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Mountain Tourism for Local Community Development in Nepal

A Case Study of Upper Mustang

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International Centre for Integrated Mountain Development
Kathmandu, Nepal

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Preface

The present report is the result of a series of studies conducted as part of the second phase of the NORAD-funded project entitled Mountain Tourism for Local Community Development. One of the major objectives of the Project was to develop training modules and materials on mountain tourism for local community development for policy-makers, programme managers, private sector agencies, and local community-based entrepreneurs and impart training to these audiences on a pilot basis. As part of the Project several of thematic studies and manuals have been prepared.

This Discussion Paper is the first of three case studies from Nepal that focus on the concerns of mountain tourism and its promotion for local community development in Upper Mustang, Phewa Lakeside in Pokhara, and Syaphrubesi, Langtang. These three studies throw light on the problems as well as the prospects of mountain tourism for local development in three different ecozones of Nepal. The **Upper Mustang** case highlights the problems of environmental, economic, social, and infrastructural linkages of tourism in an area where high-yielding tourism is being promoted under the aegis of a non-government organization and where tourism could play a leading role in the integrated development of the area. The Phewa Lake study brings out the need and importance of a participatory institutional framework to deal with common property resource problems, namely those of pollution of the lake and the problems of encroachment and incompatible land use, all related to the development of tourism in the area. Phewa Lake (the second study in MEI 98/2) is a prime tourist asset for Pokhara, but it is rapidly deteriorating due to the lack of a focal institution responsible for the management of the environmental resources of the area. Syaphrubesi, in Langtang (the third study in MEI 98/3) is an area in which the initial impacts of tourism are becoming evident. The Syaphrubesi study primarily assesses the programmes introduced under the Quality Tourism Project that help improve the environmental, economic, and human resource development linkages with tourism, and it provides a number of lessons of relevance to other areas. In all cases, the attempt is to highlight the scope for community action that would contribute to local development through the promotion of environmentally friendly tourism. The studies were carried out as part of the development of training material for different target audiences under the Mountain Tourism for Local Community Development Project.

We would like to thank the Centre for Resource and Environmental Studies (CREST), our collaborating institution in the Mountain Tourism for Local Community Development Project in Nepal, particularly Dr Kamal Banskota and Bikash Sharma, for undertaking this study.

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

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This series of three studies has received help and support from many individuals. We would like to extend our thanks to Dr. Pitamber Sharma of the Mountain Enterprise and Infrastructure Division at ICIMOD for entrusting this study to CREST and for his comments and suggestions on earlier drafts of the report. We extend our thanks to Mr. Raj Krishna Shrestha, Mr. Mangal Manadhar, and Mr. Dhruva Pant for the field work and information gathering for Upper Mustang and the Phewa Lakeside study; to Dr. Krishna KC, associated with the Prithvi Campus, Pokhara, for liaising with various institutions and gathering information; to the many members of the King Mahendra Trust for Nature Conservation (KMTNC) for their valuable comments, notably, Mr. Shailendra Thakali, Mr. Siddhartha Bajracharya, and Mr. Basnet. We are also thankful to Dr. K.P. Oli, IUCN, for his suggestions with respect to the Phewa Lake Study and to Mr. Ujwol Satyal, Chief Instructor-Food and Beverages, Hotel Management and Tourism Training Centre (HMTTC), who has played an important role in the Partnership for Quality Tourism Project, for comments on an earlier draft of the Syaphrubesi Case Study.

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Part One

Introduction and Study Methodology

Mountain Tourism in Nepal has brought both positive and negative changes to the areas where it is practiced. These changes have been felt in the economic, and in the social and cultural spheres. Both the positive and negative impacts have also occurred in the environment. The positive impacts outweigh negative ones. Moreover, the potential for positive impacts is enormous. If properly guided, tourism development in mountain areas can help alleviate poverty and conserve the fragile mountain environment.

However, mountain tourism development (MTD) requires intervention on several fronts simultaneously. Previous studies carried out by CREST for ICIMOD have identified several pertinent issues in the context of MTD.

A major problem in mountain tourism is the result of a lack of vision and appreciation of the value of the natural resources essential for tourism development. This lack of vision has led to unsustainable tourism practices in mountain areas.

The conditions under which tourism could be made to play a role in mountain development and the policy environment conducive to such a role remain unexplored.

In general there has been no spontaneous impact of tourism on the major development concerns in the mountains; namely, poverty alleviation, environmental care and regeneration, and empowerment of local communities. Therefore, deliberate efforts and programmatic interventions needed to be made to link tourism to these concerns.

Mountain tourism has been entirely demand-led and supply-side planning and management (infrastructure, promotion, information transfer, and services) have been completely ignored.

This situation has resulted in poor links between mountain tourism and the economic base of mountain areas, resulting in a substantial outflow of income from tourism accruing to local communities leaking out of the area.

At present mountain tourism has so far only relied on trekking tourism and there is a need and need to develop new tourism products based on the natural and cultural resources. There is an urgent need to develop and diversify mountain tourism to benefit a wider mountain community.

A key need to make the different actors in the tourism policy-programme-action continuum aware and sensitive to the issues of sustainable mountain tourism was perceived.

Based on the findings of the previous studies, thematic areas have been identified in which strengthening the knowledge, awareness, and participation with respect to mountain tourism were required. Some of these areas have been identified.

INTRODUCTION

Mountain Tourism in Nepal has brought both positive and negative changes in mountain areas where it is practised. These changes are manifested in nature and environment, in the economy, and in the social and cultural patterns of mountain people. Although negative impacts have also occurred, by and large evidence indicates that positive changes outweigh negative ones. Moreover, the potential for developing tourism in mountain areas is enormous. If properly guided, tourism development in mountain areas can help alleviate poverty and conserve the fragile mountain environment.

However, mountain tourism development (MTD) requires intervention on several fronts simultaneously. Previous studies carried out by CREST for ICIMOD have identified several important issues in the context of MTD.

- A major problem in mountain tourism is the result of a lack of vision and appreciation of the value of the natural resources essential for tourism development. This lack of vision has led to unsustainable tourism practices in mountain areas.
- The conditions under which tourism could be made to play a role in mountain development and the policy environment conducive to such a role remain unexplored.
- In general there has been no spontaneous impact of tourism on the major development concerns in the mountains; namely, poverty alleviation, environmental care and regeneration, and empowerment of local communities. Therefore, deliberate efforts and programmatic interventions needed to be made to link tourism to these concerns.
- Mountain tourism has been entirely demand-led and supply-side planning and management (attraction, promotion, information transport, and services) have been completely ignored.
- This situation has resulted in poor links between mountain tourism and the economic base of mountain areas, resulting in a substantial amount of income from tourism accruing to local communities leaking out of the area.
- Mountain tourism has so far only relied on trekking tourism and there is scope and need to develop new tourism products based on the natural and cultural resources. There is an urgent need to develop and diversify mountain tourism to benefit a wider mountain community.
- A felt need to make the different actors in the tourism policy-programme-action continuum aware and sensitive to the issues of sustainable mountain tourism was perceived.

Based on the findings of the previous studies, thematic areas have been identified in which broadening the knowledge, awareness, and sensitisation with respect to sustainable mountain tourism were required. Some of these areas have been described below.

- Operationalisation of the considerations of carrying capacity in the local context
- Elucidation of the environmental, socioeconomic, and related impacts and implications of tourism and approaches to mitigating negative effects
- A process of participatory planning and the development of institutions for tourism in local areas and communities to manage the same
- Identification of the needs of human resource development at different levels in order to maximise the benefits from mountain tourism
- Development of materials and modules incorporating the above for the training of personnel at different levels of the tourism policy-programme-action continuum.

In other words, institutions at different levels, especially at local level where consumption takes place, are urgently required.

OBJECTIVES

As stated in the terms of reference, the main objectives of the present study are as follow.

- To broaden the understanding of the impact and implications of different types of mountain tourism on different eco-zones
- To use the outputs generated to develop training modules and materials on mountain tourism for policy-makers, programme managers, and the local community

CASE STUDY AREAS

To achieve the above objectives the study has been carried out in two phases. In the first phase, micro case studies to understand in detail the carrying capacity issues and their implications for Mountain Community Development (MCD) and MTD in the context of Himalayan Environmental Resources (HER) or natural resources were discussed. In the second phase, the training manual was to be developed after the first phase study had been completed. The micro case studies were carried out in three areas; namely, Upper Mustang, Phewa Lake Side, and Syabhrubesi.

Although the specific issues to be addressed are presented in the respective case studies, the main focus of these studies is on general background, tourism assets, and an assessment of environmental, economic, and social impacts and implications. An attempt is made to operationalise the carrying capacity concept at the local level and identify gaps in the action plans already developed for the areas (Lomanthang and Phewa Lake) and make recommendations.

Upper Mustang

The Upper Mustang area is unique in many ways. First of all, from an ecological point of view, Upper Mustang lies entirely north of the Himalayas-Trans Himalayas. Many

parts of northern Nepal, west of Gorkha district, are parts of the Trans Himalayas. Thus the problems assessed and the recommendations made as well as the training modules developed for the Upper Mustang area are likely to be relevant to other similar areas in Nepal. Furthermore, similar areas lie in Tibet, Bhutan, India, and Pakistan, and as a result this study can be of relevance to the other member countries of ICIMOD as well.

Tourism development in most mountain areas of Nepal has been largely demand led. In Mustang, however, tourism and the management of Annapurna Conservation Area Project (ACAP) have developed simultaneously. Ever since 1986 when ACAP began its programmes in the area there has been a great deal of scope to complement the efforts made by ACAP in terms of improving the supply management of tourism in the area, as well as scope for improving economic opportunities.

METHODOLOGY

Sustainable Development

Environmental sustainability (ES) implies sustainable levels of both production (sources) and consumption (sinks). The priority of development should be improvement in human well-being – poverty reduction; increased literacy; and reduced hunger, disease, and inequality. However, these goals cannot be achieved unless ES is the baseline. Although environmental sustainability continues to be a major issue of this debate, there is increasing consensus that, besides environmental sustainability, economic and social or institutional sustainabilities are also important in achieving sustainable development. The very life support system has to remain intact to improve the well-being of the people. However, it is the people who need to take the action and, hence, environmental sustainability without the involvement of the people is not meaningful. It has been realised that improving the well-being of human beings cannot be seen in isolation from the maintenance of a clean and healthy environment and without improving social relationships between individuals.

There are four kinds of capital; namely, natural, human, physical (or man-made), and social. ES requires a definition of natural capital and its maintenance. Natural capital is defined as the stock of environmentally-induced assets which provide a flow of useful goods and services, and sustainability implies the maintenance of these assets. Economics has paid little attention to natural and social capital, and today it is becoming more and more evident that the limiting factor to economic development is natural capital, which has become scarce.

Environmental Sustainability

The definition of ES has to be based on the maintenance of natural capital, hence the input/output rule (source and sink). Thus, on the output side, waste emission from a project or action being considered should be kept within the assimilative capacity of the

local environment, without unacceptable degradation of its future waste absorptive capacity or other important services. On the input side, harvest rates of renewable resource inputs should be within the regenerative capacities of the natural system that generates them. Both these principles also provide the scale of the environment, and economic activities should not expand beyond the scale of the environment, as dictated by the input and output rules.

The scale of the human economy has exceeded the regenerative and assimilative capacities of the environment. Both sources and sink functions are becoming more limited than ever before. Economic growth cannot be considered to be infinite as it is a function of throughput. Throughput, or the flow of materials and energy from the environment for use by human beings, is then returned to the environmental sinks and wastes (Goodland 1995, Munasigne and Shearer 1995). Throughput growth translates into increased rates of resource extraction and pollution, and this scale has exceeded environmental capacities. Human activities have become unsustainable as populations are living off inherited and finite capital, and the losses are not being taken into account. Hence, with regard to environmental sustainability it is essential to:

- encourage growth of natural capital by reducing the current level of exploitation;
- relieve pressure on natural capital by expanding cultivated natural capital; and
- increase the end-use efficiency of products and extend the life cycle, durability, and recyclability of products in order to improve overall efficiency.

