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## **Mountain Tourism in Nepal**

### **An Overview**

Centre for Resource and  
Environmental Studies  
(CREST)

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# **Mountain Tourism in Nepal**

## **An Overview**

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Environmental Studies**

*MEI Series No. 95/7*

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**Dr. Kamal Banskota, a resource economist, and Mr. Bikash Sharma, an agricultural economist are the professional staff of CREST responsible for writing this report.**

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June 1995  
International Centre for Integrated Mountain Development  
Kathmandu, Nepal

# PREFACE

This study presents an analysis of the state of tourism in Nepal and brings out the major issues with respect to tourism and economic and environmental development of local communities.

The study is one of a series of reviews of the status of mountain tourism in the hills and mountains of Nepal; the U.P. hills and Himachal Pradesh of India; and in the North West Frontier Province and the Northern Areas of Pakistan. The studies are intended to provide a comparative perspective on the type, nature, problems, and issues of mountain tourism in the Hindu Kush-Himalayan Region. All of these studies and papers have resulted from a NORAD-funded Project entitled, "Mountain Tourism for Local Community Development," and are being published in the MEI Discussion Paper Series.

On behalf of ICIMOD, Dr. Pitamber Sharma is the Project Coordinator as well as the technical editor of these papers.

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## Introduction

### Introduction

Tourism continues to play an increasingly significant role in the Nepalese economy. The panoramic natural beauty found in the mountain environments, with their different ecosystems and habitats, and Nepal's rich cultural heritage have been the major sources for attracting an increasing number of tourists from all over the world. Altogether 334,353 tourists visited Nepal in 1992, out of which nearly 11 per cent visited for trekking and mountaineering purposes. The remainder were conventional tourists who spent most of their time in Kathmandu. Nepal earned an equivalent of Rs 5,016.9 million in foreign exchange in 1992 from this sector, representing about 20 per cent of the country's total foreign exchange earnings. The contribution of this sector to employment generation has also been substantial as it creates direct, indirect, and induced employment as well as income through its backward and forward linkages with other sectors of the economy.

Tourism may have witnessed a high growth rate over the past decades, but the growth has occurred more in terms of tourist numbers (demand driven) than in any substantial qualitative changes in this sector (supply components). For example, the average length of tourist stay per trip has remained virtually stagnant over the last 20 years, and there has been no significant improvement in real per capita tourist expenditure during this period.

More alarmingly, there has been a high level of import leakage, with no indication of this leakage decreasing. Recent evidence further reveals that Nepal's capacity to realise the full benefits from tourism are below optimum, primarily because of the overall low level of development in the country, including import substitution industries. The scope for enlarging the tourism sector to generate more income and employment is believed to be enormous. The natural beauty of Nepal, especially in the northern half of the country which possesses many natural wonders, has not been subject to development. Tourism development in these 'niche' of natural wonders can generate income and employment to mitigate the rampant poverty of such areas. Proper planning can help link mountain development with tourism development, and the scope for providing income and employment in the mountain areas can be greatly enhanced.

There is, however, a need to exercise caution in the development of the fragile environments of the hills and mountains. Although trekking and mountaineering tourism have had visible positive effects in terms of employment and income generation, tourism has also generated negative effects that are fairly serious in some areas. Many lessons have been learned from tourism activities in the hill and mountain areas; thus, past mistakes should not be repeated while developing new areas for trekking and mountaineering tourism. The benefits resulting from tourism have also not spread widely due to poor planning of tourism development. In order to realise greater benefits from tourism and to minimise its negative effects in the mountain areas, it is necessary to see mountain areas in terms of their different environmental resources and their economic value.

The main reason for the low returns from tourism in the mountain areas has been due to an under-valuing of the environmental resources that the mountains harbour. Many of these resources are unique and have no substitute, so that, theoretically, the scarcity value of such resources should be fairly high. Another related problem is the lack of integration of mountain development and mountain tourism. Tourism development in the mountain areas should not be undertaken in isolation from mountain development. Mountain tourism is but one important dimension of overall mountain development. Given that the mountain environment is endowed with unique resources, it should be conserved for future generations. Hence, environmental conservation has to be the guiding philosophy of overall mountain development, including trekking, mountaineering, and other forms of development.

It is also necessary to diversify tourism to new areas to ensure environmental conservation. This strategy will promote more income, employment, and better distribution of income. The development of new areas will, however, depend primarily on the strength of the forces that operate on the supply side, even though the demand side continues to be important. A destination like Sagarmatha National Park is selected by tourists primarily because it has the world's highest mountain, for which there is no substitute. The desire to observe or climb the world's tallest mountain and come in contact with the unique local Sherpa culture have been the primary reasons for a large number of tourists to this Khumbu region, and local people have responded to the needs of these tourists. The Annapurna area has unique panoramic features, is relatively accessible from Kathmandu, and the area has a rich, vibrant Gurung and Thakali culture. Tourism development in this area has occurred here too because of the local people's ability to respond to tourist needs. Langtang National Park has excellent views of the Himalayan peaks, is easily accessible

from Kathmandu, and offers a full trekking circuit that can be undertaken in about a week's time. Here, too, tourism development has occurred with local people responding to the tourists' needs. Stated differently, tourism development in the above areas has been primarily demand driven.

The concern of this study is not with the overall tourism sector but with trekking and mountaineering tourism, or what is referred to as mountain tourism in this report.

Kathmandu is an inevitable stopover for virtually all tourists (excluding Indians) visiting Nepal, because it has the only international airport. Factors deterring tourism, such as pollution, dirtiness, congestion, the difficulty of quick and easy access to other parts of the country from Kathmandu at short notice, and many others, are becoming critical issues that are certain to affect the future development of this sector. The development of trekking and mountaineering tourism in new areas of the country could relieve some of this pressure on the capital to help the industry grow as well as to mitigate rural poverty.

Although the overall growth of tourism will affect mountain tourism, the development of this sector will depend on many other factors as well. At present, the overall policy and an institutional framework for mountain development and mountain tourism are totally lacking in Nepal. Even considering mountain tourism in isolation from mountain development, policy and institutional weaknesses and failures are paramount. The problem is compounded by market failure as well, when private parties pursuing income and employment neglect the concern for preserving the mountain environment. The result has been a deteriorating trend in the quality of the environment, both in Kathmandu and in the popular mountain areas.

## **Problem Statement**

Mountain and trekking tourism has played a significant role in transforming a few rural communities in certain areas of the country, notably the Sagarmatha, Annapurna, and Langtang regions, by diversifying local economies from a below-subsistence farming and herding system to a tourism-based economy in the last 20 years or so. However, these areas are sensitive micro-ecosystems, with meagre tolerance of stress and limited carrying capacity. Aggressive tourism activities in such areas, without proper mountain resource management, i.e., supply side management, have created serious environmental problems.

The benefits derived from mountain tourism have also been wanting. Benefits have been realised primarily in terms of income and employment but more significant benefits, based on the value of the environmental resources, remain to be realised. The concentration of tourists in some mountain pockets, the seasonal nature of mountain tourism, and lack of integration of tourism with the local economy are important issues that warrant concern about the distribution of benefits from tourism.

The economy and environment of the mountain areas need to be developed in a well-integrated manner. The mountain environment cannot be expected to sustain the continuous growth of tourism. The capacity of the environment to sustain economic development in the mountains has to be better understood. The complementary nature of environment and investment has to be studied and planned.

Remedial actions and a code of conduct have been formulated, but the fact that negative impacts, or excess stress, on the carrying capacity continues to occur indicates the failure of existing policies or their ineffective enforcement. Furthermore, in some mountain areas visited by the tourists, tourism management is entirely absent. This has not helped local people to realise greater benefits from tourism, nor has the effects on the environment been monitored. Thus, effective policy and institutional frameworks are necessary, to conserve the environment as well as to promote income and employment in such areas.

Integrating tourism and local community development will also require institutional development at the local grassroots' level. Presently, there are no such institutions at the national and local level. The role of such institutions and the ways and means to make such institutions viable and sustainable need to be explored.

What stands out from the above discussions are the following issues.

1. Tourism development in mountain areas is essential to alleviate poverty by providing income and employment to local communities.
2. New methods are needed to reduce overcrowding in old areas and to promote tourism in new areas.
3. The potential in developing tourism in new areas cannot rely on demand-induced tourism alone; supply-managed tourism should play the leading role. Supply-managed tourism is also likely to promote other sectors of the local economy.

4. Institutional and organisational aspects of strengthening the capability of local people and the community need to be identified and assessed.
5. Finally, policies have to be conducive to promoting tourism investment from the point of view of the environment so as to strengthen linkages between tourism and local community development.

## **Objectives of the Study**

The study's specific objectives are given below.

1. To carry out an extensive review of the literature related to tourism, in general, and mountain and trekking tourism in Nepal in particular.
2. To identify and assess the impact of trekking and mountaineering tourism on the local environment, income, and employment.
3. To examine policies related to trekking and mountaineering tourism and to assess the implication of policies on tourism, economy, and environment.
4. To identify and analyse the main problems in mountain tourism development in the context of mountain environment.

## **Organisation of the Study**

Following the introductory chapter, Chapter 2 presents an overview of tourism in Nepal. Macro-trends in the tourism sector are analysed and assessed. Chapter 3 focusses on mountain tourism. It describes the types of mountain tourism activities and the areas where such activities are conducted. In Nepal, mountain tourism occurs chiefly in protected areas; hence, this chapter briefly discusses the mountain protected areas and reviews the major conflicts in these protected areas, noting the revenue generated by mountain environmental resources. Chapter 4 assesses the major impact resulting from tourism in the mountain areas and Chapter 5 assesses tourism policy and institutions in Nepal. The overall problem related to mountain environment and tourism are identified and analysed in Chapter 6.

## Overview of Tourism in Nepal

### Introduction

Throughout history, people have travelled for many different reasons. Tourism as an industry, however, began to flourish after the Second World War, with per capita incomes in the developed countries increasing significantly and the development of efficient mass air transport. The tourism industry is the largest in the world and is a complex one. The demands of international tourists, the consumers - and of international destinations, the producers - are bridged by the tourism industry. The industry consists of a wide range of enterprises supporting the mass movement of people across varied areas within a country and across international boundaries, including a variety of wholesale and retail outlets for hotels, airlines, tour operators, etc. The tourism industry sells a unique product, often called an invisible export. The product may be sold and consumed locally, but it is consumed by foreigners, i.e., the external market. Nepal is one such popular destination for tourists from all over the world.

### Growth of Tourism

#### *Numbers*

Table 2.1 presents historical data on tourist arrivals (including Indian) in the country over the period from 1962 to 1992. Tourist arrivals in the country have fluctuated, but the trend has been one of an average growth of over six per cent between 1976 and 1992. Most of the tourists are in the 16-45 age group, and male tourists outnumber female tourists.

The majority of tourists visiting Nepal are from Western Europe, followed by Asia, primarily Indians. Tourists from Asia have been increasing while those from North America have been declining marginally. In the early period, tourists from Asia accounted for a small percentage of the total arrivals, (Table 2.2 and Figure 2.1), but, in recent years, they comprise a huge percentage of the visitors to Nepal. Furthermore, as a nationality, Indian tourists constitute the largest number of all tourists. The percentage of Western European tourists has remained more or less the same.

Figure 2.1

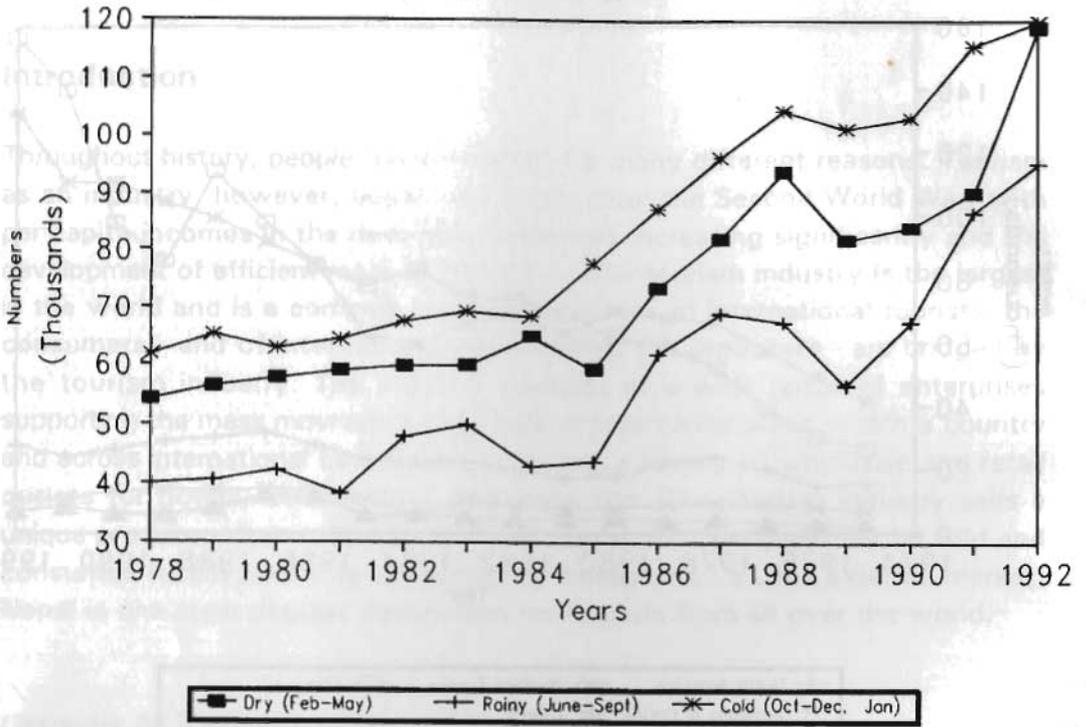


The growth rates of tourists visiting Nepal by continents and of tourists from India (1978-1992) are also presented in Table 2.2. The growth rates indicate that, including Indians, the largest growth rate occurred among Asian tourists (8.3%). Indian tourists accounted for a growth of 6 per cent. Other Asians followed with 7 per cent, followed by Western Europe with 5.3 per cent. The growth in North American tourists has dropped significantly over the years.

The pattern of tourist arrivals is somewhat seasonal. The months are divided into three seasons, namely, dry season (February to May), rainy season (June-September), and the cold season (October-January). Tourist arrivals peak during the winter season, followed by the dry season, and a relatively slack rainy season (Figure 2.2). From 1978 to 1984, the growth of tourist arrivals in all three seasons was fairly equal, but, after 1984, there was a higher growth in tourist arrivals in all the seasons. If only non-Indian tourists are considered, the

Figure 2.2

Tourist Arrivals by Seasons  
(1978-1992) Including Indian Tourists



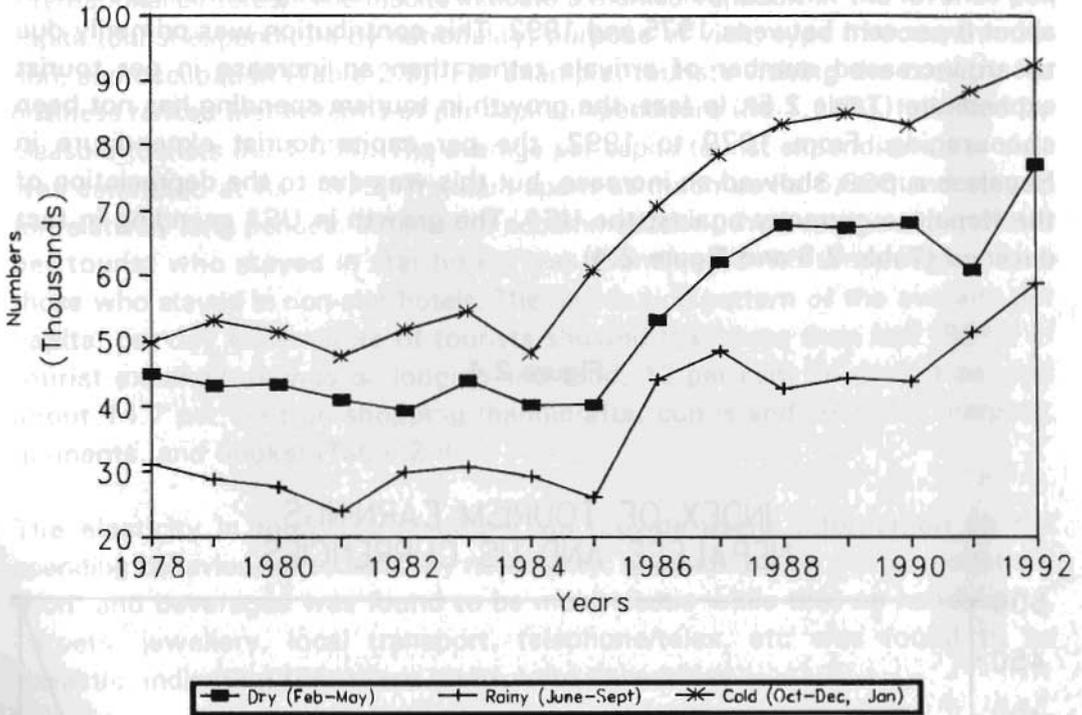
picture does not change very much (Figure 2.3). This indicates that both Indian and non-Indian tourists have a seasonal bias, with a relatively lower preference for visiting Nepal during the rainy season.

Tourists visit Nepal for different purposes. In the early years, the pleasure and trekking categories were not differentiated. The percentage of tourists visiting Nepal over the last 20 years indicates that the percentage share of this group has not changed very much (Table 2.3). In 1992, about 71 per cent of the tourists visited Nepal for pleasure, 10.5 per cent for trekking, and the remaining 18.4 per cent for business (9.5%), official (6.3%), and others (2.6%).

The number of visitor-days also shows a steady increase over the years. Visitor-days have been grouped by length of stay reported by visitors and are presented in Table 2.4. Growth rates in visitor days were estimated for each group. Visitor-days are classified into four groups, namely, 1-7 days, 8-15 days,

Figure 2.3

### Tourist Arrivals by Seasons (1978-1992) Excluding Indian Tourists



16-30 days, and 31 days and more. The estimated growth rates of tourist arrivals in each of these length-of-stay groups show gradual increase over time in the order of 7.65, 7.17, 5.68, and 1.57 per cent, respectively. However, the actual growth in the length of stay is almost insignificant (0.05%).<sup>1</sup>

### Foreign Exchange Earnings

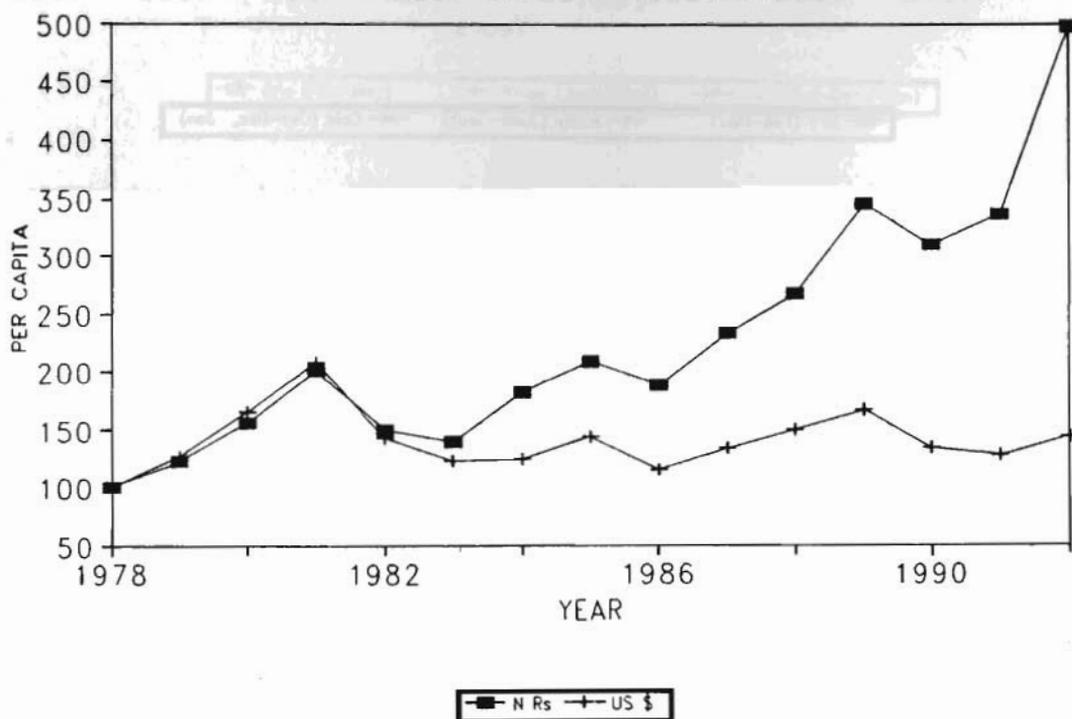
Based on the balance of payments statistics, the gross earnings from tourism increased from Rs 419.2 million in 1979 to Rs 2,838 million in 1992, at current prices, with an average annual growth rate of about 17 per cent (Table 2.6).

1. Total visitor-days (VDAYS) is the product of the total number of tourists (NT) multiplied by the length of stay (LS), i.e.,  $VDAYS = NT * LS$  or  $0.49 = 9.32 * LS$  or  $LS = 0.05$ .

The share of earnings from tourism in the total value of merchandise export more than trebled to about 60 per cent in 1989, from 19 per cent in 1973-74, but decreased to 35.9 per cent in 1992. Foreign exchange earnings from tourism have also helped to meet the trade and foreign exchange gaps (Table 2.7). The average contribution of tourism earnings to GDP increased from one per cent in 1974 to 3.8 per cent in 1992, with an average annual growth of about 8 per cent between 1975 and 1992. This contribution was primarily due to an increased number of arrivals rather than an increase in per tourist expenditure (Table 2.5). In fact, the growth in tourism spending has not been encouraging. From 1979 to 1992, the per capita tourist expenditure in Nepalese rupees showed an increase, but this was due to the depreciation of the Nepalese currency against the US\$. The growth in US\$ spending in fact declined (Table 2.5 and Figure 2.4).

Figure 2.4

INDEX OF TOURISM EARNINGS  
NEPALESE AND US CURRENCIES



## **Level and Pattern of Tourist Expenditure**

The tourism expenditure survey reported in NRB (1990) provides useful information about the spending behaviour of foreign tourists. The average per capita, per day tourist expenditure was estimated at Rs 747 (excluding international air fares). The results indicate a marked variation in the level of per capita tourist expenditure by nationality, purpose of visit, type of accommodation, and occupation (Table 2.9). For example, tourists visiting the country for business ranked first in terms of per capita expenditure (Rs 1,148), followed by pleasure tourists (Rs 1,034). The average per capita tourist expenditure per visit was estimated at Rs 6,975. Trekkers spent as much as Rs 6,888 and stayed for relatively long periods. In terms of accommodation, the average expenditure per tourist who stayed in star hotels was found to be 4.5 times higher than those who stayed in non-star hotels. The distribution pattern of the average per capita, per day expenditure of tourists showed that more than half (53%) of tourist expenditure was on lodging and food, 12 per cent on recreation, and about 14.7 per cent on shopping (handicrafts, curios and jewellery, carpets, garments, and books) (Table 2.8).

The elasticity in tourist expenditure can provide useful information on the spending behaviour of tourists. By nationality, expenditure on accommodation, food, and beverages was found to be most elastic while that on handicrafts, carpets, jewellery, local transport, telephone/telex, etc was found to be inelastic, indicating that these items were necessities.

Furthermore, the NRB study also reveals that with every Rs 100 increment in overall tourist expenditure, expenditure on accommodation increased in the range of Rs 29 to Rs 43. Tourism is essentially a luxury and tourists have a relatively high income. According to the NRB study, the trend of tourist arrivals is relatively more reflective of the income levels of tourist originating countries and travel cost, and less dependent on other factors such as exchange rate and price differential between the host country and the tourists' country of origin. This is corroborated by studies conducted in countries like Hong Kong and Turkey (NRB 1990).

## **Supply Components of Tourism**

The supply side of tourism depends upon the quantity and quality of goods and services a host country can provide. Goods and services provided by hotels, travel and trekking agencies, airlines, cargo agencies, restaurants, handicrafts, carpets, and garment industries all determine the supply side of tourism.

## *Accommodation*

From 1965 to 1970, about eight hotels came into operation, giving impetus to tourism development in the country. Since then there has been a steady growth in the number of hotels to the present 159 hotels of different categories. Of these, about 35 have star categories; the rest are non-star hotels. About 80 per cent of the star hotels, including all the four- and five-star hotels, are concentrated in the Kathmandu Valley, the rest mainly in Pokhara and Chitwan. The total number of all types of hotels in Kathmandu - eight in 1971 - increased to 116 in 1992 (Table 2.10).

The number of hotels, rooms, and beds increased by over 11 per cent between 1971 and 1992. The growth rate in accommodation outside the Kathmandu Valley has been higher than in Kathmandu (Table 2.10). The number of star hotels in Kathmandu increased from eight in 1971 to 52 in 1992, the number of beds from 644 beds in 1971 to 8,009 beds in 1992. If all hotels are counted, the number of hotel beds in Kathmandu increased from 644 in 1971 to 8,703 in 1992. For Nepal as a whole, the capacity increased from 728 beds in 1971 to 11,772 beds in 1992 (Table 2.10). The annual average bed occupancy rate of all categories of hotels was 53 per cent in 1987, compared to 48 per cent in 1984. The highest occupancy rate has been in the five-star hotels (67%), the lowest in non-star hotels (48%) (Table 2.11). Also, occupancy rates have generally been highest in October and November and lowest in July, indicating the seasonal character of international tourism and the slow growth of domestic tourism (Table 2.12).<sup>2</sup>

The number of airlines and travel and trekking agencies has been steadily increasing with the growth of the hotel industry. The number of international flights has also increased. There were 57 travel agencies in 1987; from 1981 to 1985, the highest growth in the number of travel agencies occurred.

## *Employment Generation*

Direct employment generated from tourism and tourism-related sectors is presented in Table 2.13. Altogether 11,172 people were directly employed in the tourism sector; 53 per cent of these were employed in hotels, the rest in

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2 Note that there are no statistics on domestic tourism, hence it is difficult to speculate on its growth. In the case of domestic tourism, pilgrimage tourism may be sizeable in some important places such as Janakpur (Janaki Mandir), Kathmandu (Pashupati Mandir), Gosaikunda (Langtang National Park), Lumbini (birth place of Lord Buddha), etc.

travel and trekking agencies and airlines. Since most of the tourism agencies lie inside Kathmandu Valley, it can be assumed that most of the employment was also generated in the valley. Table 2.14 presents the number of employees per hotel, room, and bed, and the investment per employee. One tourist bed in Nepal creates less than two jobs, which is fairly low compared to other developing countries (NRB 1990). This is because low-budget tourists constitute about 67 per cent of all tourists and most of these are catered for by non-star hotels.

According to Khadka (1993), the total direct employment in the hotel industry alone in 1987/88 was 10,112, which is almost double the estimate reported in the NRB (1990) study. The NRB figures are an underestimation (Touche Ross 1990).

### *Earnings and Expenditure*

The average earnings for each hotel in 1986/87 totalled Rs 2,717 thousand. Of the total earnings during 1986/87, star hotels accounted for an overwhelming proportion (91.2%); the remainder was distributed among non-star hotels. Also, the earnings indicated that 38.8 per cent was in foreign currency and the rest in local currency during the year 1986/87.

The total expenditure of all categories of hotels was estimated to be Rs 563.2 million during the year 1986/87, compared to Rs 189.2 million in 1982/83, reflecting a marked growth in the level of expenditure. Over two-thirds of the total expenditure of all categories of hotels in 1986/87 was accounted for by amortisation of loans, wages and salaries, taxes, food, utilities, and depreciation. Details on the results (Table 2.15) are provided in the NRB study.

The tourism sector industries (e.g., airlines and hotels) are relatively more capital-intensive than the tourism-related industries (e.g., carpets, handicrafts, garments, etc). For example, the average capital requirement per unit of labour was Rs 213.5 and Rs 112.4 thousand in the airline and hotel industries respectively, whereas the corresponding figures for the carpet and handicraft industries were only Rs 13.2 and Rs 14 thousand. While trekking agencies are more labour-intensive than travel agencies (Table 2.15), travel agencies are found to be more productive than trekking agencies due to their high income-labour ratio. That is, the annual average income generated per unit of labour employed in travel agencies was Rs 288.8 thousand, compared to the income-labour ratio of Rs 73.3 thousand in trekking agencies. The income generated per unit of labour has been found to be the lowest in the handicraft industry,

followed by the carpet industry, and restaurants. The income generated per unit of investment, on the other hand, has been found to be relatively higher in the airline industry than in the travel-related and garment industries (Table 2.15).

## Linkages of the Tourism Sector with Other Sectors

Linkages of the tourism sector with other sectors of the economy can be viewed in terms of the multiplier effects of tourist expenditure. A dollar spent by a tourist transmits impulses to different sectors in the economy, depending on the degree of forward and backward linkages of tourism with other sectors of the economy. The higher the dependency of the tourism sector on imports, the lesser will be the linkage with the domestic economy. Put differently, a lower (higher) multiplier indicates a weak (strong) relationship among sectors, implying a heavy (weak) dependence on imported goods and services. The two recent studies (NRB 1990; Khadka 1993) shed some light on the linkages between tourism and the domestic economy.<sup>3</sup>

In the NRB study, the tourism sector includes hotels, travel agencies, trekking agencies, airlines, and cargo handling. The tourism-related sector includes handicrafts, garments, carpets, and other industries indirectly related to tourism. The link between tourism and other domestic sectors can be examined in terms of direct, indirect, and induced effect of tourism expenditure on output, import, employment, and income. Such multiplier effects are reported in Table 2.16 and 2.17. Output multipliers measure the extent of linkages between sectors. The output multipliers were found to be the highest for travel agencies and the lowest in the airline industry. Likewise, among tourism-related sectors, multipliers were relatively lower in the carpet industry (1.002), indicating that this industry has a very weak relationship with other domestic industries in terms of inter-industrial linkages. This is expected, as most of the output of the carpet industry is exported abroad and most of the raw material is imported. In general, the results indicate a relatively weak linkage between the tourism sector and other domestic sectors, which is to be expected in a

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3 It should be noted here that Khadka's study differs from the NRB (1990) study in that the former has examined the impact of tourism under the conditions of both the constrained and unconstrained supplying capacities of the domestic economy, using an economy-wide input-output model. The NRB study, on the other hand, is based on a sectoral input-output model, and it is not clear whether this study examines the input-output model under conditions of capacity constraint on the domestic economy. Banskota and Sharma (1993a) provide a more detailed synthesis of these two studies.

less developed economy such as Nepal's, a primary reason for which is the high import content of the tourism sector.

The tourism sector import multiplier is relatively higher than that of other tourist-related sectors. The ratio of the import content of the tourism sector (import content of both goods and services are treated as a leakage of the sector) in Nepal is about 62.2 per cent, compared to 55.3 per cent in tourism-related sectors when all effects were taken into account (Table 2.17). The NRB study further revealed that over 75 per cent of the total import content of the tourism sector was accounted for by merchandise imports when all effects were combined.

The presence of a large import content, particularly in the tourism sector, implies that a major chunk of the foreign exchange earned by the tourism sector actually leaks out for importing goods and services consumed by the tourism sector itself. The large amount of import leakage also suggests that the domestic production of goods and services consumed by the tourism sector has no close substitutes produced in the domestic economy, i.e., a severe lack of import-substituting industries.

Import leakages estimated under the limited supplying capacity of the domestic economy were found to be much higher than in an unconstrained situation (Khadka 1993). Under the supply constraint, imports, as a percentage of total tourist receipts, were found to be 26.0 per cent and increased to 36.4 per cent when induced effects were considered (Table 2.17).

The employment multiplier in the tourism sector was found to be relatively lower than in the tourism-related sector (Table 2.17). For example, when only direct and indirect effects are taken together, for every hundred thousand rupees of tourist expenditure, 3.92 man-years of employment are generated in the tourism-related sectors, compared to 2.78 man-years in the tourism sector. The NRB study further reveals that although a large investment is required to generate employment for one person compared to that in a related industry, the efficiency of the tourism sector is higher than that of other sectors based on output - employment and output - investment ratios.

Khadka's study shows that employment generation under the limited supplying capacity of the domestic economy is lower than that under no constraints. For example, the tourist expenditure under supply constraints was found to be 21.7 per cent lower than that under no supply constraints. The reduction in the size of employment multiplier in the tourism sector, within the limited capacity of

the domestic economy, showed a weak linkage of this sector, with the rest of the economy. Furthermore, the employment effect of tourist expenditure was more sensitive to the capacity of the domestic economy than to the income and output multipliers. The results further indicated that expenditure of tourists staying in low-class hotels generated higher employment effects than those staying in high-class hotels. Similarly, trekkers generated slightly higher employment effects than pleasure tourists (Table 2.18).

Tables 2.16 and 2.19 show the Nepal Rastra Bank (1990) and Khadka (1993) estimates of the income multiplier resulting from a rupee of tourist expenditure in different tourism and tourist-related sectors. Khadka found a relatively lower income multiplier in the tourism sector than in other export sectors (Table 2.19). The only exception was in the garment industry in which the direct plus indirect income multiplier was relatively lower than that in the tourism sector. In fact, with the exception of the garment industry, the Nepalese export sector is generally agro-based; the value-added is relatively high; and the sector is less import-intensive. This explains the relatively higher value of the income multiplier (Khadka 1993). The value of the income multiplier in the tourism sector, however, increases further with the inclusion of induced effect, indicating the heavy dependence of the Nepalese economy on agriculture.

As seen from Table 2.20, the output, income, and employment multipliers of tourist expenditure estimated under the assumption of the limited capacity of the domestic sector were found to be less by 11.6 per cent, 13.7 per cent, and 21.7 per cent, respectively, than those estimated under an unconstrained situation. On the whole, the real impact of tourism was found to be only 86 per cent of the nominal impact (i.e., impact estimated in an unconstrained situation). This implies that the multiplier effect estimated under the unconstrained supplying capacity of the domestic sector is based on an overestimation of the economic impact of tourism. Clearly, the results indicate that a greater proportion of the surplus generated by the tourism sector has actually flown out due to the capacity constraints in the domestic economy. Therefore, putting emphasis only on the tourism sector is not sufficient to control import leakages; it is also necessary to develop other sectors in the economy, especially sectors with relatively low surplus capacity that have fairly strong linkages with tourism and other domestic sectors.

## Issues

The tourism industry is a very broad-based industry that has direct and indirect linkages with many other sectors of the economy. The industry is among

Nepal's leading foreign exchange earners, contributing over 20 per cent of total foreign exchange earnings. Thus, it is necessary to know how this industry is faring and what direction it should take to have the desired effects of generating income and employment. To achieve this, the need for a sound policy is vital. Without a broad and reliable information base, however, it will not be possible to steer the industry and untangle its intricate relationship with other sectors. Quality information will provide the basis for quality research through which essential planning for this sector can be conducted. Two issues emerge as critical in the future development of this industry, namely, a long-term vision of what is desirable from this industry, and, second, how this vision can be fulfilled.

### *Vision*

It is essential to have a clear vision on what is desired from tourism. Simply stating that growth in this industry is desired is meaningless if there are no clear strategies to achieve it. For example, the primary objective of tourism development in Nepal appears to be increasing foreign exchange earnings (Touche Ross 1990). In terms of a long-run strategy, this objective is at best vague, and especially so if mountain tourism is considered<sup>4</sup>. Growth can be achieved in different ways. First, a policy to attract more tourists can be designed. Second, policies can be designed to increase tourists nights in the host country. Third, if tourist spending can be increased, growth is possible. Finally, if import leakages can be minimised by developing import substitution industries, growth is possible. If all the above four strategies are pursued, growth is assured.

On the demand side, tourists' demand to visit Nepal is primarily dictated by their incomes, relative costs associated with international air travel, and local costs that are incurred in the host country. On the demand side, a small country like Nepal can do very little to influence tourist arrivals, since Nepal's ability to influence tourists' income and international air travel costs are virtually nil. As a result, when tourist incomes (as during a recession) fall or international travel costs increase, the flow of tourists visiting Nepal will also fall. However, supply management, through policy formulation, can be conducted to achieve desirable results to promote tourism growth in the domestic economy as well as other domestic sectors. For a small country like Nepal, therefore, tourism development must be defined in terms of national

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4 See Chapter 5 for more details on policies related to this sector.

goals and an appropriate growth path must be prioritised<sup>5</sup>. As will be highlighted in Chapter 5, there is a major lacuna in Nepal's tourism development goal.

### *Lack of Information*

Currently, the information base to address the various issues related to the tourism industry is incomplete and inadequate. Without a broad and reliable information base, it will be impossible to understand what is really happening in the industry.

Currently, two agencies produce information related to this sector. It is mandatory for all tourists visiting Nepal to fill out an immigration (embarkation and disembarkation) card at the point of exit and entry. The information derived from this card is basic nationality, age, sex, last port of call, and purpose and length of visit. Tourists who go trekking need to receive a trekking permit, but the application for it does not provide any additional information beyond that already obtained. No additional information is collected from tourists visiting Nepal. The immigration office passes this information on to the Ministry of Tourism, which then publishes it. The second source of information related to tourist expenditure is generated by the NRB and the Ministry of Finance (MOF) as part of the monetary situation and the overall economic performance of the economy.

The lack of periodic surveys on tourism that are consistent in definition and coverage makes it difficult to determine the demand for and supply of tourism in the country, which is vital to promote marketing and prioritise investments as well as to formulate policies for tourism promotion.

