In: Wall, Geoffrey (ed): *Outdoor Recreation in Canada*. Toronto: John Wiley. pp 201-229.

WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT (WCED)

- 1987 *Our Common Future*. New York: Oxford University Press.