Environmental sustainability seeks to improve human welfare by protecting the sources of raw materials used for human needs and ensuring that the sinks for human wastes are not exceeded. All human economic subsystems must be kept within the scale of the overall ecosystems. This means that, on the sink side, all waste emissions must be within the assimilative capacity of the environment and, on the source side, harvesting rates of renewable resources must be kept within regenerative rates. Economic and social sustainabilities thus depend on environmental sustainability. What is needed in the face of uncertainty and risk is to use the precautionary principle – be conservative and exercise prudence.

Economic Sustainability

Economic sustainability can be defined as maintenance of capital: *"the amount one can consume during a period and still be as well off at the end of the period."* However, when environmental, human, and social capital are also considered, this definition of capital provided by Hicks needs to be extrapolated upon (Goodland 1995). Clean air, forests, soils, and so on are forms of natural capital which can deteriorate. Life-supporting systems are shrinking as economic growth expands. The life support system and nature's sink functions are finite and cannot expand with economic growth. As a result, the scale of the environment in terms of life support and its sink function is finite and this needs to be taken into account. Economics has a tremendous difficulty in evaluating

regulations and the willingness of the society to obey them; and this can include coercion, delegation of authority, representation and voting, and direct participation. The different forms of collective decision-making by societies are through participatory institutions where individuals act not in their self interests but in the interests of their community. Participatory institutions play an important role in social capital formation. How to promote and how to accumulate collective decision-making, public action, institutional capability, political participation, and leadership through all the intangible attributes of social capital, become important components. While people have good ideas about how to accumulate the other three forms of capital, there is lack of knowledge about accumulating and developing social capital. It is being increasingly realised that development programmes, including those related to resource conservation, need to address the diverse needs of local communities and individual experiences in order to achieve sustainability and self-reliance. The need to reduce poverty, promote employment, and bring about social integration to build civil society has already been formalised through an international consensus (World Summit on Social Development 1995). Like all other capital, social capital also depreciates and requires maintenance and replenishment through participation and is necessary for social sustainability.

In the formation of social capital, three processes appear crucial; namely, social experiment, social innovation, and social learning. Projects and programmes need to be treated as experiments which aim to test the viability of development options. Social experiment recognises that the process of development has to be found from within a given society but can vary across societies. Enough time has to be given for the experiment to work so that the society is able to deal with unpredictable options. This process inspires the society to set the stage for social innovations (Banuri et al. 1994).

Social innovations are experiments carried out by the society, within the context of their own values, traditions, and norms, which, in turn, enable them to develop their own solutions to emerging problems. Social innovations must also embody the principles of diversity, space, transparency, accountability, and equity. Finally, social learning requires that the society should take direct responsibility for the design and implementation of programmes and should also be allowed to set the conditions under which the activities are expected to proceed (empowerment).

Carrying Capacity

At the heart of sustainability lies carrying capacity. Carrying capacity is a complex terminology and, for operational purposes, could be defined as the 'maximum use of natural and cultural resources by the community and tourism of a given geographical area for Mountain Community Development (MCD) and mountain tourism development (MTD) without adverse impacts on the sociocultural, economic, or biophysical environments' (Figure 1). In other words, carrying capacity can be simplified to consist of three interrelated dimensions; namely, the environment, the economy, and the social and institutional aspects. However, there are difficulties in

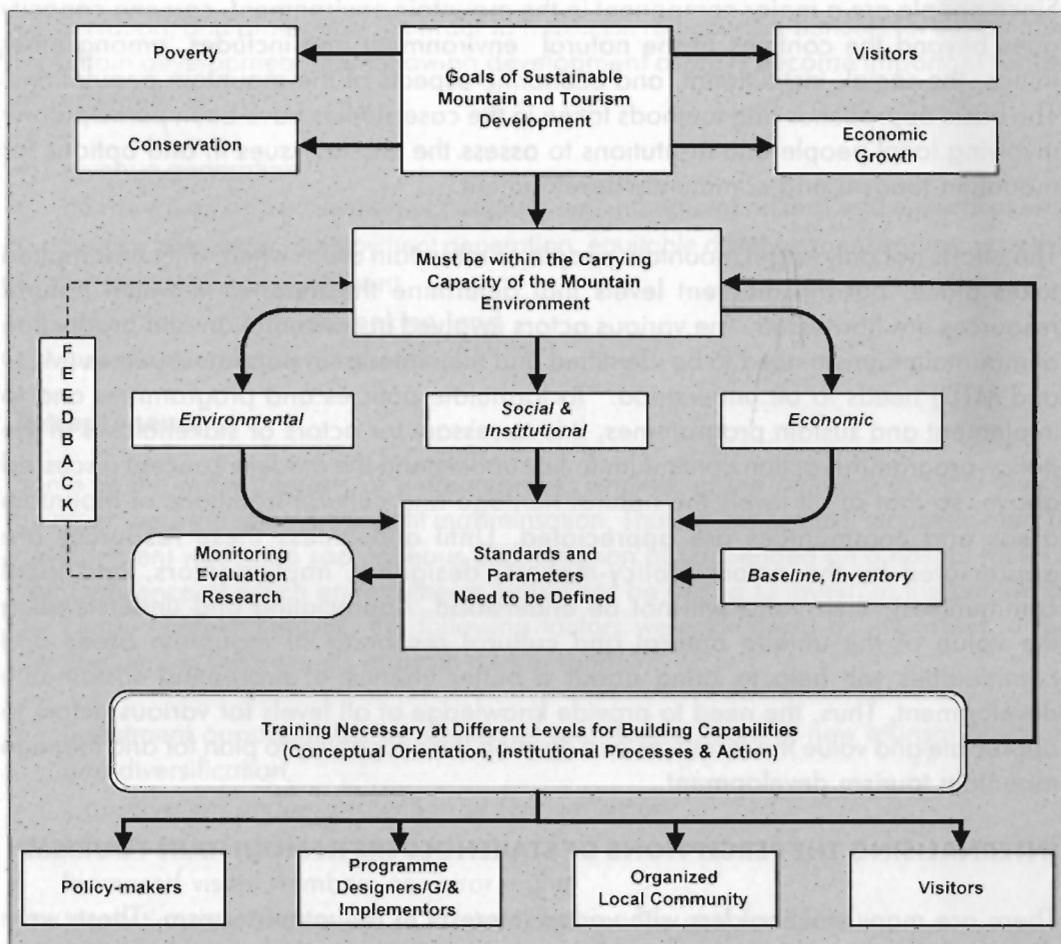


Figure 1: Essentials of the Carrying Capacity

operationalising this concept and simplification becomes essential; hence, a critical factor approach is needed. The critical factors are meant to be crucial variables, the presence (success factors) or absence (failure factors) of which is vital for the attainment of at least one element or object of sustainability and which also affects other aspects of sustainability. Thus, critical factors are those which need to be changed from their current stage, or, alternatively, conserved or protected in their current state, in order to increase the carrying capacity of the environment on the basis of predetermined standards. Critical factors can have negative or positive effects on both community and tourism and hence on natural resources. Negative factors (failure factors) result in overall deterioration in the state of MCD, MTD, and natural resources, whereas positive factors (success factors) improve their current state. The basic idea is to identify the most critical environmental, economic, and social factors and evolve a range within which changes brought about in these aspects will have the potential of being acceptable to policy planners and the concerned community at large and also contribute to the comprehensive process of mountain development.

Since people are a major component in the mountain environment, carrying capacity goes beyond the confines of the natural environment and includes, among other things, the social, institutional, and economic aspects of the mountain populations. The basic approaches and methods taken in the case studies have been participatory; involving local people and institutions to assess the crucial issues in and options for mountain tourism and community development.

The efforts not only target mountain people or mountain areas where the consumption takes place, but the different levels that determine the manner in which natural resources are harnessed. The various actors involved in consumption and production of mountain tourism need to be identified and their interest in natural resources (MCD and MTD) needs to be understood. To formulate policies and programmes and to implement and sustain programmes, it is necessary for actors or stakeholders in the policy-programme-action continuum to first understand the modern concept discussed above, so that at all levels the natural heritage and cultural traditions of mountain areas and communities are appreciated. Until and unless these resources are appreciated by the actors (policy-makers, designers, implementors, and local communities), their value will not be understood. Appreciating and understanding the value of the unique natural and cultural resources of mountain areas and communities will help to bring about a better chance of promoting sustainable development. Thus, the need to provide knowledge at all levels for various actors to appreciate and value the resources and develop their capability to plan for and manage mountain tourism development.

INTERNALISING THE PERCEPTIONS OF STAKEHOLDERS IN MOUNTAIN TOURISM

There are many stakeholders with varied interests in mountain tourism. These were identified during a participatory workshop held in Pokhara (March 1996) which was attended by participants from India, Pakistan, and Nepal. As many as five stakeholders, as well as their interests in MTD, were identified. These were: the government, both national and local; local and national entrepreneurs; NGOs and INGOs; local people and communities; and visitors. Each of these five major stakeholders has different interests in mountain tourism development, and their perceptions need to be internalised in the tourism policy-programme-action continuum. The major interests of each stakeholder were identified and factors that influence their interests were discussed.

Government

The interests of the government (national as well as local) were identified as maximisation of real tourism benefits for sustainable mountain development. It should be emphasised here that the word **real** is being used to capture a wide range of issues that falls within the purview of any government, e.g., security, law enforcement,

conservation, and protection¹. In order to maximise real tourism benefits for sustainable mountain development, the following development aspects become important for the government:

- revenue generation,
- conservation and protection of (tangible and intangible) natural and cultural assets,
- poverty alleviation (employment generation, equitable distribution, economic growth),
- infrastructural development,
- decentralised decision-making, and
- human resource development.

Entrepreneurs

Some of the main interests of entrepreneurs, whether at the national or local levels, however, were the same, i.e., profit maximisation. Thus, in this context, mountain tourism development was not a spontaneous phenomenon but depended on a host of factors, in the absence of which entrepreneurs would not be willing to invest. In the context of the Hindu Kush-Himalayas, the following factors were identified as important to the stakeholders in the interests of profit maximisation.

- Investment opportunities, awareness of and development of new tourism products and diversification
- Conservation and/or protection of tourism assets
- Infrastructural development
- Increased visitor numbers or visitor nights
- Marketing and promotion of tourism destinations and products
- Support services
- Training and skill development
- Conducive investment opportunities
- Policy facilitation

NGOs/INGOs

NGOs and INGOs have played an important role in organizing poor people, building capabilities, mobilising local resources, conservation, and in poverty alleviation. As a result, the interest of NGOs and INGOs was identified as maximisation of tourism benefits at local level. In order to achieve this the issues listed here are necessary.

- Social mobilisation or organizational empowerment
- Generate awareness and capability (skill) to be self reliant

¹ The provision of these and similar services by the state is assumed in order to bring better focus to the study

- Local resource mobilisation
- Community services
- Availability of credit

Local People

Local people become the centre of mountain tourism development. Unless the living conditions of the local people improve, the achievement of sustainable mountain tourism development is unlikely. The interest of the local people is to **maximise tourism benefits locally** which requires that the following issues will also be addressed:

- conservation/protection of assets,
- employment and income generation,
- community development, and
- empowerment of local communities.

Visitors

All four of the above-mentioned stakeholders are on the supply side of tourism. Visitors complete the tourism picture by being on the demand side. The interest of the visitors is to **maximise satisfaction**, which becomes possible only if there are adequate facilities and the services are of good standard. There also has to be adequate infrastructural development and the cost should be reasonable.

The five stakeholders were further grouped into three in view of the training modules that had to be developed in the context of mountain community and mountain tourism development. The three groups are:

- i. **policy planners:** government, NGOs/INGOs, entrepreneurs;
- ii. **programme designers and implementors:** government, GOs/INGOs, entrepreneurs, CBOs; and
- iii. **CBOs:** local government, organized communities, and entrepreneurs.