Tourists demand goods and services of different kinds and are willing to spend resources to consume them. On the demand side, the proper knowledge of the level of tourist expenditure patterns is important to understand the tastes and preferences of tourists with regard to the available domestic products. Information on the types of goods and services they demand needs to be collected in detail. Such information will be useful for the pricing policy of

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5 This growth must complement environmental conservation for tourism development to be sustainable. Tourism development cannot be viewed in isolation from conservation and natural resource management, a topic which will concern us through most of this study. Most of the remote areas of the mountains in Nepal have the potential for tourism development, which also implies income and employment generation in these areas.

domestic products. Products that exhibit an inelastic demand tell policy-makers that such products can be subjected to a flexible pricing system. Likewise, products with an elastic demand should be governed by a relatively rigid pricing mechanism. This sort of information is also useful in promoting domestic industries.

On the supply side, it is extremely important to have a proper understanding of the quantity and quality of goods and services provided by the host country. The lack of periodic data (preferably on an annual basis) on the different entities that provide goods and services to tourists (hotels, airlines, travel agencies, trekking agencies, handicraft shops, carpets, and garment industries, etc) makes it difficult to assess the supply components of this industry. No system has been developed so far to conduct a regular periodic survey of the different industries that are involved in tourism. Thus, the type of investment policies required, the times when capacity is a constraint, how the various goods and services being generated respond to policies, etc, all become anybody's guess. Any policy action taken is, thus, based on an *ad hoc* decision, which is often likely to miss its target.

A major goal of tourism development in Nepal has been to increase foreign exchange earnings. However, there is considerable leakage due to an active black market. An estimated 37 per cent of the total tourist expenditure in Nepal is exchanged in the black market (Development Research and Training Centre 1993). Therefore, the official estimates of tourism earnings are underestimated. Unless periodic studies of this nature are conducted, it will be difficult to evaluate the effectiveness of policies or programmes aimed at reducing this leakage.

In sum, the information on the tourism industry is so limited and inadequate that it is surprising policies have even been formulated. This should be a matter of prime concern, given that tourism has possibly the greatest potential for expansion in Nepal.

**Table 2.1: Annual Flow of Tourists to Nepal**

Year	Number	Year	Number
1964	9526	1965	9388
1966	12567	1967	18093
1968	24209	1969	34901
1970	45970	1971	49914
1972	52930	1973	68047
1974	89893	1975	92440
1976	105108	1977	129329
1978	156123	1979	162897
1980	162897	1981	161669
1982	175448	1983	179405
1984	176634	1985	180989
1986	223331	1987	248080
1988	265943	1989	239945
1990	254885	1991	292995
1992	334353		

Source: Nepal Tourism Statistics, Ministry of Tourism and Civil Aviation, Department of Tourism, HMG

**Table 2.2: Percentage Distribution of Tourist by Major Regions for Selected Years**

Year	N. America	W. Europe	Asia	Australia	Others	India
1978	15.1	42.8	33.6	5.9	2.6	19.5
1979	13.4	42.0	36.5	5.8	2.3	23.1
1980	10.9	43.2	38.0	5.0	2.9	25.0
1981	10.6	39.2	42.8	4.6	2.8	30.3
1982	11.4	39.2	42.1	4.8	2.6	30.9
1983	12.6	37.1	41.6	5.7	3.0	27.9
1984	12.5	33.8	47.2	3.2	3.3	33.2
1985	12.6	34.7	43.4	5.9	3.4	29.7
1986	12.5	38.3	38.0	6.0	5.2	24.7
1987	12.7	37.1	39.7	5.6	4.9	23.8
1988	11.4	37.5	42.9	5.1	3.1	27.1
1989	12.1	43.6	36.0	5.8	2.4	18.0
1990	10.3	43.5	38.6	5.1	2.5	23.4
1991	8.2	37.7	47.8	3.6	2.7	31.6
1992	8.2	39.6	46.8	3.3	2.2	31.9
Growth rates (1978-1992) based on semi log trend.						
	3.4	5.3	8.3	3.3	7.1	6.0

Note: Percentages may not add to 100 due to rounding errors.

Source: Same as Table 2.1

**Table 2.3: Proportion of Tourists by Purpose of Visit**

Year	Pleasure	Trekking & Mountain	Business	Official	Other
1970	91.1	1.2	2.0	3.3	2.4
1975	75.9	13.6	5.3	4.6	0.6
1976	78.6	11.1	4.7	4.0	1.6
1977	82.3	10.4	3.5	3.2	0.6
1978	79.4	11.1	4.3	3.6	1.3
1979	79.4	11.3	3.9	3.4	2.0
1980	80.2	11.8	3.4	2.9	1.7
1981	79.0	13.4	3.9	3.5	0.2
1982	77.9	13.4	4.2	4.1	0.4
1983	73.8	13.5	5.5	4.7	2.5
1984	79.6	8.5	4.6	5.3	2.0
1985	70.8	15.9	5.8	5.1	2.4
1986	73.4	15.0	4.9	4.0	2.7
1987	74.6	14.6	4.7	3.6	2.5
1988	75.5	13.9	4.5	3.7	2.4
1989	75.4	16.7	1.1	5.1	1.7
1990	63.5	15.7	4.6	10.4	5.8
1991	60.5	14.4	5.0	12.7	7.1
1992	71.1	10.5	9.5	6.3	2.6

Source: Same as Table 2.1

**Table 2.4: Visitor-days by Length of Stay**

Length of Stay	in '000' visitor days									
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
1-7 days	396	420	388	319	333	363	456	577	644	715
8-15 days	233	241	218	208	225	227	218	287	336	468
16-30 days	426	459	457	436	539	460	453	544	659	765
31+ days	823	859	758	727	1265	679	703	774	895	1106
Total	1878	1979	1821	1691	2361	1729	1826	2182	2535	3055

Source: Table 5.6; Statistical Yearbook of Nepal, various issues

**Table 2.5: Gross Foreign Exchange Earnings and Per Capita Tourist Expenditure**

Year	Earnings		Average		Foreign Arrival	Index of per	
	NRs '000'	US\$ '000'	Per Capita NRs	Per Capita \$		Capita Nrs	Expense \$
1979	419270	35227	3360.80	282.37	124753	100.00	100.00
1980	614480	51632	5028.27	422.50	122205	149.62	149.63
1981	550496	44935	4884.87	398.73	112694	145.35	141.21
1982	439647	33441	3626.04	275.81	121247	107.89	97.68
1983	536364	35667	4148.12	275.84	129303	123.43	97.69
1984	679189	41273	5759.89	350.02	117917	171.38	123.96
1985	719365	39185	5659.43	308.28	127109	168.40	109.18
1986	1077802	50841	6410.30	302.38	168136	190.74	107.09
1987	1304656	60229	6898.71	318.48	189116	205.27	112.79
1988	1486837	63502	7668.65	327.52	193885	228.18	115.99
1989	1838520	68343	9348.68	347.52	196661	278.17	123.07
1990	1868873	63701	9578.02	326.47	195121	284.99	115.62
1991	2260808	58589	11276.47	292.23	200489	335.53	103.49
1992	2838100	61090	12459.88	268.20	227779	370.74	94.98

Source: Same as Table 2.1

**Table 2.6: Contribution of Tourism Earnings**

Year	Total Earnings as a percentage of		
	Merchandise Export	Foreign Exchange Earning	GDP
1975	19.2	30.2	1.0
1977	24.2	26.3	1.7
1978	34.1	24.8	1.8
1979	38.1	26.9	2.3
1980	54.6	26.9	2.7
1981	47.9	29.2	2.8
1982	56.2	36.8	2.7
1983	74.3	37.3	2.5
1984	32.8	19.7	1.4
1985	26.6	19.8	1.7
1986	34.7	18.5	2.1
1987	58.0	26.6	3.0
1988	40.6	18.2	2.5
1989	65.0	24.5	3.5
1990	59.5	23.3	3.4
1991	47.1	21.8	3.6
1992	35.9	20.0	3.8

Source: Economic Survey, Ministry of Finance, HMG, 1993

**Table 2.7: Merchandise Trade Deficit, Foreign Exchange Gap and Travel Earnings \***

Year	Trade Deficit and Travel Receipt		Exchange Gap and Travel Receipt	
	Merchandise Trade Deficit (Rs million)	Travel Receipt as % of Trade Deficit	Total Foreign Exchange of Total Deficit Gap	Total receipt as % Total Exchange Deficit
1975	925.0	18.4	566.9	36.5
1976	812.9	25.6	409.1	51.3
1977	856.4	33.6	284.3	101.3
1978	1450.6	25.0	941.5	38.6
1979	1608.8	30.9	968.9	51.3
1980	2416.6	26.5	1740.1	36.6
1981	2830.2	27.3	1930.1	40.1
1982	3452.0	24.4	2390.8	35.2
1983	5197.0	16.2	3830.6	22.0
1984	4823.6	11.6	3285.6	17.2
1985	5022.2	14.6	3916.9	18.8
1986	6286.3	17.0	4897.1	21.9
1987	7924.1	22.0	5948.3	29.3
1988	9765.5	17.2	9577.2	22.1

Source: NRB 1990

**Table 2.8: Composition of Tourist Expenditure**

	1975	1981	1988
Accommodation	33.0	29.0	26.6
Food & Beverage	23.0	22.3	26.4
Sight Seeing, Transport etc	19.0	19.8	16.1
Handicraft, Curios	19.0	23.7	14.7
Miscellaneous	6.0	5.3	16.2
Total	100	100	100
Rs Per Tourist/day	169	390.3	747
Length of stay (nights)	6.9	14.5	9.3
Rs Per Visit	1166	5657	6975
Rs Per Capita (1974-75 price)	1166	3510	2352

Source: NRB 1990

**Table 2.9: Average Tourist Expenditure and Average Length of Stay by Purpose of Visit and Accommodation: 1986-87**

Purpose of Visit	Per Tourist/Day Expenditure (Rs)	Average Length of Stay (nights)
Pleasure	1034	5.9
Trekking	536	25.8
Business	1148	6.0
Official	888	7.7
Diplomatic	939	5.6
Pilgrimage	235	2.0
Education	268	18.7
Others	512	3.9

Type of Accommodation	Per Tourist/Day Expenditure (Rs)	Average Length of Stay (nights)
Five Star Hotel	1997	6.1
Four Star Hotel	1472	7.9
Three Star Hotel	1070	7.8
Two Star Hotel	579	13.9
One Star Hotel	573	13.9
Non Star Hotel	429	10.1
Lodge/Guest House	411	14.1
Paying Guest	324	4.3

Source: NRB 1990

**Table 2.10: Hotels, Rooms, and Beds Available by Type of Hotel**

Hotel Type	Hotel 1971 No.			Hotel 1992 No.		
	No.	Rooms	Beds	No.	Rooms	Beds
<b>Kathmandu</b>	8	339	644	116	4412	8703
5-Star	1	110	206	4	722	1414
4-Star	-	-	-	5	468	965
3-Star	1	60	120	3	206	387
2-Star	3	110	205	19	729	1421
1-Star	3	59	113	21	563	1105
Tourist Standard	-	-	-	9	184	390
Others	0	0	0	55	1540	304
<b>Outside Kathmandu</b>	3	32	84	87	1580	3069
3-Star	-	-	-	1	69	136
2-Star	-	-	2	2	80	164
1-Star	-	-	-	9	280	376
Tourist Standard	-	-	-	4	52	104
Others	3	32	84	71	1099	2289
<b>All Total</b>	<b>11</b>	<b>371</b>	<b>728</b>	<b>203</b>	<b>5992</b>	<b>11772</b>

Source: Department of Tourism 1992

**Table 2.11: Bed Occupancy Rate by Category of Hotel**

Hotel Category	1985	1986	1987
5-Star	52.29	58.90	66.73
4-Star	44.18	47.96	55.82
3-Star	53.76	53.76	62.07
2-Star	46.31	50.73	50.13
1-Star	47.66	44.67	48.38
Tourist Standard	37.89	40.66	37.16
Others*	48.31	48.61	50.15

\* Includes non-star hotels, lodges, and guest houses

Source: NRB 1990

**Table 2.12: Bed Occupancy Rate by Month**

Month	1985	1986	1987
January	42.74	43.13	47.52
February	45.94	47.56	50.83
March	53.95	58.36	61.13
April	53.05	55.71	59.01
May	47.82	46.48	49.09
June	37.12	38.30	39.18
July	27.66	31.07	33.18
August	33.93	38.05	37.61
September	42.52	41.85	46.74
October	70.19	70.58	73.25
November	65.46	72.57	71.96
December	53.68	56.13	58.40
Average	47.96	49.88	52.47

Source: NRB 1990

**Table 2.13: Direct Employment Generation from Tourism and Tourism-related Sectors 1986-87**

Sector	Total employment	Level of employment			Average
		% top	% mid	% basic	
Hotels	5912	8.5	30.0	61.5	25
Restaurants	693	12.0	38.0	50.0	13
Travel Agencies	1544	17.6	43.0	39.4	30
Trekking	978	12.5	26.0	61.0	20
Airlines	2738	4.4	22.0	74.0	na
Carpets	2551	1.5	5.0	94.0	na

Source: NRB 1990

**Table 2.14: Number of Employee per Hotel, Room, and Bed and Investment by Type of Hotel (1986-87)**

Hotel Category	Number of employees per			Investment per (Rs '000')
	hotel	room	bed	
5-Star	472.0	2.7	1.4	156.3
4-Star	202.0	2.5	1.3	157.6
3-Star	118.3	1.9	0.9	108.2
2-Star	43.6	1.2	0.6	102.3
1-Star	19.4	0.9	0.5	47.6
Tourist Standard	18.5	1.0	1.9	70.2
Others	7.2	0.6	0.9	45.5

Source: NRB 1990

**Table 2.15: Average Earnings, Expenditure, and Factor (Rs '000') Intensities in Tourism-related Sectors (1986-87)**

Sector	Earnings	Expenditure/la bour	Capital/ labour	Income
Hotels	2717	2407	112.4	107.6
Restaurants	772	665	26.2	56.0
Travel Agencies	8742	6476	65.2	288.8
Trekking	1846	1192	28.2	73.3
Airlines	5600	-	213.5	523.0
Carpets	4800	4500	13.2	51.1
Garments	156	125	34.2	71.3
Handicrafts	292	-	14.0	48.0

Source: NRB 1990

**Table 2.16: Multiplier Effects of Tourist Expenditure in Different Sectors (1986-87)**

Sector	Output	Income		Employment		Import	
		DI	DII	DI	DII	DI	DII
Hotels	1.09	0.33	0.47	2.67	3.36	0.38	0.53
Travel	1.43	0.63	0.91	2.77	4.08	0.45	0.74
Trekking	1.18	0.77	1.11	4.96	6.57	0.18	0.54
Airlines	1.07	0.13	0.19	0.71	0.99	0.61	0.67
Handicrafts	1.35	0.55	0.79	6.48	7.63	0.31	0.56
Carpets	1.00	0.27	0.39	5.85	6.42	0.68	0.81
Garments	1.47	0.57	0.83	4.40	5.60	0.30	0.56
Textiles	1.05	0.46	0.67	3.32	4.29	0.27	0.49
Food	1.09	0.34	0.49	1.85	2.57	0.25	0.41
Beverages	1.06	0.23	0.34	1.57	2.18	0.28	0.41
Printing	1.03	0.65	0.94	5.36	6.72	0.16	0.46

Note: DI = direct and indirect effects; DII = direct, indirect, and induced effects

Source: NRB 1990

**Table 2.17: Direct, Indirect, and Induced Effects of Per Rupees of Tourist Expenditure on Imports, Employment, and Income**

<u>Multiplier</u>	<u>Tourism Sector</u>	<u>Tourism Related Sector</u>
<u>Import:</u>		
D	0.297	0.276
DI	0.406	0.355
DII	0.622	0.553
<u>Employment</u>		
<i>(Manyear per 10,000 Rupees):</i>		
D	2.010	3.745
DI	2.780	3.923
DII	3.754	4.818
<u>Income/Value added:</u>		
D	0.376	0.377
DI	0.467	0.425
DII	0.675	0.614

Note: D = direct, DI = direct plus indirect, DII = direct indirect, and induced.

Source: NRB 1990

**Table 2.18: Manyears of Employment Generated Per Rs 100,000 Tourist Expenditure by Type of Hotel and Type of Tourist**

<u>Type of Hotel</u>	<u>Man Year</u>	<u>Nationality</u>	<u>Man Year</u>
Five-star hotel	2,514	North American	2,650
Four-star	2,443	European	2,597
Three-star	2,418	Australian	2,463
Two star	2,607	Asian	2,500
One star	2,570	Indian	2,477
Non star	2,636	<u>Average</u>	2,562
Lodge	2,714		
<u>Type of Tourist</u>			
Pleasure Tourist	2,530		
Trekker	2,588		

Source: Khadka 1993

**Table 2.19: Output, Income, and Employment Multipliers under Unconstrained Situations**

Sector	Output DPI	Income		Employment	
		DPI	DPIPI	DPIPI	DPI
Tourism	1.342	3.037	0.740	1.865	2.562
Cash Crop	1.340	5.144	0.983	3.509	5.245
Livestock	1.222	5.157	0.987	3.602	6.783
Carpet	1.354	3.613	0.983	2.283	3.960
Garment	1.098	2.747	0.724	1.820	1.313
Jute	1.432	3.668	0.928	2.443	4.313
Leather	1.925	5.307	0.971	3.217	5.301

Source: Khadka 1993

**Table 2.20: Direct Plus Indirect Impact of Total Tourist Expenditure under Unconstrained and Constrained Supplying Capacities**

	Unconstrained	Constrained	% Change
Total tourist expenditure	1961.1	1961.1	
Import	509.7	707.9	+38.9
Compensation of employees	444.4	364.2	-18.0
Indirect tax	215.5	207.0	-3.9
Operating surplus	673.2	570.4	-15.3
Value added (net earnings)	1451.4	1253.1	-13.7
Value added as % of GDP	2.6	2.3	
Net earnings as % of export	48.5	41.9	-13.7
Import as % of tourist receipt	26.0	36.1	+38.9

Source : Khadka 1993

## Mountain Tourism Development

### Introduction

This chapter deals with different aspects of mountain tourism. It argues that the development of tourist facilities is not a sufficient basis for mountain tourism development. Mountain tourism development is a concept that should encompass the characteristics of the mountain environment and the values of the different environmental resources that mountains harbour. Efforts to develop tourism in the mountains without duly addressing the mountain characteristics can do more harm than good to the mountain environment and its economy.

### Tourism in Mountain Areas

#### *Trekking Tourism*

Although there is no one accepted way of classifying different types of tourism, one could classify tourism into four general types, namely, leisure tourism (shopping, general observations, etc), recreational tourism (mountaineering, fishing, trekking, rafting, etc), cultural tourism (archeology, historical sites), and eco-tourism (bird and wildlife watching, photography, scenery, scientific tourism, etc). If so, mountain tourism would be composed of recreational tourism, cultural tourism, and eco-tourism. Recently, the concept of eco-tourism has gained much ground (Denman 1992; Singh 1992; Moore and Back 1992).

In the context of Nepal, however, mountain tourism includes trekking tourism and mountaineering tourism, with the former being the more popular. Rafting too is gaining popularity. All those wishing to trek must obtain trekking permits regardless of the area in which they wish to trek. Trekking tourism is, simply, trekking in a mountain area for more than a night. Hiking refers to trekking without an overnight stay. The most popular areas in the mountain regions visited by trekkers are the Annapurna, Langtang, and Sagarmatha regions (Map 1). The Sagarmatha and Langtang regions are in fact national parks and the Annapurna Region is a Conservation Area. The Makalu Region encompasses both a national park (core area) and a Conservation Area (buffer zone). Aside

from these areas, all national parks (including Sagarmatha, Langtang, and Makalu) are also opened for trekking tourism. There are other trekking areas that have been opened in the mountain regions such as the Kanchenjunga, Manaslu, Mustang, and Dolpo regions.

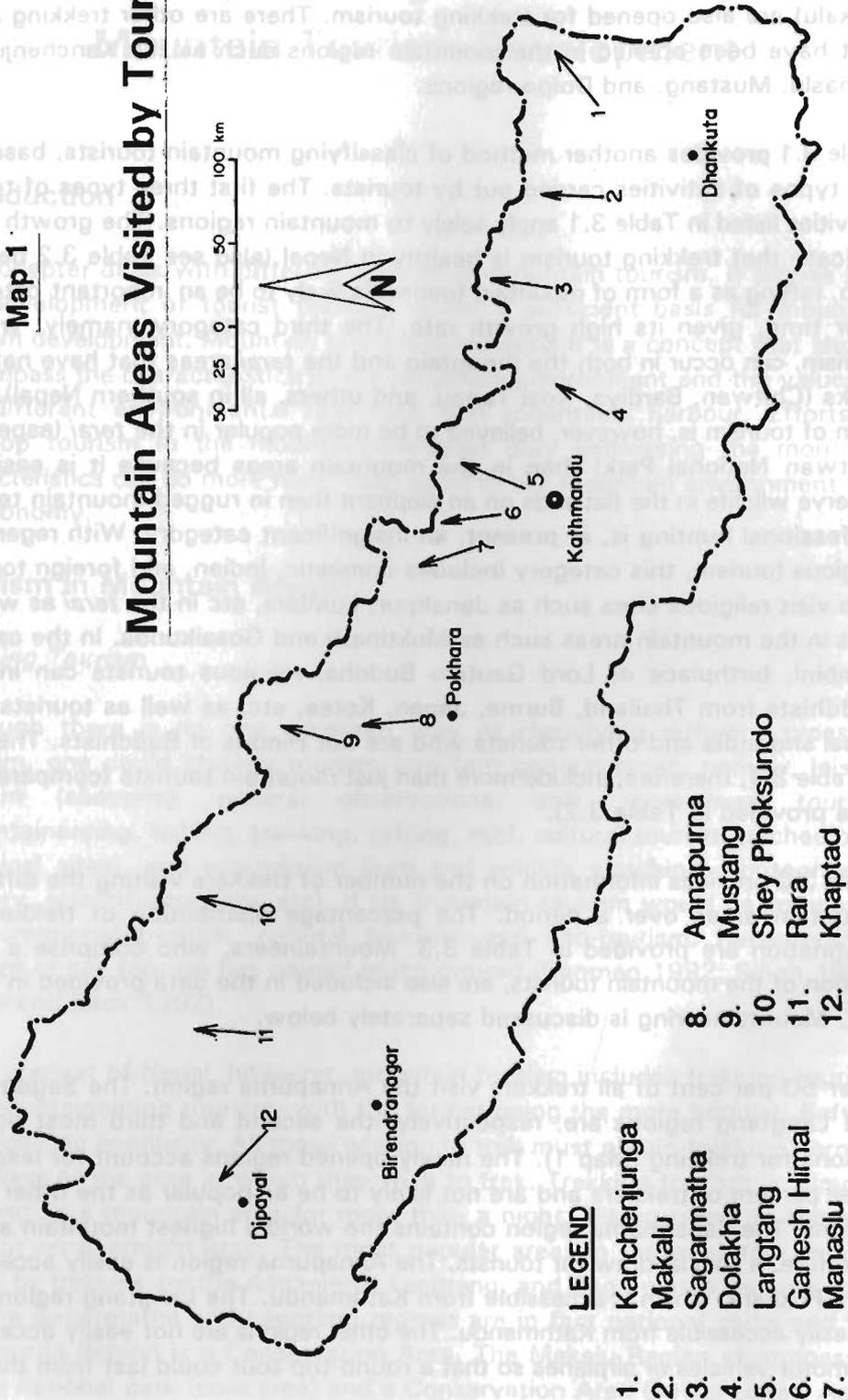
Table 3.1 provides another method of classifying mountain tourists, based on the types of activities carried out by tourists. The first three types of tourist activities listed in Table 3.1 apply solely to mountain regions. The growth rates indicate that trekking tourism is healthy in Nepal (also see Table 3.2 below). Also, rafting as a form of mountain tourism is likely to be an important category over time, given its high growth rate. The third category, namely, wildlife tourism, can occur in both the mountain and the *terai* areas that have national parks (Chitwan, Bardiya, Kosi Tappu, and others, all in southern Nepal). This form of tourism is, however, believed to be more popular in the *terai* (especially Chitwan National Park) than in the mountain areas because it is easier to observe wildlife in the flatlands on an elephant than in rugged mountain terrain. Professional hunting is, at present, an insignificant category. With regards to religious tourism, this category includes domestic, Indian, and foreign tourists who visit religious sites such as Janakpur, Lumbini, etc in the *terai* as well as sites in the mountain areas such as Muktinath and Gosaikunda. In the case of Lumbini, birthplace of Lord Gautam Buddha, religious tourists can include Buddhists from Thailand, Burma, Japan, Korea, etc, as well as tourists from Nepal and India and other tourists who are not Hindus or Buddhists. The data in Table 3.1, therefore, include more than just mountain tourists (compare with data provided in Table 3.2).

Table 3.2 provides information on the number of trekkers visiting the different mountain areas over a period. The percentage distribution of trekkers by destination are provided in Table 3.3. Mountaineers, who comprise a small portion of the mountain tourists, are also included in the data provided in Table 3.2. Mountaineering is discussed separately below.

Over 50 per cent of all trekkers visit the Annapurna region. The Sagarmatha and Langtang regions are, respectively, the second and third most popular regions for trekking (Map 1). The newly opened regions account for less than three percent of trekkers and are not likely to be as popular as the other three regions. The Sagarmatha region contains the world's highest mountain and is, therefore, a special draw for tourists. The Annapurna region is easily accessible from Pokhara, which is accessible from Kathmandu. The Langtang region, too, is easily accessible from Kathmandu. The other regions are not easily accessible by motor vehicles or airplanes so that a round-trip tour could last from three to

Map 1

# Mountain Areas Visited by Tourists



**LEGEND**

- 1. Kanchenjunga
- 2. Makalu
- 3. Sagarmatha
- 4. Dolakha
- 5. Langtang
- 6. Ganes Himal
- 7. Manaslu

- 8. Annapurna
- 9. Mustang
- 10. Shey Phoksundo
- 11. Rara
- 12. Khaptad

four weeks, time not often available to tourists. Thus, it is unlikely for other regions to equal the three regions in popularity in the near future, unless the supply side of trekking tourism in these areas is developed to attract a larger number of tourists. Other tourist areas in the mountains are not protected areas, but the number of tourists is curtailed by higher trekking permit fees and an annual quota system.

### *Group vs Individual Trekkers*

Mountain tourists can also be classified into three different groups, namely, independent trekkers (FITs), group trekkers, and mountaineers. 'Independent trekkers' are those who carry their own backpacks or hire a guide/porter to assist them and eat and sleep in local lodges or 'tea houses.' Independent trekkers travel almost exclusively in the Solukhumbu, Annapurna, and Langtang regions where lodges and food are easily available. Group trekkers come on a scheduled trip or join up with friends for a customised, self-contained trek, organised by an overseas' adventure travel company or with a Kathmandu-based trekking agency. The full service, or 'inclusive' package, includes all camp equipment such as sleeping bags, dining and toilet tents, cooking gear, three meals a day, guides, cooks, and porters. Group trekkers, being self-sufficient, can travel into wilderness areas and away from villages as long as there is water and a place to pitch tents (Lama 1991; Lama and Sherpa 1994).

Each of the three groups has a different impact (income and employment generation, cultural and environmental) on the areas they visit. His Majesty's Government (HMG) currently has different regulations for each group, which has implications on the local economy (to be discussed later). Published time series' information on the volume of group and individual trekkers visiting mountain areas in Nepal was not available before to 1992. The information presented in Table 3.4 indicates that the distribution of group tourists and FITs vary by region as well as over time. No clear trend can be discerned from the data on the future trend of FITs or group tourists. In Langtang National Park, the region most accessible from Kathmandu, FITs constitute a larger percentage over group trekkers. In other parks and areas less accessible, group trekkers constitute a majority.

### *Mountaineering Tourism*

Mountaineering tourists can be classified into two categories, namely, those who climb peaks above 6,000m and those who climb peaks below 6,000m. Permits are required to climb mountain peaks of any altitude. For peaks above

6,600m, permits have to be acquired from the Ministry of Tourism, and, for peaks below 6,600m, permits are issued by the Nepal Mountaineering Association.

Mountaineering is a hard and strenuous activity, requiring a prolonged stay, even up to several months. Because of its very high concentration of the highest peaks, the Nepal Himalaya constitute the ultimate and most challenging arena for mountaineering. Nepal has thus become one of the most popular areas for mountaineering expeditions since 1949. As more peaks have been steadily opened up, there has been an increase in the number of climbers as well. Table 3.5 provides information on the number of mountaineering teams, based on permits issued by the Ministry of Tourism.

There are 84 peaks in various mountain ranges from east to west opened for mountaineering. Eight peaks in the far-western region were opened in the spring mountaineering season of 1993, with a view to decongesting such activities in the eastern region and to distributing them evenly throughout the country.

#### Royalties

The royalties for climbing peaks were as follows (in equivalent Nepalese rupees).

FY 2040-41 (1984)

(1) Everest	Rs. 50,000
(2) Other 8,000m peaks	Rs. 40,000
(3) 7,501m - 8,000m peaks	Rs. 30,000
(4) 6,601m - 7,500m	Rs. 20,000
(5) 6,600m up to	Rs. 10,000

A compound interest rate of 10 per cent per annum was levied each year on the stipulated fee until 2048-5-3 (1992). From September 1992, a new rate in US dollars was introduced.

Peaks	For expedition including up to 9 members	For each additional member
8,000m above (except Everest)	US\$ 8,000	US\$ 800
7,501m - 8,000m	US\$ 3,000	US\$ 400
7,001m - 7,500m	US\$ 2,000	US\$ 300
6,501m - 7,000m	US\$ 1,500	US\$ 200
below 6,501m	US\$ 1,000	US\$ 100

For Mt. Everest, US\$ 10,000 was levied for a period of two years only. It was hiked to US \$ 50,000 a year in retrospect in autumn 1992 and took effect from autumn 1993. The government stipulated that this unprecedented hike in royalty is to lessen pressure and conserve the environment around Mt. Everest.

Moreover, a new garbage management rule in the Khumbu area makes it mandatory for all mountaineering teams to carry down biodegradable litter to the nearest village, or to Kathmandu to a specified agency in case of recyclable litter. Certain other waste items such as used batteries, oxygen cylinders, and used equipment are categorised as items that have to be reexported.

For teams attempting to climb any peak in Khumbu, it is mandatory to deposit from US \$ 2,000 for peaks less than 8,000m to US \$ 4,000 for Mt. Everest with the Ministry of Tourism. This is to ensure that all regulations pertaining to garbage management are complied with. Upon conclusion of the expedition, a team that complies with the provision is entitled to reclaim the deposit in full. For supervision and monitoring of the entire mountaineering activities, the Ministry of Tourism deposes liaison officers with each expedition team.

## **Mountain Tourism Development**

Although mountain tourism development is assumed to have started with mountaineering, there is no concept of mountain tourism development in Nepal. As tourists began to visit mountain areas, local people responded to meet their demands, and these 'services' appear to have been endorsed as tourism and mountain development. In newly opened areas too, development may be expected to come about by allowing in tourists and encouraging the development of infrastructure that facilitates tourists. Such a state of affairs appears to have been the experience of areas like the Swiss Alps and Himachal Pradesh (Messerli 1987; Singh 1992; Kleinschmidt and LaDow 1992; Healy 1992).

Tourism development and mountain development must be seen as different concepts that complement one another. In certain regions of the mountains, tourism can play a leading role in the area's development; in others, tourism may not play a leading role. It is, therefore, essential to assess the mountain environment resources in order to integrate mountain development and tourism development so that a larger number of people can benefit while the mountain environment remains protected. Mountain environmental resources are meant to include clean air, watersheds, biological diversity (genes, species, and ecosystems), scenic beauty, cultural heritage, human resources, and renewable resources such as firewood, fodder, and many more found in the mountains.

The Sagarmatha region has been a tourist area ever since Mt. Everest was climbed in 1953. Thousands of tourists from all over the world visit the region annually. Local people have responded to their needs for food, shelter, and energy. A similar development has occurred in the Annapurna and Langtang regions. In the Annapurna region, some effort has been made to integrate local and tourism development through the Annapurna Conservation Area Project (ACAP). In general, the lack of a concerted effort to define and link the two types of development has resulted in the overall degradation of the mountain environment, as the next chapter will highlight.

Perhaps because it has never been acknowledged, this state of affairs has not changed. It is generally assumed that opening new areas in the mountains will result in local development (whatever it means), but it is difficult to expect that such development will occur in every area opened to tourism. The Makalu, Rara, Khaptad areas, among others, though opened many years ago, are severely constrained by the accessibility factor and have, thus, not had a larger number of tourists. The other areas (Manaslu, Kanchenjunga, Dolpo, and Upper Mustang), recently opened for restricted tourism (i.e., numbers are controlled), also suffer from similar constraints. Local people expecting tourism to bring benefits to their area have, however, failed to see how this will be achieved. The development of some basic infrastructure alone will not result in tourism development in mountain areas (IUCN 1993), contrary to what is often believed and recommended.

When new mountain areas are opened to tourists, no effort is made to integrate tourism with local development, or to include the needs of local people (Uprety 1985; Kharel 1993 ; Sherpa 1988; Stevens and Sherpa 1993). Often some infrastructure is developed to encourage tourists but the needs of local people are not adequately addressed. In the Manaslu region, for example, local people are at a loss as to how they can benefit from tourism.

Mountain and tourism development has to be considered in the context of the natural environment and the area's natural resources. Tourism development has to be integrated with mountain development so that a large number of mountain people benefit from it.

There are two exceptions to what is generally a discouraging situation—the Annapurna area and the Makalu-Barun area (Bunting 1985; Stevens et al. 1993a; Shrestha et al. 1990). Both areas were opened to tourism prior to the development of any plans. The efforts of ACAP in the Annapurna area have been encouraging, but a detailed evaluation of this project remains to be

conducted to fully understand its benefits to mountain and tourism development. In the case of the Makalu Area, the Makalu Barun National Park and Conservation Area Project (MBNPCAP) is still in its initial stages of implementation and tangible results have yet to be observed. In the other older areas, such as Sagarmatha and Langtang, problems continue in spite of the efforts made (Byers and Banskota 1993; Robinson 1993; Lama and Sherpa 1994; Uprety 1985; Kharel 1993). Even in the national parks, where tourism is an important activity, a comprehensive concept of mountain tourism is still lacking (see the boxes on pages 44, 45, and 46).

## **Mountain Environment**

The existing approach to mountain tourism development has failed to benefit a wide area and to achieve sustainable mountain development (Keinschmidt and LaDow, 1992; Shah and Panday 1992; Moore and Back 1992; Byers and Banskota 1993; Stevens et al. 1993b; Healy 1992). In order to develop a concept of mountain development in which tourism has a role, it is first essential to identify the importance of a mountain area in terms of its resources and their value from a local, national, and an international perspective. Clean air, watersheds, biological diversity (genes, species, and ecosystems), scenic beauty, cultural heritage, human resources, and renewable resources such as firewood, fodder, and many more, found in the mountains, may all be called environmental resources. Clearly, Nepal abounds in these environmental resources; some of them form the basis for mountain tourism. These resources have immense value to present-day mankind as well as to future generations. Whenever an individual or a group derives satisfaction or fulfills a need from something, value is said to be generated. Economic value arises when satisfaction is derived from consuming resources directly or indirectly. The economic value of the mountain environmental resources is believed to be far in excess of what is currently realised (McNeely 1988; Winpenny 1991; Wells 1993).

Despite the abundance and potential value of the resources found in the mountain areas, their inhabitants lead subsistence lives. A large portion of the benefits are not retained in these areas but accrue to people and places far away. The mountains are a store of unique environmental resources that have no close substitutes. Some important reasons for conserving the environmental resources of Nepal's mountains are given below (Thorsell and Harrison 1993).

1. The mountain environment provides a home to over 10 million people with a rich, diversified cultural heritage who depend on the environmental resources for their livelihood.

2. For centuries, these people have managed the environmental resources; thus, they possess a wealth of human traditions that can provide solutions to the conservation of these environmental resources. Also, these people have a vast knowledge of the different values of a wide variety of endemic plants.
3. Mountain environments are the stronghold for many endemic and threatened species whose potential value to mankind may be enormous.
4. Mountain areas provide aesthetic value; more recently, environmental resources have been found to have high recreational value.
5. Mountains are highly fragile and unstable where human disturbances lead to environmental degradation.
6. Mountain environments have immense downstream values in terms of soil erosion control, watershed protection, and hydropower generation.

Since the mountain environment is characterised by a sensitive ecology, with meagre tolerance and limited carrying capacity, mountain experts have long stressed the need to develop a model of mountain tourism that is compatible to the overall objective of promoting mountain development that is in harmony with the mountain environment. A key to achieving this goal is the need for community involvement in all the conservation and development processes. Tourism development in the mountain areas must be able to provide increased income and employment to a large number of people. The area's production potential, based on its resources, must be assessed to develop new production units with appropriate technology that should be linked to other sectors. Also, the community's basic needs must be addressed. New skills and training are required. Environmental education must be an important part of this overall development. The area's resources must be valued in terms of their local, regional, and international benefits, and ways and means must be explored to internalise these benefits to ensure sustainable mountain and tourism development.

## **Protected Areas in the Mountain Environment and Conflicts**

### *Protected Area*

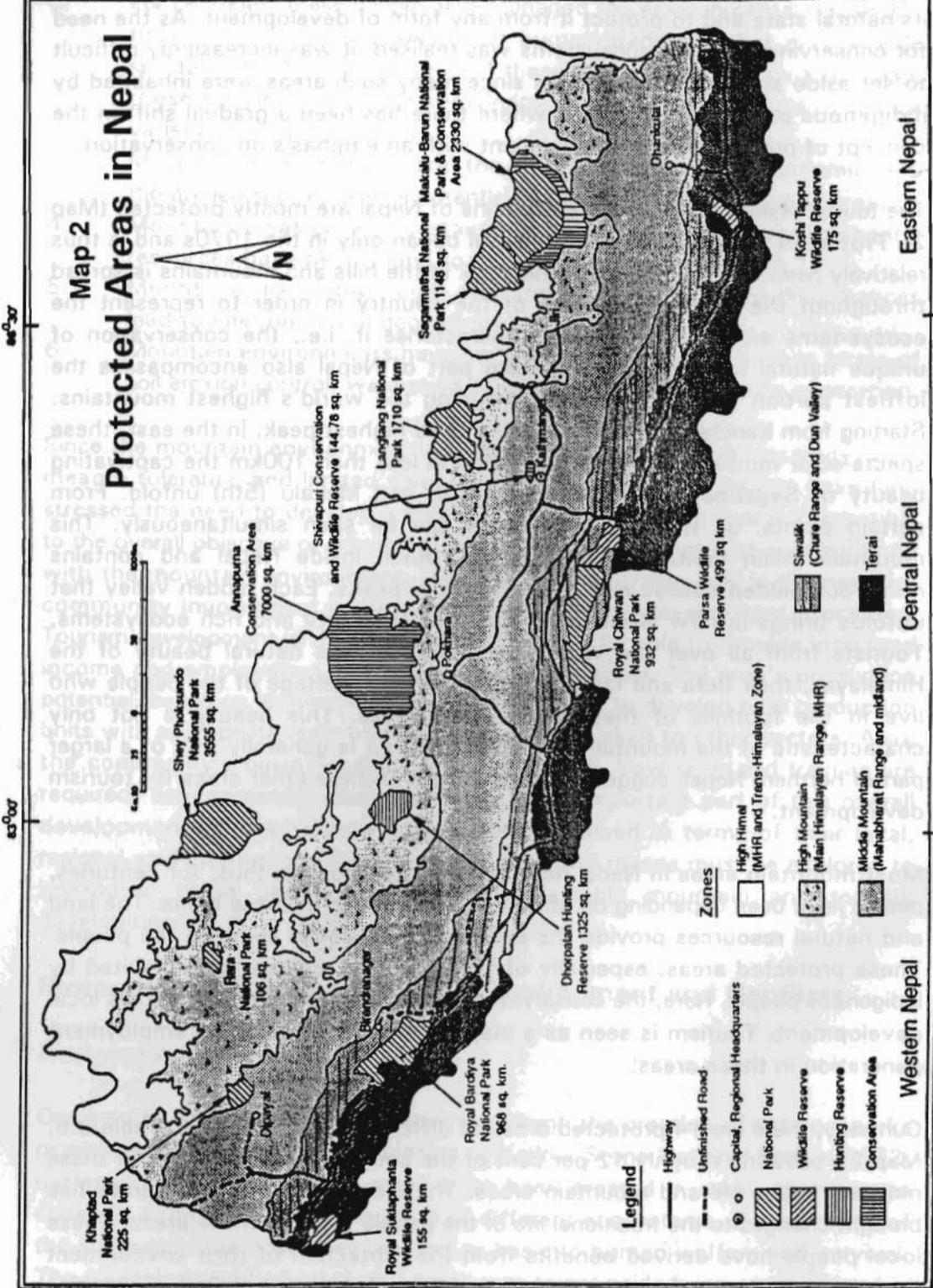
One way to conserve the environment is through the creation of national parks or protected areas. Since the creation of Yellow Stone National Park in 1872, national parks or protected areas have been created in many countries to conserve or protect a wide spectrum of different ecosystems. Conservation of the ecosystem has now been realised as basic to human welfare and survival. The original concept of protected areas was to set aside huge areas of land in

its natural state and to protect it from any form of development. As the need for conserving different ecosystems was realised, it was increasingly difficult to set aside such wilderness areas since many such areas were inhabited by indigenous people - as in Nepal, where there has been a gradual shift in the concept of protected area management with an emphasis on conservation.

The tourist-visited areas in the mountains of Nepal are mostly protected (Map 2). Protected area management in Nepal began only in the 1970s and is thus relatively new. The protected area network in the hills and mountains is spread throughout the east to the west of the country in order to represent the ecosystems and biodiversity that characterise it, i.e., the conservation of unique natural systems. The northern part of Nepal also encompasses the loftiest portion of the Himalayas, including the world's highest mountains. Starting from Kanchenjunga, the world's third highest peak, in the east, these spectacular mountains extend west, and in less than 100km the captivating beauty of Sagarmatha (1st), Lhotse (4th), and Makalu (5th) unfold. From certain points, all these world towers can be seen simultaneously. This mountain chain continues west some 700km inside Nepal and contains numerous hidden valleys and towering snow peaks. Each hidden valley that unfolds brings in new wonders of spectacular beauty and rich ecosystems. Tourists from all over the world are drawn by this natural beauty of the Himalayas, their flora and fauna, and the cultural heritage of the people who live in the foothills of these mighty Himalayas. This beauty is not only characteristic of the mountain protected area but is generally true of a larger part of northern Nepal, suggesting the potential of these other areas for tourism development.

Most mountain areas in Nepal have soils of poor quality; thus, for centuries, people have been depending on other resources found in these areas. The land and natural resources provide the basis for subsistence living to the people. These protected areas, especially of the mountain regions, are inhabited by indigenous people. Here, the conservation of the environment also entails local development. Tourism is seen as a major source of income and employment generation in these areas.

Currently, there are 14 protected areas of different status in Nepal (Table 3.6, Map 2), covering roughly 12 per cent of the country's surface area. Of these nine are in the hill and mountain areas. The creation of protected areas has brought changes to the traditional life of the people living in these areas. These local people have derived benefits from the protection of their environment though, at the same time, conflicts have also arisen between Park authorities



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and tourism (Shrestha et al. 1990; Sherpa et al. 1986; Stevens and Sherpa 1993; Yonzon 1993). In Nepal's case, protected area management is carried out by the Department of National Parks and Wildlife Conservation (DNPWC).<sup>1</sup>

### *Khaptad National Park<sup>2</sup>*

Gazetted in 1985, this park protects the unique ecosystem of the western mid-mountain ecosystem and represents religious significance. Because the area is sparsely populated, major conflicts between people and park have not arisen. Conflicts in seasonal grazing are a major problem. A buffer zone concept has been suggested to lighten this pressure. Tourism, virtually non-existent now, has potential for development.

### *Langtang National Park*

This was the first national park to be gazetted in the mountain region in 1976. This park lies on the crossroads of the more humid eastern Himalayas and the drier west Himalayan region. The flora and fauna are thus mixed. The representative value of this park is at higher elevations. There are a number of endangered and rare biological species protected in the park. Currently, it is the third largest park in the mountains that attracts tourists. It also has religious significance because of the Gosaikunda lake. There are opportunities to conduct biological research at higher altitudes. The cultures of the Tibetan and the Tamang people are pronounced among park residents. Conflicts related to access to resources by local people living inside and outside the park emerged when the park was created and continues to the present day (Kharel 1993). There are limited rights and concessions to local people. Poaching of wildlife species is also frequently reported (Yonzon 1993).

### *Lake Rara National Park*

This park was gazetted in 1976. It protects the mid-western ecosystem and provides beautiful scenic beauty around Lake Rara. It protects endangered species, e.g., the snow leopard and the musk deer. Conservation education to local people and a revised management plan have been recommended. Currently, tourism is insignificant in this national park.

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1 See Kharel (1993) for details on the evolution of the DNPWC.

2 Only national parks will be briefly discussed here since Shivapuri and Dhorpatan Hunting Reserve have been created with specific purposes. Furthermore, there is little information on these protected areas. Also, the national parks in the *terai* will not be discussed.

### *Shey Phoksumdo National Park*

This park protects the unique ecosystem of a Trans-Himalayan region. It is the habitat of threatened species, e.g., the snow leopard, musk deer, wolf, and wild dog. Natural assets of the park are the turquoise Lake Phoksumdo, crystal clear mountains, and the Shey Gumpa. Tourism is insignificant.

### *Sagarmatha National Park*

This park is famous for Mt. Sagarmatha, the world's highest peak, and a number of other peaks above 8,000m. It is the home of the *Sherpa* people. The entire park is situated at an altitude of over 3,330m. The Tengpoche Monastery and a number of other monasteries give the park a high cultural value. In the park are found the habitats of endangered species, e.g., the musk deer and the Himalayan bear (see Box 2).

### *Annapurna Conservation Area*

This area is a conservation area where a "people participatory approach" is being carried out to develop the area and tourism (see Box 1). The development focusses on a wide variety of things. Nature conservation and tourism development are simultaneously addressed and the efforts so far are considered to be successful. It contains the famous Mt. Machhapuchare and the Annapurna Range. The area supports some rare species such as the snow leopard, musk deer, red panda, and blue sheep. Over a hundred variety of orchids and many endemic medicinal plants are also found in this area.

### *Makalu-Barun National Park and Conservation Area*

This park is a contiguous region of the Sagarmatha National Park. Many species of wildlife found in the SNP have winter habitats in the Makalu region (see Box 3). In addition, protecting this area protects about 25 per cent of the Arun river watershed. The area has one of the richest diversity of flora and fauna found in Nepal. The conservation area is inhabited by *Rai*, *Sherpa*, and *Bhotia* people who have rich cultural heritages. The conservation area is a buffer zone where development activities will be carried out. Tourism is a small activity in the area. The park also contains the world's fifth highest mountain, Mt. Makalu (Shrestha et al. 1990).<sup>3</sup>

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3 If the proposed Arun III hydroelectricity project is implemented, a larger value of the protection of this area will most likely be realised.

The large number of national parks and protected areas conserve an enormous wealth of environmental resources, some of which are not found in any other part of the world. The creation of protected areas has generally meant changes in traditional land use practices (timber, firewood, and other forest products, harvest, grazing). There have been changes in cultivation practices, in some cases through policy initiatives, in others through private initiatives. Changes have occurred in the traditional lifestyles of the local people and, to some extent, in traditional hunting. Based on the literature, the main areas of conflict between local people and park authorities can be summarised as follow: (Uprety 1985; Kharel 1993; Yonzon 1993; Stevens et al. 1993a and 1993b; Sherpa 1988):

- 1) denial of access to resources for local people (these resources include firewood, leaf litter, seasonal grazing, timber, and other minor forest products);
- 2) crop and livestock depredation by protected area's wildlife; and
- 3) the absence of local people's participation in the management of the area.

Firewood collection has been regulated by park authorities. In many protected areas, households are becoming increasingly aware of the growing scarcity of forest and other resources. They have responded to this scarcity by afforestation programmes on public and private lands and community management of forests. Collection of leaf litter is not allowed. In some parks, grass cutting is allowed on a seasonal basis. Livestock grazing has been curtailed and only people living inside the park are allowed seasonal grazing rights. Timber for house construction is also permitted and regulated. Wildlife hunting is strictly controlled, although poaching continues to be a problem in most of the protected areas.

Crop and livestock depredation by wildlife is an important source of the conflicts between local people and park staff. Wildlife depredation is a common phenomenon and no mechanism exists to compensate local people for losses incurred. Although various recommendations have been made to minimise depredation, no mechanisms have yet been tried out by the park authority (Kharel 1993). In general, the conflict in land use and the associated nature of cost and benefits associated with the different uses can be argued as the chief source of conflicts. In other words, the divergence in the public and private interest is the source of conflict (McNeely 1988; Winpenny 1991).

### Box 1: Annapurna Conservation Area (ACAP)

The Annapurna Conservation Area Project started in 1986 with the objective of developing an innovative approach to prevent environmental degradation by the creation of a sustainable balance between the immediate survival need of local people, tourism management, and nature conservation. Currently, in its first phase, it covers an area of about 800sq. km., which will be extended to cover a much larger area over the years. ACAP takes a grassroots' approach, by which the conservation authority works closely with the local people in the management of mountain environmental resources, including tourism. A multiple land use and zoning practice, consisting of a protected core area, buffer zone (protected forests and seasonal grazing area), and an intensive use area (settlements, agriculture, tourism, and other heavily impacted areas) provide the basis for combining environmental conservation with community development. ACAP started a pilot programme in Ghandruk, a highly impacted area, on the way to the Annapurna Sanctuary. The project helps to improve the quality of life of the local people by empowering them with appropriate skills, knowledge, and technical and financial assistance. The population of the area is about 40,000, consisting of a variety of ethnic groups, most of which are *Gurung*, *Magar*, and *Thakali*. Further north are the *Bhotia* and *Sherpa*. The chief occupation of most people is subsistence agriculture and animal husbandry. This area is also famous as a former recruitment centre for Gurkha soldiers. The Annapurna area is surrounded by some of the world's highest peaks and has the world's deepest gorge - the Kali Gandaki Gorge.

Traditional rights over grazing, forests, and local institutions are respected and strengthened. ACAP relies heavily on local participation and local management of natural resources, including that of managing tourism impacts. Conservation and the local development of the ACAP area are funded partially by the entry fees collected from tourism. The King Mahendra Trust for Nature Conservation, the managing NGO of the ACAP area, also procures funding from international bodies to support other development plans in the area. In sum, a broader concept of local community and tourism development operates within the framework of mountain environmental management.

Some of the ACAP programme activities include forest conservation, alternative energy, conservation education, tourist awareness programmes, community development projects, community management committees, and research and training. Four new programmes, e.g., women's development, integrated agriculture, eco-tourism, and agroforestry, have also been added during phase one. In most project activities, ACAP and the local people share the costs on a 50 per cent basis.

It is increasingly acknowledged that, without the participation of local people, conservation may be a difficult goal to realise. Experiences in the ACAP and Sagarmatha (Box 2) area have shown that. The primary difficulty arises from reconciling local development priorities and the goal of protected area management. The process of involving local people has not been easy. It took a long time for ACAP to gain their trust. Continuous interaction with the local people and periodic reviews of the plans have been necessary to accommodate changing aspirations, goals, local values, and conservation objectives. On the whole, the experience of ACAP suggests that local development and conservation can coexist. With active support from ACAP, tourism as an alternative source of income was promoted through the provision of a mobile lodge owners' training programme. Fuel efficient devices were popularised to conserve scarce forest products and mini-hydros were installed at places in collaboration with local people.

Most of the 60 Village Development Committees under ACAP have their own forest committees which decide on the judicious use of forest products for the village people. Renamed the Conservation and Development committees, some of these committees are very active in mobilising the support of the local people. In recognition of the forest conservation effort of Ghandruk VDC, the Conservation and Development Committee was awarded the J. Paul Getty Award in 1992 and the Global 500 Environment Award in 1994.

ACAP intends to hand over the project to the local people. The experience indicates that by giving local people appropriate incentives to manage the resource base within traditional practices, and providing conservation education and financial and technical support, local development and conservation become mutually reinforcing.

## Box 2: Sagarmatha Pollution Control Project

Khumbu is spread over an area of roughly 1,000sq.km. and contains the world's highest mountain -Mt. Everest (8,884m). The Dingboche and Pangboche villages lie around 4,000masl. The region is entirely inhabited by the *Sherpa* who are believed to have migrated from Tibet in the 16th century. Over recent years, the population of Khumbu is believed to have declined - due to migration and decline in fertility. The sex ratio is in favour of females as adult males generally migrate.

Prior to 1960, there was no modern schooling available in the Khumbu region. There are now more than 20 schools supported by the Himalaya Trust, established by Sir Edmund Hillary. Overall, literacy has increased.

The Himalaya Trust also runs a hospital in Kunde village in the Khumbu region. Before its establishment, modern health services were not available in the region. This hospital also maintains a trekkers' aid post at Pheriche during the trekking season.

Khumbu society is based on agriculture, grazing, and trade, and, more recently, on tourism. Only one agricultural season is possible due to the Khumbu's cold climatic conditions. Buckwheat, barley, and potato are the main crops cultivated. Farming activities begin in April-May and harvesting is over by early October. Women continue to attend to agriculture, while many adult males find employment in the tourism trade. Hired labourers from the south, mostly *Magar*, prepare the fields for plantation and work during harvesting. Over the years, agriculture has almost become secondary to tourism in some parts of the Khumbu. Traditional farming practices have virtually disappeared at higher altitudes. Vegetable cultivation in kitchen gardens has increased over the years.

Animal husbandry, which used to be a major occupation of the region, too, has been replaced by tourism. The difficulty of obtaining herdsmen is a primary reason. Many prefer to raise pack animals that can be hired for trekking and mountaineering than to breed other types of livestock because of the relatively higher cash returns pack animals fetch.

Ever since the first summit of Mt. Everest by Sir Edmund Hillary and Tenzing Norgay, this area has become one of the most popular of all mountain areas in the world. Each year, thousands of tourists flock to the region. One adverse effect is the accumulation of garbage, a problem that has come to international attention. The World Wildlife Fund (WWF) and MTCA, along with local participation, have launched a programme to curb pollution and garbage in this area.

Originally started in 1991 with support from WWF, this project has received funding from the MTCA since the fiscal year 1993/94. A Sagarmatha Pollution Control Committee has been formed to carry out the following activities in the region:

- garbage management
- clean up of Sagarmatha Base Camp (has been launched successfully)
- conservation education
- reforestation
- sanitation
- tourist facilities (trail, bridge, radio, and telephone installation)
- community services (maintenance of infrastructure, community water supply, hydroelectricity schemes, etc)
- cultural conservation (cultural studies, monuments, *gompa*, etc)

Two fuel-efficient incinerators have been set up at Lukla and Namche. Rubbish pits and public toilets have been set up at various places as have visitor information service centres at strategic locations. The government has learned from these innovative projects. It is now realised that, without involving the community, the conservation and sustainable development of such unique, beautiful, and fragile areas are impossible. Also, revenue raised from park fees is being shared by the government and the local committees. The need for involving an NGO/INGO as a link between the centre and local people to educate and direct people's participation in the cause of development and conservation has now been realised. People in most of the mountain areas have a low education level, low awareness, and low morale. So, only suitable NGOs can closely work to boost the morale of these people and to get their cooperation.

### Box 3: Makalu Barun National Park and Conservation Area (MBNP/CA)

Officially gazetted in 1991, the Makalu-Barun National Park and Conservation Area project covers an area of 2,330sq.km. within the Solukhumbu and Sankhuwasabha districts of Nepal. This newly created Makalu-Barun National and Conservation Area adjoins the Sagarmatha National Park on the latter's eastern border. The two areas are contiguous. While the SNP area on average lies almost over 3,000masl, the MBNP/CA has a variety of climatic conditions that range from temperate to alpine. Thus, the MBNP/CA provides life support to a variety of mammals from the SNP during the harsh winter season.

A total of 32,000 people from a variety of ethnic groups reside in the conservation area. They depend heavily on subsistence agriculture and pastoralism (over 80%), supplemented by use of forest products, seasonal trade, and migration.

The *Rai* are predominant in the area, but there are sizeable populations of *Sherpa* and *Bhotia* in the Conservation area. The average household size is 5.71 members, and the female population exceeds that of males. The literacy rate in the area is reportedly around the national average, but not all reported as enrolled in school actually attend school on a regular basis. Thus, the overall illiteracy rate in the area is about 73 per cent, with female illiteracy being as high as 89 per cent.

A majority (98%) of the households operate *bari*<sup>4</sup> and only about 45 per cent own *khet*<sup>5</sup>. Over 84 per cent of the farm households own less than 1.02ha of land in size. A very small percentage of the households use high-yielding seeds (4%) and chemical fertilisers (8%). Given the harsh climatic conditions and poor soil quality, a large majority of the households cannot produce sufficient food to meet their own annual needs. The food shortage problem is most severe among the *Bhotia* households (93%), followed by the *Rai* (73%) and *Sherpa* (58%).

Sheep and pigs dominate the livestock composition of households. All grazing animals depend heavily on public lands and pastures in the area. Stall feeding practices are rarely observed. Livestock productivity is also believed to be low and most of the products are consumed domestically.

The MBNP/CA has only begun implementation, and, therefore, the effectiveness of its management plan in fulfilling conservation and local development goals is yet to be seen. It shares broad similarities in its management plan to the ACAP's. One major difference between the two is that one implemented by an NGO (KMTNC), while the MBNP/CA's is implemented by the Department of National Parks and Wildlife Conservation (DNPWC), which manages other national parks in Nepal. The role of tourism in the MBNP/CA is not likely to be as important as in the ACAP area, although the potential to increase it beyond current levels is enormous (Shrestha et al. 1990; Byers and Banskota 1993).

4 *bari* - rainfed agricultural land

5 *khet* - irrigated agricultural land

With the degradation of resources (see next chapter on tourism impacts on these areas) occurring rapidly, tourism development alone cannot be seen as a remedy for mountain development. Harnessing and nurturing renewable environmental resources will provide the key to mountain tourism development. The environmental resources are currently being used to attract tourists, but these renewable resources are also being degraded. People are forced out of their traditional mountain homes, their culture and traditional means of livelihood are threatened. Ancient systems of conservation are abandoned, leading to greater loss or deterioration of the environmental resources. Biodiversity and endemic species are increasingly threatened. The aesthetic and recreational values are diminished, too. The drying up of watersheds, soil erosion habitat loss, and other negative downstream effects increase (Byers and Banskota 1993; Robinson 1993; Stevens and Sherpa 1993; Yonzon 1993; Wells 1993).

There is growing concern that Nepal's protected areas are inadequately managed and that the financial resources for their management are also inadequate. Currently, however, the Department of National Parks and Wildlife Conservation's (DNPWC) budget does not benefit from the fees charged. Other fees in the form of trekking permit and mountaineering royalties do not go to the DNPWC, though most of the mountaineering and trekking are conducted inside these protected areas. The concession fees raised by the DNPWC are almost a negligible amount in the mountain protected areas. The direct costs of park protection and management exceed the revenues collected considerably. Also, a large portion (over  $\frac{2}{3}$ rds) of the annual budget for most protected areas is actually spent on administration and army protection. Through appropriate management, economic benefits, including those from tourism, can be generated to provide the right incentives for their effective management (Lawrence 1992; Romero 1992; Cacha, 1992).

Much of the attention has gone to evaluate the impacts from tourist expenditure rather than to evaluate the economic value of protected areas. This oversight has resulted in a greater retention of tourism benefits at the source where tourism originates than at the point where tourism is actually consumed (Wells 1993). From the public point of view, the creation of national parks has been a major success, with the private sector having a valid role in the development and management of activities in such areas (Fowkes and Fowkes 1992). Currently, though the benefits from these areas have not been maximised, their very creation has helped conserve a variety of ecosystems, flora and fauna, and religious sites. If these protected areas had not been created, it is possible many unique natural features would have been degraded or destroyed.

There are many reasons why greater economic benefits have not been realised (Kharel 1993; Lawrence 1992). Some of these areas are in one of the most remote regions of the world. Promoting tourism requires investments, and, without proper management, promotion can lead to destruction rather than benefits (Sneed 1992). Now that Nepal has over 20 years' experience in protected area management, it is time to look closer at maximising benefits, based on scientific assessments.

New methods have evolved in the management of protected areas (Sneed 1992; Sherpa et al. 1986; Shrestha et al. 1990). The Annapurna Conservation Area is managed by a national NGO, the King Mahendra Trust for Nature Conservation (KMTNC). The newly-created Makalu-Barun National Park and Conservation Area management plan, drafted by a task force after extensive study of the area and consultation with the local people, is being implemented by the DNPWC. It has been increasingly realised that protected areas should contain a buffer zone in order to shield the core area, on the one hand, and to promote resource conservation in the buffer zone to meet the local people's needs on the other. Also, the need to involve the local people in the management of protected areas is acknowledged as essential (Shrestha et al. 1990).

### **Tourism Revenue Generation from the Mountain Environmental Resource**

Mountain environmental resources can be assumed to generate a substantial amount of revenue. This revenue is generated in the form of the expenditure tourists make to visit the mountain areas of Nepal. However, not all this revenue comes to Nepal. In the first place, a considerable amount of the expenditure made by tourists is spent in international air travel, a large part of which does not accrue to Nepal. Also, local expenses while making travel arrangements are incurred in the country from which the tourists originate. These expenditures cannot be captured by Nepal, although there is scope to maximise income from these sources. Setting aside these above sources of income, there is considerable scope to maximise and retain the expenditure incurred by tourists, once they enter Nepal, by minimising import leakages.

Mountain environmental resources generate income in various forms that accrue to Nepal directly. First, tourists desiring to visit Nepal for trekking, mountaineering, or other purposes in the mountains must acquire a visa to enter Nepal. Once the tourists arrive in Kathmandu, at least a day has to be

spent in the city before they begin their journey to the mountain regions. During their stay in Kathmandu, tourists spend on accommodation, food, transport, and on other purchases. The magnitude of such expenses has to be assessed, and the percentage retained in Nepal and that which leaves Nepal in the form of leakages have to be evaluated. Whatever, the percentage retained in Nepal is attributable to the mountain environmental resources where tourists whose purpose is to visit the mountain areas are concerned.

Travel to reach the mountain destination may be by air transport or other forms, which also incur expenditure. Other expenses during the journey involve expenses on local transport, airport tax, etc. Additionally, all tourists visiting mountain areas, irrespective of their purpose, are required by law to obtain a trekking permit or a park or conservation area permit, all of which incur fees. In some newly-opened routes, the trekking permit fee varies by area as well as duration of stay. Mountaineers pay royalties, which vary depending on the peak they want to climb. Other tourists travel to Nepal for the purpose of rafting, which also requires a payment of fees. Often, tourists visiting Nepal who do not visit the mountain areas opt for the 'mountain flight,' another source of revenue generated by mountain environmental resources. Yet another contribution of these resources comes from the sale of books, postcards, etc on Nepal's mountains.

Investments made by local people in the mountain areas to cater to tourists is virtually unknown. In the absence of such parameters, it is impossible to derive reliable estimates of the income generated by the mountain environmental resources. This information is important in deriving parameters for policies related to a variety of issues in terms of policy weaknesses, inadequacies, market failures, distribution of income, as well as in assessing the value of mountain resources and many more (see Chapter 6). Unfortunately, there is no agency, including the Ministry of Tourism or the Department in Nepal, that appears to have a time series' record on the various information related to fees, investments, etc in the mountain areas.<sup>6</sup> Finally, once in the mountains, porters are hired and local accommodation and food outlets are used, generating further income.

Although the lack of adequate information on various forms of user charges related to mountain tourism activities by destination and composition of tourist

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6 . A considerable amount of time was spent in digging out the basic parameters but no agency seems to have any record. Many indicated that the records were misplaced or lost. One would expect the Ministry for Tourism and Civil Aviation to have such records, but, unfortunately, this agency does not.

expenditure does not enable precise computation of revenue generated from mountain tourism, an attempt has been made to provide estimates of such revenue based on available information and assumptions. Some simplifying assumptions made are as follows.

1. The annual number of tourists visiting mountain areas by destination has been desegregated into group and individual trekkers, using the weight factors reported in Table 3.4. Such disaggregation is necessary in view of the differential user's charge and impacts associated with these two types of tourists. Of the total mountain tourists, 44 per cent are assumed to be group trekkers, the rest individual trekkers.
2. Support staff hired by both group and individual trekkers (porters, *Sherpa*, etc) generate income in the form of wages in mountain areas. In order to estimate this income, the average number of support staff per trekker is assumed to be four per group tourist and 1.5 for an individual trekker, with the duration of employment being assumed to be two weeks on average for both categories. The time series' data on wage rates for different types of support staff reported in CEDA (1988) have been used to derive the average growth rate in the daily wage rates of the different types of support staff. The average weighted wage rate was then derived using the information reported in Table 4.14. Of the total support staff, 72 per cent are assumed to be porters, the rest fall under other categories.
3. To estimate tourist expenses on food and lodging, individual trekkers are assumed to spend a flat US \$10 per day, based on Banskota and Upadhyay (Table 17, 1989). There is no such information available for group trekkers, although group trekkers also incur expenditure on fuelwood, vegetables, eggs, meat, etc in local areas. A flat rate of US\$ 5 per day is assumed. The US\$ values are converted to Nepalese currency, using the exchange rate in mid July reported by NRB.
4. Royalties and fees for mountaineering, trekking peaks, trekking, and park and conservation area entrance are the various forms of user charges levied on the consumption of mountain resources. The trekking peak fee and the number of permits issued were collected from Nepal Mountaineering Association. The rates for trekking peak have remained constant since 1981 at US\$ 300 per climber.
5. Trekking permit fees vary with the length of stay and have not been accounted for because the length of stay in any area is not reported. All trekkers are assumed to trek for 14 days, which is a conservative estimate.

The revenue generated by mountain environmental resources has been grouped into wages earned by porters; expenditure on food and accommodation; mountaineering teams' expenditures and royalties paid; and fees from trekking peaks, trekking, and park and conservation area entrance. The results are presented in Table 3.7.

The total revenue generated from mountain tourism in 1992 is about Rs 640.662 million compared to 73.911 million in 1980, representing an average annual growth rate of 22 per cent. In US\$, the earnings in 1980 were about 6.2 million dollars; in 1992 they had increased to about US\$ 15 million.

Of the total revenue generated, wages paid to porters and other support staff constituted about 23 per cent on average over the entire period. It is difficult to say what percentage of the income earned in the form of wages is actually retained in the local area. It is unlikely that all of it is retained in the local area as a sizeable number of porters hired during treks belong to other areas (Banskota and Upadhyay 1989).

Food and accommodation expenditure appears to account for nearly 50 per cent of the total mountain revenue. Such expenditure is also subject to some leakage as different lodges serve food that requires imported items for preparation. There is scope for increasing the retention of income in local areas if local production units can be developed and linked with tourism.

Mountaineering expenditure is a category that is not defined. It is likely to include substantial expenditure on imported food purchased in Kathmandu and some locally. It also includes payments to porters and other support staff, which is not accounted for under the wages' category discussed above. Mountaineering royalties account for less than two per cent on average, although the hike in royalties in 1992 has increased its share to about five per cent. The share from the various permit fees has been decreasing steadily over the years and is less than the share contributed by trekking peak fees.

Also reported in Table 3.7 is the per trekker expenditure per day in local and US currencies. Although there appears to be a growth (nominal in terms of the local currency), the per trekker, per day expenditure in US\$ has remained virtually constant. The same trend was also observed in the case of tourists visiting Nepal in general, as discussed in Chapter 2.

As indicated earlier, the estimates made in Table 3.7 are lower than they should be for reasons pointed out above. It is difficult, however, to quantify the

margin underestimated. To fill this gap, information from the different sources identified above will have to be collected. Despite this underestimate, it is nevertheless fairly clear that mountain environmental resources generate a substantial amount of income and there is scope to increase this income. The various user fees charged are on an *ad hoc* basis, since no proper study has been conducted to price these user fees based, for example, on tourists' willingness to pay. Willingness to pay is an expression of preference that reflects how much tourists are willing to pay over and above the actual cash-cost of consumption of the environmental resources. To obtain total economic benefit, the willingness to pay is the appropriate concept to use. In the context of Nepal, so far no study has been conducted to estimate the willingness to pay. Appropriate user fees could be stipulated on the basis of willingness to pay.

## Issues

### *Role of Tourism in the Context of Mountain Development*

The above discussion suggests that despite the growing and important role played by tourism in some mountain areas of Nepal, there is yet no clearly defined role of tourism in the context of mountain development. Opening new areas and building some rudimentary infrastructures have been the sole basis for tourism and mountain development. As a result, only small pockets have benefitted. In newly-opened areas, where only group tourists are encouraged, local people are finding it difficult to derive benefits from tourism. Group tourists are generally self sufficient in food and other necessities and depend little on local resources and facilities.

### *Institutional Mechanism and Participatory Approach*

The involvement of local people in areas where tourism occurs has been minimum. In the ACAP area, and in the MBNPCA, this has changed. But the lack of an evaluation of the new approach in the ACAP area makes it difficult to conclude how well the new process is contributing to mountain and tourism development. In the MBNPCA, the process has only begun, so it is too early to judge. In the Sagarmatha area, the pollution control programme has been initiated, but here too, it is too early to judge its merits. There is also no institutional mechanism at the national level that addresses mountain tourism, which will be seen in Chapter 5.

*Lack of Complementary Investment*

There has been no concerted effort by the government to view the mountain areas as potentially rich in a variety of unique natural resources. The value of these resources needs to be identified and their potential role in mountain development needs to be assessed. Furthermore, the role of tourism in mountain development needs to be clearly identified. This lack of perspective in the case of Nepal appears to have led to a demand-induced tourism growth pattern that has not resulted in a sustainable basis for mountain tourism.

The lack of vision regarding mountain environmental resources and their role in mountain and tourism development needs to be understood. The need for conservation will be easier to appreciate if the environmental resources of the mountain areas are clearly defined. A mountain and tourism development plan can then be initiated that has the active participation of local people. Complementary investment packages can be identified to reinforce mountain as well as tourism development.

Table 3.4: Mountain Tourism By Destination (1980-1992)

Year	INP	INT	ACAP	Other	Total	Share
1980	8000	4100	1400	800	14300	22.8%
1981	8000	4400	1700	800	14900	24.4%
1982	8000	4500	1800	800	15100	24.9%
1983	8000	4600	1900	800	15300	25.4%
1984	8000	4700	2000	800	15500	25.9%
1985	8000	4800	2100	800	15700	26.4%
1986	8000	4900	2200	800	15900	26.9%
1987	8000	5000	2300	800	16100	27.4%
1988	8000	5100	2400	800	16300	27.9%
1989	8000	5200	2500	800	16500	28.4%
1990	8000	5300	2600	800	16700	28.9%
1991	8000	5400	2700	800	16900	29.4%
1992	8000	5500	2800	800	17100	29.9%

**Table 3.1: Natural Resource Tourism: Numbers and Growth Rates (1987)**

Type of Activity	Number of Tourists	Growth Rate per Annum
Mid-altitude trekking (up to 6,000masl)	47,275	11%
High-altitude mountaineering	796	1.1%
Rafting	3,612	320%
Wildlife tourism	25,844	rapid
Professional hunting	12	static
Religious tourism	30-60,000	?

Source: ERL 1989, Annex C Table 1.1.2(a)

**Table 3.2: Mountain Tourism By Destination (1980-1992)**

Year	SNP	LNP	ACAP	Others	Total	Share	Total Arrivals
1980	5836	4113	14332	3179	27460	22.47	122205
1981	5804	4488	17053	215	27560	24.46	112694
1982	6240	4535	19702	1855	32332	26.67	121247
1983	6732	4030	21119	417	32298	24.98	129303
1984	7724	4792	25422	3268	41206	34.94	117917
1985	8347	4610	18960	813	32730	25.75	127109
1986	9900	5250	33620	805	49575	29.49	168136
1987	8998	6107	30914	1256	47275	25.00	189116
1988	11366	8423	37902	3582	61273	31.60	193885
1989	11836	8563	36484	3975	60858	30.95	196661
1990	11314	7826	36361	6591	62092	31.82	195121
1991	11862	9603	39107	5198	65770	32.80	200489
1992	12325	9457	42553	7104	71439	31.36	227779

*The Makalu area has been opened for many years, but, prior to 1992, trekking permits issued for the Sagarmatha region included the Makalu region as well. The Dolpa and Kanchenjunga regions have been recently opened for group tourists only. The Manaslu region has been open for group tourists since 1993. In the Kanchenjunga region, visitor numbers since 1988, when the area was opened, are as follow until 1992: 87, 590, 620, 502, and 436. The Dolpa region was opened in 1990; the number of visitors to this area are as follows: 585, 698, and 698 in 1992.*

Source: Makalu region trekkers from Banskota and Upadhyay, 1991b; others from the Department of Tourism, 1992, and Jagat Police Post (Manaslu area), 1994

**Table 3.3: Percentage Distribution of Trekkers by Region**

Year	SNP	LNP	ACAP	Others	Total
1980	21.25	14.98	52.19	11.58	100
1981	21.06	16.28	61.88	0.78	100
1982	19.30	14.03	60.94	5.74	100
1983	20.84	12.48	65.39	1.29	100
1984	18.74	11.63	61.69	7.93	100
1985	25.50	14.08	57.93	2.48	100
1986	19.97	10.59	67.82	1.62	100
1987	19.03	12.92	65.39	2.66	100
1988	18.55	13.75	61.86	5.85	100
1989	19.45	14.07	59.95	6.53	100
1990	18.22	12.60	58.56	10.61	100
1991	18.04	14.60	59.46	7.90	100
1992	17.25	13.24	59.57	9.94	100

Source: Same as Table 3.2

**Table 3.4: Percentage Distribution of Group and Individual Trekkers Visiting Different Areas**

Percentage Distribution		Area	Source
Group	Individual		
65	35	Makalu-Barun Region	Banskota & Upadhyay 1990
61	39	Sagarmatha Region	Banskota & Upadhyay 1990
26	75	Langtang Region	Banskota & Upadhyay 1989
70	30	Sagarmatha Region	Bjonness 1980
52	48	Sagarmatha Region	Central Immigration 1983
70	30	Sagarmatha Region	Baumgartner et al. 1978
68	32	All Nepal	ERL 1989
43	57	All Nepal	Dept. of Tourism, 1992
56	44	Sagarmatha Region	Dept. of Tourism, 1992
33	67	Langtang Region	Dept. of Tourism, 1992
36	64	Annapurna Region	Dept. of Tourism, 1992
100	0	Dolpa trek	Dept. of Tourism, 1992
100	0	Kanchenjunga trek	Dept. of Tourism, 1992

Notes: Region is meant to include broader areas since tourists not only visit the park areas (SNP, LNP, MBNP, ACAP), although their final destination may be these areas, but also other places in the region.