No separate training module is required for the visitors, but their interest must be understood by the other stakeholders so that visitors are able to maximise satisfaction. Hence, three sets of training modules for the first three groups of stakeholders will be developed.

TRAINING NEEDS

The training needs to cover a wide variety of areas but, after extensive discussion, three broad areas of training were identified for each of the stakeholders. These broad areas of training are discussed below (see Figure 1).

Conceptual Orientation

A great deal of awareness building on the meaning and use of concepts at the policy and programme levels has become necessary. Much of the effort in conservation of natural and cultural assets begins by realising their values, as these are essential for developing a vision on sustainable mountain tourism development. As will be discussed later, the need to assess carrying capacity is essential in this exercise and carrying capacity, being as complex as it is, needs to be simplified and modified over time in light of management objectives. Certain attributes of nature are best preserved if they are left untouched because they are extremely scarce. In short, there is still a great deal to learn about nature and, in many places, a great deal of damage has already been done. Therefore, prudence must be observed and planning and management must be carried out by setting reasonable standards, limits, and so on.

Institutional Process

Organizing local communities, designing rules and regulations, and enforcing them are important aspects of institutional development. Without institutions, the management of sustainable mountain tourism development is not possible. However, centralised institutions cannot fulfill the task of managing development at local levels. While central-level institutions are necessary for policy and programme formulations, these policy and programme formulations need to be sensitive to local needs. Institutional linkages and coordination become vital in programme implementation. Local institutions cannot be expected to carry out too many tasks just as central-level institutions cannot fulfill others. NGOs and INGOs have become an effective force at the local level. Hence, from crafting local institutions to developing coordination among institutions at different levels, all are important in the institutional process.

Actions

Finally, plans and programmes can be formulated, but history has shown that implementation in Nepal has been weak. Actions need to be effectively orchestrated within the context of needs, capacities, and resource endowments or the comparative advantages of local areas. Complementary actions for mountain community and tourism development become essential. Providing quality services to visitors, managing the natural and cultural assets, and developing new products are equally important in this matter. Linking actions to financial institutions, developing trained manpower, and developing guidelines are other attributes essential for successful implementation. Research, evaluation, and monitoring can provide valuable inputs to policy-makers and planners to guide sustainable mountain and tourism development.

Physical Setting

Mustang is one of the 75 districts of Nepal and is one of the most populated of its districts. The district can be divided into two parts, namely, Upper and Lower Mustang. The area of Upper Mustang is part of the Lo Region. The district is composed of 10 VDCs. Mustang contains seven, namely, Chhonup, Chhoshar, Lomanthang, Surkhong, Chorang, Ghomi, and Chhulsang (Map 1). Of these, six VDCs, i.e., Chhonup, Chhoshar, Lomanthang, Surkhong, Chorang, and Ghomi, together comprise the Lo Region. The case study focussed on the settlement of Lomanthang. However, the implications of the study also have a bearing on the Upper Mustang region as a whole.

The entire Mustang district lies across the Himalayan ranges of Annapurna (8,091 m) and Dhaulagiri (8,167 m), which overhang the east and west of the Kali Gandaki Gorge, believed to be the deepest in the world. The Kali Gandaki River originates in northern Mustang. The region is roughly 2,902 sq. km. in area. Upper Mustang is almost inaccessible from the east and west due to mountain ridges that rise over 5,000 m, although accessibility from the north and south is relatively easier through the Kali Gandaki Valley. The lower slopes are used for grazing and collecting herbs, fuelwood, and other natural resources. The alluvial parts of the valley are used intensively. The upper Mustang area bridges the Tibetan Autonomous Region of China to the north.

Upper Mustang lies between 3,300 and 6,480 m above sea level. It has a typical Tibetan landscape. The valley is widest in the trans-Himalayan part of the Kali Gandaki where the river almost bisects the valley. Within this larger valley are many smaller valleys formed by the tributaries of the Kali Gandaki which are marked by undulating hills, moraines, canyons, ravines, and gullies. Most of the land surface lacks vegetation except

Part Two

Case Study of Upper Mustang

BACKGROUND TO THE CASE STUDY AREA

Physical Setting

Mustang is one of the 75 districts of Nepal and is among the most inaccessible and least populated of its districts. The district can be divided geographically into two parts; namely, Upper and Lower Mustang. The area north of Kagbeni is considered to be Upper Mustang or the Lo Region. The district is composed of 16 VDCs, of which Upper Mustang contains seven; namely, Chhonup, Chhoshar, Lomanthang, Surkhang, Charang, Ghami, and Chhuksang (Map 1). Of these, six VDCs; i.e., Chhonup, Chhoshar, Lomanthang, Surkhang, Charang, and Ghami, together comprise the Lo Region¹. The case study focussed on the settlement of Lomanthang. However, the implications of the study also have a bearing on the Upper Mustang region as a whole.

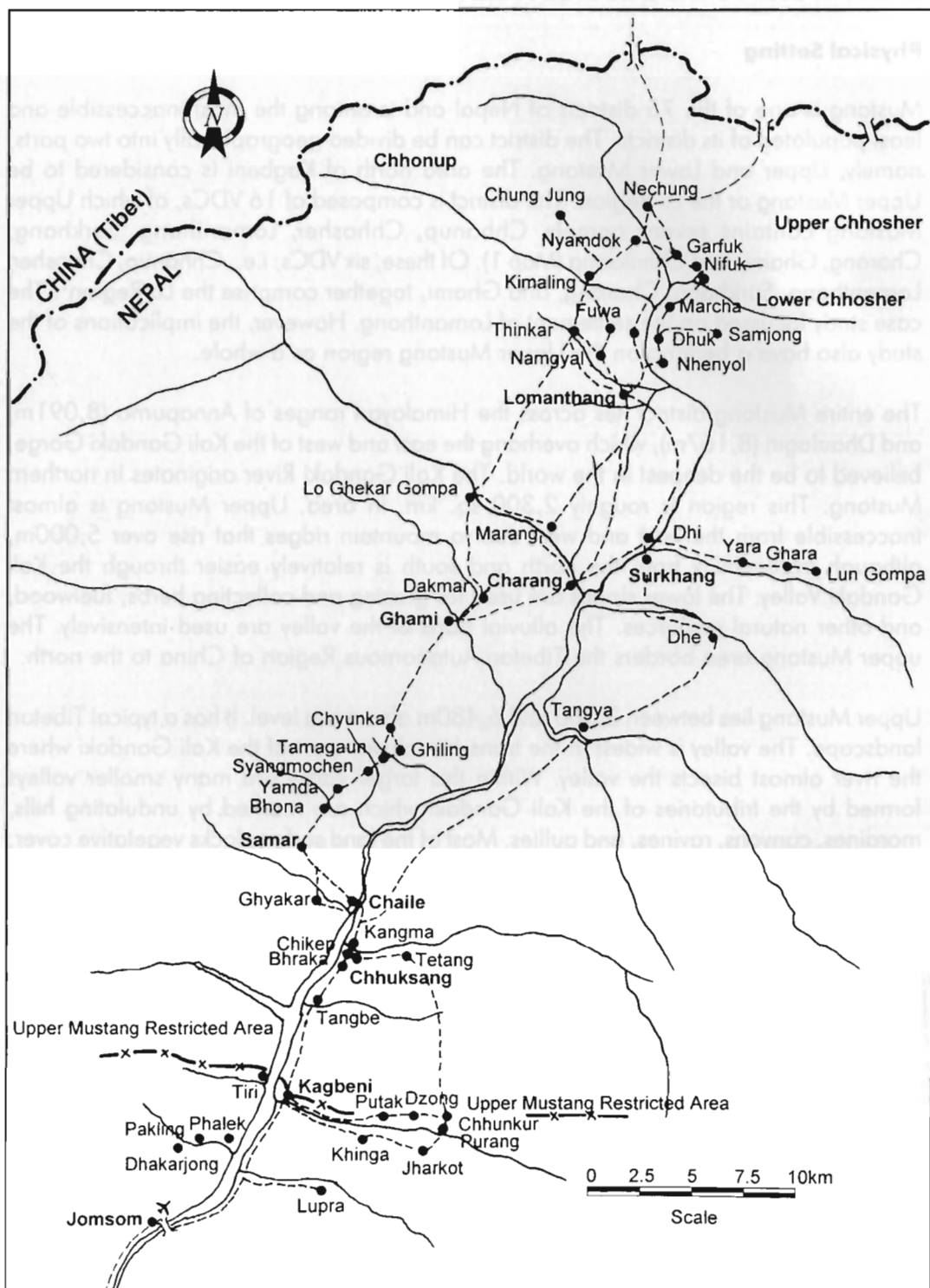
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Upper Mustang lies between 3,300 and 6,480m above sea level. It has a typical Tibetan landscape. The valley is widest in the trans-Himalayan part of the Kali Gandaki where the river almost bisects the valley. Within this larger valley are many smaller valleys formed by the tributaries of the Kali Gandaki which are marked by undulating hills, moraines, canyons, ravines, and gullies. Most of the land surface lacks vegetative cover; and snow, sun, and wind act on the sandy soils to cause erosion. The entire landscape of Upper Mustang is that of a high altitude desert, and it appears uninhabitable.

The main access to Upper Mustang is through the Kali Gandaki Valley. Due to the lack of proper bridges across the river, villages become isolated during floods. In winter, due to heavy snow, the mountain passes are blocked and many settlements remain shut off from the rest of the country.

Lomanthang VDC is the traditional hub of Upper Mustang, although the district headquarters of Mustang are at Jomsom in Lower Mustang. Lomanthang is 84km north of Jomsom and this distance can be covered in about three to four days. The altitude of the Lomanthang settlement is 3,697m (12,126 feet) above sea level. The Lomanthang VDC covers a wider area and is surrounded by Chhonup and Chhoshar VDCs in the north, Charang in the south, Surkhang in the east, and Dolpa district in the west.

¹ More specifically the entire area above Ghiling village is called the Lo Region.



Map 1: Upper Mustang: Settlements and Trails

Climate

The climate of Upper Mustang is insular with sparse rain and severe winters. Upper Mustang lies in a rain shadow caused by the Himalayas. Rainfall averages about 554mm between April and October, whereas during November to March it receives 782mm of snow. Because of the high altitude, the climate is cold all year round. The temperature ranges between four degrees below zero to 14 degrees Celsius. Climatic variation within the Upper Mustang is minimal.

Upper Mustang has two distinct seasons. April to October are relatively mild, while, between November to March, the winters are severe. Floods due to snowmelt generally occur almost every afternoon during June and July. These floods at times can be devastating.

Demographic Characteristics

About 40 per cent of the total population, i.e., 14,924 (1991 Census), of Mustang district or about 39 per cent of the total households (3,025) live in Upper Mustang. The ratio of male to female is 0.94 in Mustang as well as in Upper Mustang.

Mustang district, in general, and Upper Mustang, in particular, is one of the most sparsely-populated regions of Nepal. The population density is very low, about 2.5 person per sq. km. Based on the agricultural sample Census of 1991, there was about 1,184 ha of cultivated land in the entire district.

Literacy and Health

There is only one high school, three lower secondary, and 25 primary schools in Upper Mustang. Mustang has a low literacy rate. The attendance rates are low, although enrollment is high. The local people do not see how the curriculum taught in Nepali helps enrich their Buddhist and Tibetan way of life.

According to a socioeconomic survey of 109 households in Lomanthang conducted by ACAP/UMCDP, children from about 46 households attended school. Only 42 per cent could speak Nepali. The literacy rate among the population aged 10 years and above is about 10 per cent, with a marked gender gap in literacy (ACAP/UMCDP 1993).

The average health condition of the people in Upper Mustang is generally poorer than that of an average Nepali, despite the fact that every VDC in Upper Mustang has a health post. The service delivery system from the existing government organizations for health and agricultural and livestock extension is very poor.