Source: Banskota and Upadhyay 1991b

**Table 3.5: Number of Mountaineering Teams Granted Permission by Season**

Year	Number of Teams			Total
	Spring	Autumn	Winter	
1978	18	24	-	42
1979	21	26	-	48
1980	32	25	7	64
1981	34	40	5	79
1982	32	43	9	84
1983	30	46	12	88
1984	34	49	19	102
1985	26	49	16	91
1986	31	49	14	94
1987	27	58	13	98
1988	30	50	12	92
1989	48	60	17	125
1990	29	80	11	120
1991	37	82	11	130
1992	34	69	10	113
1993	29	58	9	95

Source: Ministry of Tourism, personal contact. Also see Appendix 1

**Table 3.6: Protected Areas in Nepal**

Name	Area (sq.km.)	Location	Gazetted
<b>Hill and Mountain</b>			
Rara National Park	106	High mountains	1976
Shey Phoksundo National Park	3555	High himal	1984
Annapurna Conservation Area <sup>1</sup>	7000	High mountain to high himal	
Langtang National Park	1710	High mountain to high himal	
Sagarmatha National Park	1148	High himal	1976
Makalu-Barun National Park & Conservation Area <sup>2</sup>	2330	High mountain to high himal	1992
Shivapuri Watershed Protected Area <sup>3</sup>	144	Mid mountains	
Dhorpatan Hunting Reserve	1325	High mountain	1987
Kaptad National Park	225	High mountain	
<b>Terai or Inner Terai</b>			
Royal Sukla Fata Wildlife Protected Area	305	Terai	1976
Royal Bardia National Park	968	Terai	1988
Royal Chitwan National Park	932	Terai	1973
Parsa Wildlife Protected Area	499	Terai	1984
Kosi Tappu Wildlife Reserve	175	Terai	1976

Source: Master Plan for the Forestry Sector Project (MPF 1988), main report

1. The Annapurna Conservation Area is managed by the King Mahendra Trust for Nature Conservation (KMNTC) - as an autonomous non-government organisation - under an Act. Recently (1993), the Trust has acquired additional area for management in the Mustang Region.
2. The Makalu-Barun Area contains a conservation area of about 830sq.km. (Shrestha et al. 1991).
3. Although it is proposed that this watershed be managed by the DNPWC, no action has been taken yet.

**Table 3.7: Income Generated By Mountain Environmental Resources**

in '000'

Year	Wages (NRs)	Food (NRs)	Mountaineering Exp (NRs)	Royalty (NRs)	Trek & Park NRs	Peak Fee NRs	Total Mountain Revenue NRs	Expendi- ture Per Trekker per day NRs
1980	16328	35558	15827	843	3295	2121	73972	192
1981	18595	39073	18217	5281	3525	1760	86452	210
1982	22811	47206	17504	1036	3880	2108	94545	209
1983	24836	52414	18575	1150	3876	2521	103372	229
1984	36343	74121	20169	2752	4945	3104	141434	245
1985	31483	64272	17870	3298	3928	3646	124497	272
1986	52485	117298	28854	4063	5949	5602	214251	309
1987	55596	115481	34020	4330	5673	7770	222870	337
1988	81310	159630	42582	5079	7353	8523	304477	355
1989	89938	184416	63976	7222	7303	1389	354244	416
1990	103952	197112	68368	7266	7451	1605	385754	444
1991	120225	309618	156363	8929	7892	13053	616081	669
1992	146663	332838	101355	30351	8573	20883	640662	641

**Shares**

Year	Wages (NRs)	Food (NRs)	Mountaineering Exp (NRs)	Royalty (NRs)	Trek & Peak Park NRs	fee NRs	Total
1980	22.07	48.07	21.40	1.14	4.45	2.87	100.00
1981	21.51	45.20	21.07	6.11	4.08	2.04	100.00
1982	24.13	49.93	18.51	1.10	4.10	2.23	100.00
1983	24.03	50.70	17.97	1.11	3.75	2.44	100.00
1984	25.70	52.41	14.26	1.95	3.50	2.19	100.00
1985	25.29	51.63	14.35	2.65	3.15	2.93	100.00
1986	24.50	54.75	13.47	1.90	2.78	2.61	100.00
1987	24.95	51.82	15.26	1.94	2.55	3.49	100.00
1988	26.70	52.43	13.99	1.67	2.41	2.80	100.00
1989	25.39	52.06	18.06	2.04	2.06	0.39	100.00
1990	26.95	51.10	17.72	1.88	1.93	0.42	100.00
1991	19.51	50.26	25.38	1.45	1.28	2.12	100.00
1992	22.89	51.95	15.82	4.74	1.34	3.26	100.00

## Appendix 1- Mountaineering permits issued by the Ministry of Tourism

Name of Peak	No. of Team	Name of Peak	No. of Team
<b>Spring 1986</b>			
		33. Lhotse	2
1. Annapurna I	3	34. Pumori	3
2. Lhotse	2	35. Ama Dablam	3
3. Annapurna II	2	36. Annapurna + Tilicho	1
4. Makalu	1	37. Gangapurna + Annapurna II	
5. Makalu II	1	38. Chamlang	2
6. Mt. Everest	2	39. Langtang Lirung	2
7. Cho Oyu	3	40. Annapurna IV	1
8. Dhaulagiri I	2	41. Tukucho	1
9. Dhaulagiri II	1	42. Thamserku	1
10. Manaslu	1	43. Himalchuli	2
11. Langtang Lirung	1	44. Kangtega	1
12. Kanchanjungha	1	45. Kumbha Karna	1
13. Gangapurna	1	46. Baraha Shikhar	1
14. Ganesh I	1	47. Tripura Hiunchuli	1
15. Ganesh II	1	48. Kangchung Tse	1
16. Tilicho	1	49. Gauri Shankar	1
17. Annapurna IV + Lamjung	1	50. Annapurna III	1
18. Kangtega + Ama Dablam	1	51. Kirat Chuli	1
19. Nuptse + Kangtega	1	52. Kangchung Tse	1
20. Ama Dablam	1	53. Cho Oyu & Nago Zumbakang	1
21. Langsiri	1	54. Mt. Everest + Lhotse	1
22. Bhrikuti	1	<b>Sub-total</b>	<b>49</b>
23. Gychungkang	1		
<b>Sub-total</b>	<b>31</b>	<b>Winter 1986</b>	
		55. Annapurna I	2
<b>Autumn 1986</b>		56. Dhaulagiri I	2
24. Mt. Everest	2	57. Makalu I	1
25. Cho Oyu	2	58. Mt. Everest	2
26. Makalu + Lhotse	1	59. Manaslu	1
27. Makalu I	3	60. Pumori	2
28. Dhaulagiri I	3	61. Ama Dablam + Choltre	1
29. Annapurna I	3	62. Nuptse	1
30. Kanchanjungha	1	63. Himal Chuli	1
31. Manaslu + Annapurna I	1	64. Lobuche	1
32. Manaslu	1	<b>Sub-total</b>	<b>14</b>

Source: Ministry of Tourism, Nepal, Kathmandu, Nepal, 1986, p. 10.

1. The Annapurna Conservation Area is managed by the King Mahendra Trust for Nature Conservation (KMTNC), an independent non-government organization since an Act of Parliament (1988). The Trust has a large staff and resources for the management in the Annapurna region.
2. The Makalu Barun Area is a conservation area of about 820 sq. km. established in 1981.
3. Although it is proposed to be managed by the DNPWC, as per the Forest Act of 1972.

Name of Peak	No. of Team	Name of Peak	No. of Team
<b>Spring 1993</b>			
1. Ama Dablam	1	22. Kumbha Karna	1
2. Annapurna I	1	23. Khangserkang	1
3. Baruntse	1	24. Kangtega	1
4. Cho Oyu	2	25. Lhotse	2
5. Dhaulagiri I	2	26. Makalu I	4
6. Gangchanpo	3	27. Makalu II	2
7. Kanguru	1	28. Manaslu	4
8. Makalu I	2	29. Manaslu north	1
9. Manaslu	1	30. Pumori	5
10. Mt. Everest	14	31. Mt. Everest	3
<b>Sub-total</b>	<b>29</b>	32. Tilicho	1
		33. Tripura	1
11. Ama Dablam	10	<b>Sub-total</b>	<b>58</b>
12. Annapurna I	3		
13. Annapurna IV	1	<b>Winter 1993</b>	
14. Baruntse	5	34. Ama Dablam	3
15. Bhrikuti	1	35. Cho Oyu	1
16. Cho Oyu	4	36. Cholatse	1
17. Cholatse	1	37. Gun Karpo Ri	1
18. Churen	1	38. Langtang Lirung	1
19. Dhaulagiri I	4	39. Mt. Everest	1
20. Kanjirobo	1	33. Tripura	1
21. Kanchaniungha	1	<b>Sub-total</b>	<b>9</b>

Source: Ministry of Tourism

## Mountain Tourism Impacts

### Introduction

The previous chapter attempted to provide a concept of mountain tourism in the context of environmental resources and mountain development. In this chapter, the various impacts that have resulted from tourism practices in the mountain areas are reported. There have been socioeconomic, cultural, environmental, and other physical impacts of tourism. These impacts can be direct, indirect, positive, or negative, but often they are difficult to compartmentalise in this manner since the impacts may be spread over a wide area and are also not directly attributable to tourism. The analysis relies on numerous secondary sources, namely, studies conducted in different areas of the mountains. The coverage of mountain areas where tourism occurs is also not uniformly distributed, with a maximum number of studies conducted in the Sagarmatha region, in particular, and protected areas in general. Furthermore, these studies vary in their coverage and, often, considerable time lapses between two similar studies. This chapter discusses the various types of impacts and concludes by identifying some major issues related to the mountain environment and mountain tourism.

### Tourism Impacts

The bulk of mountain tourism in Nepal is conducted in protected areas. Major socioeconomic changes among the local people in the protected areas have occurred as a result of tourism. Although local people have made rational attempts to maximise opportunities introduced by tourism, the effects on conservation have not always been positive, as will be discussed below. In the case of Nepal, based on the literature, the impacts can be categorised under different headings. The major impacts associated with tourism in mountain areas can be classified as related to:

- |                   |                   |
|-------------------|-------------------|
| 1) land use,      | 2) litter,        |
| 3) pollution,     | 4) forest,        |
| 5) sociocultural, | 6) income, and    |
| 7) employment,    | 8) other impacts. |

Other impacts of tourism that do not fall under the above categories, and on which literature is very minimal, e.g., on women, will also be briefly discussed in this chapter.

### *Land Use*

In the mountain areas, fertile lands are seldom available. Due to the long and harsh winters, cultivation practices are difficult, generally with one crop season per year and very low yields. The steady growth of tourism in mountain areas has affected agricultural practices and land use. Although the impact of tourism on land use is not well recorded, studies have noted land use changes that may be attributed to tourism. The changes in land use cited refer to changes in the crops cultivated or the cropping pattern; converting land from forestry to agricultural use; conversion of agricultural land to build lodges or tea stalls; and leaving land fallow to rent as camp grounds.

Tourism has brought economic opportunities to remote areas of Nepal where agriculture and animal husbandry were traditionally the main occupations of most households. In areas, such as Sagarmatha National Park, as well as Tatopani and Bagarchap villages in the Annapurna Conservation Area (ACA), agriculture has gradually become secondary to tourism-related activities such as the operation of lodges, working as guides or kitchen boys, or working in tourism-related services in Kathmandu (CEDA 1988; Friend 1983; Haimendorf 1984; Stevens et al. 1993b).

In parts of the Sagarmatha National Park, many households have abandoned their traditional cropping practice of buckwheat and barley to cultivate more potatoes because of tourism. Potatoes find a ready cash market (Upadhyay 1984). Some land use changes are reported in the ACA in the Tatopani region (Friend 1983). Households along the trekking routes have begun cultivating fruit and other high-value crops. Furthermore, Friend (1983) reports that increasing amounts of land around Tatopani have gone out of agricultural production. Also, the productivity of some crops has declined because local people sometimes change planting time to accommodate the tourism season.

In the area immediately adjoining SNP and lying between Jorsalle (the park entrance) and Lukla, another observed land use change is the increased number of households cultivating fruit (apples and peaches). Again, fruit is readily sold to tourists (Upadhyay 1984). At higher elevations within the park area, climatic conditions prohibit fruit farming. In Bagarchap village in the Annapurna Conservation Area, households have shown preference for fruit and vegetable farming

over traditional crops. Chettri et al. (1992) also discuss the impact of tourism on land use in terms of horticultural activities in the Jomsom-Marpha area.

Changes in the cropping pattern are positive so long as they help mountain people earn a relatively better income than from traditional cultivation practices and the changes do not harm the environment. From both angles, the land use changes occurring appear to have made a positive contribution. For example, in the case of Rasuwa district, where Langtang National Park is situated, profit per hectare has been found to be much higher under fruit cultivation than under traditional crops (Table 4.1). Also, from the point of view of long-term sustainability, given the land holdings (less than 0.005 ha per capita, Yonzon 1993) and the poor quality of soil, agricultural development (a traditional practice) cannot be seen as a viable sector for development (Banskota and Sharma 1993b).

In terms of forest land encroachment, no appreciable change has been observed within the SNP area, which may be due to land zoning and strict monitoring by park authorities (Upadhyay 1984). Using a repeat photography approach, Byers (1987) arrived at a similar conclusion.

The construction of new buildings, however, is a visible sign of land use impact in many of these protected areas frequented by tourists (Byers 1987).<sup>1</sup> Aside from park headquarters and other buildings, construction of lodges and tea stalls has occurred extensively in Sagarmatha National Park (SNP), Annapurna Conservation Area (ACA), and Langtang National Park (LNP), both inside and outside the park area. In SNP and LNP, smaller temporary lodges have also been created at higher altitudes to cater to tourism. In the newly created Makalu-Barun National Park and Conservation Area (MBNP/CA), land use changes have occurred along the Makalu-Base Camp trail in the conservation area as well as outside the MBNP/CA area. Currently, these changes are in the form of lodge construction at Tumlingtar, Chichila, and Num, which fall outside the MBNP/CA, and in Sheduwa and Tashigoan, inside the conservation area. In the area adjoining the MBNP/CA, some recent changes can also be attributed to the proposed Arun III hydroelectric project.

Another indirect change in land use in some mountain areas brought about by tourism is the change in livestock composition. In the SNP area, the use of *zopkio* (yak/cow crossbreed) as pack animals has increased because of its high

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1 Similar observations have also been made in the case of the Swiss Alps (Messerli 1987) and India (Shah and Panday 1992; Singh 1992).

cash return (Brower 1984; Upadhyay 1984). As Brower reports, *zopkio* are often used to substitute for porters because of the high cash returns (a *zopkio* carries three to four porter loads). The increased number of these pack animals has put enormous pressure on grazing land. *Zopkio* also trample cultivated *bari*. Since these pack animals are used mainly to carry tourist loads, mountain tourism has brought changes in herd composition, resulting in increasing competition for grazing land as well as for fodder. Members of the *Thakali* ethnic group have also sold out their traditional livestock, preferring to own pack animals in some parts of the ACAP area (Friend 1983). Joiner (1986/87) has argued that buffaloes kept by lodge-owners for the production of milk and milk products have also put additional pressure on surrounding forests for fodder supply.

### *Litter*

The increasing amount of littering taking place at high altitudes in the mountains is a major negative environmental impact that has received a great deal of attention in Nepal. Litter includes non-biodegradable rubbish such as plastics, glass bottles, tins, foil, and batteries, improperly deposited or discarded along trails, at campsites, outside trekking lodges, and at base camps, by tourists, trekking staff, porters, trekking lodge staff, and local residents; inadequately covered toilet pits and scattered toilet paper around campsites and on trails are another problem (Lama and Sherpa 1994).

The dimension of this problem is serious. In one study, it is estimated that an average trekking group of 15 people generate about 15kg of non-biodegradable, non-burnable garbage in 10 trekking days (Lama and Sherpa 1994). Table 4.2 provides an idea of the amount of litter deposited in protected areas as well as in other areas visited by tourists and their support staff and porters. Add to this, the litter and garbage deposited by mountaineers (Table 4.2), which is considerable.

The generation of so much garbage is a serious concern, especially in the mountain environments where decomposition is an extremely slow process. Furthermore, the non-biodegradable, non-burnable garbage - if not transported out - simply piles up year after year and ruins environment, vegetation, livestock, habitats, etc. Add to this, the problem of the environment's assimilative capacity at high altitude. As an example, it takes about 60 years for a juniper to reach a height of 35cm (Bjonness 1980). Recycling problems must undoubtedly take considerable time as well. The problem is serious especially since a great deal of the litter is non-biodegradable or non-burnable.

Other environmental impacts observed are those of unsanitary garbage disposal and littering along trails and campgrounds. The trail to SNP has been called the "Garbage Trail." In the ACAP area, there is such a plethora of signboards advertising soft drinks that the trail is referred to as the "Coke Trail." The Langtang trail has sometimes been called the "Toilet Paper Trail." Although the magnitude of the impact of littering along trails has not been assessed, such labelling suggests the extent of the problem. In the ACAP region, where the King Mahendra Trust for Nature Conservation (KMTNC) and local people have been able to generate an awareness of sanitation and cleanliness among tourists as well as lodge-owners, this problem has not abated. Some information on the Langtang National Park (LNP) area compiled by Banskota and Upadhyay (1989) is presented in (Table 4.3).

### *Pollution*

The pollution of water sources from setting toilets too close to streams and drinking water sources (both lodge latrines and portable trekking toilets tents), use of chemical soaps for bathing, and the washing of dishes and clothes in streams or close to water sources have been reported. Water pollution can also be caused by disposing of human waste directly into rivers and streams - as is customarily done by lodge owners, a common practice also of local people (Lama and Sherpa 1994; Gurung 1990). In one instance in the Barun Valley, declared to be a strict nature reserve, Sherpa cites the incidence of giardia, an intestinal illness caused by consuming water contaminated with human or animal faeces (Lama and Sherpa 1994). Sickness from contaminated water and food was also reported by trekkers in LNP (Banskota and Upadhyay 1989).

The disposal of kitchen waste water into streams and ponds is another source of water pollution. The use of water courses as a means of waste disposal by local people is yet another cause of water pollution (Gurung 1990). In the absence of health and sanitation awareness, facilities, and moral persuasion, this dimension of environmental degradation related to mountain tourism will be difficult to control. Tourists who visit such areas have to be sensitive to the environment. The number of tourists that visit mountain areas is close to 70,000, and it is likely to grow; in the absence of waste and garbage disposal management, this can be a serious problem in mountain environments.

### *Forests*

One of the most widely discussed topics on the mountain environment is forest degradation and deforestation. The demand for firewood by tourism and asso-

ciated tourism activities in the mountain areas has the most significant effect on forests, vegetation, and wildlife. Seasonal demand for firewood in high alpine pastures is another source of firewood demand that disrupts the high altitude vegetation. During three to four months of the year (tourism off-season), cattle are grazed in these high alpine pastures and large quantities of firewood are used to boil milk and process cheese (Lama and Sherpa 1994; Yonzon 1993).

Firewood demand by tourists is believed to be a primary source of forest degradation in the mountains. Recently, HMG restricted the use of firewood by trekkers in most national parks, which are also the main areas for tourism. But in the absence of law enforcement and monitoring and because of the lack of a cheap alternative source of fuel the use of firewood has not stopped.

The different tourists and related groups that demand firewood are as follow:

1. tourists;
2. lodges, hotels, tea houses, and private homes that entertain tourists; and
3. porters that accompany trekkers

Three factors that put pressure on firewood demand are: some areas are visited by tourists who outnumber the local people; the firewood demand is seasonal, lasting from three to five months in a year; and growing seasons in the mountains are extremely short and harsh.

Table 4.4 highlights this situation in the three popular protected areas. In all three areas, the demand for firewood by tourists exceeds that of the local people, even though tourism in these areas is seasonal. The pressure on forests is obvious, as the tourist demand for firewood can be met only by paying a price, which gives local people the incentive to cut trees. In this sense, the forest degradation process can be assumed to have been exacerbated by tourists. The daily firewood requirement of rural households for cooking meals or heating has not been considered here since this demand is not caused by tourism. However, as local people's incomes increase from tourism, their demand for firewood is likely to increase by what may be called the income effect.

The demand for firewood also differs for free independent trekkers (FITs) and group tourists. This difference in consumption arises because group tourists are

self-supporting in food, shelter, and fuel for cooking-as demanded by HMG law-while travelling in protected areas. Travel or trekking agencies that cater to these group tourists must ensure that no firewood is used during the trips. This is also true for mountaineering teams as well. However, the enforcement has not been effective enough to make this policy a overwhelming success (Lama and Sherpa 1994; Banskota and Upadhyay 1990; Gurung 1990). Also, group tourists are accompanied by porters and other support staff who depend heavily on firewood for cooking and for warmth on cold nights. Thus, as the number of tourist groups increase, the demand for firewood by porters and support staff also increases. The same cannot be said about FITs, who generally depend on local outfits (lodges, tea houses, and homes) for food and accommodation. Therefore, the demand for firewood by this group is a derived demand that is reflected in the demand for firewood by lodges, tea houses, and local homes. When the overall consumption of firewood by group tourists is compared with FITs, group tourism consumes a greater amount than FITs (Table 4.5).

Estimates on fuelwood consumed by tourists in the mountain areas vary (Tables 4.5 and 4.6). The estimates presented in Tables 4.5 and 4.6 indicate this variability and also partially the difficulties in estimating firewood consumption by tourists. These estimates vary, depending on the season, place visited, length of stay in a place, and the type of tourism activity carried out.

Individual trekkers depend on local lodges or hotels, tea houses, and homes for food and accommodation. In a study in SNP, 30 per cent of the visitors were individual trekkers, out of which 73 per cent ate in lodges or tea houses (Tables 4.7 and 4.8). Only 18 per cent of the lodges/tea houses/hotels kept kerosene, implying that 82 per cent of the lodges/tea houses/hotels depended on firewood. Also, significant numbers of group trekkers are known to purchase firewood locally, in spite of regulations

The porters that accompany all types of tourists are heavy consumers of firewood. They rely entirely on firewood for cooking and for warmth in colder regions. However, the firewood consumed by porters is reported to be less than that consumed by the '*Sahibs*' on a per capita basis (Bjonness 1980). But when total quantities consumed are compared, firewood consumed by porters is more significant as every tourist is accompanied by approximately two porters (Upadhyay 1984; Bjonness 1980).

It is possible to provide an idea of the magnitude of firewood annually consumed by tourists in the mountain areas using estimates provided by

Gurung (1990) and Banskota and Upadhyay (1991b). Some results are shown in Table 4.9.

The quantity of firewood consumed by tourists is enormous. Even though firewood use by group trekkers and mountaineers are banned inside national parks, the rule has not been strictly followed. Outside protected areas, this rule is most likely not adhered to at all. In the estimates in Table 4.9, the consumption of firewood does not include consumption by local people. The per capita fuelwood and timber demand of local people is estimated to be about 0.588 mt and 0.079 cum/yr, respectively (Master Plan for the Forestry Sector [MPFS] 1987). In protected areas, the consumption of firewood and timber thus adds up significantly. In certain regions, there has been an increase in the traffic of animals carrying loads because of tourists. For example, 65,000 pack animals are reported to pass through the Tatopani area, resulting in overgrazing and loss of vegetative cover (Friend 1983). Also, an estimated one hectare of forest area around Ghorepani disappears annually as a result of catering to tourist demands for fuelwood.

It is not only deforestation that destroys the mountain environment. Another important factor, it should be realised, is that, when firewood or timber is harvested at high rates, the loss in biomass is also significant and can have damaging effects on vegetation and habitats. Lopping of dwarf junipers for fire at base camps by mountaineering teams has been a common phenomenon (Byers and Banskota 1993). The cumulative effect of removing this vegetation on the fragile slopes when coupled with a dense flow of tourists and their entourages can be devastating (Shrestha et al. 1990). Off-trail hiking and firewood collection can impact a much larger area than the immediate vicinity around the trail. This problem is compounded by the fact that tourism in these areas occurs during off-growing seasons, when weather and soil are extremely dry. The collection of plants, such as medicinal herbs, has also posed new problems (Yonzon 1993). In the mountain areas, where the growing season is very short and forest growth rates are extremely slow, the rate at which forest biomass is consumed is alarming.

The foregoing analysis indicates that firewood consumption will continue to grow in mountain areas of Nepal where tourism thrives. An increased population will increase firewood demand further. Since mountain tourism is expected to increase, and since not all tourists carry firewood substitutes, such as kerosene or cooking gas, the pressure on forests in such areas is bound to be compounded. Increased tourists also mean more porters, lodges, and tea

houses, which in turn mean greater demand for firewood-whether directly or indirectly-for cooking and heating.

Another important factor in firewood consumption is the price of firewood. The opportunity cost of firewood to local residents has increased as the time taken to collect firewood has increased compared to past years. This increase in the opportunity cost of time may be assumed to encourage more efficient use of firewood. In rural Nepal, this may not be true. The derived demand for firewood by lodge owners and households who entertain tourists and are willing to pay cash for firewood may have been strong enough to encourage more firewood collection despite increased collection time. Also, the government's effort to introduce new woodburning stoves that use firewood more efficiently may not have gained acceptance by many households, as indicated by Ives and Messerli (1989). Thus, tree replanting for purposes of sale is not likely to be encouraged in such a situation, despite evidence of greater scarcity (as reflected in the increased price of firewood) (Friend 1993; NTDP-Interim Report 1989).

The pattern of firewood consumption may have changed in current years, especially due to the ban on firewood consumption by trekkers. However, FITs continue to depend on local resources for food and accommodation and the demand for firewood by lodges, hotels, tea houses, and private homes cannot be assumed to have decreased.

### *Sociocultural*

The impact of tourism on local cultural traditions and values is difficult to assess. Not only tourists but also local people who travel for education, trade, or other purposes bring in new ideas and behaviour that affect cultural practices. Changes in people's behaviour, dress, lifestyle, family and social structure, and values and expectations; the decline in local support for local traditions and institutions; people's preference for tourist-related jobs over education; pollution of sacred places; and changes in traditional architecture are generally cited as instances of tourism's negative impact on culture. Economic impacts are also important in bringing cultural changes. It is difficult to assess whether such impacts are caused by tourism, economic factors, or by other factors. There are undoubtedly both positive as well as negative impacts of tourism on the sociocultural practices of mountain people (Haimendorf 1984; Upadhyay 1984; Robinson 1993; Lama and Sherpa 1994; Stevens et al. 1993b; Chhetri et al. 1992).

With the increase of tourism in the mountain areas, adult members often leave home for prolonged periods, which is believed to have affected *Sherpa* society, causing family break-ups in some cases.

It is said that the *Sherpa* have become overly westernised, that their religious faith has diminished. It is argued that most families prefer their children to undergo the new system of education rather than to join the monastery as monks.

Sharma's (1995) views are cited below:

*It (tourism) has led the traditional Buddhist highlander society to transform from a pastoralist-cum-subsistence agriculturalist, trading in Tibetan salt, wool, and grain across the high passes of the Himalayas between Tibet and Nepal to supplement their income from agriculture, into a life of modern-looking, western-dressed, English-speaking, widely-travelled, intelligent, endowed with a highly-developed skill in the tricks not only of mountain climbing, but also in running tour and trekking business [sic], in just a matter of three decades.*

Although not everyone believes the impacts on the *Sherpa* culture have been all positive, it could be argued that tourism has in general had more positive than negative effects on the *Sherpa* culture. The changes that have occurred far from being devastating seem to be closer to the normal process of change, and this change has been welcomed by the *Sherpa* themselves (Sharma 1994; Robinson 1993).

### *Employment<sup>2</sup>*

The impact of mountain tourism on employment can be assessed by estimating the number of temporary or permanent jobs created. However, this study will not estimate the permanent jobs created since its interest is only in assessing the employment generation in mountain areas where jobs generated by tourism are generally seasonal in nature. In mountain areas, tourism generates jobs for porters, cooks, kitchen boys, and guides, i.e., support staff. However, not all of these employment benefits accrue to the local population; quite often, people outside the area exploit this opportunity.

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2 This section and the following section on income is from Banskota and Upadhyay (1991b).

The common practice is to hire porters either in Kathmandu or at some point along the trek route (Banskota and Upadhyay 1989). Since group treks are generally organised by trekking agencies, the hiring of porters and other support staff is generally conducted in Kathmandu by the *sirdar* (Banskota and Upadhyay 1991b). If supplies are transported from Kathmandu by bus or plane to locations such as Jiri, Pokhara, or Hile, then porters are hired at these destinations.

Groups and individual trekkers hire different numbers of support staff. Based on interviews with trekking agencies and past studies, an average group size (group tourists) ranges from six to ten trekkers, and the average number of support staff hired ranges from about two to four per trekker (Banskota and Upadhyay 1991b; Upadhyay 1984; Baumgartner 1978). Using two support staff per trekker as a low estimate, and four support staff per trekker as a high estimate of the direct employment generated by group trekkers, an estimate of the overall employment impact can be reached if the numbers of trekkers in such groups are known. On the other hand, FITs hire between 0.5 to 1.5 per trekker<sup>3</sup>. Clearly, in terms of direct employment generation, group trekkers have a greater impact on employment than FITs.

Individual trekkers, however, generate other forms of employment. Since a large number of them depend on local lodges and hotels for food and accommodation, they generate employment in these facilities. Moreover, these facilities are generally owned by local people and hence employment is directly generated in the local area. In Sagarmatha and Langtang National Parks and the Annapurna Conservation Area, a large number of such lodges and hotels and tea stalls that cater to tourists would be out of business if individual trekkers did not visit or were not permitted to visit such areas. The trail to Sagarmatha National Park, starting from Jiri, is lined with lodges, hotels, and tea stalls, outlets that generate considerable employment. Nevertheless the employment generated by tourism in mountain areas is seasonal, generally lasting six to seven months in a year.

The average length of time staff members are employed by trekkers has been estimated to be about ten days, both for group and individual trekkers (Banskota and Upadhyay 1989, 1991b; ERL 1989). This average can vary substantially with different trekkers and the trekking routes they choose. Sharma (1989) reports an average length of stay of 25.8 nights for trekkers, which also includes the time spent in Kathmandu.

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3 Generally, two individual trekkers hire one to three support staff members.

For the purpose of this study, an average of ten nights is assumed to be the length of stay of trekkers in mountain areas. The number of days of employment generated, however, varies depending on location and mode of transport. But assuming ten days to be the average, one group trekker annually generates roughly twenty to forty man days of employment, while one individual trekker generates roughly five to fifteen man days of employment. Table 4.10 provides an estimate of the total direct employment generated by mountain tourism over a period of years based on the above method and assumptions. Note that employment generated in lodges, tea houses, and hotels and other forms of indirect employment are not considered in Table 4.10. Clearly, the employment impact of mountain tourism is substantial. Furthermore, if employment generated by mountaineering teams is considered, the impact is greater than that reported in Table 4.10. Table 4.11 reports employment generated by mountaineering teams in Nepal over a period of time.

Direct employment generated by mountaineering expedition shows a declining trend, especially during the period 1990-1992. Direct employment generated by mountaineering teams declined from 9,154 persons in 1990 to 8,251 persons in 1992 because of lesser mountaineering teams and lesser members per team.

#### *Employment in Accommodation and Catering Services in Mountain Areas*

A recently conducted study by CEDA (1991) provides information on the employment related to the accommodation and catering industry that is connected to tourism in the whole of Nepal. Altogether 32 districts in the country were surveyed, with special surveys conducted in Kathmandu, Pokhara, and Chitwan. Selected results from this study are provided here to highlight the structure of manpower and its magnitude in the case of mountain tourism. It should be noted that all the accommodation and catering facilities in the mountain areas may not fully service tourists. Many may provide services to local people (i.e., local tourists) as well. But an estimate of the overall situation will indicate the significance of this sector in the mountain areas.

There were an estimated 24,524 people working in the accommodation and catering (restaurants) sectors during the time the survey was conducted in 1991. Out of this, 75 per cent were employed by the accommodation establishments (hotels of all kinds, lodges, etc), with the remaining employed in the catering industry. Males outnumbered females in the accommodation industry (79%), and in the catering industry female employment was even

lower (12.5%). More than 70 per cent of those employed were below 35 years of age, suggesting a limited opportunity for replacement employment.

The education status of those employed indicated that about 20 per cent in the entire industry had no formal education and only six per cent had a university degree. Also, less than eight per cent had received any form of vocational training - three per cent in restaurants and eight per cent in accommodation (Table 4.12).

The recruitment method is mostly through personal contacts rather than through recruitment media. The overwhelming majority (85%) of the establishments indicated there was no problem in recruitment, except in the case of kitchen-related manpower. About 30 per cent of the establishments indicated that there was no need for training of any kind, reflecting the high number of small and family-operated establishments. The greatest need for training was reported in the area of kitchen services. The total number of beds estimated in all classes of establishment was 44,000, the number of seats in restaurants was estimated to be 25,000. The average ratio of persons to beds was 0.41 and to seats 0.26.

Table 4.13 presents some results on the accommodation and restaurants found in the mountain districts. Not all of these districts are popular for tourism but they have visitors, not all of whom are foreigners. Of the establishments in the country as a whole, 46 per cent are located in the hills and mountains, the majority in Kathmandu, Pokhara, and Chitwan. These latter three areas cater to the largest volume of tourists and are not included separately in the table. Thirty per cent of the establishments are located in Solukhumbu district, which contains the Sagarmatha National Park. Considering the broader Sagarmatha region, and including Ramechhap and Dolakha districts, the total for this region is 347 establishments (38%). These latter two districts lie on the Sagarmatha trekking route. Districts such as Kaski (Pokhara not included), Myagdi, Manang, and Mustang, which are all in the Annapurna region, contain 345 accommodation establishments, i.e., 38 per cent of the total in the mountain regions. In the Langtang region (Rasuwa and Nuwakot districts), there are 77 (8%) such establishments. The three protected area regions of Sagarmatha, Annapurna, and Langtang are the most popular tourism areas in the mountains and together account for 85 per cent of the accommodation facilities in the mountain districts. As a percentage of the overall establishments, these three regions account for 39 per cent of the establishments in Nepal, which is a very high percentage.

The employment of males and females in the accommodation establishments also presents an interesting picture. The total employment in the establishments of the mountain areas accounts for 18 per cent of the national total. If the mountain region alone is taken into account, the three regions mentioned above account for 77 per cent of the total employment in the accommodation industry. Males alone account for 34 per cent of the total employment, females for 42 per cent. It is interesting to note that in the Sagarmatha and Annapurna regions, female employment in the accommodation industry is much higher than male employment. The employment in restaurants is also presented in Table 4.13. In the catering industry in the mountain region, employment accounts for a much smaller percentage, although here too females outnumber males. It appears that the mountain tourism industry is more female labour-intensive than male with respect to accommodation and catering facilities. It has also induced the involvement of women in activities such as gathering and collecting fuelwood, cooking, and the day-to-day running of lodges. In areas experiencing seasonal migration for portering, the household burden and family responsibilities on women have increased (Bjonness 1980; Sharma 1989).

#### *Income*

The impact of mountain tourism on income generation can also be estimated from secondary sources. First, the weighted average wage rate paid to different support staff members (*sirdar*, guides, cooks, kitchen boys, and porters) must be calculated. The weights used are the percentage of each type of support staff per group trekker (Table 4.14). The weighted average wage rate works out to Rs 66.82 per support staff member per day. Note that other benefits received by selected staff members like the *sirdar*, cook, kitchen boy, or guide in terms of food, clothing, and tips are not considered. Using the weighted average wage rate of Rs 67 (66.82) per support staff member, the income generation impact of mountain tourism employment for 1988 is presented in Table 4.15.

According to the figures presented in Table 4.15, the effect of mountain tourism on income is significant. Group tourists have a greater impact on income as they generally hire larger numbers of support staff. The effect of mountain tourism on income, however, does not end here. Individual tourists pay for local accommodation and food, an expenditure not accounted for. In addition, both group and individual tourists spend on drinks, fruit, handicrafts, and other items (Sharma 1989: Table 3). However, the generation of income through employment is the most substantial effect of trekkers as far as income

generation in mountain areas goes. Income generated by mountaineering tourism is also substantial and competes fairly closely with that generated by trekking tourism (Table 4.16). Income generated by mountaineering teams in Nepal generally shows a steeply increasing trend. Between the period from 1980 to 1992, the average annual growth rate in income is 17 per cent. In addition, mountaineering also generates substantial revenues in the form of royalties, which, however, remain with the government. Also, in many cases, all the income that accrues to mountain tourism is not retained in the areas where mountain tourism occurs. Lodge owners who benefit most are from regions outside the trekking area, and the largest income from agency-organised trekking goes to people living far from the area (Sharma 1989). Additionally, many from one region travel as porters to other regions so that local income impacts tend to be minimal.

Trekkers could have a greater impact on income in mountain areas. At present, group trekkers and mountaineers purchase most of their food items in Kathmandu prior to treks or expeditions in addition to what they import. Many of these items - including vegetables, eggs, milk, and other perishable foods - could be produced locally. Encouraging the production of these items where tourism is active would benefit these areas even more than indicated above.

### *Impact on Women*

Tourism is believed to have had both positive and negative impacts on women in the mountain areas. Although no studies have so far directly addressed this issue, evidence can be pooled together to shed some light on the impact of tourism on women.

One impact has been the increasing burden on women to look after the family and agriculture as adult family members stay away from home for prolonged periods to serve tourists. Although not reported, this negative impact could have resulted in a smaller family size, which has ramifications on women's health and time allocation and can be seen as an indirect positive impact induced by tourism.

In rural areas of the mountains, literacy rates among women are relatively lower than those of males and opportunities for gainful off-farm employment-except as porters-is seldom available to women. However, with the advent of tourism in these remote and inaccessible areas, a large number of women have been able to find self-employment in running lodges and tea houses. Many women from the mountain communities not only manage lodges in the mountain areas

but also in Kathmandu. Not only has tourism been able to provide off-farm employment to women, but it has also provided women with the opportunity to demonstrate their capabilities as good managers.

Tourism has also helped women to undertake such highly specialised and skilful activities as climbing Mt. Everest, which undoubtedly has increased their morale. Women from the *Sherpa* community have been trained as doctors and increasing numbers of females from such communities are going for higher education. Perhaps the full impact of tourism on women is just beginning to unfold; in a few decades, the impact will be visible.