Table 1: Population Distribution of the VDCs in Upper Mustang District

Name of VDCs	Household		1996 Population			1983 Population
	1996	1983	Male	Female	Total	
Chhuksang	192		552	502	1054	
Ghami	154	210	531	418	949	1033
Charang	133	115	368	340	708	620
Lomanthang	177	195	411	477	888	1037
Chhonup	201	163	506	468	974	765
Surkhang	139	123	358	330	688	620
Choosher	175	197	376	386	762	720
Total	1,171	973	3,102	2,921	6,023	4,695

Source: Figures for 1983 are from Ojha 1987 and those for 1996 were gathered during the field trip.

Settlements

Most settlements (31 in total) in Upper Mustang are located along the river valleys where access to water for irrigation is easy. Mud canals are generally built to divert water for irrigation. Often, when such canals are destroyed due to natural calamities, such as snow, flood, or avalanches, the settlements have to shift. Settlement areas generally lie between 3,000 to 4,000masl and stand out sharply from their barren surroundings when the fields are green with crops. Houses are constructed from mud bricks and are generally flat-roofed. Windows are small and few — for insulation against the harsh winter.

Upper Mustang is composed of seven traditional districts with a total of twenty-seven villages and is grouped into two broader geographical regions for political and administrative purposes by the people of Upper Mustang. The northern region is called the '*Dhal-la-yeh*' and it is comprised of Lomanthang, Chhosher, and Chhonup and covers about 700 sq. km. The southern region is called '*Dhal-la-meh*' and is comprised of Ghami-Dhakmar, and Dhe-Tange and occupies about 1,300 sq. km. This division is geographically and ecologically natural, but culturally or linguistically it is the same. Ghiling is now a part of Upper Mustang for administrative reasons.

Lomanthang

Lomanthang, a walled city, is the premier settlement of Upper Mustang. The settlement inside the wall – *Dhrokpu* - has a population of 800 people. Another settlement is outside the wall – *Tsoral Dhrokpu*. Lomanthang was the political capital of the Lo kingdom and today it is the social, economic, and religious centre of Upper Mustang.

Available literature reveals that Upper Mustang (Manthang, Ghami, Surkhang, Charang, Chhonup, and Chhosher VDCs) - constituted an old kingdom founded in the 15th century by Ama-d'pal. Until the 18th century when Lo fell to the kingdom of Jumla, Buddhism flourished and many of the finest *gombha*(s) in the area were built during this period. In the late 19th century, when Jumla was annexed by the expanding kingdom of Prithvi Narayan Shah, Upper Mustang became a part of modern Nepal.

Lomanthang is a valley which runs east to west. The walled city is located at an altitude of 3,720m and is L-shaped. Three quarters of the township lie inside the wall and the remaining outside. Monasteries occupy the northern quarter and the two quarters inside the wall consist of settlements.

The wall is about six metres high and built by traditional mud-filling techniques. The wall was built for defense against armies attacking from other areas. This wall is rapidly falling. The parts that have fallen have been crudely rebuilt. According to photographic evidence, most of the destruction has taken place after the 1970s (Rai 1987).

The main gates have a large wooden door that is closed every night and opened in the mornings. Several new gates have been built as well. The main gate continues to have great symbolic importance. Visitors must enter through the main gate and, if on horse, must dismount before entering.

Social Structure²

Upper Mustang is heavily influenced by Buddhism and by Tibetan culture. It has been able to maintain its own traditions too. Buddhist customs originating in the 14th century are still in practice. Among the four branches of Buddhism (*Ningma*, *Kagyre*, *Gheluk*, and *Shakya*), the *Shakya* system is in practice in all the four monasteries in Lomanthang. It is believed that the Buddhism practised in Lomanthang came from Tibet.

Social

The society of Upper Mustang is an amalgamation of Tibetan culture and Nepali political institutions. The people of Upper Mustang have a complex social structure consisting of social and caste divisions and kinship relations. *Bista*, *Gurung*, and *Kami* are the three ethnic groups residing in Lomanthang. The *Gurung*(s) constitute the predominant ethnic group in terms of population, although the *Bista*(s) are the traditional ruling class in the area. The villagers in this area are ethnically *Bhotiya* or *Bhote*. It is a common practice among Nepal's Tibetan ethnic communities to adopt names of adjacent peoples who were ranked more highly than *Bhotiya*(s) in the *muluki ain* (national code). In other words, the *Gurung*(s) of Upper Mustang may also in fact be of *Bhotiya* origin. Of the 176 households, 25 belong to the *Bista*, 122 to the *Gurung*, and 29 to the *Bishwakarma* or *Kami* groups. Of the total population (970) in the Lomanthang VDC, 47 per cent are female.

The major class division is between the aristocrats (*Kudhakpa*) and the commoners (subjects/*Misher-bhija*). *Kudhakpa* symbolises the kings and other noble families – mostly from the *Bista* caste. Most of the aristocrats (minority) claim to have immigrated from Tibet. The aristocrats are divided into three categories; namely: *Loba* royal family, nobles,

² Refer to Rai 1987 for more details.

and quasi nobles. Each individual in the aristocratic group is ranked according to genealogical ties with Tibetan families.

The commoners can be divided into two major groups. The *Shinghwa* are the farmers and merchants. They are mostly from the *Gurung* caste and live within the walled settlement. The *Hrigmawa* are the traditional lower caste, i.e., the Biswakarma, and live outside the city walls. The commoners play a key role in the overall economy – in agriculture, trade, and animal husbandry — and provide labour. In the past, they provided services of various types to the *Raja* and the monastery. Monks for the monastery were recruited from among the commoners. The commoners claim to be indigenous to the area. The commoners comprise more than 80 per cent of the population. The aristocrats own most of the productive assets in Lomanthang.

The caste system determines rules of marriage and purity and continues to be strong even to the present day. The caste system cuts across the class system and thus makes the social stratification system fairly complex. The *Loba* divide themselves into two main caste groups, namely 'ritually pure' and 'ritually impure'. There is division within these groups as well. The former observes endogamy strictly and exclusively controls socio-religious and political affairs. The caste hierarchy is less rigid and more permeable than the class hierarchy. While the ascribed caste status of an individual is determined by birth and, therefore, fixed for life, one can affect caste mobility-both upwards and downwards-within each of the ritually pure and impure categories.

Kinship

Social organization and kinship further complicate the *Loba's* social stratification. Kinship divides the society horizontally into groups and cuts across the caste and class systems. Relatives and non-relatives are distinguished through the kinship relationship (both patrilineal (bone relatives) and matrilineal (flesh relatives)). The concept of relatives is confined to a small group lying between two senior and two junior generations.

Marriage rules are regulated by kinship and caste. Partners have to be found among non-relatives. Other social and personal factors are also important in determining marriage. Polyandry is also practised. The family is a religious, economic, and social unit.

Institutions

The *Loba* political organization is represented by three institutions; namely, the *Raja*, the traditional village organization, and the monastery and lies outside the formal structure of the Nepal Government.

The Local Raja

The local *Raja* is a powerful institution, although being part of the Kingdom of Nepal, the *Raja* of Lo enjoys limited powers. "To the local people the *Raja* is a 'paramount

personality, commanding absolute power'. All Loba citizens are expected to abide by the rules and regulations of the palace. The palace owns large tracts of land and has been selling land to the local people. The commoners shoulder the responsibility of tilling the palace lands. Agricultural activities are all dictated and regulated by the palace in some villages of Lo. The palace produces surplus food, which is loaned out at an interest rate to food deficit households. Thus, the palace has strong control over the local economy. Traditionally, the *Raja* can impose a social sanction of *Chhepa* on anyone who does not abide by his rulings. The system of *Chhepa* has alarming connotations to the people of Lo.

Over time, as political changes have taken place in Nepal and Tibet, the powers of the *Raja* have also gradually declined. However, locally, the *Raja* is still a powerful institution in Upper Mustang.

Traditional Village Organization (TVO)

The TVO is formed from families and can function without approval or support from the *Raja*, although its functioning is made easy if the *Raja* supports it. The TVO is relatively democratic and egalitarian despite the complex social structure. The TVO is represented by members from the families of the aristocrats (15 families) and commoners (125 families). The headman and four other members are selected from the aristocratic families. Apart from these, two spokespersons, an accountant, and four lieutenants constitute the council. The council is effective for one year, after which a new council is formed.

The TVO carries out community activities in the form of irrigation, trails and bridges, and maintenance of public places and religious monuments. Households owning large landholdings have to supply more labour. Predetermined fines have to be paid by households unable to supply labour. Irrigation water is distributed in relation to land size. Pasture management and livestock grazing are also regulated by the TVO, although pasture management has been fairly poor. Certain types of village disputes are also settled by the TVO. It acts as an intermediary between the people and the palace and has, in the past, been said to have taken a stand against the *Raja's* decisions. Fines collected are used for meeting the council's costs, and the remaining amount is shared among the members. The TVO does not overlap with the local political body and is a fairly popular institution.

Upper Mustang has its own local-level, community-based organization managed by the local people for the development of their villages. In each village, the *mukhiya*, head of the village, is elected normally for one year. The *mukhiya* is responsible for the overall development activities of the village. Everybody in the community normally pays their respects and obeys him. He cannot be absent from the village during his tenure even for a single night. Rules and regulations with regards to fund raising and voluntary labour are laid out. The rules are very strictly enforced and obeyed. The money which is collected under this system is deposited in the village fund. There is a system of mutual help between such organizations for development work, and it is called *neakhay*. To solve social disputes, the VDC, the *Raja*, and the *lama* are usually consulted.

The Monastery

The monastery exercises jurisdiction over religious affairs. It owns large tracts of agricultural land and so produces surplus food. This food is loaned out at interest and thus indirectly influences the local economy. It leases land out to families whose sons or daughters are either monks or nuns in the monastery. It is mandatory for all households with more than three sons to send one son to become a monk. Usually the second child is sent. The monks provide the spiritual and religious leadership and influence decisions involving moral and ethical codes. For holding village rituals, the monastery can demand contributions from the households.

These three institutions, the *Raja*, TVO, and the monastery, maintain social order among the *Loba(s)*. Each institution has its own forms of physical punishment. However, the rules are many and often contradict one another. Often the rules are biased against the lower socioeconomic groups. A default is not judged on the basis of breach of rule per se, but by the status of the defaulter and punishment is fixed accordingly. Therefore, the aristocrats have fewer rules to follow and there are fewer social controls. The commoners have numerous rules to follow and feel socially restrained (Rai 1987).

Government and Other Organizations

Apart from the Village Development Committee (VDC), an agricultural services' centre, a livestock services' centre, a health post, the Nepal Food Corporation (NFC), a post office, a telecommunication office, a police post, one lower secondary, and one primary school are other government institutions located in Lomanthang, and these provide some level of services to the people in Upper Mustang. Some of these agencies, such as, the agricultural and livestock services centres, are reported to remain non-functional for most of the year. In addition to these regular government agencies, other offices in Lomanthang include the ACAP/UMCDP and two local level NGOs. A mothers' group, some users' groups, and a Conservation and Development Committee (CDC) are also working with the assistance of ACAP/Upper Mustang Community Development Project (UMCDP) and the District Development Committee (DDC).

Economy

Farming, supplemented by animal husbandry and trade, is the main occupation of the people. Over 90 per cent of the people depend on livestock and agriculture, eight families also make some income from tourism (lodge, camping site, and curio shop). Seasonal employment created by tourism for the local people is almost non-existent. (See Ojha 1986 for more details on the economy of the Lo region).

Farming

Information on agriculture for the Lo Region is not available. According to the 1991 Agricultural Sample Census, the total area under agriculture in Mustang district was

1,183 ha., which is higher than that reported in the 1974-75 cadastral survey (1,300 ha) (Ojha 1983). The 1,183 ha were distributed over 8,525 parcels with an average size of 3.4 ha. The average size of land holding is less than 0.5 ha.

The Bista (royal) family holds the largest proportion of land, and so they have surplus food to sell. Agricultural activities begin after the snow begins to melt in March-April and end in October after harvest, after which all agricultural activities come to a stop. Almost all households are dependent on agriculture to varying degrees. Members who have migrated also return home to help out.

Most of the people of Upper Mustang usually grow only one cereal crop a year on a rotational basis. Wheat, naked bakery, buckwheat, peas, mustard, and a very limited amount of maize are the main crops. Due to variations in altitude, crops mature at different dates. Productivity is poor due to a variety of factors, including the poor quality of soil, lack of adequate manure, and lack of improved seeds, irrigation water is not assured and depends on weather conditions and all the seeds broadcasted do not germinate. Vegetables and fruit, such as apples, apricots, radishes, potatoes, and green vegetable have only recently been introduced. Apple and peach orchards are also found in several places where irrigation is available.

A fairly large proportion of households is food deficit. Therefore, livestock raising, trade, cottage industry, and winter migration have continued to be the major economic activities of the people of the Lo region. These activities follow an annual cyclical pattern dictated by the climate of the area. Labour shortages are reported during the peak agricultural season, especially during harvest (Ojha 1986).

Animal Husbandry and Pasture

Animal husbandry plays an important role in the livelihood of the people of Upper Mustang. Yaks, sheep, and mountain goats are the main livestock providing nutritious food, fuel, transport, and income. Households own a variety of livestock such as sheep, mountain goats, yaks, naks, mules, and *ghopa* and horses, mules, and *dzopa* are used for transportation. Yaks are the most valued livestock, followed by sheep and goats. *Jhopa* is used to till the soil and horses are used for transportation.

According to a survey conducted by ACAP/UMCDP, the average livestock holding in Lomanthang was 3.6 cattle, 2.27 horses, 1.86 donkeys, and six yaks per household. Only 12 per cent of households reported having sufficient fodder for livestock, while 38.5 per cent had barely sufficient fodder, another 26.5 per cent reported buying fodder. Horses, ponies, and mules are mostly used in tourism but are owned by the relatively well-off section of the community. Livestock products are sold only in local markets but not in the tourist market.

Livestock are continuously moved from one pasture to another, depending on the availability of grass. Yaks graze on the high altitude pastures. Some limited numbers

from villages close to the Tibetan border (Chhonup and Choosher) are allowed to graze inside Tibet. Five rupees have to be paid to the Tibetan authority per head of livestock grazed inside Tibet. Also, the numbers are controlled. Sheep are grazed only in summer in pastures located in the south. Horses are generally stall-fed, but may be taken to the pastures occasionally.

Over time, yak herds have decreased and thus reduced household livestock income. Pastures in Tibet were the main source of pastureland for livestock, but access to these pastures has been curtailed significantly by the Chinese authorities in recent years. As a result, livestock numbers have decreased. Local pastures have deteriorated significantly due to overgrazing by refugees – *Dhrokhpa(s)* and *Khampa(s)* – in the 1960s. Although the refugee problem does not exist now in the region, pastures have not improved. Compared to the past, current herd sizes are down to about one-third.

There is no institutional regulation of pastures in any of the Lo settlements (Ojha 1986). Thus a grazing decision is an individual decision and no rotational grazing practices are observed. However, community ownership of pastures is highly respected. Members of other communities do not use pastures not belonging to them without permission. Therefore, depending on the amount of pastures owned by a community, households make an appropriate selection of the type of livestock and herd sizes.

Trade and Migration

The Kali Gandaki trail served as a major trade route in the past connecting Tibet with India. This trail is relatively easily accessible compared to other north-south trails in the area. Although the north-south trade was an important activity to the Lo people in the past, its importance has declined significantly since the late sixties. The *Thakali(s)* were the most important traders, but the Lo people benefited as well, mainly by transporting traded goods. Trade contributed significantly to the growth of Upper Mustang in the past. Trade between this area and Tibet continues, despite the control executed in the early sixties after the Chinese takeover of Tibet.

During the harsh winters, between half to two-thirds of the people of Lomanthang migrate to Pokhara, Kathmandu, or to India for approximately three months. They normally engage themselves in door to door trade. Many who go to India purchase woollen garments from Ludhiana and sell them in Assam and Benaras. Therefore, in this sense, seasonal migration may be considered as an economic activity for a large number of people from Upper Mustang. At least one member of the household migrates to the south during winter. Migration is strictly seasonal and little permanent migration is believed to have taken place.

Herbs of different kinds, *churpi* (dried cheese), and other locally produced cottage industry products are generally taken by the migrants to sell in the south. Traditionally, exchange was conducted by barter for food grains. Cash obtained from trade is used to purchase

small, manufactured items which are then sold in different villages. Some engage in retail trade as roadside vendors.

By April, most return home to attend to agriculture. With the cash gained from trade most people bring back food grains and other manufactured items, some of which they may sell across the border in Tibet. From Tibet they bring back salt, wool, and other livestock products. Professional traders continue this form of trade as long as the weather permits.

Cottage Industry

Cottage industry activities are carried out on a small scale—mostly for home consumption—in Upper Mustang. Wool is imported from Tibet to meet the local demand for woollen products. Most of the households have acquired good skills in making woollen materials.

Energy

The local people continue to rely on the little vegetation that is available to meet their firewood needs. In contrast to other parts of the country where firewood still continues to meet the bulk of energy requirements for cooking and heating, the situation in Upper Mustang is different. Firewood is very scarce and people are forced to rely heavily on animal dung to meet over 90 per cent of their annual energy requirements.

It is proposed to build a micro-hydro project with a capacity of 29kW near Lomanthang, and it was expected to be completed by the end of 1997 at an estimated cost of NRs. 5.8 million. The power will be used mostly for lighting purposes.

TOURISM ASSETS, PRACTICES, IMPACTS AND IMPLICATIONS

Rationale for Tourism in Upper Mustang

Although detailed information on the living conditions of households in Upper Mustang is not available, it may be considered to be below the average for the country and other similar mountain regions. Several factors, natural and geophysical and social, have all contributed to this situation.

From a physiographic point of view, Upper Mustang is a fairly uninhabitable area. High altitude, low rainfall, extreme temperatures, and marginal agricultural land all make agricultural development in this region extremely difficult. The remote and fairly inaccessible location of Upper Mustang is the main constraint, as costs escalate to transport people and goods to this region. Any development activity thus becomes fairly expensive, especially if material inputs have to be transported from the south.

The distribution of agricultural land in Upper Mustang is highly skewed. Ojha (1986) estimated that about 33 per cent of agricultural land is held by the top decile group and the bottom 50 per cent hold only about 18 per cent. The inequality in asset ownership

is very pronounced, and the existing social system has developed in such a way that it is the commoners who appear to be both economically and socially disadvantaged (Rai 1987).

Livestock development has some potential, but will require major interventions and investments in both pasture development as well as in improving the breeding stock. Currently, livestock numbers have reduced significantly since access to Tibetan pastures have been severely curtailed by the Chinese authorities. Among the existing livestock, inbreeding is a serious problem which explains the low productivity, in terms of both meat as well as milk production. There has been considerable degradation of local pastures, and they need to be improved. Also, there is no form of pasture management in Upper Mustang. This needs to be introduced if livestock development is to take place. The demand for livestock products, locally as well as in the south, is very high, and, hence, livestock development has great potential for providing households with additional income.

Tourism that is based on the advantages of relative inaccessibility appears to have potential for development in Upper Mustang. It is this realisation that led the Ministry of Tourism (MOT) to introduce controlled tourism in this region. Only group tourists are permitted to visit the area. Group trekkers come on a scheduled trip or join up with friends for a customised, self-contained trek, organized by an overseas adventure travel company often in association 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.

The cold arid desert presents an opportunity for tourists to see one of the last frontiers of a Himalayan enclave that has seen little change. Its remoteness adds to its attraction. The socioculture of the people also serves as a rich tourism resource. Owing to its unique religion and culture, fragile environment, remoteness, and its restricted status until a few years ago, this area has always been veiled by an aura of mystery. Apart from the renewable natural resources, which to the local people serve to meet their daily subsistence needs directly or indirectly, these resources have not been harnessed to improve the living conditions of the people. Accessibility and other constraints are obvious in Upper Mustang. In such a context, developing Upper Mustang and uplifting the economic status of the people become extremely difficult tasks.

Realising that development in terms of agriculture and other modern sectors in Upper Mustang is fairly unfeasible, the government has decided to promote high-paying tourism in the area. Tourism-led development must, therefore, be the focus of development in this region and tourism must be able to benefit a wider community. Tourism development must be planned in a such a way that the needs of the local people are promoted as well. The local people must be made guardians of the fragile and harsh environment of the region. Their culture, which people from many parts of the world come to see, must

be promoted and conserved. If these assets deteriorate, the only hope of development in this area may be lost. In March 1992, this area was opened to the outside world. Additionally, the Ministry of Tourism has decided to develop Upper Mustang as a model ecotourism area to minimise negative impacts and promote positive impacts. The tourism that is promoted is restricted (maximum of 1,000 visitors per annum) and costly (a trekking permit fee for a ten-day period costs US \$ 700. Each additional day beyond this period will cost the trekker US \$70 per day) and the government has committed to channelise a certain percentage of the revenue (30 to 50 % of the trekking fees) obtained for the development of the area. It is in this context that tourism in the Upper Mustang region becomes extremely important and the efforts made to develop tourism should not fail. Its failure will imply 'lost hope' to the people of this region.

Tourism Assets of Upper Mustang³

The natural resources of Upper Mustang are mountains, glaciers, rivers, snow, lakes, and the entire cold desert landscape. Two main rivers in Upper Mustang originate from Chhoshher (Tibetan border VDC) and Damodar Kund (a pilgrimage site for Hindus). There are several smaller snowfed streams. All rivers and streams finally join the Kali Gandaki River. This river drains the Upper Mustang area, separates the Annapurna and Dhaulagiri ranges, and plays an important part in the migration of birds.

Upper Mustang is essentially a cold arid desert where vegetation is extremely sparse. Due to low rainfall, natural forest is stunted and much of the vegetation is bushy. Fuelwood is extremely difficult to obtain. People are known to uproot bushes to meet firewood needs. Many travel over a day to collect firewood from thorny bushes and then spend another day returning. The forest cover is sparse and limited to the sides of the Kali Gandaki River. Water for human consumption is also fairly scarce.

An asset by definition generates a stream of benefits. Assets also provide the basis for attracting tourists – an important attribute of the supply side of tourism. Without attraction tourism cannot flourish since there is nothing for the tourist to see and enjoy. The tourism assets of Upper Mustang can be classified into several categories; namely, natural and man-made. Natural assets include the endowments of nature and man-made assets could be tangible, e.g., a monastery, as well as intangible, i.e., culture.

Natural Assets

What makes tourists want to pay US\$ 700 (for 10 days) to visit this remote and inaccessible place that lacks almost anything that is modern? In other words, what makes the Upper Mustang area in particular a unique tourism destination?

³ The relevance of these and related concepts has been discussed in more detail in Banskota and Sharma (1995) and will not be elaborated upon here.

Natural Landscape

The Upper Mustang area is unique because of its trans-Himalayan setting from where one gazes south to look at the main Himalayas. Remoteness and the restricted status of the area (to foreigners) until a few years ago are also important factors that attract tourists. A unique environment, such as that of Upper Mustang, has limited substitutes and hence exhibits a steeply sloped demand function with high option value.⁴ The sheer beauty of this *cold natural wilderness desert* north of the majestic Himalayas is in itself an important tourist asset.