Although there is no evidence to point to the other impacts of tourism on women, it may be conjectured that other positive impacts, such as on household decision-making, may have increased since more and more women have begun to participate in tourism.

#### *Other Impacts*

Although not directly attributable to tourism, there are other impacts that can be identified. The discussion below conjectures and aims to shed light on new tourism impacts. These other impacts, resulting from mountain tourism, can be broadly grouped as a) poverty alleviation; b) awareness generation (education, health and hygiene, conservation of natural and cultural sites, etc); c) development (infrastructure, settlement, cottage industry, etc); d) socio-demographic; e) research; and f) publicity for Nepal.

There is no doubt tourism has been able to alleviate poverty in many areas. This is obvious if one simply compares similar areas in the mountains where tourism is occurring and where tourism does not exist or is of small magnitude. The above sections have highlighted the employment and income impacts of tourism. It should be realised that in areas where there is no tourism, such impacts simply do not exist. Although nothing can be said of the magnitude of the impact of tourism on poverty alleviation in areas where it flourishes, i.e., the income distribution aspects of tourism, the relative impacts of tourism in a 'with' and 'without' situation are incomparable.

Awareness generation in various dimensions of life among the local people of different mountain regions can be attributed to the impact of tourism. It is beyond the scope of this study to address the various dimensions of awareness generation or changes that can be attributable to tourism. Nevertheless, some important ones can be identified. Compared to other mountain regions of Nepal,

the level of literacy among the younger generation of the *Sherpa* people of Khumbu is relatively high. Some basic understanding of a second language (mostly English) among local people where tourism is practised (Sagarmatha, Annapurna, and Langtang), relative to other similar mountain people in areas where there is no tourism, is another case in point. Among the people of these regions, the awareness about health and hygiene is of a higher standard than in other mountain pockets not frequented by tourists (Industrial Services' Centre [ISC] 1979). Sometimes these types of impacts can be negative, as in the case of Ghorepani and Rolwaling where the sale of vegetables, eggs, fruit, and milk to trekkers has reduced the supply of important nutrients to the local people. This has had a negative impact on nutrition (Baumgartner et al. 1978; Joiner 1986/87).

The relatively greater awareness about conservation of cultural sites and nature may also be different among two groups of mountain people. Chettri (1993) has reported the loss in cultural assets (theft) of local communities in the Jomsom-Marpha area because of sale to tourists. On the other hand, tourism has helped preserve local monuments, as in the case of the Tengboche Monastery and others.

Infrastructural development in remote areas of the mountains can also be attributed to the growth of tourism. Had there been no tourism in these areas, it is most likely that airstrips, bridges, and trails would not have been developed so early. The limited resources of the government and local people would perhaps not have been adequate to build all the infrastructures available in areas such as SNP, ACAP, and LNP, had there been no tourism. Other types of infrastructural development such as transport, communication, mini-hydropower, water supply, and extension services can also be indirectly attributable to tourism. This becomes fairly obvious if one compares the conditions of infrastructure in popular tourism places such as the Khumbu and Annapurna with those in the Makalu, Manaslu, or Kanchenjunga regions. Furthermore, there has also been growth in market towns due to tourism in mountain areas. Various places en route to Sagarmatha, in the Annapurna region, and other regions have experienced the development of growth points or growth axes or even market towns. Local people have benefitted by such development as services have come closer to their doors. An extreme example of this development is the case of Pokhara, which has experienced remarkable growth. Other settlement areas that have experienced growth and modernisation in terms of their size and functions are Namche Bazaar, Lukla, Junbesi, Jiri, Ghorepani, Ghandruk, Tatopani, and Dunche. In this context it is also worth noting that awareness and development are related, e.g., better

hygiene, a better living environment, and improved health facilities required to cater to tourists have also benefitted local people. Furthermore, other spontaneous development activities have occurred due to tourism - as in the case of Marpha village in the Annapurna region where tourism has generated off-farm activities, which otherwise would not have come about (Chhetri et al. 1992).

The growth of tourism in mountain areas has also had socio-demographic effects. Tourism is often believed to reduce the outmigration process. Available evidence from Nepal in this regard are, however, mixed and location-specific. In the Khumbu region, the growth of tourism reduced the temporary migration of *Sherpa* people to Darjeeling in search of employment. Income accruing from tourism has at the same time encouraged migration. For example, there has been a steady flow of younger men aspiring to be tourist guides (ISC 1979). Anecdotal evidence from Jomsom-Marpha reveals that some entrepreneurs who had migrated in the past are now returning because of the growth in tourism (Chhetri et al. 1992). It is also reported that men in search of better income and employment opportunities abandon their homes and leave the women behind to look after all household activities, including farming. As a result, there has been a decrease in the supply of agricultural labour in households, with the women left in charge unable to continue traditional land-use practices (Friend 1983). Had returns from traditional occupation been rewarding enough, such seasonal migration would perhaps not have arisen. This pattern of seasonal migration is generally true in many mountain areas of Nepal where economic hardships are increasing (Sharma 1988).

The effect of tourism on population growth in mountain areas is not clear. In the Rolwaling Valley, tourism-induced population growth (Baumgartner et al. 1978). Family planning practices are common and the fertility rate of the *Sherpa* is found to have declined (Fisher 1986). Other positive impacts on life are reported in consumption habits, schooling, and general health and nutrition.

The area of research in Nepal is another important area that can be said to have benefitted from tourism. There are a multitude of studies that span different areas, such as anthropology, biodiversity, culture, glaciers, etc, that have benefitted from tourism. In many cases, tourists have either been directly involved in carrying out such studies or have funded or found financial support for Nepalese as well as foreign scholars interested in carrying out such studies.

Finally, Nepal has received a great deal of international publicity through tourism, especially mountain tourism. There is no doubt some of this publicity

has been negative. By and large, the publicity has helped Nepal promote itself as a unique country for tourism. The vast number of books that have been printed, the many hours of documentary films that have been made, the many articles published by scholars in international journals, the nearly half dozen or so cover stories published in the National Geographic magazine, and the millions of photographs that circulate the globe have largely been the result of tourism.

## **Issues**

### *Limited Carrying Capacity and Mountain Resource Management*

Mountain and trekking tourism have played a significant role in transforming rural communities in certain areas of the mountain regions, notably the Sagarmatha, Annapurna, and Langtang regions, by diversifying the local economies from a below subsistence farming and herding system to a tourism-based economy within the last twenty years or so. However, these areas are composed of sensitive micro-ecosystems with meagre tolerance to stress and limited carrying capacity. Aggressive tourism activities in such areas without proper mountain resource management has created serious environmental threats. As a result, such areas are believed to be already carrying tourists beyond their sustainable limits. There are reasons to believe that the tourism carrying capacities of such areas are already exceeding their limits not only from an environmental point of view but in terms of the infrastructure available. In other words, "the goose that lays the golden egg is not being well attended to," and current practices are not encouraging enough to sustain the goose's health. Clearly promoting mountain and trekking tourism without consideration of the area's specific carrying capacity under the given state of technology, infrastructure, and policy environment is likely to make tourism unsustainable.

### *Code of Conduct*

Remedial actions and a code of conduct have been formulated, but the fact that negative impacts or excess stress on the carrying capacity continue to occur indicate that polices have failed or that their enforcement has been ineffective. Furthermore, in some areas in the mountains visited by tourists, tourism management just does not exist, thereby affecting negatively the carrying capacity of such areas.

In the more popular areas where trekking and mountaineering activities are conducted, such as the Sagarmatha National Park, Langtang National Park, and the Annapurna Conservation Area, the existing management systems have been able to curb the negative impacts and promote the positive impacts. In terms of the rules and regulations minimising negative impacts and promoting the comparative advantage of the area, as well as being sensitive to the needs of the local people, the effectiveness of the management regimes found in these areas varies. Clearly, the policy framework governing such areas needs to be assessed to evaluate its effectiveness in environmental conservation and its promoting income and employment in the local areas.

### *Investments*

In protected areas where tourism is popular, the different management modalities that exist limit the scope of private investment from people outside the community. Such investments are prohibited, justifiably so on the grounds that local people would face unnecessary competition from outside, would not be able to compete, and thus stand to lose their current businesses. Although the validity of this kind of argument has never been well studied, the argument may have some truth. It is, however, worth examining the investments that cater to tourism made by these local people in their areas in order to understand the difficulties such investors are facing under the current policies. Ways can perhaps be found to improve the policy environment that promotes the environment, local businesses, and tourism-related services, i.e., the carrying capacity.

### *Diversification*

It is necessary to diversify tourism to new areas to ensure environmental conservation. This strategy will promote more income, employment, and a better distribution of income. The development of new areas will, however, depend primarily on the strength of the forces that operate on the supply side, although the demand side will also be important. Unique characteristics of the area have to be identified, and innovative strategies need to be promoted. With the old trekking areas already overcrowded, there is a growing need to diversify tourists to newer areas.

### *Inadequate Research*

To date, there has been no one complete study conducted in any area that incorporates tourism as an integral part of mountain development, although scattered studies that deal with different issues conducted at different time intervals exist. As a result, it has been difficult to systematically assess the impacts of tourism in mountain areas. Such studies need to be conducted at specific time intervals to understand, among other things, the linkages of mountain tourism with the mountain economy.

Given the need for integrating trekking and mountain tourism with local environment and development, it is equally important to address the gender issue with emphasis on the female role. Women are the backbone of the rural areas and are known to be effective in natural resource management. They are also actively involved in agriculture and animal husbandry. Therefore, linking tourism development with local community development requires the active participation of women. It is essential to explore how women can be involved in integrating tourism with local community development.

Integrating tourism and local community development will require institutional development at the local grassroot's level. Presently, such institutions at the local level do not exist (see Chapter 5). The role of such institutions and the ways and means to make such institutions viable and sustainable have to be explored.

Although tourism benefitted research, such research has been carried out only in the self-interest of scholars. A well-planned research agenda to address the different problems of mountain areas and mountain tourism is still missing. The first example that can be cited of preliminary work conducted in this manner is the case of the Makalu-Barun National Park and Conservation Area (Shrestha et al. 1990).

**Table 4.1: Per Hectare Yield and Benefit (Gross) of Different Land Use Practices in Rasuwa**

Crops	Mt/Ha	Rs/Ha
Apples	7.66	74,600
Pear	13.50	67,500
Walnut	2.75	68,750
Paddy	1.98	7,086
Maize	1.42	1,994

Source: For fruits see Shrestha (1989), and for paddy and maize see Banskota and Sharma (1993a)

**Table 4.2: Litter Deposits in the Mountain Environment, 1988 (in kg)**

Area	Number Trekkers	Average Deposited	Total Deposited
Annapurna	37902	15	56853
Khumbu	11366	15	17049
Langtang	8423	15	12635
Other	3582	15	5373
Cumulative total (1976 to 1993)		640mt	

**Mountaineering (1979-1988): Garbage Cleared From Everest Base Camp, Spring 1993**

	Disposable Garbage	Non-Disposable Garbage	Oxygen/Gas Cylinders	Total
14 expeditions	7030	2350	3444	12824
Average/team	502	168	246	916
Range	90-1350	60-360	356-540	390-1820

Nepal Total (1979-1988) total for 840 teams:

<b>421680</b>	<b>141120</b>	<b>206640</b>	<b>769.44mt</b>
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Source: Lama and Sherpa (1994)

**Table 4.3: Trekkers Opinion on Sanitation and Garbage Disposal Facilities in LNP**

	Sanitation Facilities		Garbage Facilities	
	Adequate	Inadequate	Adequate	Inadequate
Lodge	26 (33)	53 (67)	47 (59)	33 (41)
Camp Sites	17 (35)	31 (65)	31 (65)	29 (63)
Private Homes	5 (24)	16 (76)	9 (39)	14 (61)
Trekking routes	25 (34)	49 (66)	16 (20)	62 (79)

Figures in parentheses are in percentages.

Source: Banskota and Upadhyay (1989)

**Table 4.4: Firewood Consumption by Tourists**

Destination	Local Population	Annual Fuelwood Consumption (000kg)	% Increase of trekkers demand over local needs
Sagarmatha	3,000	1,968	85.2
Langtang	6,588	4,322	18.0
ACAP	7,000	4,592	4.7

Source: ERL (1989); Annex C Table 1

**Table 4.5: Average Fuelwood Consumption Associated with Mountain Tourism (1987)**

Type of Tourist	Number of Tourists (kg)	Fuelwood Consumption (kg)	Total Consumption
Mountaineers	796	18.5	927,700
Group Trekkers	21,805	18.6	4,062
Individual Trekkers	25,470	5.5	1,415
Rafters	3,612	4.5	32,500

Source: ERL (1989) Annex C Table 1.1.3(b) and Attachment 1, Tables 2 and 3

**Table 4.6: Daily Firewood Consumption by Group Trekkers**

Survey Area	Year	Kg/Person/day
Rolwaling	1978	2
Everest	1980	4.5
Everest	1984	8

Source: Rolwaling (1978), Everest (1980), and Everest (1984) estimates are respectively from Baumgartner et al. (1978); Bjonness (1980); and Upadhyay (1984)

**Table 4.7: Consumption of Fuel and Firewood in Sagarmatha National Park**

	Organized Groups	Individual Trekkers
Number of trekkers	338	145
Manpower assistance	586	82
<b>Total consumers</b>	<b>924</b>	<b>227</b>
<b>Consumption pattern (in %)</b>		
Eating in lodges/tea houses, hotels	-	73
Kept own kerosene	7	18
Cooked in sherpa lodges	2	4
Bought fuel/firewood from local dealers	91	5
<b>Total</b>	<b>100</b>	<b>100</b>

Source: Bjonness (1980)

**Table 4.8: Daily Firewood Consumption by Households and Lodges SNP**

Type of Household (Source)	Year	Quantity Consumed (kg/per household/day)
<b>Everest:</b>		
Pure Households:	1984	18
Upadhyay	1988	3
CEDA	1980	14
Bjonness		
Household cum Lodge:		
Upadhyay	1984	38
CEDA	1988	11

**Table 4.9: Estimate of Firewood Consumed by Tourists in Selected Protected Areas (mt)**

Year		1976	1977	1980	1981	1982	1987	1988
SNP:	Group	619	692	858	747	917	1323	1671
	FITS	165	184	229	199	245	353	446
LNP:	Group	217	293	466	577	514	693	955
	FITS	27	36	58	71	63	85	118
ACA:	Group	229	294	456	543	628	985	1204
	FITS	131	168	261	310	359	563	688
Others:	Group	102	110	748	507	436	295	863
	FITS	9	9	62	42	36	25	72
Total:	Group	1168	1390	2528	2374	2495	3295	4693
	FITS	331	398	610	623	703	1025	1324
Total		1499	1788	3138	2997	3198	4321	6017
Fresh total		2497	2979	5228	4993	5329	7198	10024

Notes: The estimates have been derived based on the per capita consumption figures provided in ERL (1989). The estimates made by Gurung have also been used.

Source: ERL (1989); Gurung (1990)

**Table 4.10: Direct Man Days of Employment Generated by Mountain Tourism**

Year	Group		Individual		Total Employment Generated (Man Days)			
	Total number	Employment Generated (Man Days)		Total number	Employment Generated (Man Days)			
		High	Low		High	Low	High	Low
1985	16,937	667,480	338,740	11,770	176,550	58,850	844,030	397,590
1986	19,829	793,160	396,580	13,780	206,700	68,900	999,860	465,480
1987	21,337	853,480	426,740	14,827	222,405	74,135	1075,885	500,875
1988	22,873	914,920	457,460	15,895	238,425	79,475	1115,345	536,935

Note: The figure for employment generated by group tourists is the average number of trekking days (10) multiplied by 2 (low) or 4 (high) support staff (including porters) multiplied by the number of trekkers. The figure for employment generated by the individual tourist is the average number of trekking days (10) multiplied by 0.5 (low), or 1.5 (high) support staff multiplied by the number of trekkers. The trekkers who reported trekking and mountaineering are split into group and individual trekkers using the 59 and 41 per cent formula. Mountaineering tourism generates more employment than either group or individual tourism (ERL 1989).

Table 4.11: Employment Generated by Mountaineering Teams

Year	No. of Teams	No. of Mountaineers	Seasonal Employment
1980	64	639	9016
1985	91	824	8835
1986	94	807	10415
1987	98	796	11166
1988	92	936	10839
1989	125	1053	10984
1990	120	966	12179
1991	130	1038	9154
1992	113	929	8251

Source: Ministry of Finance, Economic Survey (1993)

Table 4.12: Employment by Type of Establishment

Type	Total Employed	Percent	
		Male	Female
Accommodation	18,072	79	21
Restaurant	6,452	88	12
Total	24,524	81	19

Source: CEDA (1991)

**Table 4.13 : Establishments in Selected Mountain Areas**

District	Number of Estab.	Accommodation			Employment in Restaurant			All Total
		M.	F.	Total	M.	F.	Total	
Dhankuta	38	108	58	166	1	1	2	168
Sankhuwasabha	12	31	10	41	10	10	20	61
Solukhumbu	271	391	486	877	-	-	0	877
Ramechhap	53	70	95	165	-	-	0	165
Dolakha	23	36	36	72	6	1	7	79
Makwanpur	9	41	6	47	17	1	18	65
Kabhre	14	154	27	181	29	18	47	228
Sindhupalchok	4	7	5	12	20	10	30	42
Nuwakot	11	19	19	38	4	5	9	47
Rasuwa	66	140	117	257	8	3	11	268
Palpa	21	56	27	83	68	26	94	177
Tanahu	4	13	7	20	35	20	55	75
Gorkha	41	144	83	227	14	8	22	249
Kaski	118	155	228	383	15	31	46	429
Myagdi	71	109	164	273	7	22	29	302
Manang	83	118	148	266	-	-	0	266
Mustang	73	103	130	233	11	14	25	258
<b>Total</b>	<b>912</b>	<b>1695</b>	<b>1646</b>	<b>3341</b>	<b>245</b>	<b>170</b>	<b>415</b>	<b>3756</b>
<b>Mountains</b>	<b>45.97</b>	<b>11.87</b>	<b>43.37</b>	<b>18.49</b>	<b>4.34</b>	<b>21.07</b>	<b>6.43</b>	<b>15.32</b>
<b>Nepal</b>	<b>1984</b>	<b>14277</b>	<b>3795</b>	<b>18072</b>	<b>5645</b>	<b>807</b>	<b>6452</b>	<b>24524</b>

Source: CEDA (1991)

**Table 4.14: Support Staff Hired by Group Tourists and Wage Calculations**

Support Staff	Number (Rs/day)	Weights	Mean Wage
Sirdar	1.0	0.14	77
Cook	1.0	0.14	70
Guide	2.5	0.26	58
Kitchen Boy	3.1	0.32	58
Porter	2.0	0.21	60
<b>Average Wage</b>	<b>9.6</b>	<b>1.00</b>	<b>67</b>

Source: The number of support staff for an average group of ten is obtained from Banskota and Upadhyay (1991 a), who also provided the mean wage rates.

**Table 4.15: Income and Employment Generated by Group and Individual Tourists: 1988**

Type of Tourist	Employment (mandays)	Income (Rs)
Group Tourists		
High	914,920	61,299,640
Low	457,460	30,649,820
Individual Tourists		
High	238,425	15,974,475
Low	79,475	5,324,825
All Tourists		
High	1,153,345	77,274,115
Low	536,935	35,974,645

Notes: The high and low income estimates provided in the above table are multiplied by the average weighted wage rate of Rs. 67 per day.

**Table 4.16: Income Generated by Mountaineering Teams**

Year	No. Teams Mountain.	No. (Rs'000')	Income (Rs '000')	Royalty
1980	64	639	15,827	843
1985	91	824	17,871	3,298
1986	94	807	28,854	4,063
1987	98	796	34,020	4,330
1988	92	936	42,583	5,079
1989	125	1,053	63,976	7,222
1990	120	966	68,368	7,266
1991	130	1,038	156,363	8,929
1992	113	929	101,355	30,351

Source: Ministry of Finance, Economic Survey (1993)

# Tourism Policy Review and Institutions<sup>1</sup>

## Introduction

Over the years, the tourism industry has received a great deal of attention. There was a master plan for the development of this industry as far back as 1972. Many policies and rules and regulations were created to bring positive changes in this sector. New institutions in the public and private sectors have developed over the years. Given that the tourism industry is a multi-sectoral concern, its linkages with policies and institutions in the public and private sectors become important. The discussion below elaborates on these and other policy and institutional issues related to tourism.

## Overview of Tourism Policy

Tourism became an important sector in the Nepalese economy in 1959 with the establishment of the Department of Tourism during the first Five-year Plan period. It was only in the Third Plan period, however, that an objective to increase the number of incoming tourists and foreign exchange earnings was stated. To meet these objectives, the policy's major focus was the establishment of hotels and extension of aviation facilities, in view of the 20,000 arrivals projected until the end of the Third Plan (1965-70).

The Fourth Plan period (1970-75) sought to enlarge the scope of tourism with trade as an important source of increasing national income and foreign exchange earnings. However, this initiative was not backed by adequate and clearly formulated policies. Also, no clear strategies were laid down to accomplish the objective.

The Nepal Tourism Master Plan (1972), formulated during the Fourth Plan period, put forward a comprehensive set of policies to promote tourism immediately and in the future. The subsequent periodic plans have been largely guided by the Master Plan and have focussed on major areas identified in the

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1 We would like to thank Mr. Deepak Dhital, Planning Officer at the Department of Tourism, for the time, suggestions, and comments he provided on many occasions in the writing of this chapter.

Master Plan. The Fifth Plan (1975-80) focussed on the preservation of historical, cultural, and natural attractions of the kingdom to promote tourism and sought to spread its growth in other potential areas, apart from the Kathmandu Valley, where tourism was mostly concentrated.

The Sixth Plan (1980-85) also drew heavily on the Master Plan recommendations. The main objective of the plan was to increase foreign currency reserve to improve the balance of payment situation by increasing the number of tourists and the duration of their stay. Emphasis was also given to encourage the establishment of import substitution industries in the tourism sector and to enhance employment generation through growth and expansion of tourism.

The Seventh Plan (1985-90) also emphasised retaining maximum foreign currency earnings from tourism to improve the balance of payment situation, creating more employment opportunities and diversifying tourism activities to potential areas with basic infrastructural facilities. It was during this plan period that the need to protect and conserve environmental, historical, religious, and cultural resources was first laid down. This plan also continued to place importance on the main objective of the Sixth Plan, namely, the promotion of import substitution industries.

The current Eighth Plan (1992-97) places emphasis on promotion of environmental, historical, and cultural assets through tourism promotion and on developing linkages between tourism and other sectors of the economy, among other things. To increase the number of visitors to Nepal, a liberal sky policy has been adopted. Diversification of adventure travel destinations within Nepal, spreading benefits of tourism to local communities, and involving non-government organisations (NGO) and local people in monitoring and managing adventure sites are other notable points of the eighth plan document.

#### *Critical Review of Nepal's Tourism Master Plan (1972)*

Since tourism policies to date have been mainly guided by the Tourism Master Plan, it is necessary to highlight some of the important features of this Plan. The Plan was the first serious attempt to lay out a comprehensive policy framework for the tourism sector. The Plan formulated programmes into two phases: Phase One (1972-1975) and Phase Two (1976-1980). Originally designed for implementation during a decade, it provided guidelines and objectives to the sector during its earlier formative stage. The plan proposed five different types of tourism in Nepal, namely:

- sight-seeing tourism,
- trekking tourism,
- 'Nepal style' tourism,
- recreational tourism, primarily from India, and
- international pilgrimage tourism.

The primary markets for these tourism products were thought to be Western Europe and the USA, with Japan, Australia, Scandinavia, etc, in the category of secondary markets.

Kathmandu was seen as the nerve centre of tourism activities. To increase the duration of tourist stay, sight-seeing tours east and west of the valley and the development of resort areas with appropriate recreational facilities were recommended. Places of high natural and cultural interest were envisaged for integration into 'westward' and 'eastward' sight-seeing tours. The destinations for the westward tours included the Gorkha, Pokhara, Tansen, Lumbini, and Chitwan circuits, with emphasis on the development of infrastructural and superstructural facilities, including resort activities. Similarly, the destinations for the eastward tour included a circular tour of Kathmandu, Namche Bazaar, Janakpur, and Chitwan. Due to the absence of a circular road network, tours by small aircraft were recommended.

Priority was placed on the development of pilgrimage centres at Lumbini, Muktinath, Barahachhetra, and Janakpur. Similarly, the development of national parks in Langtang, Khumbu, Annapurna, and Dhaulagiri was suggested for promotion of adventurous mountain tourism.

Resort area development, with the provision of basic infrastructure, was envisaged for various locations in Kathmandu, Pokhara, Tansen, Lumbini, Chitwan, Gorkha, etc. For remote, attractive places, such as the Khumbu, Langtang, and Annapurna regions, the development of mountain lodges was also emphasised. In addition, often remote places, such as Dailekh, Dhankuta, Ramechhap, Rara, and so on, were considered for resort development in the longer run. The Plan also recommended conservation and management of natural and environmental resources, including the protection of wildlife.

Emphasis was also placed on the preservation of monuments and the rich cultural tradition of Kathmandu Valley and the development of mountain view points on its periphery. The need for investment flows from the public and private sectors was envisaged: from the public sector for necessary in-

infrastructure and from the private sector for industries such as accommodation facilities. The government was supposed to play a leading role in decentralising tourism and opening up accommodation in places where the private sector would have difficulties.

On the institutional front, the Master Plan recommended the establishment of the Ministry of Tourism and Culture as an authoritative body for overall planning, promotion, and development of tourism. It was suggested that the functions distributed among the then existing organisations of the Department of Tourism, Department of Archeology, Department of Forestry, Department of Immigration, and Ministry of Foreign Affairs be brought under the proposed ministry. It was also suggested that ecological surveys and measures for the conservation and promotion of traditional music, dance, customs, and festivals be carried out.

The Master Plan provided the first comprehensive guidelines for policy and programmes in the tourism sector. Its emphasis on developing qualitative tourism and projecting Nepal as a destination on its own merits called for a sustained and concerted effort on the part of the government and the private sector. However, without adequate and proper planning, tourism took a haphazard course of development because of the failure to foster a strong partnership between the public and private sectors. As noted by the 1984 Master Plan Review, the main impediment to the plan's implementation was due to the fact that "*the government at large [sic] failed to share its responsibilities in directing and promoting tourism in a planned manner.*" Infrastructural facilities to diversify tourism to important market segments, as noted earlier, were not laid properly to meet the needs of the time. The private sector invested in all the places with tourism potential, and markets began to develop in accordance with the dictates of the buyers. This demand-induced development resulted in an uncontrolled development and proliferation of low-cost and low-quality establishments. While Kathmandu became increasingly crowded, the other sight-seeing places, e.g., Pokhara, Tansen, Gorkha, Lumbini, and so on, were neglected. In mountain tourism also, Annapurna, Khumbu, and Langtang became over-exposed, causing increasing pressure on their scarce natural resources. Other regions with comparable attractions were not developed because of the failure of the government to open, regulate, and control tourism. International pilgrimage tourism is still in an incipient stage of development despite the presence of world-renowned heritage sites like Lumbini and Janakpur. Wildlife tourism has been limited to Chitwan basically, although, after many years, it has begun to extend to the reserves in Bardiya and Shuklaphanta.

The Master Plan recommended the development of supply-guided 'Nepal-style tourism' to give Nepal an independent and unique destination status. It emphasised providing a mixed recipe of comfortable, natural, and cultural sight-seeing along with a variety of 'soft' or 'hard' adventure products, as per the physical stamina and time disposition of the traveller. But the infrastructural back-up and imaginative/innovative endeavour needed to create alluring supply-guided tourism are seriously lacking. All adventure market segments, including wildlife, trekking, and rafting, were started by expatriates and blindly emulated by Nepalese entrepreneurs. Although the Master Plan emphasised supply-guided tourism development, the tourism development that has taken place in Nepal has so far been essentially demand-induced development.

The Ministry of Tourism, established in 1977 according to the recommendation of the Master Plan, has not become an effective central government body to look after the vital issues and challenges in the field of tourism. Rather than focussing on policy, planning, and coordination, it has implemented simple plans and programmes that fit under the jurisdiction of the Department of Tourism. It has only added to the bureaucracy but not provided the effectiveness and efficiency envisaged in the plan. In view of this, the 1984 review recommended two other institutions to address the highest policy-level need for coordination as well as for autonomy and flexibility at the implementation level. However, such institutions were set up only in 1992 in the form of a Tourism Council and a Tourism Development Board, and they are yet to begin functioning.

It seems that most of the recommendations contained in the 1972 Master Plan have yet to materialise conceptually and functionally. The government has to play a pivotal role in the decentralisation of tourism, regulating and monitoring the qualities of products, and marketing the destinations internationally, whereas the private sector has to create a mix of products unique to Nepal more imaginatively. In fact, when the Asian Development Bank was approached by HMG in 1990 for cooperation in tourism, it was not asked to prepare another Master Plan, as stipulated in the 6th Five-year Plan, but to formulate concrete action plans to achieve the goals.

### *The Nepal Tourism Development Programme*

The Nepal Tourism Development Programme (NTDP), prepared in four volumes by Touche Ross management consultants on behalf of the Asian Development Bank, has recommended the overall development of this sector. It has reviewed

existing plans and policies and suggested timely modifications for the sustainable use of tourism resources. It provides action plans for tourism development and recommends the strengthening of institutional capacities.

The study has meticulously reviewed past studies, including the 1972 Master Plan and its 1984 review. It has also analysed market trends, market segments, and the functions and capabilities of tourism institutions and associations in the public and private sectors. It has assessed the environmental issues related to tourism and suggested key strategies to strengthen institutional capabilities, international marketing, and education and awareness in the tourism sector. The major output of the study is a set of action plans recommended for the growth and promotion of the tourism sector in the short and long run. The action plans are expected to:

- release bottlenecks in Nepal's tourism industry,
- increase tourist expenditure, and
- establish Nepal as a premium tourist product.

The action plan covers over 50 projects that can broadly be categorised into the following:

- infrastructure,
- tourist attractions,
- accommodation,
- technical assistance, and
- economic linkage.

Depending upon the nature of the project and the locality of implementation, the action plans can be implemented by either the government, the private sector (including foreign investors), or NGOs.

The immediate output of the ADB study has been a US\$ 10.4 million, ADB-funded Tourism Infrastructural Development Project which seeks to upgrade some of the existing tourism infrastructure in Pokhara, Kathmandu, and Gorkha, with a view to enhancing the quality of tourist products available in these destinations. This five-year project, being carried out under the Department of Tourism, aims to upgrade the Pokhara airport and the Pokhara-Sarangkot access road and to carry out the environmental improvement of the Pokhara

and Gorkha conservation areas, specifically in the vicinity of Ram Krishna Ganesh Tole and the lower area in Gorkha. The development of a small Phewa lakeside footpath and garden is another activity being undertaken under the project. Two tourist service centres, one each in Kathmandu and Pokhara, will be constructed, and the physical facilities at the Hotel Management and Tourism Training Centre (HMTTC) will be upgraded.

One interesting aspect of this project is the development of a model ecotourism circuit on the Pokhara-Ghalegoan-Siklis trekking route. The ecotourism project seeks to improve trails, provide alternative sources of energy such as mini-hydro and kerosene, conserve and preserve cultural and natural resources, and to pave the way for local communities to benefit from tourism. Community-managed lodges and camp sites and handicraft promotion will be focussed upon as direct income-generating activities for local people, whereas broader linkages among resource bases and tourism will be a longer-term goal.

### **Mountain Tourism Policy**

One of the key points of every tourism policy adopted in the periodic (5 year) Plans is the diversification of tourism to all potential tourist sites in a phase-wise manner. But there has been no commitment to priority setting in a time-frame. There is no tourism development area declared as yet in the mountain regions, or, for that matter, even in the Kathmandu Valley. When basic infrastructure, such as roads, drinking water, communication systems, etc, reach areas rich in potential for nature tourism or man-made heritage, tourists start visiting such areas, and the private sector provides services and facilities to cater to tourist needs (i.e., demand driven). This is basically the way sight-seeing tourism has been diversified to Pokhara, Tansen, and Lumbini. On the mountain tourism front, subsequent policies have emphasised the promotion of trekking and mountaineering activities and the diversification of these products to remote areas of the country. Mountain areas closer to Kathmandu and Pokhara, apart from the Manaslu region, have seen an impressive growth in trekking, mountaineering, and rafting activities over the years. Various trekking trails and side trails have been developed, modest services and facilities have been created by the local people, and camping grounds have been set up for group tourists, both through government and local efforts. The Rara and Jumla areas have been open for a long time, but the Kanchenjunga area was only opened up five years ago to group tourists. These areas are visited by fewer numbers of tourists because access to these places is not easy, and they are far from the main tourist hubs of Kathmandu and Pokhara.

Mountaineering regulations are often changed without any survey/research or consultations with specialists. One new regulation stipulates that only one team will be allowed on each route per peak every season, but the routes were arbitrarily designed on the basis of past attempts by foreign teams. There are many cases of breaking the 'one route one team' rule by the concerned ministry. Even after the steep hike in royalties (Chapter 3), monetary deposits for garbage management is an unnecessary hassle for the mountaineering teams. If provisions like the garbage deposit are necessary, what is the role of a liaison officer? it is asked. The involvement of the local community in garbage management was recently started in the Khumbu area. The garbage regulation in Khumbu is a half-hearted measure, since there is no such rule for trekkers who far outnumber the mountaineers. Visitor education and awareness at the local level with regard to litter and pollution are poor and unorganised. Certain discerning agencies and individuals observe environmentally friendly practices on their own volition, but for others who defy rules or who are careless about environmental pollution, there are no mechanisms for monitoring. The Sagarmatha Pollution Control Project in Khumbu and the Annapurna Conservation Area Project in the Annapurna area are making headway with environmental causes. They need to be further strengthened and such institutions need to be created in other areas where garbage management is still lacking.

In newly-opened trekking areas that are sensitive natural and cultural environments, quotas fixed for maximum permissible trekkers per season are not based on empirical study. An increase in quota is often made when the demand increases and pressure is exerted by adventure outfitters in Kathmandu. The opening of new destinations or routes for adventure is never declined on the basis of a careful survey, nor are mid-term surveys conducted to assess the impacts. Studies to assess the actual carrying capacity of each adventure tourism area have not been undertaken yet; because of this, many traditional places have deteriorated in quality.

Even in the traditional mountaineering and trekking areas, there is a shortage of alternative fuel sources such as mini-hydro, solar panels, and kerosene. Consequently, the consumption of scarce fuelwood for cooking, heating, and boiling water is rampant. If part of the revenue earned from these areas was ploughed back for development and conservation such problems would not arise. The indigenous culture of the local people, a major reason for the tourists' attraction to the mountains, is also declining due to a lack of awareness among the people, who appear to be opting to emulate Western ways.

## **Major Rules and Regulations Pertaining to Tourism**

### *Tourism Act, 2035 B.S.*

The regulation and control of tourism industries and activities, particularly mountaineering, is broadly guided by the Tourism Act of 2035 B.S. under which various regulations pertaining to various sub-sectors are in effect.

The Tourism Act consists of six chapters, of which the first is devoted to a description of various terminologies used in the Act. The second chapter, concerned with travel and trekking agencies, clearly stipulates that a licence is necessary to open a travel or trekking agency. Unlicensed activities are liable to punishment, which includes the closure of operations and a fine. The Act makes it mandatory for legitimate agencies to conduct business in convertible foreign currency only through the Nepal Rastra Bank. The Department of Tourism is given the authority to suspend or punish agencies failing to abide by the provisions of the Act.

### *Rules Pertaining to Hotels and Lodges*

The hotel, lodge, restaurant, and bar section of the Act stipulates the categories of such establishments. Only hotels, lodges, restaurants, and bars registered with the Department of Tourism (DOT) can use standard symbols, letters, or any other symbols designed by the DOT and can strike agreements with foreign agents in connection with providing their services and facilities to tourists. These industries need to inform the DOT about the charges they levy on their services and facilities to tourists. Unregistered industries under this heading are not entitled to publicity as tourist standard establishments. Failure to abide by the regulations is subject to warning, suspension for a stipulated time, or a fine as specified in the regulations.

### *Mountaineering Rules*

Under the rules, climbing permits are mandatory for all mountaineering teams attempting to scale any of the Himalayan peaks available for the purpose, against the payment of a specified royalty. Rules are laid out for reporting the progress of the expedition through a government-deputed liaison officer and for the hiring of mountaineering support staff, including *sirdar*, high altitude porters, cooks, and base-camp staff. For the safety and well-being of the Nepalese staff attached to a mountaineering expedition, there are provisions for personal health checks and insurance against accidents. Similarly, there is a

provision for emergency rescue arrangements through a representative agency in Kathmandu. The duties and responsibilities of the team leader, liaison officer, and *sirdar* are specified. There is a strict provision for keeping the environment clean during the course of the expedition. The news of the expedition's progress should be reported first to the Ministry of Tourism. In recognition of mountaineering as a distinct adventure activity, all climbing members and staff working at base-camp or above are required to carry certificates from their respective alpine clubs. The Ministry can authorise Nepal Mountaineering Association to issue climbing permits for a fixed number of peaks. No expedition team can change the climbing route without written approval from the Ministry of Tourism. Damage to the environment and its pollution are liable to punishment. Similarly, climbing attempts without a permit and any action or behaviour in defiance of the regulation are punishable.

#### *Provision of Tour Guides*

Persons wishing to work as tour guides should obtain a licence from the Department of Tourism. The licence should be periodically renewed and its holder is expected to adhere to the code of conduct stipulated in the regulation. Any action or behaviour defying this regulation is punishable by fine.