Damodar Kund

The Damodar Kund is a sacred site for Hindus and also provides a unique opportunity to observe a glacial lake that abounds in almost pristine forests and wildlife. Although the trekking trail in this Damodar Kund area is relatively difficult, to adventure seekers it can prove to be very challenging and exciting. Apart from the growing component of international tourism there is the interest of observing wildlife. Therefore, this area has several tourism attributes. Many of the wildlife species found in the Damodar Kund area as well as in Upper Mustang are uncommon and some are endangered. With rich biodiversity, beautiful scenery, and almost no human settlement, the Damodar Kund is a pure wilderness and has potential to be developed into a prime tourism asset. Facilities are, however, completely lacking. Trails, drinking water sources, and camp sites have to be developed. Sensitive areas need to be identified and even restricted from any form of use, since biodiversity in this area is reviving after being fairly badly destroyed during the *Khampa* movement.

Fauna and Flora

Upper Mustang has distinct *faunal* species, mostly Tibetan, and some are already listed as either rare or endangered by the Department of National Parks and Wildlife Conservation (DNPWC). Wildlife density in Upper Mustang is very low. Much of the wildlife habitat was disturbed and only recently have the species begun to reappear in the area. Little is, however, known about their stock, distribution, ecology, and behaviour. The more important fauna of the area are as follow (KMTNC 1992).

Mammals

Snow leopard (*Panthera unica*)

Wolf (*Canis lupus*)

Red or hill fox (*Vulpes vulpes montana*)

Lynx (*Felis lynx isabellina*)

Himalayan black bear (*Selenoroctos
thibetanus*)

⁴ Option Value: "An environment confers benefits on users, and those who, while not using it directly, are glad that it is there. User benefits are derived by two types of consumer: i) all who make actual use of the environment and ii) potential users of the environment in the future, either in the present or the unborn population" (Pearce et al. 1989)

Bharal or blue sheep (<i>Pseudois nayaur</i>)	Tibetan antelope or chiru
Common langur (<i>Presbytis entellus</i>)	(<i>Pantholops hogsoni</i>)
Himalayan marmot (<i>Marmota bobak</i>)	

Occurrence of three endangered species; namely, wild yak (*Bos grunniens*), Tibetan wild ass (*Equus hemionus kiang*), and the nayan or great Tibetan sheep (*Ovis ammon hodgsoni*) in northern Mustang. The great Tibetan sheep near the Tibetan border has also been reported but not authenticated.

Birds

Grey Headed Shrike (<i>Lanius Tephronotus</i>)	King Eagle (<i>Aquila chrusaetos</i>)
Yellow Billed Chough (<i>Pyrrhocorax Graculus</i>)	Hen Harrier (<i>Circus cyaneus</i>)
Red-billed Chough (<i>Pyrrhocorax Pyrrhocorax</i>)	Bearded Vulture or Lammergeir (<i>Gypaetus barbatus</i>)
Hill Pigeon (<i>Columba palumbus</i>)	Hoope (<i>Upupa epops</i>)
Common Rose Finch (<i>Carpodacus acitirostris</i>)	Black Redstart (<i>Phoenicurus ochruros</i>)
Humes Short Toed Sky Lark (<i>Calandrella acutirostris</i>)	Honey Kite or Honey Buzzard (<i>Pernis ptilorhyncus</i>)
Plumbeous Redstart (<i>Rhyacornis fuliginosus</i>)	Himalayan Griffen Vulture (<i>Gyps himalayensis</i>)
White Eye (<i>Zosteropss palpebrosa</i>)	Tree Sparrow (<i>Passer montanus</i>)
Chukar Partridge (<i>Alectoris chular</i>)	Tibetan Snowcock (<i>Tetraogallus tibetanus</i>)
Himalayan Rubythroat (<i>Erithacus pectoralis</i>)	Pied Wagtail (<i>Motacilla alba</i>)
Rose Breasted Pipit (<i>Anthus roseatus</i>)	
White-capped River Chat or Red-capped Redstart (<i>Chaimarrornis leucocephalus</i>)	

The area around the Damodar Kund (a pilgrimage site for Hindus) has almost *pristine* forests and harbours many of the above-mentioned species. These species take refuge in this area because of better habitat conditions and also to escape hunters. Livestock depredation by some of these wildlife is reported to be fairly high, especially during summer when herds are taken to the high altitude meadows for grazing.

Mustang Gate

The Kali Gandaki, at a point below the settlement of Chaile along the trail, can be seen to flow through a big rock face. The site is spectacular. This is called the Mustang Gate. An appropriate bridge over this section would be helpful for both the local people and tourists.

Man-made Assets

The people of Upper Mustang, over the past centuries, have been successful in developing rich cultural assets as well. The many structures that still exist today are reminders of a long and rich history. The monasteries (that continue to maintain many rites and rituals that date back to the 14th century), cultural events, and festivals are all relics of a long tradition that still continues in this remote and inaccessible part of Nepal.

Historical and Cultural Assets

Monasteries

The three monasteries-*Jhampa Gomba*, *Thuhchhen*, and the *Ngon-ga-Tangchubung Monthang Choedhe*-inside the wall city were constructed with the help of Tibetan monks and are managed by monks and the local community. *Chayardi* monastery lies within the palace and is managed by the royal family of Lomanthang.

Besides the natural attributes, Upper Mustang has many historical and cultural assets of high tourist value. *Chhenpo Gombha* is commonly known as *Jhampa Gombha*. This is the oldest monastery in Lomanthang. It was built by the late King Ama-d'pal in 1387. Ngor Chen Kunga Sangpo, a renowned scholar from Tibet, also helped to design and construct this *gombha*. Its uniqueness lies in the mysterious and exclusive, gold-painted mandalas.

Thuhchhen (Maha Muni) monastery, subscribing to the *Shakayapa* sect of Tibetan Buddhism was built in 1412 by the late King Chhang Chhen Tashi Gon, the grandson of the late King Ama-d'pal. The famous scholar, Poncheen Shakay Chok Dhen, from Tibet helped to construct this monastery. This monastery was a major centre of religious activity in those days. It has an imposing two-storied building consisting of beautiful art works and woodwork in the interior.

The *Ngon-ga-Tangchubung Monthang Choedhe* monastery was built by the King - Ham Tshewang. The abbot of this monastery was Ckokya Dorje Chang. Previously, this monastery was called Dakar Thekchenling Tsuklak Khang. The main image is a painting of Mahakha Darlenma painted by the Penchan Shakya Chok - Dhen. In 1934, a very severe earthquake caused large-scale damage to the monastery.

Longest Prayer Wheel Wall

Upper Mustang also boasts of one of the longest rows of prayer wheels in Nepal. It is located in Ghami VDC.

Chhoser Cave

Chhoser VDC is full of caves. Among the numerous caves found in this area, one cave is five storeys high and consists of about 85 rooms. The sizes of most rooms are about 120 sq. ft. with the exception of one big room that is about 400 sq. ft. The cave itself stands on a rocky cliff and can be climbed only with the help of a long ladder. Besides a kitchen and washroom facilities, there are shelves in all the rooms, perhaps made for storing food and other materials. The walls of the caves are painted with turpentine extracted from blue pine.

Such caves occur in large numbers above the river banks. According to local legends these caves were inhabited by the population of Lo in ancient times. The caves have an intricate architecture with multiple rooms interconnecting with one another. The caves would be of interest to tourists.

Lomanthang Wall

Built in the 15th century by Mustangi King Ama-d'pal, the wall surrounding the White Fort City is another cultural heritage of the people of Lomanthang. Local people consider the wall to be an important part of their cultural heritage. The wall needs renovation.

Fort Towers

Two dilapidated forts stand just north of Lomanthang. From the fort towers it is possible to see clearly inside the Tibetan plateau. It is reported that these towers were built to watch for enemy attacks from Tibet. The physical condition of these two fort towers is poor, and they need renovation.

Festivals

Lhosar

Lhosar marks the new year and is an important festival celebrated by all the people in Upper Mustang. A large number of people gather in Lomanthang to celebrate Lhosar for two days. The city is decorated with many colourful banners. The fluttering of the banners is believed to bring good luck to the people throughout the year. People dress in colourful clothes and women in fine jewellery. Although an important event to the local people, this festival falls during February which is a non-tourist season.

Teeji Festival

The Teeji festival is an annual phenomenon of Lomanthang. Teeji is an abbreviated form of *tempa chitrim*, which translates to 'prayer for world peace'. The Teeji festival is celebrated for three days. Teeji commemorates the victory of Buddha's incarnation Dorjee Sonnum over a demon called *Ma Tam Ru Ta*, considered to be a man-eater possessed with destructive powers. The Teeji festival is held in the *Chhoedhe Gomba* (Shakya sect) monastery. The chief abbot of this monastery is Tashi Tenzing Rimpochhe. The monks enact the harassment of the *Ma Tam Ru Ta*. Monks perform a dance called '*tsa chham*' to purify the city from evil spirits. Villagers from all over Upper Mustang come to watch the dances and to participate in the festival. The villagers also contribute firewood and necessary materials and money to make this festival successful. This festival can be an interesting event for tourists since it takes place in May.

Yartung

This is a harvest or horse festival that takes place on the 15th of the seventh month of the lunar calendar. The festival lasts for about three days. The opening ceremonies are conducted by the *Raja*. On the second and third day, the festival is led by the *Rani* and head monk respectively. Horse races are held and people wear their finest clothes for this festival. A great deal of drinking and dancing takes place at this festival.

With growing poverty and hardship, some of these assets are deteriorating. Unless tourism development in the area can be made a vehicle of overall development, these assets will continue to face deterioration and will gradually erode the comparative advantage the area enjoys in terms of tourism. Tourism itself can have negative impacts if not properly managed and this can accelerate the asset deterioration process.⁵ Over time, Upper Mustang can face increasing competition from Tibet (if China promotes aggressive tourism), and unless its cultural assets are protected and renovated and new products are developed, tourism development will suffer. Such a scenario would ruin perhaps the last hope for development in the region.

Tourism in Upper Mustang

Nature and Volume

Upper Mustang was approved for tourism in 1992. Altogether, 440 tourists visited the area in the first year (Table 2). The following year the number of visitors increased significantly to 742. In 1994 and 1995, the number remained between 810-820 and is close to the maximum number allowed (1000 per year) to visit the area. Table 3 presents information on the group trekkers by nationality. German and American tourists account for the largest number.

Table 2: Number of Tourists that Visited Upper Mustang: 1992 to 1995

Months	1992	1993	1994	1995
Jan	0	0	0	8
Feb	0	5	3	0
Mar	0	11	22	40
Apr	0	132	104	80
May	0	72	54	40
Jun	0	45	32	55
Jul	49	45	82	65
Aug	25	111	112	132
Sep	50	60	72	50
Oct	202	202	278	267
Nov	114	54	51	77
Dec	0	5	0	6
Total	440	742	810	820

⁵ See Banskota and Sharma (1995) for a detailed discussion of the impacts of mountain tourism.

Table 3: Number of Tourists that Visited Upper Mustang by Country of Origin (1995-first half)

Name of country	Kartik (Oct-Nov)	Marga (Nov-Dec)	Poush (Dec-Jan)	Magha (Jan-Feb)	Falgun (Feb-Mar)	Chaitra (Mar-April)	Baishak (April-May)	Jestha (May-June)	Ashadh (Jun-July)	Total
Australia	1	6			1	22	4	2		36
Japan	0			3				1		4
Holland	1				1		6	4		12
Germany	2				2	29	10	5	2	50
Thailand	2				2		1			5
Canada						3				3
France						8	7	3	6	24
Italy						8	18		1	27
Denmark						5			3	8
Norway							8			8
USA							3	23	19	45
UK							10		2	12
Belgium							5			5
Switzerland								6	12	18
Total	6	6	0	3	6	75	72	44	45	257

As group tourists, those permitted to visit the Upper Mustang area must be self-sufficient in food and energy. Besides travelling with an authorised registered trekking agency, group trekkers are also assigned a liaison officer by HMG whose food, accommodation, and clothing needs are to be provided by the trekking parties. The liaison officer is generally a civil servant - normally deployed either from the Department of Tourism (DOT) or from the Chief District Office at Jomsom. The main responsibility of the liaison officer is to make sure that the tour groups abide by the rules and regulations provided by the DOT. In other words, the responsibility of the officer is to monitor and enforce the rules and regulations established for Upper Mustang.

Government authorisation means taking a special trekking permit from the immigration office. Trekking permits are issued for a ten-day period and cost US\$ 700. Each additional day beyond ten days will cost the trekker US\$ 70 per day. Tourism in Upper Mustang is controlled and expensive, and, thus, it is reasonable to assume that only trekkers with a special interest in Tibetan Buddhism and culture and the high Himalayan, cold desert environment are the main visitors to the area, besides the 'pure adventure seekers'.

Trekking is not possible during winter due to the harsh cold conditions in the Himalayan desert, when temperatures drop far below zero and the snow can make trekking difficult and hazardous. Thus, trekking usually takes place between April and October. Very few tourists visit the area between November and March. The duration of treks varies between 10 to 21 days.

Trek Routes

All treks inside the Upper Mustang area begin and end in Kagbeni. Tourists fly in and out of Jomsom generally from Pokhara or even trek through the Kali Gandaki. Kagbeni is about a one-day trek from Jomsom. Some trekkers begin their trek the same day they get to Jomsom. Others may prefer to spend a few days in the Jomsom area or trek to Muktinath to acclimatise themselves before beginning the main trek. There are currently two trekking routes opened in the Upper Mustang area. The trek packages can vary between 15 to 20 days depending on the interest of the trekking groups, including the day on which trekkers reach Nepal. The first route traverses straight from Kagbeni to Lomanthang and a small detour is made on the way back. The length of the trek can vary depending on the detour (Tables 4 and 5). The second route has only recently been introduced and traverses a much more difficult terrain to Damodar Kund. This route is not developed and is pure wilderness, taking about two weeks to complete. The Damodar Kund route is for adventure-seeking tourists, as it passes through relatively high altitudes and a rugged landscape. Last summer only one tour group took this trail.

Table 4: Trekking Itinerary for the Lomanthang Area

Day	Activities	Altitude	Distance (km)	Time
01	Fly Kathmandu - Pokhara			35 Mins
02	Fly Pokhara - Jomsom	2700m		15 Mins
03	Jomsom - Kagbeni	2682 m/2900 m	11	3 Hrs
04	Kagbeni - Chaile	2800m/ 3050m	18	7 Hrs
05	Chaile - Eklobhatti	3050m/3820m	13	6 Hrs
06	Eklobhatti-Ghami	3820m/ 3520m	12	4 Hrs
07	Ghami-Charang	3520m/3500m	11	4 Hrs
08	Charang-Lomanthang	3500m/3700m	13	5 Hrs
09	Lomanthang and eastern valley	-	round trip	5-6 Hrs
10	Lomanthang-Charang	3700m/3500m	13	4 Hrs
11	Charang-Tange	3500m/3240m	10	5-6 Hrs
12	Tange -Tetang	3240m/2940m	30	10 Hrs
13	Tetang-Muktinath	2940m/3600m		6 Hrs
14	Muktinath-Jomsom	3600m/2700m		5 Hrs

Source: Gibbions, Bob and Sian Pritchard Jones (1993)

'Mustang a Trekking Guide'. Tiwari Pilgrims Book House. Kathmandu, Nepal.

Tourism Facilities

Most villages along the trekking routes are several hours apart. Most villages on the Kagbeni-Lomanthang trek route (Chaile, Samar, Ghami, Charang for example) have private campsites for group trekkers. These campsites are basically enclosed courtyards near private homes or lodges. Most campsites are equipped with drinking water, kitchen, rubbish pits and toilet pits. The camping fee is flexible and depends on the bargaining capacity of the trekking agencies and the campsite owner, as well as on the number of tour groups present at a given location. But along the newly-opened Damodar Kund route there are no villages. The trail is one used by herders during the summer months and hence trekking facilities are non-existent.

Table 5: **Trekking Itinerary for the Damodar Kund Area**

Day	Activities	Altitude	Distance (km)	Time
01	Fly to Kathmandu – Pokhara			35 Mins
02	Fly to Pokhara – Jomsom	2682 m		15 Mins
03	Jomsom – Kagbeni	2682 m/2900 m	11	3 Hrs
04	Kagbeni – Chaile	2900m/ 3060m	18	3 Hrs
05	Chaile – Tamagaun	3060m/3770 m		4 Hrs
06	Tamagaun – Charang	3770m/ 3520m		4-5 Hrs
07	Charang – Lomanthang	3520m/3697m	12	3-4 Hrs
08	Lomanthang – Dhi	3697m	9	5-6 Hrs
09	Dhi – Ghara		9	5-6 Hrs
10	Ghara – Ghamee			5- 6 Hrs
11	Ghamee – Damodar Kund	3800m/4760 m		7 Hrs
12	Damodar Kund - Ghamee	4760 m/3800 m		5 Hrs
13	Ghamee – Ghara	3800m/		5-6 Hrs
14	Ghara – Dhe		9	5-7 Hrs
15	Tangya – Dhe		3	3-4 Hrs
16	Tangbe – Chhusang		4	2 Hrs
17	Chhusang – Kagbeni-Jomsom	2900m/2682 m	24	5-8 Hrs
18	Jomsom – Pokhara	2682 m		15 Mins
19	Pokhara – Kathmandu			35 Mins

Source: Field enquiry

Porters are generally not used much in this area since there is a tradition of using mules and ponies for transportation. Ponies can be hired in Jomsom for about NRs 300*/day and carry more than an average porter. Ponies are generally owned by the better-off families and hence part of the tourism income that would accrue to the poor by serving as porters is minimised.

Impacts and Implications

Due to the low volume and short duration of tourism in Upper Mustang, the negative impacts of tourism are not noticeable. But things may change if the number of tourists increases and management, in terms of community and tourism development, does not expand. It should be noted that the different impacts that manifest themselves may not be solely attributable to tourism, as often impacts occur as people begin to be mobile and travel, read books, and magazines, listen to the radio, and so on (Banskota and Sharma 1995a). In some cases, tourism may add (positively or negatively) to the already emerging impacts. This section attempts to address the possible impacts from tourism based on experiences from other parts of Nepal.

The impacts of tourism on any destination generally depend, among other things, on a variety of factors such as the volume and type of tourism activities, the structure of the host economy, difference in sociocultural characteristics between hosts and visitors, and fragility of the local environment. It is convenient to assess the impact of tourism in Upper Mustang area in terms of the following impacts (Banskota and Sharma 1995a).

* There are approximately 63 Nepalese rupees to the US Dollar.

Environmental impacts

Land use
Litter
Pollution
Forest

Economic impacts

Income
Employment

Sociocultural impacts

Health, education
Local custom or practices
Religion
Institution

Environmental Impacts

Mustang lies almost 70km north of the Dhaulagiri and Annapurna massifs. The landscape is essentially desert like and erosion over time has created typical arid and weathered shapes. Many of the environmental impact issues in the Upper Mustang area centre around this fragile and sparsely-vegetated landscape and the pressure that is already being exerted by the local people's resource needs in relation to its regenerative capacity. Tourism, as has been witnessed in other parts of the mountain areas of Nepal, can exacerbate the pressure of demand on natural resources. Wildlife habitats can be destroyed in the process. For example, the Tibetan wild ass, which used to roam the Mustang landscape, has not been spotted for two decades. Thus, the environment of Upper Mustang is fragile and human activities, if not properly planned, may pose serious threats. Poorly-managed tourism can accelerate the process.

Forest Degradation and Deforestation

The people who live in this fragile environment depend on the sparse vegetation for meeting firewood and fodder needs. As one proceeds towards Upper Mustang from Kagbeni, the landscape begins to change gradually from brown eroded hills with thorny bushes (locally known as 'tackling' [*caraghana*]) to more eroded brown hills with fewer patches of 'tackling'. The few trees that one can see in small moist patches are *Bhote pipal* and *bias*. Between Charang and Lomanthang, a vast stretch of land suitable for pasture development can be found. Further north the impact of overgrazing is visible. Agropastoralists rely on rangeland throughout the year. About 300-600ha of rangeland are estimated to be depleted annually in Upper Mustang due to poor pasture management. Most of the slow growing forests in the entire Upper Mustang region have been almost depleted over the years to meet firewood needs. Along the main trekking route, large tree stumps or roots can be seen as a testimony to the forest stands of many years ago. Perhaps the huge timber poles seen in all the monasteries of Upper Mustang came from these primeval forests.

The Perceived Scarcity of Forest Resources and Its Implication

Animal dung is used as a limited alternative by most households. The poor quality of pasture lands and the lack of other sources for fodder do not make livestock raising very viable under the present circumstances. Grass is becoming more expensive than apples, indicating the growing scarcity of fodder in the area. An average household burns about 40kg of animal dung per day.

Through ACAP/UMCDP support, kerosene depots have been established in Upper Mustang. Kerosene sells for Rs 35/litre in the kerosene depot in Charang and Rs 27/litre in Kagbeni, which is about three to three-and-a-half times higher than the price in Pokhara. This exorbitant price reflects high transportation costs. As a substitute for firewood and dung, kerosene is unaffordable for a large majority of the local people.

Solar energy is being tried out, but it will take more innovations before this alternative technology can be put into practice in the area. Convection solar water heating systems containing galvanised iron pipes burst when water freezes during the winter months. However, both of these energy sources cannot be seen as a viable alternative to firewood and dung. Wind energy appears to have prospects in certain areas like Kagbeni, although the windmill set up in Kagbeni has failed due to technical problems.

Local people strongly expressed their interest in protecting the environment (forests, watersheds, pastures, and wildlife). Creating a more conscious awareness of the environment was perceived as being an important first step in promoting tourism in the area.

The impact of tourism on the environment is not visible at present since all group tourists mostly use ponies rather than porters, therefore the firewood demand is less pronounced. All support staff that accompany the tourists also use kerosene or other fuels they carry with them. Since kerosene is available along the trek route, many tour groups simply purchase kerosene as they trek along. Environmental impacts are also visibly dependent on the number of tourists, hence the number of tourists to Upper Mustang should not be allowed to exceed the present limits until effective management is in place.

Degradation of Pasture Lands

Pasture lands are mostly in a state of degradation and are dominated by shrubs (used as firewood) and grasses such as *Potentilla* spp, *Rosa* spp, *Juniper recurva*, *Caragana* spp, *Berberis angulosa*, etc. Local people have to use pastures inside Tibet for which they have to pay five rupees per animal per month to the Tibetan authorities. Also, during winter, livestock from Upper Mustang are herded down to the south of the Himalayas in the lower ACAP/UMCDP areas of Ghandruk, Lwang, Sikles, and so on. Both Ghandruk and Lwang have banned livestock from Upper Mustang from grazing in their areas during winter, primarily because of the forest resource degradation problems these areas are facing. Some areas in the lower ACAP region, however, continue to allow Upper Mustang livestock in their forest areas. It is likely that this may not continue for too long, since many areas in the lower Himalayan foothills are already facing severe natural resource scarcity problems. Such action will have serious negative consequences on the livestock from Upper Mustang, which may not find adequate food and may not be able to survive the long, harsh, and cold winters. Already fodder shortages have forced people to reduce their herd sizes. But this has again led to a reduced supply of dung for fuel and hence greater time being spent in gathering fuel. Tourism as such does not have much to do with this degradation of pastures.

Land-use Changes

Land-use impact refers to changes in crop composition and cropping intensity and conversion of agricultural land to build lodges, tea stalls, and camping grounds. Such impacts have been recorded in the case of Sagarmatha National Park and Tatopani and Bagarchap in the Annapurna area. Additionally, land-use impact also implies changing occupations from traditional agriculture to tourism or tourism-related activities (Banskota and Sharma 1995). FITs (free independent tourists) perhaps play a greater role in creating land-use impacts than to group tourists because of their greater dependency on local facilities and supplies. In the case of Upper Mustang, it is too early for such impacts to surface and the nature of tourism itself, namely group tourism, will induce such changes only slowly since local people have little contact with visitors. Such impacts have not been witnessed in Upper Mustang so far.