#### *Miscellaneous Headings*

This section is concerned with the control of tourists' purchase of merchandise, need to periodically report by travel/trekking and hotel industries to the Department of Tourism, restriction on authorisation to other persons or companies to work on behalf of a licence-holding company, etc. The need for regular information in case of changes is also stipulated. There is a provision regarding the delegation of authority to use duties and responsibilities stipulated in the act.

#### *Regulations Under the Tourism Act*

There are three major regulations pertaining to details of particular aspects of the Tourism Act, 2035 B.S.

- (1) Travel and Trekking Agents' Regulation, 2037 B.S.
- (2) Regulation pertaining to hotels, lodges, restaurants, bars, and tourist guides, 2038 B.S.
- (3) Mountaineering Expedition Regulation (with amendment), 2036 B.S.

The Travel and Trekking Agents' Regulation makes three key stipulations:

- i) a specified number of technically-sound personnel to be hired by every company seeking to run a travel/trekking agency;
- ii) a bank guarantee of a specified amount is to be deposited with the Department of Tourism; and
- iii) a pledge to earn annually a stipulated amount of foreign currency (US \$ 30,000 for trekking and US \$ 15,000 for travel agencies) and to report periodically to the Department in the given format is required.

Under the regulations concerning hotels, etc, there is a provision for hotel classification from One-to Five-star plus tourist standard on the basis of available rooms, services, and facilities. Only those hotels or restaurants registered with the Department of Industry on the recommendation of the Department of Tourism are entitled to obtain a standard classification licence against the payment of specified fees.

The mountaineering regulation include elaborate details on applying for a climbing permit and on providing a route map and royalty fee. It stipulates the terms and conditions to be fulfilled by a mountaineering team and facilities that HMG can provide for it. It specifies wages and gear to be provided to the Nepalese staff members attached to the team, and the details, duties, and responsibilities of all the persons in the team. It also contains details about the environmental codes to be observed by the team as well as about the periodic reporting to the Ministry that is to be carried out by the liaison officer.

The rules and regulations pertaining to mountaineering are elaborate, and all the activities under it are controlled by the Ministry of Tourism and Civil Aviation. A liaison officer is deputed with each mountaineering team to control unauthorised activities, and he reports to the Ministry during the course of the expedition.

The rules and regulations pertaining to trekking are much weaker. Trekking agencies bear the responsibility, if anything, in the place of rules and regulations for group tourism. In areas where FITs are allowed, there is no provision for or practice of making local people responsible or responsive with regard to resource conservation - both natural and cultural.

Though not incorporated clearly in policy, the practice of area classification for trekking has been in vogue since the early 90s. Traditional trekking areas

include the Annapurna and Khumbu, or the Sagarmatha, region; Langtang, Rara, etc, are both for groups and FITs. Ecologically-sensitive remote mountain areas, with an ancient culture, included in which are Manaslu, upper Dolpa, and upper Mustang, are open for trekking on a controlled basis. The annual quota of visitors to these areas is fixed, and a liaison officer accompanies tourist groups that visit such areas. The fee for these areas is higher - substantially higher in the case of upper Dolpa and Mustang (US\$ 70 for the first 10 days and US \$10 per day per person thereafter).

A system of ploughing back has been announced for these areas. Upper Mustang has already been receiving part of the revenue proceeds annually for its development and conservation. The Sagarmatha Pollution Control Project is also receiving part of the revenue for the garbage management and environmental improvement programme it launched. Until now, WWF has supported the project. Once it pulls out, the possibility of sustaining the project with local resources has to be explored

## **Tourism Institutions**

Some of the key public and private institutions directly or indirectly involved in tourism are discussed in this section.

### **Public Sector Institutions**

#### *Ministry of Tourism and Civil Aviation*

Functionally, the Ministry of Tourism and Civil Aviation (MTCA) is the apex body in the country's tourism administration. It was created in 1977, following the recommendation of the Master Plan to create an organ of government which would be "*responsible for key activities related to tourism including comprehensive development planning and analysis, implementation and execution, and promotion.*" In view of the authoritative government structure of the time, a National Tourism Organisation of this kind was recommended over a corporation-like body.

Ideally, the Ministry's role is to formulate policy and planning on the one hand while maintaining inter-ministerial coordination in the planning and implementation of projects on the other. In actual practice, the duties and

responsibilities of the Department of Tourism and the Ministry are often duplicated, with a vague demarcation of actual responsibilities. The affairs of the World Tourism Organisation (WTO) are looked after by the Ministry, while the Department looks after the affairs of the Pacific Asia Travel Association (PATA). The new organisation chart has shifted the executive function of mountaineering to the Department of Tourism, but, in fact, it is still being handled by the Ministry of Tourism. International promotion activities are being executed in a similar manner by both Ministry and Department. Planning, monitoring, and evaluation in the Ministry are only a ritual with the Ministry only formalising documents prepared by the Department. The Ministry is busy with simple day-to-day administrative procedures, fulfilling the formalities of the Tourism and Civil Aviation Departments, RNAC, and HMTTC as a parent organisation. The absence of delegation of authority and decentralisation of responsibilities creates confusion and delays when problems or opportunities arise.

Frequent rotation of employees in various sections, as shown in the organisation chart, and the transfer of old, experienced staff members to other ministries and departments, result in low morale and a lack of confidence on the part of the employees in their assigned jobs. The leadership is too frequently changed and the direction and vision capability at this level never mature.

The training needs of the employees are never assessed and there is no practice of retaining employees who have undergone relevant training or obtained academic degrees under scholarships provided by various bilateral and multilateral agencies. There is no indication of enhanced working performance by employees in the organisational setting. The development budget allotted for the tourism sector, including the Department of the Ministry, is quite low. For the fiscal year 1993/94, the combined total budget was Rs 121.738 million. For the Civil Aviation Department under the Ministry, it was Rs 625.898 million.

In a multi-disciplinary sector like tourism, inter-linkages with different public sector line agencies for infrastructural build-up and with the private sector for services and facilities to be provided to tourists are essential. However, this aspect is very poorly maintained and the coordination initiatives start only when the situation reaches crisis proportions, e.g., the pollution in the Khumbu region. The Ministry has not been able to become a policy and planning organ for the tourism sector but has rather dwindled into an additional bureaucratic tier in a simple decision-making process.

## *Department of Tourism*

The Department of Tourism is an older institution than the Ministry, as it was established in the early sixties, but it does not even have its own building. Most of the staff problems pertinent to the Ministry apply equally to the Department also. The main function of the Department is to execute the tourism plans and programmes and to regulate and control the tourism industry. The tourism sector's action plans consist of simple activities such as providing minor infrastructural facilities to resort areas or improving the conditions of some tourist areas.

Until the launch of the Tourism Infrastructure Development Project (TIDP) in the fiscal year 1992/93, with a loan of US\$ 10.4 million from ADB, no such ambitious infrastructure-related project was ever undertaken by the Department of Tourism. Mostly, the Department carries out the regulatory task of licensing travel and trekking agencies, hotels, resorts, and tourist and trekking guides and facilitates the industries established under the Tourism Act, 2035 B.S. Its role in destination promotion is limited to participation in some of the international travel trade fairs jointly conducted with the Royal Nepal Airlines' Corporation and some other private sector industries. Apart from licensing, facilitation, supervision, and control of industries, it has no other serious function in influencing or motivating the private sector. The job of issuing trekking permits is entrusted to the Department of Immigration and the execution of mountaineering activities is still undertaken by the Ministry of Tourism.

The Department is basically a recommendation body for the facilitation of the tourism industry. It does not have the authority even to register tourism organisations - the Department of Industry does that on the Department's recommendation. Following delicensing of several categories of industries, including most of the travel trade, the Department's new role has not been worked out. Many of the problems, such as pollution and shortage of infrastructural facilities, are vital issues for tourism, but the Department seems to have no say on these issues. The relationships with the concerned government departments and the private sector are not guided by vision and persuasion. The responses from the Department are often a result of compulsion from pressures created from the sector.

## *Department of Civil Aviation*

The Department of Civil Aviation (DCA), established under the Ministry of Works and Transport in 1965, was brought under the Ministry of Tourism in

1982, primarily in consideration of the civil aviation's paramount importance in the growth and spread of tourism to district locations in and outside the country. The department implements all projects and programmes related to civil aviation development, including airport construction and improvement and air transport communication and control, and it maintains relations with international agencies like IATA. It currently administers Tribhuvan International Airport and 42 other domestic airports throughout the country. There is a proposal to convert it into the Civil Aviation Authority, with more autonomy and freedom from bureaucratic red tape.

#### *Department of National Parks and Wildlife Conservation*

The Department of National Parks and Wildlife Conservation (DNPWC) administers Nepal's national parks and preserves, which constitute around 13.9 per cent of the total land area. Established under the Ministry of Forests and Soil Conservation in 2037 B.S., this department administers eight national parks, five wildlife preserves, and two conservation areas. With wildlife safari adventures becoming increasingly popular in various geographic locations, especially in the *terai*, the DNPWC's role as an organisation to protect wildlife and manage and administer park regulations is clear cut. Its connections with tourism are vital since the economic use of the protected areas is possible only through tourism. The coordination of this department with the Tourism Ministry or Department does not appear to be effective.

#### *Department of Customs and Tax*

These departments provide duty concessions and tax holidays or rebates to travel and tourism industries on the recommendation of the Department of Tourism. Hence, their role in motivating the growth and spread of tourism industries is noteworthy. Hotels and resorts can import various equipment at five per cent customs' duty during their construction phase and during expansion of facilities. Travel and trekking agencies are also entitled to similar duty concessions on selected items such as computers, faxes, telephone systems, etc. From the fiscal year 1993/94, hotels and travel agencies have been able to import a certain number of tourist buses at a 50 per cent duty concession.

#### *National Planning Commission*

The National Planning Commission (NPC), under the chairmanship of the Prime Minister, is the apex body for central government planning, monitoring, and evaluation. Annual plans and programmes to be launched through all line

agencies of the government have to be approved by the NPC. Different members look after sectoral policies, plans, and programmes, and the tourism sector is intertwined with the industrial sector. Policy adjustments and plans and programmes that integrate the tourism sector to other development sectors are coordinated by the NPC and hence can play a key role in the growth and diversification of tourism.

### *Other Agencies*

Among other agencies, the Ministry of Forest and Soil Conservation works towards conserving the forest resources and biodiversity of Nepal to enhance the appeal of the landscape to tourists. The Department of Archeology, under the Ministry of Education and Culture, administers the man-made heritage sites and maintains and manages such sites for tourism. The Royal Nepal Airlines is the national flag carrier and was established in 1958 and brought under the Ministry of Tourism and Civil Aviation in 1982. It flies to European, South Asian, ASEAN, and East Asian destinations; these include London, Paris, Delhi, Bombay, Calcutta, Dhaka, Karachi, Bangkok, Singapore, Hong Kong, and Osaka. About 58 per cent of incoming tourists take a Royal Nepal flight from one of these places. RNAC also flies to all internal destinations, facilitating the movement of tourists within Nepal. The limited fleet and seating capacity of RNAC used to discourage tourists wishing to visit various destinations in the kingdom in the past, but this constraint has been alleviated by three private domestic airlines and three helicopter services providing services.

The Nepal Rastra Bank plays a substantial role in supervising, monitoring, and controlling foreign currency earning sectors. The bank exercises its influence in the field of foreign exchange permits and transactions and adjusts regulations pertaining to foreign exchange, according to changing needs. The travel industries now have the full authority to open foreign currency accounts without surrendering the exchange to the bank. However, for the use of foreign currency from the accounts, the bank has to be informed and control is maintained through a simplified procedure.

Nepal Industrial Development Corporation (NIDC) is a semi-public sector agency charged with promoting the industrial development of Nepal by means of loans, loan guarantees, and shares. NIDC has been extending loans to tourism industries, especially capital-intensive hotel projects in the tourist areas of Nepal. While considering loan projects in the tourism sector, NIDC entertains only those industries that have been registered on the recommendation of the Department of Tourism.

### *Private Sector*

The tourism private sector is organised at various professional levels for forging common interests and undertaking collective bargaining with the public sector.

#### *Nepal Association of Travel Agents*

Established in 1966 with the objective of helping the development of tourism and the travel profession; protecting the lawful rights of its members; ensuring a professional code of conduct; and promoting cooperation among travel agents, the Nepal Association of Travel Agents (NATA) is composed of 110 active and 17 associate, allied, and non-resident members. It organises seminars and conferences for the growth and promotion of tourism from time to time and suggests policy changes and adjustments to the concerned public sectors.

#### *Hotel Association Nepal*

The Hotel Association of Nepal (HAN) was also established in 1966 with the objective of promoting the hotel industry and protecting the lawful rights of its members. HAN embraces only those hotels registered with the Department of Tourism as its members.

#### *Trekking Agents' Association of Nepal*

The Trekking Agents' Association of Nepal (TAAN) was established with the objective of promoting mountain tourism, primarily trekking and mountaineering, in Nepal. The conservation of the mountain environment and the promotion of the welfare of the people living in the mountain regions are among TAAN's objectives. TAAN cooperates with the Ministry of Tourism and Civil Aviation in formulating new policies regarding mountain tourism; with the Hotel Management and Tourism Training Centre (HMTTC) providing basic and medium level manpower training for the trekking industry; and with other NGOs in imparting conservation-oriented knowledge to the field staff of trekking agencies. Occasionally, TAAN also takes part in clean-up campaigns of important mountain trails.

#### *Nepal Mountaineering Association and Himalayan Rescue Association*

The Nepal Mountaineering Association (NMA) and Himalayan Rescue Association (HRA) were established in the early seventies. NMA is dedicated to

the cause of mountain tourism, especially mountaineering. It recognises mountaineers and high altitude expedition workers by issuing recognition letters; maintains worldwide contact with alpine associations; and takes part in events related to mountaineering. Lobbying for policy changes or adjustments in mountain tourism and the execution of some high mountain environment cleaning campaigns are some other responsibilities undertaken by NMA. It organises basic and advanced level mountaineering courses at its Manang-based Mountaineering School, besides providing climbing permits for 18 selected trekking peaks, mostly in the Khumbu and Annapurna area. The main objective of the HRA is to reduce casualties in mountain tourism, especially in mountaineering and high altitude trekking. It operates two high altitude clinics at Pheriche and Manang on the most popular trekking trails of Khumbu and Annapurna.

#### *Nepal Association of Rafting Agents*

Nepal Association of Rafting Agents (NARA) was established in 1988 with the objective of protecting, developing, and promoting environmentally-conscious river rafting as a major component of the country's tourism industry. There are 58 rafting agencies in its membership. It organises river guide training in association with the HMTTC and an annual rafting picnic to popularise river rafting.

#### *Tourist Guide Association of Nepal*

Established in 1989 with the objective of promoting quality tourism experiences for tourists and contributing indirectly to the preservation and upkeep of heritage sites, this association has a membership of 275 from among the licensed guides. It works to spread awareness in the field of tourism.

#### *Restaurant and Bar Association of Nepal*

Set up with the objective of upgrading the restaurant and bar business to international standards in 1991, the Restaurant and Bar Association has 67 active members now. It emphasises the need for trained personnel in the restaurant and bar business and collaborates with the HMTTC to organise training for the staff of member establishments.

#### *Tara Gaon Development Board*

This was established with the objective of promoting Nepalese culture and traditions for tourism. It is, however, in the process of privatisation because the

private sector is suited to undertaking commercial ventures of the kind promoted by Tara Gaon.

Most of the private sector associations mentioned lack a code of conduct that binds their members in good faith and professional discipline. Even having celebrated their silver jubilees, HAN and NATA seem to be loosely organised in their own capacities. Like the public sector organisations, they lack real initiative except in persuading the concerned government agencies to sanction key areas of their own interest. Tourism in Nepal has been the domain of the private sector with the public sector supporting and facilitating it in the background. A strong partnership between the two sectors and a willingness to work together for quality tourism are necessary.

### *Grass Roots' Agencies in Mountain Tourism*

All the above agencies, public or private, operate at the central level. Until now, no effective institutional mechanism has been forged to look after mountain tourism. Under the outreach training programme of the HMTTC, supported by UNDP/ILO, basic lodge-owners' training has been organised in various locations of the Annapurna and Khumbu since 1987. But this programme is sporadic and has not taken on any institutionalised form to raise the capability of the mountain private sector.

Following the establishment of the Annapurna Conservation Area Project (ACAP) under the King Mahendra Trust for Nature Conservation (KMTNC) in 1987, tourism in and around the Annapurna Sanctuary area has received attention from income-generating activities. People's participation was sought for the conservation of forest resources, fuel-efficient stoves were popularised, and technical and financial support for the development of mini-hydros has been made available for this area. The ACAP also periodically organises lodge owners' training in cooperation with the HMTTC at various places on the Annapurna-Jomsom-Manang trail.

A somewhat similar approach was taken in the Khumbu when the Sagarmatha Pollution Control Project was set up in 1991 with the support of the World Wildlife Fund (WWF). The project mobilised local participation for control and management of litter in the Khumbu and aroused considerable interest on the part of government also. HMG made available a grant of Rs two million for the project in the 1993/94 fiscal year.

The responsibility for conservation and development in newly-opened Mustang has been vested in the ACAP by the Ministry of Tourism and Civil Aviation. A sum of approximately Rs seven million was made available to the ACAP in the fiscal year 1993/94 for the upper Mustang Project.

Apart from these agencies, there are no agencies looking after tourism in mountain areas. From the fiscal year 1992/93 onwards, HMG announced a policy of ploughing back part of the revenue from tourism operations into selected areas for the development and conservation of these areas. The more conscious areas of Khumbu and Annapurna, supported by NGOs and INGOs, have been able to get their share, but other tourist areas, such as Manaslu and Kanchenjunga, have received nothing due to the lack of a management unit. So, a proper management unit (NGOs or INGOs) to disseminate the relevant awareness to local communities is essential for other mountain areas visited by tourists.

### **Policy Coordination between Tourism and Other Sectors**

In a multi-disciplinary service industry such as tourism, policies and subsequent activities by other agencies have a discernible bearing. Travel and tourism industries use simple agricultural products at one end of the scale to the latest high-tech machines and equipment at the other. Because this sector has a broad spectrum of linkage activities, policy-level coordination of related sectors is necessary for its progress and smooth functioning.

The major agencies with which the travel and tourism sector is distinctly related in its day-to-day activities are the:

- Department of Industry (DOI),
- Department of National Parks and Wildlife Conservation (DNPWC),
- Department of Immigration (DIM), and
- Department of Archeology (DOA).

All travel and tourism industries are required to come into contact with both the DOT and DOI for licensing purposes. In the case of travel and trekking agencies, licenses are issued by the DOT only after the firm is registered with the DOI on its own prior recommendation. The reason for this duplication is not clear. It has certainly created a situation of shifting responsibility between the

two agencies and unnecessary hassle among the firms. If tourism is a distinct industry and a fully-fledged ministry is there to look after it, why are the functions of registration or licensing and monitoring and facilitation not under the same umbrella? In other words, it is essential to establish a one-window system for the tourism sector.

The DNPWC manages and administers eight national parks, five wildlife reserves, and two conservation areas, which cover 14 per cent of the total land area of the country. Tourism in these areas has provided revenue and increased motivation for the cause of conservation. Tourism should, of course, be a by-product of a conservation effort directed to these areas. In view of the increasing number of tourists visiting various protected areas each year, coordination between these two important institutions until now has been ritualistic - the two ministries/departments come in contact with one another only when a private party approaches them in connection with tourism operations in the protected areas. While setting operational tourism policy guidelines in national parks, or fixing the entrance and various other fees for visitors, the views and opinions of the Ministry of Tourism are not known to be sought. In the same way, there is no system of feedback on the impact of tourism in these protected areas.

Tourism operations in mountain areas are controlled through trekking permits issued by the Department of Immigration (DIM). Likewise, the opening of new areas for trekking activities in the mountain areas falls under the Ministry of Home Affairs. The practice of controlling tourist numbers has therefore relied on the simple administrative procedures of the trekking permits, and thus has not helped reduce pressure on fragile areas. In the traditional trekking areas, such as Sagarmatha, Annapurna, and Langtang, the number of trekkers per season is not fixed even though these places have constraints in terms of infrastructure, services, and facilities. There does not seem to be a basis for fixing the numbers either. When mountain areas became degraded because of uncontrolled development, complaints are lodged with the Ministry or Department of Tourism but a system of feedback among the concerned institutions virtually does not exist.

Some rapport between tourism and immigration agencies is seen in the opening and operation of newer areas, including upper Mustang, upper Dolpa, and Manaslu, where the annual or seasonal visitor quota and a variable trekking fee policy rate are stipulated in consultation with the Ministry of Tourism. However, the opening of these ecologically-sensitive areas was not carried out

after consultation between concerned government agencies but was carried out abruptly without any field studies.

A system of central fee collection at the immigration counter has not yet been introduced, and visitors have to pay a park entrance fee to the DNWPC. In fact, the revenue collected by both institutions goes to the central treasury.

The Ministry of Tourism, related ministries, and other agencies have not developed a systematic approach of information sharing and feedback in the entire tourism sector. There is no limit to the numbers or the numbers are fixed arbitrarily in Kathmandu.

## **New Directions**

His Majesty's Government has recently revised tourism policy in order to make this industry more modern and vibrant. Although there is little that can be said until the policy document is translated into action, a brief summary of the new policies is provided here.

Nepal has virtually an unlimited potential in adventure tourism (if managed properly). From the plains to the tip of Mount Everest, adventure tourism could be operated in several interesting ways. In light of this greater potential, the tourism policy stresses

- i) diversifying land, air, and water-based adventure products in various areas;
- ii) diversifying wildlife tourism for experiencing the biodiversity available in the kingdom; and
- iii) opening new peaks for mountaineering and new areas for trekking and expanding cross-border adventure activities between Nepal and neighbouring countries.

Environmental issues are bound to become significant with environmental impact assessment (EIA) almost being mandatory for tourism-related projects in any new area. Community participation for sustainable tourism has been emphasised, and the concept of "ecotourism" has received importance. There are plans to lease out public land to develop environment-friendly resorts.

Development of tourism-related infrastructure will no longer be the domain of the public sector alone. Those in the private sector willing to invest and benefit from such investments will be encouraged. Communities in tourist areas will be encouraged to design and observe local environmental codes of conduct, in lieu of international conventions and national guidelines, codes, and so on, and thus be empowered to forge their own destinies.

The DNPWC manages and administers eight national parks, five wildlife reserves, and one national monument. Under the new policy, research and development have received greater attention than in the past. An ecotourism unit will be set up to promote this important concept and to examine the carrying capacity of various heritage sites, both natural and man-made. Unlike in the past, emphasis has been given to research studies that establish better linkages between tourism and other sectors of the economy, especially agriculture, cottage industries, and import-substituting industries.

The new policy has classified trekking areas according to their level of development, namely, a) ordinary trekking areas with good trails, basic services, and facilities (general trekking areas); b) areas with no basic services, facilities, and not very clearly identifiable trails where tourists can only go with an agency (guided trekking areas); and c) ecologically very sensitive remote mountain areas where trekkers can go with an agency and a government-deputed liaison officer (controlled trekking areas). In order to enhance the quality of village tourism, provisions will be made to strengthen the mobile training unit of the HMTTC. The need for regular public sector investment in conservation and development will be stressed.

The Tourism Council, headed by the Prime Minister and represented by other ministers related directly or indirectly to tourism, apart from adequate representation from the private sector, has already been set up. It will coordinate the interests of the tourism sector at the highest policy level and provide timely guidelines and directives to the ministry concerned. The creation of an autonomous Tourism Development Board under it, for implementation of the tourism sector policies and programmes, is also a timely step to address the dynamic needs of this most potential sector. The development of tourism along an 'endemic tourism' line - which believes in the uniqueness and micro-cosmic nature of each tourism destination - is an ideal situation for tourism in Nepal. Each tourism destination within Nepal - big or small, including trekking trails - should have local tourism communities involving people from the public and private sector just as there is a Tourism Council or Board at the centre. Institutionalised communication and the empowerment of such communities would lead to sustainable tourism development in the mountain areas of Nepal.

## Issues

### *Policy Weaknesses and Enforcement*

There are many issues and challenges that need to be addressed from the policy side, despite the new policy framework adopted to make the tourism industry a more prosperous and sustainable one.

Ever since the Master Plan, diversification of sightseeing and adventure tourism has been a major thrust of all succeeding policies. In actual practice, sightseeing tourism has concentrated in the Kathmandu Valley alone, with little spill-over in Pokhara and Lumbini. Mountain tourism has concentrated in Khumbu, Annapurna, and Langtang. The situation of infrastructural facilities and proximity to urban tourism centres have been the major guiding factors for the diversification of mountain tourism. No urban sightseeing hubs have been able to develop in the far western and far eastern regions of Nepal so far. As a result, the potential for mountain tourism development in these regions has not been realised. The Manaslu area in the western region has unspoilt charms, but the poor access to the area is not conducive to its development.

Of the four As (attraction, accessibility, accommodation, and activity) needed for a tourist destination, accessibility and activity assume critical importance in the context of Nepal. Attraction in the form of natural or cultural heritage is ubiquitous in the country, but access to these places and activities is a problem. The permission for private airlines to operate under the liberalised economic policies has relieved the constraints of seat capacity to remote mountain areas since 1992, although problems related to landing sites and equipment continue. The government is now prepared to allow the "Build, Operate, and Transfer (BOT) technique to solve this problem of aviation infrastructure.

With the exception of rafting in Trisuli (60 %), which is easily accessible at points along most of its entire length from Kathmandu to Chitwan (hub for wildlife tourism), other rivers with equal potential for rafting development have been constrained by the four As. Modern telecommunication facilities further add to the retarded development of other mountain tourist areas in Nepal.

Concerns over forest degradation and the increased use of firewood have received much attention, but no effective policy to control firewood use has been introduced. Alternative sources of fuel, such as mini-hydros, and solar panels, and so on, also play an important role in maintaining the environmental

balance of the fragile mountain areas visited by tourists. Small hydro plants have recently been established in the ACAP and Sagarmatha areas.

The operation of mountain tourism is centralised, with benefits accruing to a few operators in Kathmandu. The contribution of group tourism to the local economy is not considerable as compared to that of FITs. The proliferation of basic lodges and tea houses on popular trekking trails is due to the perceived demand created by movement of trekkers. Local people have been exploiting scarce forest resources to cater to the demands of trekkers. Because of their low awareness and education, the absorptive capacity of the local people is small. Efforts to raise their efficiency and absorptive capacity are either lacking or inadequate.

Some traditional areas with several years of mountain tourism operation have generated government revenue, but no attention has been paid to ploughing back revenue to set up essential infrastructure such as mini-hydros.

The existing policies and institutional structures are grossly inadequate for linking mountain tourism with other mountain economic activities. Scarce resource are exploited by a few for small gain. Sustainable tourism is being threatened.

The first innovative example of an NGO working closely with local people in conservation and sustainable use of natural resources was in the ACAP. Only recently has the Sagarmatha Pollution Control Project, funded by the WWF and recently by HMG, begun to be effective in garbage control and overall management of tourism resources through community participation. By and large, there are no adequate grassroots' agencies looking after tourism in mountain areas.

Nepal's mountaineering tourism is now suffering from self-glorifying *ad hoc* policy changes. The application procedures for mountaineering are cumbersome. The role of the liaison officer has been poorly defined. The practice of cash deposit for garbage disposal-despite the hike in royalty-and the attachment of a government liaison officer have been negatively perceived as unnecessary inconvenience by mountaineers. Despite periodic hikes in royalties, no additional facilities have been erected at important base camps. The new garbage regulation was clamped on the Khumbu in autumn 1992, in the face of increasing pressure on its environment due to an increase in mountaineering activities and the need to diversify mountaineering to the far west and east of the kingdom. However, there has been no active promotion of newly-opened

peaks by the MTCA in the international market. Despite having more than 6,000 peaks, Nepal has not been able to render this product supply-led because of weak marketing. Opening new peaks should be accompanied by other activities, such as trekking, in corresponding areas. Lowering royalty rates for lesser known peaks could be a selling strategy, but it has not been seriously considered.

### *Coordination*

Tourism is a multisectoral activity that requires strong and effective coordination between various sectors both in the private and public sector. Line agencies often conceive their area of jurisdiction narrowly and attend only to those problems that directly affect their sectoral interests. No effective body has been established to harmonise this situation. Recently, the Tourism Council was envisaged as being able to tackle this problem but this body has not been effective. It lacks information and it needs to be institutionalised. Even in Kathmandu, the economic linkages of the tourism sector with other sectors in the public and private sector are not known objectively enough.

### *Domestic Tourism*

Whatever domestic tourism exists in Nepal is in the form of pilgrimage tourism. The operations of international tourism have had some effect on the travel habits of the Nepalese, however, since the Nepalese have begun to go trekking, rafting, wildlife viewing, etc. As the incomes of the Nepalese begin to grow, domestic tourism has the potential to expand and fill the seasonal gaps. But so far, there has been little effort to promote domestic tourism. Tax breaks, for example, could provide an incentive for promoting domestic tourism.

Finally, setting aside part of the revenue from trek operations for local development and conservation has been announced as a policy; it has actually been put into practice in some areas such as upper Mustang and Khumbu. Notwithstanding, without appropriate planning that is supported by research, the newly generated revenue may not achieve the desired results for the local people.

## Analysis of the Problem

### Introduction

This study has attempted to provide a state-of-the-art review of tourism in the mountain regions of Nepal in light of the following major problems and issues as stated in the terms of reference: a) problem of exploitation and impingement on natural resources beyond sustainable limits; b) lack of linkages of tourism with local and regional production systems; c) lack of retention of benefits from tourism in tourist areas; d) high level of seasonality; and e) problem of policy and institutional development. The purpose of this chapter is to identify and analyse the major problems associated with mountain tourism in the context of the mountain environment and to suggest possible ways and means to internalise the value of the mountain environment. But first, a brief summary of the major issues that have emerged will be presented.

### Major Issues

The mountain environment in Nepal, which is an important source for generating income and employment through tourism in the mountain areas, is in a poor state. There is an urgent need to define the role of tourism in the context of mountain development. Opening new areas and building rudimentary infrastructure have been the sole basis for tourism and mountain development. As a result, only small pockets have been able to benefit and, in newly opened areas, local people are not deriving benefits from tourism as only group tourists are encouraged to visit such areas.

It is essential to have a clear long-term policy on what is desired from tourism in the context of mountain development. The national objective of tourism is to increase revenue growth, but there are several ways to achieve this growth. For example, growth can be achieved by encouraging a) more tourists to visit the country, b) tourists to spend more nights, c) by encouraging more spending, and d) by the development of import substitution industries. For a small country like Nepal, therefore, tourism development must be defined in terms of the national goal and an appropriate growth path must be prioritised. This growth must complement environmental conservation if tourism development is to be sustainable, especially in the fragile environment of the

mountain areas. Tourism development cannot be viewed in isolation from conservation, natural resource management, and mountain development. Thus, in the first instance, a clear objective on mountain development and the role of tourism needs to be assessed in all mountain areas that already have tourism and in other areas that have tourism potential.

There is an urgent need to improve the information base of the tourism sector in terms of the quality and quantity of information. Tourism is a multi-disciplinary activity involving the conservation of the old order of things and the development of new infrastructure and facilities. The tourism industry is a broad-based industry that has direct and indirect linkages with many other sectors of the economy. Good quality information will provide the basis for good quality research through which essential planning for this sector can be conducted.

The lack of periodic surveys on tourism, with consistent definition and coverage, makes it difficult to determine the demand for and supply of tourism in the country. This is vital for guiding the planning and management of the tourism industry, promoting marketing, prioritising investments, and formulating policies for tourism promotion. On the demand side, proper knowledge of the level of tourist expenditure patterns is important to understand the tastes and preferences of tourists with regard to different domestic products. This information will not only be useful for pricing domestic products but will also provide important information for the promotion of domestic industries. No system has been developed so far to conduct a regular periodic survey of the different industries that are involved in tourism. Any form of policy action taken is thus *ad hoc* and is often likely to miss its target.

The lack of periodic data (preferably on an annual basis) on the different entities that provide goods and services to tourists (hotels, airlines, travel agencies, trekking agencies, handicraft shops, carpets and garment industries, etc) makes it difficult to assess the supply components of the industry. In sum, the information on the tourism industry is so inadequate and limited that it is surprising how any policies have ever been formulated. Estimates indicate that 37 per cent of the total tourist expenditure in Nepal is exchanged in the black market.

The only comprehensive studies that have attempted to link the tourism industry with the entire economy have been those conducted by the Nepal Rastra Bank (NRB) and Khadka (1993). One major conclusion emerging from these studies is that a great portion of the revenue generated by tourism in

Nepal actually flows out due to the capacity constraint in the domestic economy. Such studies should be conducted on a periodic basis to formulate new policies and fine-tune the old ones.

There has been no concerted effort on the part of the government to view the mountain areas as potentially rich in a variety of unique natural resources. Neither has mountain tourism been conceived as an integral part of overall mountain development. This lack of perspective in Nepal appears to have led to a demand-induced tourism growth pattern that has not resulted in a sustainable basis for the development of mountain areas and mountain tourism.

The unique mountain environment of Nepal is increasingly being degraded, thereby reducing the tourist amenity and the visual appeal of the area. The scattered evidence on the mountain protected areas in Nepal clearly points to this. Since the nature of the studies conducted vary considerably over time it is difficult to form a clear picture of the various impacts and to determine their trends, severely limiting policy analysis as well as formulation. Clearly, the need for generating systematic information on the various dimensions of mountain areas and mountain tourism is necessary for guiding, planning, and managing mountain and tourism development.

Government policies to encourage the private-mountain-tourism sector are totally lacking; the preference is towards tourism investment in urban areas. The linkages of mountain tourism with the mountain economy have yet to be addressed.

Although research work might have benefitted from tourism, such research has been conducted only in the self-interests of scholars. A well-planned research agenda has not been conducted to assess the environmental resource base, its value, and sociocultural and economic characteristics, together with the feasibility of an investment package, before opening up new areas for tourism. Neither has there been an agenda to address the different problems of mountain areas and mountain tourism.

There are many issues and challenges that need to be addressed in terms of policy, despite the new policy framework recently made public. Since the Master Plan, the major thrust of all succeeding policies has been the diversification of sightseeing and adventure tourism.

Of the four As (attraction, accessibility, accommodation, and activity) needed to make a tourist destination, accessibility and activity assume critical impor-

tance in the context of Nepal. Although the liberal sky policy has relieved the seat capacity constraints of air travel to remote mountain areas since 1992, problems related to landing sites and equipment continue. With the exception of rafting on the Trisuli (60%), other rivers with comparable potential for rafting development have been constrained by the four As.

There is no effective policy and programme to control firewood use yet. The operation of mountain tourism remain centralised, with the benefits accruing to a few operators in Kathmandu. Some of the traditional areas with several years of mountain tourism activity have provided a revenue to the government, but no resources have been ploughed back to set up essential infrastructure such as mini-hydras and to carry out other conservation and development work inside the protected areas.

The existing policies and institutional structures are grossly inadequate for linking mountain tourism and other mountain economic activities. Scarce resources are exploited by a few for small gain. There is as yet no institution to specifically look at mountain tourism in Nepal.

Nepal's mountaineering tourism is now suffering from self-glorifying *ad hoc* policy changes. The application procedures for mountaineering are cumbersome. The requirement of a cash deposit to ensure garbage disposal-despite a hike in royalties and the attachment of a government liaison officer-is negatively perceived as unnecessary trouble by mountaineers and trekkers. Despite periodic hikes in royalties, no additional facilities have been erected at important tourist areas in the mountains.

A systematic approach to information sharing and feedback between the ministries related to tourism lacking. The lack of coordination in the formulation and implementation of sectoral plans and programmes is yet another problem on the institutional front. What is disturbing is that after so many years of knowledge about environmental degradation, new areas are opened without addressing ways and means to curb it.

### **Main Problem: Lack of Assessment of the Value of Environmental Resources**

It is necessary to consider the environmental resources that provide a flow of services to mankind. These environmental resource commodities or services at any time are uniquely determined by geological, hydrological, atmospheric, ecological, and other attributes of nature or the environment. Man modifies the

environmental attributes by his behaviour. For example, land use change from forest or agriculture to residential or commercial use, dumping waste in streams or rivers, building a dam, and so on, all these change the environmental attributes. Externalities - negative as well as positive - can be associated with these changes.

Mountain environmental resources are consumed directly or are used as primary inputs into the production of the environmental resource commodity or, simply, the environmental commodity. Presently, the users are local people and tourists who consume these commodities directly. There are other potential consumers as well, namely, all those who opt to consume the commodity at some future date and the future generation. Tourists purchase goods and services and consume then jointly with unpriced natural amenities such as natural beauty, scenery, climate, and so on. Local people use it to produce goods and services for their sustenance, or use it to produce goods and services for tourist consumption. Many other potential values of the flora, fauna, and nature functions remain unknown. Mountains are thus a store of unique environmental resources that have value and have no close substitutes. These environmental resources are regenerative but potentially exhaustible as the sustained flow of services can never exceed some finite rate.

Whenever an individual or a group of individuals derives satisfaction or fulfills a want from something, value is said to be generated. Economic value arises when satisfaction is derived from consuming the resources directly or indirectly. The economic value of an environmental resource consists of actual value, option value, existence value, and non-consumptive use value.<sup>1</sup>

Actual value is derived from the present or future use of resources and includes the direct personal or group benefits generated as well as the benefits that accrue to others indirectly. The actual value of an environmental resource could have a consumptive use value as well as a productive use value. Consumptive use value refers to the value placed on environmental resources consumed directly without passing through the market-place, e.g., consumption of firewood by households in mountain areas, use of highland grazing pastures, and so on. Productive use value refers to resources that are harvested for commercial purposes, e.g., firewood harvested to sell to tourist lodges, medicinal herbs, collected for sale and musk deer poaching<sup>2</sup>. When

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1 For detailed elaboration of these concepts and their usefulness see McNeely (1988); Dixon et al. (1986); and Winpenny (1991).

2 Despite being an illegal activity, poaching takes place because the potential (market) reward, despite the possibility of being caught, is very high.

environmental resources are harvested for consumptive or production purpose, externalities are generally generated, e.g., the external cost of deforestation as a result of fuelwood harvest. Benefits that occur to other parties are known as external benefits (positive externalities) or external values. If the externalities generated benefit others who are not directly involved in the consumption or production, the benefits should be added to actual value. If the externalities harm others, these should be deducted from actual values. The production and consumption of resources will be optimum from an environmental point of view only when all these environmental costs and benefits are internalised in their prices.

Option value refers to the option of individuals to postpone consumption of the environmental resource. This is an expression of preference or willingness to pay for the preservation of an environment against the probability that an individual or group will use it some time in the future. Furthermore, since the future is uncertain, society should prepare for unpredictable events. Also, some environmental resources may be unique, that is, they may not be substitutable. If such a unique resource is harvested beyond a certain limit, it could become extinct, which results in a large 'option demand.' The best way to avoid all these dangers is for society to preserve as many environmental 'niche' (protected areas), gene pool, or important environmental resources as possible, e.g., the creation of strict nature preserves such as the Makalu-Barun National Park. The willingness to pay<sup>3</sup> to preserve an environment for the benefit of our children and grandchildren is also a form of option value, which is better known as bequest value.

Existence value is concerned with the right and welfare of non-human beings. Many people value the existence of cultural sites, wildlife species, scenic places, and so on, although they may not be of actual use. If there was no value placed on the mere existence of non-human beings, tigers, red panda, musk deer, and rhinoceri (protected by law) found in Nepal would be extinct through poaching.

It is also important to take into account-in the case of environmental resources-the many functions and services provided to mankind by nature, i.e., non-consumptive use value of environmental resources. These are consumed by society without being traded in the market or valued in national accounts. The issues of irreversibility, uncertainty, and uniqueness are also important here.

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3 It is the amount an individual is willing to pay for the consumption of the commodity now or at some later date.

The special attributes of ecosystems that provide refuges to unique biodiversity, watersheds, the waste assimilative capacity of the natural environment, and so on, are examples of such values. The relative importance of the above types of values operate at different levels. For example, consumptive use value is more relevant at the community level, productive use value at the national level, and option and existence value mostly at the international level.

There are serious problems encountered in the valuation of environmental resources. Although consumptive use value of environmental resources may be proxied by market prices, such market prices may not always reflect the true scarcity value of such resources to society. Livestock grazing on seasonal high altitude pastures, or the value of fodder consumed, and so on, are difficult to value since there are no appropriate market prices for them, even though the physical units consumed could be quantified. Productive use value might refer to resources harvested for commercial purposes-one would expect their market prices to reflect the value society assigns to them-but there are problems nevertheless. The general practice is to price such resources at the production point rather than at the retail point, the price at the latter generally being many times greater. An example here would be medicinal herbs, or the musk (poached), which are priced much lower at the harvest point than at the retail point.

The concept of option value poses an even greater problem. In the first place, it cannot be said whether option value is negative or positive. This is due to the uncertainty in future income and the nature of society's risk taking. If a society's future income is uncertain and the society is a risk averter, the willingness to pay to retain the option for future consumption cannot be high, and the preference to consume the resource immediately is likely to dominate. If the reverse were true, there would be a strong motivation to conserve the resource since the option value would be high. Even greater problems are encountered when it comes to existence and non-consumptive use values. The economic value of environmental resources is then the sum of all the different values described above, which is not easy or always possible to quantify.

Despite the complexities of valuation, these concepts can be useful in determining environmental policy in the mountain areas. If option, existence, and non-consumptive use values turn out to be large in relation to actual value, it would imply a strong policy bias towards conservation. If the beneficiaries (those who value the option, existence, and non-consumptive uses) are tourists, the losers mountain people (loss in terms of actual benefits foregone

by local mountain people), the conservation policy would require a transfer of income from tourists to the local people.

## **Problem Analysis**

### *Government Intervention and Policy Weaknesses*

The failure of the market to allocate the environmental resource commodity and the externalities that have occurred in the context of mountain tourism can be identified as the main problems demanding government intervention. Policy failure is defined as a government intervention that exacerbates an existing market failure or that distorts a well-functioning market. Governments intervene by introducing policies to correct the market failure. The mere fact of a market failure does not, however, justify government intervention, if such an intervention could lead to a worsening of the problem it was meant to correct. In developing countries, misguided interventions or inappropriate policies and market failures have been blamed for environmental deterioration. Chapter 5 discussed the various policies related to the tourism sector, with the condition that there are inadequate and inappropriate policies (e.g., conflicts in protected areas) and that, where interventions exist, their enforcement has been weak (e.g., kerosene ).

There are many examples that can be cited here from previous chapters. In protected areas, there is continued use of firewood; lack of non-wood fuel and kerosene use; poaching; *ad hoc* changes in visa fees; absence of an appropriate pricing mechanism in the case of park entrance fees, trekking fees, and mountaineering fees; the opening of new areas (e.g., Manaslu, Kanchenjunga, etc.) without prior assessment of their potential value and investments; poor enforcement and the lack of economic incentive and disincentive measures at the community level in managing the resources; and so on. It should be stressed that, in certain cases, government interventions in the absence of rationality can lead to further distortions in the market (i.e., policy-induced market

distortion). Interventions require adequate knowledge of the value of the environment and of the market failure before they are carried out.

### *Market Failure*

When the economic value of an environmental resource commodity is taken into account, it exhibits the characteristics of a public good. A public good has

two basic characteristics, namely, non-rivalry in consumption and non-exclusion. Non-rivalry in consumption means that consumption by one person need not diminish the quantity consumed by anyone else, e.g., joint consumption of the Himalayan scenery by tourists from all over the world year after year. It is not possible to specify the amount of Himalayan scenery a tourist can consume and say that there is not enough for the next generation, i.e., the resource commodity is non-excludable. Non-exclusion means that the benefits accruing from an environmental resource commodity are impossible to confine to selected individuals, or that it would be prohibitively costly to do so. As a result, whether anyone is willing to pay or not, everyone can derive benefit from it (e.g., individual or group trekkers).<sup>4</sup>

These properties of the public good imply difficulties for the market pricing mechanism. In the market, the pricing mechanism operates on a rationing basis since only those who can pay the price are able to enjoy the good, i.e., the market rations the good to those who value it the most. In the absence of non-excludability, sellers cannot exact a price since the consumer can consume it without paying the price. Hence, no voluntary price can be charged in the absence of non-excludability and whatever prices charged have to be coercive. This is the case of the free rider problem in the case of a pure public good.

When commodities exhibit the characteristic of a public good and externalities are involved, what arises is the fundamental problem of resource allocation. Resources are assumed to be allocated efficiently by markets or through government interventions when markets fail to allocate resources efficiently. In relation to mountain environmental resources, both these institutions have failed to allocate resources efficiently in the present context of Nepal. An allocation mechanism is said to be efficient in the context of environmental resources if the net present value (NPV) is maximised (Conrad and Clark 1981) not only for the present generation but for future generations. The NPV as a criterion for resource allocation is relevant to both private (markets) as well as public (government) management decisions, although how costs and benefits are measured will vary significantly in the two cases. The divergence of private and public interest is another cause of market failure leading to resource misallocation.

There is another complication involved when private and public managements are involved and NPV has to be maximised. The value of the supply of various

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4 In some cases it is possible to restrict consumption, e.g., restricting the number of tourists visiting an area so that only those paying can visit the area. But among those visiting the area, there can be no exclusion.

services provided by mountain environments has to be discounted to the present time by an appropriate discount rate, which, however, varies with the private and public sector. The private management decisions have a short-time horizon, meaning private parties are unwilling to wait long to capture benefits emanating from their investments. On the other hand, the public sector can wait for a much longer period and thus its discount rate is said to be low. There is a distinct problem in reaching an appropriate discount rate, and the problem is compounded if different discount rates have to apply to different services and parties.<sup>5</sup>

All these complications lead to inappropriate scarcity signals in the market, and the fundamental problem of resource allocation arises. Chapter 4 provided evidence to show that there is a serious allocation problem in terms of the resource commodity. The pollution, littering, and deforestation, as well as others identified, are examples of an allocation problem. Also, there have been externalities generated, some positive and others negative. If there was a scarcity and the markets reflected it, the high prices that resulted would lead to resource conservation. Such disassociation between scarcity and price, between benefits and costs, and between action and consequences exist because of market failure and policy distortions. But, in the absence of markets, there is over-consumption of the resource commodity, which in turn generates externalities.

### *Redistribution and Inequality*

Besides the allocation problem discussed above, there are problems associated with the distribution of benefits accruing from the environmental resource commodities or services. The manner in which the development of the mountain environment and mountain tourism has taken place is partly responsible for this problem. The weak linkage between mountain development and tourism indicates that the development benefits of tourism have not spread equitably. The weak linkage of local areas with mountain tourism also resulted from the absence of any policy directives. Although alternative development in mountain areas may be limited, given the climate, accessibility, and resource

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5 Private management is concerned with actual and internalised costs, whereas public management is often concerned with social and external costs. Private individuals cannot take risks and have a shorter time horizon relative to that of the society, implying that the private discount rate is higher than society's. This divergence between private and public interest has a direct bearing on resource allocation, and, under a higher discount rate, resources are extracted at a faster rate than under a lower discount rate.

base of these areas, there have been no initiatives to examine the possibilities of linking local economies with tourism. The generation of income and employment currently occurring in the mountain areas does not necessarily imply that mountain tourism is strongly linked with the local economy. The nature of the production system in the mountain areas is by and large subsistence-oriented and is unable to provide the types of products demanded by tourists. This problem is compounded by climatic conditions and difficult accessibility in these areas, and these too limit the scope for a wide variety of products (agricultural) and their easy flow.

Mountain tourism in newly opened areas has not benefitted the local people to the extent tourism has in the older areas of SNP, ACAP, and LNP. In newly opened areas, such as Manaslu, Kanchenjunga, and Dolpa, it is usually outsiders who get most of the jobs and benefits.

The development of mountain tourism in Nepal has followed a virtually demand-driven growth process. As tourists began to visit the areas, the local people have responded to tourist demands, resulting in the development of places like Namche Bazaar, Dhunche, and the Annapurna Area. There has been little effort through policy intervention to guide development. Perhaps in the initial stages of tourism-led development in such remote areas, where there were no viable alternative economic opportunities, this was the only course. Each sector was found to develop and to respond independently to increased tourist demand. In this process, the traditional farming community came under pressure from the needs of residential or commercial construction.

Tourism is popular in the hill and mountain regions that are generally economically deprived and characterised by subsistence households. Such households are unable to meet the food and shelter needs of the large numbers of tourists. Thus, tourists visiting such areas bring most of the essential items they need for their trip. What they leave behind is garbage and refuse. Moreover, most of the essential items they bring along are often imported goods, which poses the question whether even the country fully benefits from tourism.

As with the tourism industry all over the world, Nepal's too is fairly seasonal, its mountain tourism specifically so. This has been highlighted in an earlier chapter on tourist arrivals and tourism's seasonality. At least with regard to mountaineering, the seasonality is partly due to the regulations of HMG, which preclude climbing activities during June-August and the second half of November-February (Gurung 1990).

The seasonal nature of tourism has certain disadvantages as well as advantages in the context of mountain tourism. First, from the tourist point of view, seasonality leads to the possibility of crowding or congestion in an area. The crowding issue has not been adequately addressed in the context of mountain tourism. Some studies indicate that the symptoms of the problem are beginning to appear in places like Langtang and Sagarmatha (Banskota and Upadhyay 1989).

The second negative aspect of seasonality is in terms of the income and employment generation of tourism. Income and employment are generated by mountain tourism only during the seasons tourists visit these areas. In the rest of the year, the local industry has no potential to generate income and employment because these areas lack other alternatives.

However, despite the negative aspects of seasonal tourism, it appears to have some important advantages in the context of Nepal's mountain tourism. If large-scale tourism was to be conducted in the off-season, namely, June to September, as during the dry and winter seasons, it would coincide with the monsoon season. Travelling in the mountains during this season is arduous and risky. Small or temporary bridges are washed out by swift mountain rivers, trails are slippery, or washed out. Weather conditions, such as the regular overcast skies, make it extremely risky to evacuate people in case of emergencies. Also, most of the mountain areas are predominantly agricultural, and this season is the main agricultural season. If people were to find employment in tourism during this time, it is likely agriculture would suffer, which would only lead to greater food shortages in these areas. The resulting price rises for food would effect the poorer sections of mountain society. Food shortages in the subsistence economy of such mountain areas would be devastating to many for these reasons. The seasonal nature of tourism may be a blessing to the mountain economy.

### *Limits of the Mountain Environment*

There is another important dimension to seasonality that has ramifications for the environment. The abundant growth in natural vegetation in the hills and mountains occurs at a time when the stress factor arising from tourism is absent. If seasonality were somehow to be spread out, in the absence of a fairly unmanaged mountain tourism, what would be the impact on the natural vegetation? After all, a lot of natural vegetation trampled by tourists during the peak seasons is revived during the monsoon period when the flow of tourists

is almost zero. Therefore, even for the revival of the natural vegetation in places close to the tree line where mountaineers pitch their base camps, where the natural vegetation is destroyed, where pastures have been trampled by thousands of tourists, and where rivers and water sources have been polluted by refuse and garbage, the monsoon is nature washing out all these negative factors to bring new life to the mountain environment. From this perspective, the seasonal nature of mountain tourism helps to conserve the mountain environment.

It is, however, important to realise that these mountain areas may have endemic species that may be endangered or rare. Although tourism slackens during the monsoon seasons and allows healthy vegetative growth, there is the danger that too much tourism during the winter season could harm or ruin these endangered or rare endemic species, resulting in irreversible loss.

The environment is endowed with attributes such as atmosphere, hydrology, ecology, geology, and so on. These attributes are linked in unique way to produce environmental goods and services. Man enters the production system as a modifier of the environmental attributes, a role he carries out directly or indirectly, bringing land use changes (conversion of agricultural land to lodges, creation of national parks), removing vegetation, or disturbing soil (e.g., construction of an airport or trail in the wilderness). The side effects can be expected or unexpected when direct effects are involved. For example, the opening of a national park can lead to greater encroachment in forests outside the park, or wildlife from forests outside may enter the park as parks provide greater protection. Since the full nature of the relationship between different attributes of nature is not known, caution needs to be exercised when man intervenes in the environment.

## **Internalising Mountain Environmental Values for Development**

The major problem in the context of tourism in the mountains has been stated as "*the lack of appreciation of the value of environmental resources and the lack of a vision on mountain and tourism development.*" The problem was then analysed in terms of the absence, weaknesses, or failure of policies and institutions, including markets, to allocate these resources efficiently to conserve the environment and achieve greater benefits. Without an appreciation of the value of the environmental resources and a vision of mountain development, tourism development alone cannot be considered a panacea to improve the livelihood of the large majority of mountain people.

A great deal of work remains to be done in this area, and it needs to be done urgently to conserve the environment. Some major steps that should be taken are given below.

- Assess the value of the environmental resources in terms of their contribution to local, regional, and national economy.
- Develop a vision of mountain development.
- Develop a vision of tourism development in Nepal, in general, and a vision of mountain tourism in particular.
- Identify areas that have potential for tourism development in the context of environmental resources.
- Assess the role of tourism in such areas in terms of whether tourism can play a leading or secondary role.
- Identify and assess the role of environmental resources for community development and this can be linked with tourism development.
- Develop appropriate institutional mechanisms at the national and local level with and other agencies, such as NGOs, to coordinate activities that affect the community and tourism development.
- Develop research programmes to identify problems, opportunities, mitigation methods, and so on.
- Enact and enforce law regulations.
- Develop economic incentive methods to encourage behaviour that conserves resources, link local community-based activities with tourism, promote investments in local areas, and so on.

In many places of the mountain areas of Nepal, conservation means modifying the traditional behaviour of local people and of tourists. To the tourist, a change in behaviour for the sake of conservation may not be as severe as in the case of local people who depend very much on the use of resources. In the case of Nepal, this has been witnessed in the case of most protected areas where conservation has brought about a conflict between local people and the management authority. This conflict is generally related to the modification of behaviour in the absence of alternative incentives to compensate for changes local people have been forced to make due to policy intervention (Kharel 1993; Steven et al. 1993b; Yonzon 1993). Similarly, such conservation has not resulted in the same negative effect on tourism (Robinson 1993).

The objective of economic incentives should be to motivate behaviour that is conducive to conservation, on the one hand, and to tourism development on

the other. The main objective of using incentives is to smooth the uneven distribution of social costs and benefits of conserving the mountain environment and to use these incentives as policy tools for correcting the problems stemming from market failure and misguided policies. An economic incentive is an inducement that is intended to motivate people to conserve environmental resources (e.g., concessions, compensation, secured land tenure, subsidies, etc). Likewise, an economic disincentive is an inducement or mechanism that discourages people from depleting mountain environmental resources (e.g., fines, taxes, and penalties administered through legislation). As has been discussed in the context of mountain environmental resources, the current process and form of development are depleting the mountain environment. The problem is already serious and warrants immediate government action, namely, the assessment of the value of mountain environmental resources and their contribution to the local, regional, and national as well as international economy. Economic incentives and disincentives at the national and community level can play an important role in conserving mountain environmental resources. Therefore, a realistic incentive package through appropriate government policies needs to be designed and developed at the national, regional, and community levels. But because the economic incentives at the community level depend substantially on proper policy support from the national level, it is essential for the government to determine conservation and development-related policies.

Government policies are needed to compensate for externalities and other market failures. Economic incentives in the form of taxes on activities that generate negative externalities (social cost) and subsidies on activities that generate positive externalities (social benefits) should be encouraged. The government should analyse the impact of all relevant policies on environmental resources on the determination of marginal opportunity cost. Based on the policy review, government should eliminate or reduce policy distortions such as subsidies and price control that favour environmentally unsound practices. Another important role of government is to establish a structure of responsibility for managing environmental resources. Incentives should be used to create institutional settings in which the property rights of a specific population are held by single decision-making units.

Finally, in order to operationalise conservation incentives, the concept of carrying capacity is suggested to be appropriate. The following section will briefly discuss the concept in relation to mountain and tourism development and environmental resources.

## Carrying Capacity

This section attempts to highlight the bare bones of a framework to address the above problems in relation to mountain environment and mountain tourism. The environment is considered to consist of the natural, cultural, and the economic environments (Rau 1980). The natural environment is composed of natural resources such as water, forests, landscape, and so on. The cultural environment is composed of cultural institutions, monuments, customs, traditions, and so on. The economic environment is composed of production and consumption activities, technology, markets, and so on, (see Figure 6.1 where feedback loops are shown by the double line). These three environments interact to determine the quality of the overall environment. Each has an upper limit, beyond which negative effects occur, that affects the quality of the overall environment. Thus, the carrying capacity of the environment needs to be understood. To keep matters operationally tractable, it will be useful to consider the carrying capacity of a small area or region.<sup>6</sup>

Furthermore, it is operationally more tractable to focus on sustainable resource use in the context of the mountain environment. This applies to the renewable stock of natural resources and reflects the idea that the use of goods and services provided by such resources can be regulated to maintain an optimal stock level. Resources, or the resource base, means all renewable resources and their regenerative support system-resources that are critically important for regional welfare. Regional development can be assumed to fulfill the following:

- economic progress and/or potential of the area concerned,
- ecological values and/or constraints of the area concerned, and
- the economic and environmental interest of parties not directly involved (other regions; different generations).

In the present context, mountain development needs to be clarified. Simply stating that mountain tourism involves activities (trekking, hiking, mountaineering, sight-seeing, etc) of tourists in mountain areas is not sufficient. A concept of mountain tourism should involve the local people, their institutions, and their social and cultural values. Tourism should benefit these people, tourists should be able to enjoy goods and services for which they pay, and the mountain environment (including the different ecosystems, gene pools,

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6 These concepts are highlighted in Nijkamp et al. (1990); Winpenny (1991); and McNeely (1988).

wildlife, plants, etc, it harbours) should never be put to stress. Furthermore, the complex nature of the mountain environment (of which very little is understood) and its vast geographical area suggests that it may be helpful to limit the area of enquiry within a defined geographical boundary.

In order to operationalise the carrying capacity concept, it needs to be further simplified. Although the concept of carrying capacity is difficult to operationalise, the approach taken should identify the critical resources that are involved directly or indirectly in the mountain environment and understand the stress on these critical resources (see Figure 6.1). Within the mountain environment, certain resources are more critical than others in that development (including tourism) can bring rapid negative changes in their densities due to stress. Minimum densities are necessary for the maintenance of a gene pool. Furthermore, some resources may be abundantly available in a relative sense; their use pattern could lead to a rapid depletion of stock.

Areas characterised by such critical resources are critical areas. Such areas may also be characterised by other fragile attributes of nature, e.g., slope, loose soil, etc. Critical areas thus need to be identified, and human interventions have to be minimised.

If human action, or behaviour was not present, the need for a carrying capacity analysis would not be necessary. However, development involves human behaviour, which is not neutral. Human actions retard or accelerate stress on the environment. Such behaviour is called critical behaviour. It brings changes in species' composition, leads to deforestation, littering, and so on, other types of negative or positive effects could also result. Inducing appropriate changes in human behaviour and the mode of development can, therefore, minimise stress on the environment.

There is no disagreement that development in the mountains is necessary. Poverty is chronic and rampant in the mountain areas. The mountain people live in areas that are rich in the sense of the environment, but they are poor and unable to use resources to conserve the environment. Often, when development takes place, it exacerbates resource depletion or deterioration (allocation problem). Benefits are thinly spread (distribution problem) and people are forced to further deplete resources. The environment is further ruined (scale problem). Therefore, the need for development that does not impinge on the resource base and that benefits a large number of people needs to be designed, i.e., critical development.

Three critical institutions appear to be important in mountain development. The local community has to become a participant in the development of its environment. Some external institution, such as an NGO, has to work with the local people to identify the critical issues and to plan. The agency should be able to bring in external resources and knowledge and act as a liaison between the local people and other external institutions, including government. Finally, there has to be a responsible agency in the public sector to monitor the mountain environment, set standards, and devise policies.

# Annotated Bibliography

(not necessarily cited in the text)

**Banskota, K., 1974.** "Rural Tourism, Income, and Employment." M.A. Thesis, Tribhuvan University, Kathmandu, Nepal, 1974.

The study concentrates on the employment and income effects of tourism. The occupancy rate in some hotels in Kathmandu and the impact of tourism on employment in the hotel industry is discussed. It also deals with trekking tourism and its impact on local income, resulting primarily from the wages and salaries received by porters.

**Banskota, K. and Upadhyay, M., 1989** "A Survey of Trekking Tourists in Langtang National Park." Kathmandu, Nepal; publisher not given.

This study is based on a visitor-use survey of some 104 trekking tourists in Langtang National Park conducted during the 1988-89 winter season. The authors provide information on the perceptions of the trekkers regarding the state of the natural environment, accommodation, food, expenditure patterns of trekkers, and issues important to park management.

**Banskota, K. and Upadhyay, M., 1990** "Tourism Management Component." *The Makalu-Barun Conservation Project*. Kathmandu: Department of National Parks and Wildlife Conservation, His Majesty's Government and Woodlands Mountain Institute.

As part of an overall comprehensive study in drafting a management plan for the Makalu-Barun National Park and Conservation Area, this study focused on the development of tourism. It identifies the growth potential of tourism development in this area and recommends that, before tourism is promoted, the basis for tourism management must be established. The importance of nature protection, diffusion of tourism income over a wider local community, linkages of tourism with local development, and the need for infrastructural development are all identified. The opportunities for development potentials and the necessary policies are systematically identified.

**Banskota, K. and Upadhyay, M., 1991a.** "Rural Tourism and Environment in Nepal: A Compilation of Some Selected Literature." Report 18. *The*

*Makalu-Barun Conservation Project.* Kathmandu: Department of National Parks and Wildlife Conservation, His Majesty's Government and Woodlands' Mountain Institute.

**Banskota, K. and Upadhyay, M., 1991b.** "Impact of Rural Tourism on the Environment, Income, and Employment in the Makalu-Barun Area." Report 17. *The Makalu-Barun Conservation Project.* Kathmandu: Department of National Parks and Wildlife Conservation, His Majesty's Government and Woodlands Mountain Institute.

This comprehensive study summarises the impact of mountain tourism in terms of income, employment, land use, deforestation, etc. The study is based on secondary sources of information. It was part of an exercise the authors carried during the drafting of the "Management Plan for the Makalu-Barun National Park and Conservation Area."

**Banskota, K. and Sharma, B. 1993a.** *Performance of the Tourism Sector.* ADPI Series No. 4. Kathmandu: ICIMOD.

This study provides a comprehensive review of the literature that was used as an input-output model to address a variety of macroeconomic issues related to tourism in Nepal. The study synthesises various other studies to provide a comprehensive picture of Nepal's tourism industry and to address policy issues.

**Banskota, K. and Sharma, B. 1993b.** "Economic and Natural Resource Conditions in the Districts of Bagmati Zone and Their Implications on the Environment: An Adaptive Policy Simulation Model." Report Submitted to ICIMOD, Kathmandu, Nepal.

**Banskota M.; Sharma, P.; Sharma, S.; Bhatta, B.; Banskota, K.; and Tenzing, T., 1990.** *Economic Policies for Sustainable Development in Nepal.* Kathmandu, Nepal: ICIMOD.

Economic and environmental trends in Nepal are analysed from a sectoral, institutional, resource base, and from a policy point of view. The dimensions of unsustainability are then addressed by bringing out major issues in sectoral plans and policies. The study stresses the need for a transition towards sustainable development that is strongly based on improving the management of the renewable resources base, including human resources, using clean energy, promoting tourism that is environmentally sustainable, and mobilising local community organisations and initiatives.

**Baumgartner, F. et al., 1978.** "Tourism and Development in Nepal: Impacts of Trekking-Tourism in Hill Areas." Report on a field survey in Autumn 1977. Zurich, Switzerland. 1978.

The main goals of this study were to recommend ways to increase foreign exchange earnings by developing tourism and making the balance of payments favourable to the country; to increase the scope of employment by developing local arts and handicrafts and raising the purchasing power of the majority of the people; to install tourist centres at appropriate places; and to encourage inter-regional and regional tourism. The major recommendations of the study are divided into four parts, namely, ways to increase foreign exchange earnings; employment and income generation; and regional development and special issues (improvement of the traditional economy, route policy, controlling and diverting energy consumption, training courses for sirdar level guides.

**Bhattarai, S., 1985.** "Environmental Impact of Tourism on the Mountain Ecosystem". In *People and Protected Areas in the Hindu Kush-Himalaya*. Proceedings of the International Workshop on the Management of National Parks and Protected Areas in the Hindu Kush-Himalayas. Edited by J.A. McNeely, J.W. Thorsell and S.R. Chalise. Kathmandu: KMTNC and ICIMOD.

This paper outlines some of the problems of tourism and presents a strategy for improved tourism management in the mountain environment with regard to policies on tourism, alternative energy sources, improved waste disposal, assessment of carrying capacity, expanded research, appropriate training, and enhanced opportunities for rural people to benefit from tourism.

**Bjonness, I.M., 1980.** "Ecological Conflicts and Economic Dependency on Tourist Trekking in Sagarmatha (Mt. Everest) National Park (SNP), Nepal. An Alternative Approach to Park Planning." In *Norwegian Journal of Geography*, March.

The author points out that the flow of tourists to Sagarmatha National Park has been increasing over the years and has reached a more or less stable situation. The pressure on the demand for food, shelter, firewood, and other services has reached a critical point which is manifested in the natural, economic, and social environment of the area.

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**Bunting, B.W.**, 1985. "Annapurna National Park: The Nepal Plan for Joining Human Values and Conservation of a Mountain Ecosystem." In *People and Protected Areas in the Hindu Kush-Himalaya*. Proceedings of the International Workshop on the Management of National Parks and Protected Areas in the Hindu Kush-Himalayas. Edited by J.A. McNeely, J.W. Thorsell and S.R. Chalise. Kathmandu: KMTNC and ICIMOD.

**Byers, A.C. and Banskota, K.**, 1993. "Environmental Impacts of Back-country Tourism on Three Sides of Everest." In *World Heritage Twenty Years Later*. Switzerland and U.K.: IUCN (Gland) and Cambridge, University Press. Also printed in *Parks, Peaks, and People*. Compiled and edited by L.S. Hamilton, D.P. Bauer, and H.F. Takeuchi. East-West Centre Programme on Environment with Assistance from the Woodlands' Mountain Institute, U.S. National Parks Service, and IUCN. 1993.

Case histories of three protected areas in the vicinity of Mt. Everest are reviewed, focussing on contemporary fuelwood and refuse disposal problems encountered in the approaches to the Everest and Makalu base camps. Included are discussions of Sagarmatha National Park, Nepal (established in 1976), Rongbuk glacier area of Qomolangma Nature Preserve, Tibet Autonomous Region (est. 1988), and Makalu-Barun National Park and Conservation Area, Nepal (est. 1991). It is suggested that accessibility and differing management policies have clearly influenced contemporary tourist impacts, ranging from the distinct and quantifiable social/landscape changes in the Sagarmatha National Park during the past 20 years to the comparatively pristine conditions still found in the remote Makalu-Barun region. Regardless of current conditions, however, it is suggested that all three sites will continue to face chronic problems of energy (fuelwood) supply, concurrent landscape degradation, and garbage disposal alternatives. Existing and proposed solutions to these problems are discussed and discussions include a review of fuelwood use philosophies and options, promising energy-related technologies, and tourist/trekking agency behaviour modification.

**Byers, A.**, 1987. "An Assessment of Landscape Change in the Khumbu Region of Nepal Using Repeat Photography." In *Mountain Research and Development*. Vol. 7, No. 1.

Visual assessment of landscape change is conducted using photography taken in 1960 and 1984 in the Sagarmatha National Park area to evaluate whether significant changes have occurred. Most forests appear to have changed little, considerable thinning of certain juniper woodlands has occurred, little change of a medium-to large-scale geomorphic nature can be discerned and several distinctive tourist-and

park-related structures are apparent. The author argues that, contrary to belief, land uses have not changed significantly.

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Natural resource accounting primarily aims to provide a true measurement of the national income by accounting properly for the depletion of natural resources incurred in the pursuit of economic development and the environmental protection costs spent. The concept is an integration of the natural resources and environmental information into the System of National Accounts (SNA). Despite dilemmas for such integration and the still evolving methods of valuation, resource accounting should be initiated as early as possible in the development of protected areas. The information generated in the process of accounting has many practical applications other than the accurate determination of income. Accounting for biological resources, even without the benefit of accurate valuation, will provide a framework for an information system that will facilitate management and development of protected areas.

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**Chettri, J.K; Neupane, I.; and Sharma, B., 1992.** *Off-Farm Employment in Nepal: A Case Study of Marpha-Jomsom VDCs, Mustang District.* MPE Series No 18. Kathmandu: International Centre for Integrated Mountain Development.

**Conard, J.M. and Clark, C., 1981. *Natural Resource Economics*. Cambridge: Cambridge University Press**

This is a technical book meant for students of natural resource economics. It provides a good exposition of the optimal control theory and applies it in the context of natural resource economics.

**Cunha, S.S., 1993. "Action for Proposed Mountain Protected Areas in the High Pamirs, Tajikistan." In *Parks, Peaks and People*, compiled and edited by Hamilton, L.S., Bauer, D.P and Takeuchi, H.F. U.S.: East-West Centre Programme on Environment with Assistance from the Woodlands Mountain Institute, U.S. National Parks Service and IUCN.**

This paper briefly describes the physical and cultural geography of the Pamir Mountains, reviews recent legislative action pertaining to the proposed park, and presents an action plan developed during the parks, peak, and people consultation held in Hawaii Volcanoes National Park.

**De Boer, J., 1989. "Environment and the Poor: Sustainable Approaches to Hillside Agricultural Development". In *Environment and The Poor: Development Strategies for a Common Agenda*. H. J. Leonard, ed. New Brunswick and Oxford: Transaction Books.**

Among a series of other papers in the volume, this article addresses the problem of agriculture in the Himalayan region, where environmental degradation is associated with human impact. A major cause of the environmental degradation is related to poverty. It analyses the constraints faced by hill farmers and the environment-poverty problem. It argues that conventional approaches to the development of hill areas and currently available technologies are insufficient to deal with the problem. Policies issues are then addressed.

**Denman, R., 1992. "Fostering Ecotourism Enterprises in Local Communities." The Tourism Company. IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.**

There are strong reasons why a particular effort should be made to stimulate appropriate ecotourism activities and enterprises that involve local communities and local entrepreneurs to ensure a higher percentage of tourism spending stays within the local economy and to secure participation by local people in conservation issues and appreciation of their own environment. The challenge is to ensure that local tourism enterprises are: ecologically sound and relevant to the objectives of the protected area; commercially viable; and of the right quality for the

international and domestic market. This requires enterprises to be of an appropriate scale and to reflect local themes and styles in design; integrate with local economies and communities; develop activities that enable visitors to experience aspects of the environment in an appropriate way; and raise visitor consciousness of conservation issues. There is a need to influence both existing enterprises and potential developments.

**Department of Tourism (DOT).** 1972. *Nepal Tourism Master Plan*. Kathmandu, Nepal: DOT.

----- 1984 *Tourism Master Plan - Mid-term Evaluation Report*. Kathmandu: DOT

----- (DOT); *Tourism Statistics*, various issues.

**Development Research and Training Centre,** 1993. "Parallel Markets for Foreign Currencies in Nepal." Report submitted to IRIS/University of Maryland USA. Research Report.

**Dixon, J. and Hufschmidt, M.M.** (eds), 1986. *Economic Valuation Techniques for the Environment: A Case Study Workbook*. Baltimore and London: The John Hopkins' University Press.

The authors have edited a collection of work that apply to the valuation of different aspects of the environment resulting from development projects. The first part of the book provides a general overview of the valuation techniques, the second part deals with a collection of applied work.

**Dixon, J. A.; Carpenter, R.C.; Fallon, L.A.; Sherman, P.; and Manopimoke, S.,** 1992. *Economic Analysis of the Environmental Impacts of Development Projects*. London: Earthscan Publications Limited, London in association with Sherman and the Asian Development Bank, Manila.

This book demonstrates the applicability of a range of quantitative economic valuation techniques to the planning and appraisal of development projects that have environmental components in them.

**Environmental Resources Limited (ERL),** 1989, "Natural Resource Management for Sustainable Development; A Study of Feasible Policies, Institutions and Investment Activities in Nepal with Special Emphasis on the Hills." Draft Final Report, London. 1989.

This was a major study and here only the tourism part is summarised. Its goal was to study feasible policies, institutions, and investments in Nepal, with special emphasis on the hills. The tourism section deals with managing the impacts of tourism and infrastructural development on the hill resource base. Tourism and infrastructural development are considered to be the two chief sources impacting the hill resource base. Natural resource tourism, which is growing annually in Nepal, impacts the resource base via the demand created upon fuelwood, environmental pollution, and conflicts with the resource needs of the local people. It argues that steps can be taken for better management of the resource base. To manage tourism impacts, it suggests management and monitoring of a) natural areas, b) regulatory mechanisms, c) user charges and pricing, and d) local incentives and diversification. User charges and pricing have not been used as tools to manage the environment. Incentives for local people have been provided through limited access to certain resources of the park, but the process of involving local people in policy, planning, and implementation has not been effectively conducted. Finally, the study recommends five actions for the future, namely, introduction of fuel sufficiency rule, incentives for local people through rewritten management plans, investment in infrastructure, clarification of responsibilities, and maximisation of local technical ability.

**Fisher, J.F., 1986.** "Tourist and Sherpas." Contributions to Nepalese Studies, CNAS, Tribhuvan University. Vol. 14, No. 1.

**Fowkes, J. and Fowkes, S., 1992.** " Private Sector Involvement in the Development of Tourism in Conservation Areas and the Opportunities for Linking such Development to Local Communities," University of Cape Town, South Africa. IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

This paper presents a method of evaluating activities in which private sector participation could or should be encouraged in the development of tourism in conservation areas. It identifies institutional structures in which local communities could be incorporated in such development. It points to the dual economic role of conservation areas - that of a collective good held by the state for the benefit of all and that of the recreational toll good for which the user should pay. The paper establishes a framework comprised of the components and activities within a conservation area showing where private sector involvement may be appropriate in their development. From this framework are identified those areas that should not be privatised, those that it is not desirable to privatise, and those areas that are appropriate for private sector involvement. The conclusion drawn is that the State has an over-

riding responsibility to retain ownership and management of conservation areas held on behalf of the nation. The private sector has a valid role in the development and management of pre-identified activities within the management plan.

**Friend, J., 1983.** *Trek Tourism, Energy and Ecologically-related Impacts within the World's Deepest Valley.* Hobart, Tasmania, Australia: Centre for Environmental Studies, University of Tasmania.

This study was concentrated in the village of Tatopani (125 residents, consisting of *Magar, Thakali, Chettri, and Newar*) in Myagdi district within the Annapurna area and attempts to describe the various impacts resulting from tourism. Tourism is playing an increasing role in the economy of this village, as the number of trekkers increases annually. The dependence of the local people on the traditional salt trade has been replaced by dependence on tourism and monetisation of the local barter economy. Tourism has increased the demand for natural resources and has resulted in visible impacts on the resource base. In addition, other impacts, such as land use changes, changes in cropping pattern, and a reduction in the use of traditional species and cultivars in favour of grain and fruit crops, have also occurred. The village atmosphere has been ruined by garbage dumping and the problem compounded by a lack of toilet facilities. The *Thakali* control the trekking industry; thus, the gains from tourism have been chiefly confined to this ethnic group.

**Gurung, H., 1990.** "Environmental Management of Mountain Tourism in Nepal." Paper presented at an ESCAP Symposium on Tourism Promotion in the Asian Region. Hangzhou, China, 1990.

This study examines the damage caused by tourists to the natural environment in the mountain areas of Nepal. It assesses the carrying capacity of selected mountain areas and identifies possible environmental protection measures such as regulation, regional dispersion, energy supply, pollution control, management, and finance. Finally, the study suggests an action programme to quantify the number of tourists that can be catered to within the carrying capacity of the mountain areas.

**Haimendorf, C. von-Furer, 1984.** *The Sherpas Transformed: Social Change in the Buddhist Society of Nepal.* New Delhi: Sterling Publishers.

**Hamilton, L.S., 1987.** "What are the Impacts of Himalayan Deforestation on the Ganges-Brahmaputra Lowlands and Delta? Assumptions and Facts." *In Mountain Research and Development*, Vol. 7 No. 3, pp. 256-263.

This paper raises and highlights serious problems that impede the task of determining the biophysical impacts of deforestation in the mountain uplands. It calls for the need to clarify the terms used to describe deforestation and argues that deforestation can mean a variety of different things. The author suggests classifying deforestation in relation to the hydraulic and soil aspects of tropical watersheds. There is no valid reason to support the fact that forests can prevent major floods in the large rivers of the Indian subcontinent.

**Hamilton, L.S. and Bauer, D.P., 1993. *Parks, Peaks, and People*. Hawai: East-West Center, Program on Environment.**

**Healy, R., 1992. "Nature Tourism and Sustainable Economic Development."** Centre for Resource and Environmental Policy Research, Duke University, Durham, North Carolina. IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

The contribution of nature tourism to sustainable economic development depends on several factors. Linkages with other sectors of the economy include conventional economic impacts (expenditure and employment multipliers) as well as dynamic relationships. Locational considerations determine whether economic impacts will be felt in local communities or leak out to national urban areas or overseas. The paper argues that to increase tourism's development potential, tourism sector planning should be explicitly coordinated with park and reserve planning, as well as with sector plans for agriculture, forestry, and transportation.

**Heath, R., 1992. "Wildlife-Based Tourism in a Developing Country: Economic and Managerial Implications."** Department of Geography, University of Zimbabwe. IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

The paper discusses the economic advantages of wildlife-based tourism to developing countries with reference to Zimbabwe. It points out the economic advantages of wildlife utilisation in areas marginal for agriculture and livestock production and emphasises the benefits that may accrue to such marginal areas from both lightly consumptive sport hunting and non-consumptive photographic and safari tourism. It argues that the returns from wildlife-based tourism may be one of the few options available for people in poverty stricken areas to escape from the poverty-cycle. The paper concludes by emphasising that the future survival of large wildlife populations in Africa is conditional upon their realising tangible benefits for the people upon whose land they occur,

and that wildlife-based tourism is a major vehicle for the realisation of those benefits.

**Herman, D., 1991.** "Elements of Environmental Macroeconomics." *In Ecological Economics: The Science and Management of Sustainability*, Costanza, R. ed. New York: Columbia University Press, New York.

This article argues that environmental economics has been a totally neglected topic in macroeconomics so far. This has resulted in the fact that economic growth has been perceived to be independent of the environment, where the economy is seen as an isolated system (no exchange of matter or energy with its environment). As an economy grows, the environment cannot be expected to grow. Macroeconomics must address not only the allocation but also the distribution problem and the scale of the environmental problem as well. Optimal scales such as full employment, price level stability, and distributive justice are macroeconomic goals. Economic growth cannot continue in the sense of a growing per capita consumption indefinitely. As the economy grows, it increases in scale. Scale has a maximum limit, defined either by the regenerative or absorptive capacity of the ecosystem, whichever is less. There is as yet no definition of optimal scale, but optimal scale has to be sustainable. Therefore, to limit the scale to an optimum level is important and will give the sustainable development concept a better theoretical footing.

**ICIMOD, 1993, *Our Mountains: The Hindu Kush-Himalayas. A Decade of Efforts Towards Integrated Mountain Development.*** Kathmandu: International Centre for Integrated Mountain Development.

**Industrial Services Centre, 1979.** Khumbu Region Tourism Study. Kathmandu, Nepal: Industrial Services Centre, (ISC), Balaju.

This is one of the first extensive studies conducted to address tourism development in a mountain environment, namely, the Khumbu region. It was considered to be the Khumbu Region Tourism Development Master Plan and was carried out with the objective of developing a model for development in mountain regions. It suggests various types of development investments to promote tourism, to support growth in the region, and to realise its potential to earn foreign exchange and preserve the region's heritage.

**International Union for the Conservation of Nature (World Conservation Union), 1993. *Prospects for Tourism in the Manaslu Region.*** Kathmandu: International Union for the Conservation of Nature.

This report provides a detailed account of the need to develop different types of infrastructures in order to open the Manaslu area for tourism development. It provides a detailed account of each night stop, of bridges across rivers and streams, and of areas where camp grounds need to be developed.

Ives, D.J. and Messerli, B., 1989. *The Himalayan Dilemma: Reconciling Development and Conservation*. Japan: The United Nations University and Routledge.

Joiner, D., 1986/87. 1986-87 "The Effects of Trekking Tourism: A Case of Bagarchap Village, Manang District, Nepal." University of Wisconsin, College Year in Nepal Programme.

This study attempts to evaluate the impacts of trekking tourism in Bagarchap village of Manang district in the Annapurna region. Economic impacts were more than obvious. In 1986, nearly one third of the male adult population operated lodges. Employment impact was seasonal and the village hired labour from outside and the local people of Bagarchap did not find portering to be attractive work. Fruit farming (apples, peaches, pears) had started on a fairly large scale and some households had established distilleries to use their fruits more productively. New varieties of vegetables had been planted by households to serve tourists. All these developments had increased the cash incomes of many households. Shops had opened, and, with the cash thus generated, households realised a greater scope in trade relative to the traditional form. Trade flourished and people no longer had to go south to buy most of their needs since local shops stored them. Construction activities also boomed in Bagarchap due to tourism. Wage labourers had to be hired outside Bagarchap to build houses, which became non-traditional in style. The author indicated that the use of timber for construction may have decreased. Most new houses had corrugated sheets for roofing.

Khadka, K.R., 1993. "Tourism and Economic Development in Nepal." Ph.D. Dissertation. Development and Project Planning Centre, University of Bradford.

A large part of this study is contained in Chapter 2 "Overview of Tourism In Nepal."

Kharel, F.R., 1993. "Park-People Conflict: Langtang National Park." Masters' Thesis, Lincoln University, Canterbury, New Zealand.

This thesis examines the issues and causes of conflict between the park administration and the local people in Nepal's first national park - Langtang National Park - created in 1976. The objectives of creating this park were conservation of biodiversity, environment, religious sites, the reduction of ecological impact on land use, and local cultures. About 30,000 people rely on the resources (fuelwood, pasture) of the park. These people relied on these resources long before the park was created. Thus, limiting access to resources has been the prime source of conflict in this mountain park of Nepal. The sources of conflict have been due to: lack of understanding about the value of national parks among the local people; resource-use restrained by the park; lack of compensation to local people for crop and livestock depredation by wildlife, and the absence of an assessment on the impacts of tourism growth in the park. Besides the people living inside the national park, people outside the park had also been enjoying the rights to resources. But the creation of the park has only this right to outsiders, which is another source of conflict. Although some limited use was provided to some people adjoining the park, the conflicts continue.

**Kitayama K., 1992.** "Human Impact and Implications for Management in Mount Kinabalu Park-Sahab, Malaysia." IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

This paper describes the administrative status of and human impacts on Mount Kinabalu Park in the Malaysian Bornean State of Sabah and presents guidelines for the effective management of the park that may be applied to other protected mountains in south-east Asia.

**Kleinschmidt, R. and LaDow, D., 1992** "Tourism's Role in Creating and Sustaining Protected Areas. IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

The trend towards active leisure and the growing concern about the environment are changing tourism. Eco - or nature tourism must be thoroughly understood, critically planned, and well-managed for the creation, expansion, and support of protected areas. But development principles must be established to ensure the right approach. It argues that buildings and man-made facilities must be in harmony with their natural environment; the development process must conserve and, if possible, enhance wildlife habitat and the area's natural features; the project and the operations must minimise pollutants, solid waste, and energy consumption; the project must foster an appreciation and understanding of nature and the environment; the project must make sustainable use of natural resources; the operations should offer foods, beverages, and services that promote healthful living; and products and

services should reflect local culture and support the local economy and protected areas. Existing approaches to tourism often have negative effects on protected areas and fail to achieve local support. New approaches are needed to provide direct benefits from tourism to the local economy and protected areas. Different management systems must be reviewed and judged on their merits. A decentralised system involving training and local business ownership can be an effective approach.

**Lama, W. and Sherpa, A., 1994.** "Tourism Development Plan for the Makalu Base Camp Trek and the Upper Barun Valley." Revised draft report. Makalu-Barun Conservation Project, Feb. 1994.

This study provides a detailed account - camp site by camp site, trail by trail, etc, of tourism development in the area. The environment of the base camp and the Barun Valley are very sensitive to human disturbances, given that these are extremely cold areas where growing seasons are short. Environmental protection and tourism development are both dealt with as part of the overall tourism development in the Makalu-Base camp area within the Makalu-Barun National Park and Conservation Area.

**Lama, W., 1991.** "Tourism Study Arun III: Management of Basinwide Environmental Impacts' Study." Draft Report, 1991.

The scope of tourism development in the Arun Valley is explored. The study concentrates not only on developing trekking tourism but also on cultural tourism through the preservation of unique places, such as Chainpur, that have rich culture and traditional architecture.

**Lawrence, K., 1992.** "Benefits and Costs of Tourism in Protected Areas." IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

Sustainable tourism development in protected areas can only be achieved if a balance is reached between levels of tourist use and limits of acceptable social and environmental change. The paper argues that if tourism is managed so that it stays within the area of sustainable development, economic benefits will be maximised at the lowest acceptable level of negative social and environmental change. At this level, tourism's economic benefits can be sustained throughout the life of protected areas. Management techniques used to maintain the area of sustainable development, such as price controls, advertising, and levels of maintenance, are also discussed.

**McNeely, J.A.; Thorsell, J.W.; and Chalise, S.R., (eds) 1985.** *People and Protected Areas in the Hindu Kush-Himalaya*. Proceedings of the Management of National Parks and Protected Areas in the Hindu Kush-Himalaya, Kathmandu, 6-11 May, 1985. Kathmandu: KMTNC and ICIMOD.

The basic purpose of this workshop was to access and share the practical experience of National Park management throughout the Hindu Kush-Himalayan ecosystem. Altogether 33 papers dealing with the problems and prospects and case studies and management issues of protected areas and people are provided in the report, along with some papers on the international perspective. The central theme of the proceedings is that the wholehearted involvement of people in the development effort and related environmental management is the key to sustainable progress for all. The main recommendations of the workshop focus on the establishment and management of protected areas, people in protected areas, biosphere, and environmental education and training.

**McNeely, J.A., 1988.** *Economic and Biological Diversity: Developing and Using Economic Incentives to Conserve Biological Resources*. Gland: IUCN.

This book provides an excellent exposition to the economics of biological diversity. It develops economic principles to address biological resources in a simple and straightforward manner. Case studies selected from a wide range of issues provide understanding of how economic tools can be used to address resource conservation and conservation of biological resources.

**Messerli, P., 1987.** "The Development of Tourism in the Swiss Alps: Economic, Social, and Environmental Effects." *Mountain Research and Development* 7 (1); 13-24. 1987.

Tourism in the Swiss Alps will likely increase and the need to understand stress on the environment is necessary. In the initial stages of development, lack of economic alternatives made the entire economic structure dependent on tourism. Linkages of the economy were poor with different structures developing more or less independently, and each sector was constantly adjusting to meet more tourists. Tourism is seasonal with winter seasons being more popular than the summer seasons. Tourism and agriculture are related through the labour market, land market, and the development of spatial infrastructure. Farmers tend to lose in tourism development as land prices and rents increase, and thus is compounded by a severe decline in the agricultural population. For farmers to benefit, favourable conditions for solutions specific to

individual farmers are necessary. Mountain agriculture regulates and preserves resources. Mountain agriculture, with its diversity of operational structures, is the best and most important buffer between the claims of tourism and land utilisation and the cultural landscape. There is no comprehensive, scientifically proven indicator system to announce reliably, and in time, that stress limits are being approached.

**Ministry of Commerce and Industry, 1972.** *Nepal Tourism Master Plan.* Kathmandu: Department of Tourism.

**Ministry of Forests and Soil Conservation, 1987.** *Main Report: Master Plan for the Forestry Sector.* Kathmandu, Nepal: MOFSC.

**Ministry of Finance.** *Economic Survey.* (various issues) Kathmandu, Nepal: MOF.

**Ministry of Tourism, 1988.** "Impact Studies of Tourism Development on the Environment of the Sagarmatha National Park (SNP) Area." Submitted by Leaders and Bips Engineering Pvt., Ltd., Radhakuti Arcade, Ramshah Path, Kathmandu, Nepal.

This study assesses the present ecological situation of the Khumbu region and suggests measures to maintain ecological balance. It also assesses the feasibility of developing tourism in the Arun Valley.

**Ministry of Tourism, 1989 and 1993.** *Some Provisions Relating to Mountain Tourism in Nepal.* Kathmandu, Nepal: HMG

**Moore A. and Back, J., 1992.** "Some Consideration of Tourism in the Mountain Environment." IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February, 1992.

The paper starts with the question as to why people carry out tourism activities. There are many reasons for tourism, almost as many as there are individuals. Ecotourism is amongst the most frequently used type of tourism in the literature. While ecotourism or nature-based tourism, is becoming a basis for making national parks and other protected areas, it is also being blamed for the rapid depletion of forests and the negative impact on the ecosystem. The authors state that ecotourism is a controversial topic and has not yet been properly defined. Ecotourism activities must : a) have an educational component; (b) have long-term economic impact upon the local community; (c) not have a significant

negative impact on the ecosystem and local culture; and (d) have a beneficial effect upon the conservation of local natural environment.

**National Planning Commission, 1992.** *Eighth Five-Year Plan Document and other issues.* Nepal: National Planning Secretariat, HMG.

**Nepal Rastra Bank, 1990.** *Income and Employment Generation from the Tourism Sector in Nepal.* Kathmandu, Nepal: NRB.

This study is summarised in Chapter 2.

**Nijkamp, P.; van den Bergh, C.J.M.; and Soeteman, F.J., 1990.** *Regional Sustainable Development and Natural Resource Use.* Proceedings of the World Bank Annual Conference on Development Economics. Washington D.C.: The World Bank.

The purpose of this paper is to apply the concept of sustainable development. It argues that sustainable development is too broad and hence uses the concept of regional sustainable development. It describes the relationship of sustainable development and regional sustainable development. From a planning point of view, it argues that identification of critical factors is of importance to regional sustainable development. Critical success factors and sustainable resource use provide the basis for the implementation of the methodology. The authors apply the methodology to the case of the Peel area in the Netherlands, Sporades in Greece, and rural land in Botswana. The paper concludes with a retrospective review and important research questions.

**Pioneer Associates, 1989.** "Final Report on a Trekking Profile of the Pokhara-Jomsom Areas." Kathmandu, Nepal: Ministry of Tourism, HMG.

The general objective of this study was to prepare a profile of trekking tourism facilities in the Pokhara-Jomsom area and to recommend an action programme for the development of trekking tourism.

**Rau, G., 1980** "Concepts of Environmental Impacts' Analysis." *In Environmental Impact Analysis Handbook*, Rau G. and Wooten, D.C., eds. New York: McGraw-Hill Book Company.

**Reggiori, E., 1992.** "Alternative Tourism: A New Way Forward." IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

This paper argues that tourism traditionally destroys, rather than preserves, both the natural environment and also the traditional economy and way of life of an area-but there is an alternative. This does not mean investing in hotels but in improving existing facilities. The number of tourists must be limited. This means only one tour operator choosing tourists who would feel privileged to go to such areas and who would pay more, knowing that a good part of the money is going to be invested in the local economy. A two-way education system would then operate in which the locals learn the skills needed to provide for the tourists, and the tourists learn about local ecological circumstances.

**Robinson, D.W.**, 1993. "Sociocultural Impacts of Mountain Tourism on Nepal's Sagarmatha (Everest) World Heritage Site: Implications for Sustainable Tourism." *In World Heritage Twenty Years Later*, compiled by Jim Thorsell. Gland, Switzerland and Cambridge, UK: IUCN.

Nepal is among the most popular of the adventure tourism destinations. However, while international tourism in Nepal is enjoying unprecedented growth, serious concerns are being expressed about the changes brought by long-term, negative sociocultural and environmental impacts of mountain tourism in this country. The paper reports on the perceptions and attitudes of western tourists on the impact of their behavior on the local mountain people and mountain environment of developing countries. The major conclusion of the study is that tourism significantly improved the quality of life of the Sherpa people, that the volume of tourists should increase, and there is no need for increased government-imposed controls to lessen impacts.

**Romero, A.**, 1992. "Economic Contributions of Venezuelan Protected Areas: The Tragedy of the Commons and Perspectives." IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

Although Venezuela has an impressive number of protected areas, they fall short of fulfilling their mission to promote the conservation of biological diversity, scientific research, recreation, and environmental education. Equally important, they rarely represent a direct source of revenue for either the local communities or the government. Several causes have contributed to that situation. Political objectives have dominated environmental policy. Finally, there have been few connections between the establishment of protected areas and their management. There has been no effort made to assess the costs and benefits of maintaining these protected areas and to fully envision the place that such areas must occupy within a modern society. Policy and

institutional changes are needed to enable Venezuelan protected areas to enhance their economic contribution to society and, more importantly, to ensure their survival in the long run. Among those changes the decentralisation of their administration and the participation of non-government sectors of the society are essential.

**Sagarmatha Pollution Operation Committee, 1993.** *Sagarmatha Pollution Operation Plan*. Kathmandu: Control Committee and World Wildlife Fund (WWF).

**Shah, M.K. and Pandey, R.K.** Construction Activity and Environmental Degradation in Almora Town in the Central Himalaya." *Mountain Chronicles* 171.

There is a distinct tendency among residents of the hill areas to live in the closest possible proximity to the centres of towns. This has resulted in the creation of maze-like clusters of houses around the town circles. The absence of pre-planning for such ongoing activities has given rise to various types of problems in this mountain environment. A major conclusion of this study is that widespread construction activity has disturbed the subsurface flow of water and has resulted in the depletion of water resources through the drying up of several spring resources.

**Sharma, P., 1988.** "Population Dynamics and Development Linkages in the Arun Watershed." Kathmandu: ICIMOD, 1988.

The report analyses various issues related to population growth in the world's deepest valley - the Arun Valley. Because productivity has not increased, people have been forced to cultivate on steeper slopes. Forest clearance for agriculture and for firewood have been more pronounced in the south than in the north. High fertility and low mortality rates contribute to the valley's population growth. The pressure on the resource base from the growing population is increasing and is forcing people to migrate in search of employment. Curbing population has to be a long-term goal. In the immediate short run, programmes to improve agricultural productivity and marketing have been recommended as a means to reduce the pressure on the resource base.

**Sharma, P., 1989.** "Assessment of Critical Issues and Options in Mountain Tourism in Nepal." Kathmandu: ICIMOD.

This study addresses the critical issues related to mountain tourism. It argues that a major problem in mountain tourism is the lack of an

organisation and management system that is able to adequately deal with mountain tourism. There is yet no route policy. The trekking agencies are run not by professionals knowledgeable about the broader implications of mountain tourism. The enhancement and organisational ability at the local level have been a completely neglected aspect in the promotion of mountain tourism in Nepal. With the exception of some innovative work in the Annapurna region, participation of the concerned community in activities and decision-making regarding tourism is virtually absent. The study concludes that mountain tourism can be an important source of off-farm employment only if a number of complementary activities are undertaken simultaneously. The success of mountain tourism depends on the push it can provide and the conditions it can create for sustainable development of mountain areas. In Nepal, tourism has not been seen in terms of these multifaceted linkages and coordinated packages of location/region specific policies and programmes.

**Sharma, P.R., 1995.** *Culture and Tourism, Defining Roles and Relationships.* MEI Discussion Paper Series 95/2. Kathmandu: ICIMOD.

**Sherpa, L.N., 1988** *Conserving and Managing Biological Resources in Sagarmatha National Park, Nepal,* Working Paper No. 8. Honolulu, Hawaii. Environmental and Policy Institute, East-West Centre.

The authors examine some problems and opportunities associated with the removal of human population and the exclusion of extractive uses of park resources by local people in the Sagarmatha National Park. It is argued that integrating local people with conservation activities appears to be the only viable solution to this problem. Too many people are using and misusing too few resources. Relocating people and resettling them elsewhere is also not seen as a remedy. Traditional systems of forest management need to be revitalised to manage the resources.

**Sherpa, M.N.; Coburn, B.; and Gurung, C.P., 1986.** "Annapurna Conservation Area, Nepal: Operational Plan." Submitted to King Mahendra Trust for Nature Conservation (KMTNC) and World Wildlife Fund (WWF).

**Shrestha, T.B.; Sherpa, L.N.; Banskota, K.; and Nepali, R., 1990.** *The Makalu-Barun National Park and Conservation Area Management Plan.* Kathmandu: Department of National Parks and Wildlife Conservation, His Majesty's Government and Woodlands Mountain Institute.

This is the most comprehensive study that has been conducted in Nepal to assess the potential of an area for conservation. The Makalu-Barun

National Park and Conservation Area Management Plan study was based on nearly two years of research carried out by a task force. The Management Plan has four basic components, namely, a park management, community development, tourism management, and a scientific research component. All the four components are integrated and have been strengthened by a series of other research studies that were carried out simultaneously.

**Shrestha, T.B., 1989.** *Development Ecology of [the] Arun River Basin in Nepal.* Kathmandu: ICIMOD.

**Singh, T.V., 1992.** *Development of Tourism in the Himalayan Environment: The Problem of Sustainability.* Nairobi: UNEP.

This paper examines the critical issues and options for development of tourism in the Himalayan environment or mountain environment and addresses the problems of sustainability. The author argues that, whereas promotion of tourism in the mountain environment is most desirable, the development must ensure resource sustainability. Mass tourism, though generally welcomed as an economic panacea for backward regions, ultimately threatens the capacity because of overcrowding, congestion, traffic snarls, and environmental pollution. While ecological determinism seems necessary, economic determinism should never be ignored. For ensuring sustainable mountain tourism, the paper stresses the need for a well-defined and effective policy, based on the concept of soft rather than hard tourism, a policy that is defensible rather than offensive, slow-paced rather than rapid, and integrated rather than sector-based. The choice of appropriate technology is suggested to be the prime strategy for achieving environmentally sustainable tourism which should be based on several considerations, namely, a) efficiency and effectiveness of the desired product output; b) influences on regional economic growth, local population and equality of growth; c) utilisation of the available factor of production; and d) consistencies with local sociocultural structure. Finally, the paper exemplifies the tendency of resorts (Kulu valley) to attract counter-productive tourist overloads.

**Sneed, G.P., 1992** "Learning to Think Like a Mountain: A Review of Cooperative Management Regimes Appropriate for Mountain Protected Areas." IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

This paper attempts to develop a framework for conceptualising, classifying, and describing varieties of cooperative or joint management

that may be appropriate for mountain protected areas. The paper suggests that all forms of joint (cooperative) management taken together in various combinations show the most promises for institutionalising the reduction of conflict and preservation of mountain protected areas. Conservation and sustainable management of resources requires a human ecological approach, i.e., management of human activities. The essential role of human institutions in resource management has been emphasised in this paper. The paper suggests that establishing co-management regimes for national parks or protected areas is one way of enhancing public participation and reducing conflict with local communities and resource users.

**Stark, M. 1992** " Bringing Local Involvement into Conservation and Development in Two of Irian Java's Mountain Protected Areas." IVth Congress on National Parks and Protected Areas, Caracas, Venezuela, 10-21 February 1992.

This paper describes the people-focussed approach to planning and implementation of two of the mountain protected areas in Irian Java, Indonesia. The challenge to the Indonesian government for conservation and development of protected areas is highlighted, and the successful policy strategy for conserving the resources is identified. The major conclusions emerging from the paper are: a) involvement of local people and having local acceptability of possible solutions as fundamental to the solution of long-term management of protected area; b) detailed consultations with local people residing in and around the protected area must be made before starting demarcation of a designated protected area, no matter how painfully slow the process may be, and c) managing the protected area over the long term must be based on participatory action which requires the support and involvement of the government on a culture-by-culture and area-by-area requirement basis.

**Stevens, S.F. and Sherpa, M.N., 1993.** "Indigenous People and Protected Areas: New Approach to Conservation in Highland Nepal." In *Parks, Peaks, and People*, compiled and edited by Hamilton, L.S., Bauer, D.P. and Takeuchi, H.F. U.S: East-West Centre Programme on Environment with Assistance from the Woodlands Mountain Institute, U.S. National Parks Service and IUCN.

The paper highlights some of the important lessons about managing inhabited protected areas based on the experience gained in the Sagarmatha National Park and the Annapurna Conservation Area. Proper understanding of the internal sociocultural and economic conditions of the local residents is a vital prerequisite for devising a sustainable

resource use regulation in the inhabited protected areas. The lack of such an assessment at the outset in Sagarmatha gave rise to persistent hostility and resentment for nearly 15 years. In Sagarmatha, crisis response regulations were also abruptly adopted, and local forest management institutions were undermined. The paper states that if the dynamics of *Sherpa* forest use management and regulations had been better understood at the outset, they would have been more effective than a different set of national park regulations. The experience gained further demonstrates that protected areas can be perceived by local residents as opportunities for local development and as a means through which the local control of land management of natural resources can be preserved. Experience suggests that in an inhabited protected area, partnership between protected area manager and local people is the only viable option.

**Stevens, S.; Gurung, C.; and Sherpa, M.N., 1993a.** *Tourism Impacts and Protected Area Management in Highland Nepal: Lessons from Sagarmatha National Park and Annapurna Conservation Area*. Louisiana: Department of Geography and Anthropology, Louisiana State, Baton Rouge, University.

The Mount Everest region and the Annapurna Range have long been the two major destinations of trekking and mountaineering tourism in the Himalayas. Concern over adverse environmental and cultural impacts was a major factor in the establishment of protected areas in both regions with the creation of Sagarmatha (Mt. Everest) National Park in 1976 and the Annapurna Conservation Area in 1986. The forms of tourism and the types of impacts associated with them are similar in both protected areas. Different approaches, however, have been taken to address them. This paper surveys the experiences in the two protected areas with efforts to prevent uncontrolled tourism development, deforestation, solid waste and water pollution, and cultural conflicts. It draws conclusions of potential applicability beyond highland Nepal.

**Stevens, S.; Sherpa, L.N.; and Sherpa, M.N., 1993b.** *Tourism and Local Development in Sagarmatha (Mt. Everest) National Park, Nepal*. Baton Rouge, Louisiana: Department of Geography and Anthropology, Louisiana State University,

During the past 30 years, tourism to the Mt. Everest area has increased from fewer than 20 tourists per year to nearly 10,000. This growth in tourism has transformed the local economy of the *Sherpa*. Nearly three-quarters of all households in the region have income from tourism

employment and more than 15 per cent now operate small tourist businesses, including 90 owner-operated lodges. This economic growth, however, has been accompanied by a number of adverse socioeconomic and environmental impacts. There has been increasing differentiation in wealth and standards of living between villages and among families within individual communities. Subtle changes in agriculture and pastoralism have occurred that may have significant environmental ramifications. Increasing pressure has been placed on forests both inside and adjacent to the national park for fuelwood and timber. Sagarmatha National Park management responses have had mixed results thus far.

**Thorsell, J. and Harrison, J., 1993.** "National Parks and Nature Reserves in the Mountain Regions of the World." In *Parks, Peaks, and People*, compiled and edited by Hamilton, L.S., Bauer, D.P. and Takeuchi, H.F. Hwui: East-West Centre, Programme on Environment.

**Thorsell, J., 1993.** *World Heritage Twenty Years Later*. Gland, Switzerland and Cambridge, UK: IUCN.

**Touche Ross Management Consultants, 1990.** "Nepal Tourism Development Programme: A Report for the Asian Development Bank and Ministry of Tourism." Kathmandu, Nepal: Touche Ross.

The important features of this study, that are relevant to the present study, are provided in Chapter 5.

**Upadhyay, M.P., 1984.** "Environmental Impact on Mountain Ecosystem by Trekkers and Mountaineers: Mt. Everest Trek Route Survey Report." Kathmandu, Nepal: Nepal Institute of Development Studies (NAIS).

The study evaluates environmental problems created by trekkers and mountaineers and their support staff along the trekking route to Sagarmatha. The study argues that trekkers place enormous pressure on the carrying capacity of the area and the estimated benefit/cost ratio of individual trekkers was estimated to be less than one. The major negative impact is on forests and forest resources. Trekking activities have increased the price of land for housing along the main trail. Regarding impact on the social side, the author argues that there has been a noticeable increase in the population migrating into the trek route area. There has also been a "Western" impact on local youths in terms of food habits. The traditional role of the monasteries is also reported to have decreased.

**Uprety, B.N., 1985** "The Park-People Interface in Nepal: Problems and New Directions." In *People and Protected Areas in the Hindu Kush-Himalaya*. Proceedings of the International Workshop on the Management of National Parks and Protected Areas in the Hindu Kush-Himalayas. Edited by J.A. McNeely, J.W. Thorsell and S.R. Chalise. Kathmandu: KMTNC and ICIMOD.

The paper provides an overview of the reasons for the creation of national parks in Nepal, the initial conflicts, and new directions. With the creation of parks in many areas, people have been denied access to their traditional rights on the resources available in the area, which has been one of the serious conflicts. Their resentment to the creation of parks has been in the form of violation of park rules and regulations. Where there are people living inside the park, as in the mountain areas, grazing, firewood collection, and timber harvesting problems have become paramount. Thus, in Nepal, park and people-at least in the mountain areas-are interfaced. Other issues are those related to human-wildlife interactions (crop depredation by wildlife, poaching); human life killed by wildlife; loss of livestock to predators; and resentment on the part of the local people against penalties and fines levied by the park against violators. Promoting tourism has also been a management goal of the park. But tourism is putting pressure on the Himalayan parks. Deforestation due to tourist demands for firewood is a major problem.

It was realised that local people have to be made participants in the conservation effort, and that regulations and rules and their enforcement alone are not enough. Thus, access to park resources by locals in a controlled manner, facility of movement through parks and reserves, providing economic incentives to local people, and involving local people in decision making, conservation education, etc, have been the efforts in this new conservation direction.

**Wells, M., 1993** "Neglect of Biological Riches: The Economics of Nature Tourism in Nepal." In *Biodiversity and Conservation 2*, 445-464.

Tourism has become Nepal's largest source of foreign exchange earnings and the overall number of foreign visitors continue to grow. About half of Nepal's tourists can be found in one of four outstanding protected areas. Tourism in Nepal's parks has led to complex conflicts of interests. The interested parties include: Department of National Parks and Wildlife Conservation (DNPWC) staff, who are seeking to minimise ecological impacts; local people, who are attempting to take advantage of substantial economic opportunities; foreign or Kathmandu-based tour and trekking agencies, seeking to maximise their own economic gains;

and several government agencies which, while anxious to increase overall tourist numbers, have resisted the regulation of tourists in the parks and have been slow to open up new trekking areas that could relieve the concentrated impacts of tourism. No mechanism exists, either formally or informally, for resolving these divergent interests. This issue is discussed from the perspective of representing an economic pricing problem. An economic research study is necessary to outline the appropriate levels of fees to charge to tourists in order to increase public and private sector revenues to support arguments for higher levels of investment in conserving the country's natural and cultural assets.

**Winpenny, J, 1991. *Values for the Environment: A Guide to Economic Appraisal*. London Overseas' Development Institute.**

The book provides a state of the art methodology and practice of economic appraisal of environmental effects. It covers a broad range of topics such as wildlife, wetlands, biodiversity, watersheds, forests, etc. It provides a comprehensive appraisal of the different techniques used to value environmental commodities. It provide useful case studies as well.

**World Commission on Environment and Development (WCED), 1987. *Our Common Future*. U.K.: Oxford University Press.**

**Yonzon, P, 1993. "Traditional Resource Use and Problems in Langtang National Park, Nepal." In *Parks, Peaks, and People*, compiled and edited by Hamilton, L.S., Bauer, D.P. and Takeuchi, H.F. East-West Centre Programme on Environment. U.S.: Woodlands Mountain Institute, U.S. National Parks Service, and IUCN.**

The paper demonstrates how Langtang National Park's protected status hinders its continued survival. People from both within and outside the region come into the parks to raid the park's medicinal plants. Neither collectors nor merchants are perturbed by park regulation. Protecting the park area from plant raiders rather than protecting those forest areas that surround the park often gives the merchants an easy escape with the haul collected from the park. The paper concludes that legally protecting Langtang is meaningless unless the law is enforced with the concurrence of the local people. Alternatives are few but the empowerment of indigenous people to enjoy rightly and to be responsible for managing forest resources should be promoted through participatory land management programmes.

## **ICIMOD**

ICIMOD is the first international centre in the field of mountain development. Founded out of widespread recognition of environmental degradation of mountain habitats and the increasing poverty of mountain communities, ICIMOD is concerned with the search for more effective development responses to promote the sustained well being of mountain people.

The Centre was established in 1983 and commenced professional activities in 1984. Though international in its concerns, ICIMOD focusses on the specific, complex, and practical problems of the Hindu Kush-Himalayan Region which covers all or part of eight Sovereign States.

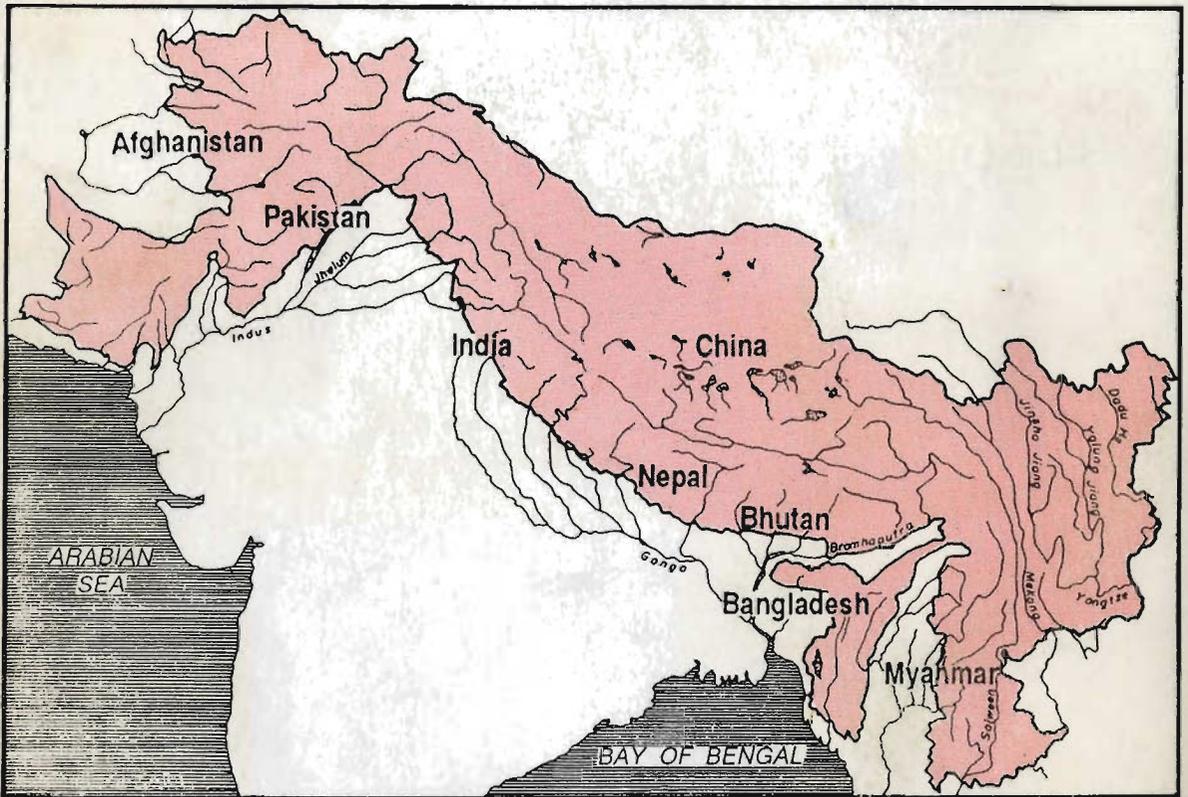
ICIMOD serves as a multidisciplinary documentation centre on integrated mountain development; a focal point for the mobilisation, conduct, and coordination of applied and problem-solving research activities; a focal point for training on integrated mountain development, with special emphasis on the assessment of training needs and the development of relevant training materials based directly on field case studies; and a consultative centre providing expert services on mountain development and resource management.

### **MOUNTAIN ENTERPRISES AND INFRASTRUCTURE DIVISION**

Mountain Enterprises and Infrastructure constitutes one of the thematic research and development programmes at ICIMOD. The main goals of the programme include i) gainful enterprise development and income generation; ii) harnessing mountain specific advantages; iii) infrastructural development (social and physical); iv) sustainable energy resources for mountain development; and v) capacity building in integrated mountain development planning.

# PARTICIPATING COUNTRIES OF THE HINDU KUSH-HIMALAYAN REGION

- |   |             |   |            |
|---|-------------|---|------------|
| □ | Afghanistan | □ | Bangladesh |
| □ | Bhutan      | □ | China      |
| □ | India       | □ | Myanmar    |
| □ | Nepal       | □ | Pakistan   |



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