Litter, Garbage and Pollution

Tourists' litter, garbage, and pollution have become a nuisance in some environmentally sensitive parts of fragile mountain areas. In mountain areas characterised by cold and frigid temperatures, decomposition of even biodegradable waste is not easy and the problem is worsened when non-biodegradable wastes (plastics and even tin cans) are generated. Additionally, polluting agents, such as batteries and other chemicals, that are dumped after use are known to cause water pollution. Certain types of non-biodegradable garbage and polluting agents have to be carried back and deposited in designated spots according to HMG rules. The setting of toilet tents in proximity to water sources and dumping of garbage randomly have been documented.

Litter and garbage created by tourist facilities in Lomanthang as well as other places, such as Kagbeni, Chaile, Summar, Ghami, and Charang, are worth mentioning. Although these places have water, kitchen, and toilet facilities, their quality needs to be improved. These areas are filled with toilet tents, garbage and litter are not properly dumped. This is more common during peak tourist seasons. The responsibility is primarily that of the trekking agencies that cater to the tourists and the liaison officer whose work is to monitor such activities. These people must be made to fulfill their responsibilities and the tourists who pay a high price for their services as well as high fees to visit places such as Mustang should not be blamed for the garbage and litter.

In the Upper Mustang area, negative impacts so far are mostly under control. ACAP/UMCDP has arranged to collect garbage in Kagbeni from tourists on their return. Plans are underway to recycle whatever can be recycled from the garbage. Also, garbage dumping pits have been developed along the trek route. Toilets, however, need to be better managed to avoid the foul smells.

Tourism in mountain areas generates both direct and indirect employment and stimulates local production if well planned. Direct employment relates to self employment in hotels, lodges, and tea houses as well as portering. Indirect employment is generated through production linkages between tourism and the community, and in the case of mountain tourism this has been limited. FITs depend on local facilities for food and accommodation and thus become primarily responsible for generating employment in mountain areas. Since group tourism is encouraged, direct employment in lodges and hotels is thus limited in the case of Mustang. Some employment in teahouses is nevertheless available, but it is almost insignificant. In Lomanthang there are three lodges/hotels, but, despite the nearly 800 tourists that visit the area, these are not doing well, since group tourists are self sufficient.

Group tourism depends on specialised staff who have a great deal of experience in taking foreign visitors to remote areas. Trekking agencies generally prefer to use their trained support staff who may not necessarily belong to the area. This is necessary to provide good quality services to the visitors and also rules out the possibility for local people to take up jobs as *sirdars*, guides, cooks, etc. It is unlikely that the people of Upper Mustang will be able to enter these professions in the near future.

Porter employment generation has been the strongest component of mountain tourism in Nepal. In the Mustang area, ponies are commonly used as a means of transportation, and this rules out the scope for generating local employment. Additionally, since the trekking point begins four days away from Upper Mustang, even if porters were to be used, their jobs would most likely be taken over by the lower *Mustangis*. Incomes earned from hiring ponies, horses, or mules accrue mostly to Lower *Mustangis*, since hiring is done in Jomsom. Clearly, the employment benefits generated by tourism in Upper Mustang do not benefit the local people in any significant manner.

In other mountain areas, local people sell firewood to earn some income. This opportunity does not present itself in Upper Mustang. Other sources are also insignificant. Conventional trekking tourism, whether it mean encouraging FITs or group tourism is not likely to benefit the local people. Therefore, unless concerted efforts are made, tourism in Upper Mustang is not likely to benefit the wider Upper Mustang community, especially the poorer section.

Indirect employment and income in the form of selling local products is also absent due to the lack of linkages. Besides there is little to gain from the sale of local food products as such in a situation in which only group tourists are permitted who do not use lodges or restaurants and who are mostly self sufficient in food. The level of community infrastructure and community development and new opportunities in Upper Mustang are so meagre that local people have not been able to respond to the opening up of tourism in their area. The human resource development aspect for local people is also

poor. Establishing linkages with a wider community is also constrained due to acute accessibility problems.

Sociocultural Impacts

Tourism impacts on sociocultural aspects are difficult to assess as such impacts are not tangible and often manifest themselves over long periods of time. Moreover, it becomes more difficult to attribute the change to tourism since many other factors may also have contributed to bringing about the change. In terms of the perceptions of local people, many do not see how tourism will benefit them.

Some *gombha*(s) have already started charging entrance fees (Rs 100 per visitor), but due to the poor interpretative and translation services provided, visitors are unable to appreciate the value of the cultural heritage. Such revenue can be used for simple maintenance work. Renovation will require bigger revenues and the ACAP/UMCDP action plan (see below) addresses this issue.

Local people and monks were concerned about the security of the ancient art works such as expensive statues and *thanka*(s). A proper inventory of such art pieces needs to be carried out first and gradually over time they must be displayed in the appropriate *gombha*(s) in a secure manner. Erosion of traditional values, particularly among the younger generation, is an emerging issue. Many can read but not write in their mother tongue (Tibetan). This is where the education system needs to be sensitive and a few years of schooling must be in the native language.

Upper Mustang suffers acutely from the lack of health and sanitation services, despite provisions made by the Ministry of Health in terms of health posts and manpower. Illiteracy and lack of awareness are also found to be important factors responsible for the poor quality of health, hygiene, nutrition, and sanitation in the area.

Carrying Capacity Assessment

In this section, a set of crucial factors describing the environmental, economic, and sociocultural dimensions of sustainability are identified. These factors are analysed to provide a qualitative assessment of the carrying capacity of Upper Mustang. At this stage, it has not been possible to provide a quantitative assessment of the carrying capacity. However, over time quantitative measurements of the factors also need to be developed to monitor the progress in relation to well-defined parameters and standards. An attempt has been made to first assess the current status (scarce, adequacy, plentiful, favourable, etc) of the factors based on discussions with the local people, personnel of ACAP/UMCDP, and other institutions in Upper Mustang, as well as from our own observations in the field. The second stage of assessment deals with the implication of the status of the indicator on carrying capacity. In other words, the question being asked is, *"given the current status of the indicator, what impacts (minor, moderate,*

and high) does it have on the carrying capacity?" In some cases, it has not been possible to judge the direction of the impact and hence is considered neutral.

Social

Table 6 summarises a list of crucial factors (indicators) related to social carrying capacity and their current status. Perceptions of both visitor and host population towards education and health conditions, cultural heritage, and institutional aspects are other factors of social carrying capacity. It has not been possible to collect information on visitors and hence only indicators are provided for future reference. Given the obvious differences in the social status of the people in Lomanthang (e.g., those who live inside and outside the walls of the city; those who are involved in trade vs those who are unable to meet their food and other needs), it was necessary to address the indicators accordingly in some cases. Additional indicators, which were not analysed but may be useful in the future, especially to ACAP/UMCDP are also listed.

Trails and bridges are the critical means of transportation for both the host population and the visitors. Without good trails and bridges travel is always hazardous and as such the social well-being (travel to schools, health post, transportation of goods and services, etc.) of the community as well as trekkers can be hindered. Additionally, an important dimension of the social carrying capacity is the effectiveness of traditional institutions and (new) grassroots' institutional development. 'An institution is simply the set of rules actually used by a set of individuals to organize repetitive activities that produce outcomes affecting those individuals and potentially others.' Participation has been seen as an important dimension of institutional development, the status of which is currently fairly ineffective in both institutions. Transparency in decision-making, formation of rules and regulations, and many more factors play their role in institutional development.

The current status of most social infrastructure related indicators in terms of their accessibility and quality is low, based on the perceptions of local people. The scope for increasing social carrying capacity is possible through providing better access and quality of services. Human resource development and social capital formation constitute other critical areas of concern, where the status is currently too low to have any meaningful and desirable impact on social carrying capacity.

Economic

Economic carrying capacity is referred to as the ability to absorb tourism development without having to squeeze out local development. In the Upper Mustang case especially, it has been argued that tourism development has to provide the stimuli for community development. Resources generated by tourism have to be used for MCD and linkages between MCD and MTD needs to be strengthened.

From the community's point of view, there is deep-rooted poverty among certain sections of the society in Lomanthang, in particular, and Upper Mustang, in general. Poverty is a

Table 6: Sociocultural Indicators: Current Status and Impact on Social Carrying Capacity

Broad areas	Indicators	Current Status of Indicators	Perceived Impacts			Remark
			Minor	Moderate	High	
Host's perception of tourism	Well-off people	favourable	v			The poor do not see how they can benefit
	Poorer sections	bewildered		v		
Cultural heritage	Religious monuments	rich but dilapidating		v		Despite the rich heritage a great deal of renovation is needed. Crafts could be promoted to benefit people, but presently they do not exist on any commercial scale.
	Religious values	high		v		
	Dance, music, festivals	fair	v			
	Crafts	scant	v			
	Crime and theft	low	v			
Social Indicators	Overall literacy	very low	v			Although crime and thefts have not been reported so far, they are possible if management is lax. The present schooling and curriculum are not helping people to find gainful employment.
	Female literacy	very poor	v			
Visitor related	Visitor satisfaction	moderate		v		Little interaction between host and visitors given group tourism. Opportunities for local people to benefit have to be promoted.
	Cleanliness	moderate	v			
	Hospitality	moderate	v			
	Information	moderate	v			
	Quality of services	moderate	v			
	Main. of tourism assets	moderate		v		
	Conservation effort	moderate		v		
	Quality of services	moderate	v			
	Effectiveness of tradition institution	fairly good	v			
	Dev. of new institutions	fairly good	v			
Decision-making process	Traditional institutions	fairly good	v			The poor are at a disadvantage. People are gradually realising the need for the development of local institutions.
	New institutions	poor	v			
	Planning & implementation	poor	v			
People's participation	Repair & maintenance	poor	v			Appropriate incentive mechanism not developed.
	Enforcement	poor	v			
		poor	v			
Coordi. across insti		poor	v			Virtually does not exist at any level.

Note: The Current Status of Indicators shows the status and the Perceived Impacts shows the influence, positive or negative, on the carrying capacity.

major factor affecting the overall carrying capacity. Food sufficiency or insufficiency among households is a good indicator in rural areas (Banskota and Sharma 1996). Tourism also has been reported to bring inflation in remote and inaccessible areas such as Mustang (based on experiences in other mountain areas where tourism is practised). Scarcity of arable land and water, declining farm productivity, heavy dependence on imports, land-use changes, increased demand for energy and lack of alternatives, increased inequality in the distribution of income, and so on are important factors that are detrimental to the economic carrying capacity. Table 7 summarises the status of selected indicators and their impact on economic carrying capacity.

Environmental

The quality of environmental resources in Upper Mustang is fragile, partly due to human actions and partly due to the fragility of the area. Without conserving the HER, or simply natural resources, tourism development is not likely to be sustainable in Upper Mustang. The different factors/indicators of environmental carrying capacity are listed and assessed in Table 8.

DEVELOPMENT EFFORTS THROUGH ACAP/UMCDP IN UPPER MUSTANG

Upper Mustang Conservation and Development Project (ACAP/UMCDP)

The foregoing sections reveal that, due to the nature of the tourism which is being promoted in the Upper Mustang area, direct benefits to the people are extremely limited. In this particular context of Upper Mustang where tourism infrastructure is limited and human resources for tourism development are scarce, the decision made by HMG to allow a limited number of high paying group tourists to visit Upper Mustang appears to be reasonable. Additionally, HMG's decision to divert 50-60 per cent of the tourism revenue for community development is also commendable, although only about 27 per cent seems to have been provided to UMCDP thus far. Given the realities of Upper Mustang, tourism appears to be the main opportunity for local development. The current level of tourism activities in Upper Mustang does not warrant any serious consideration in terms of negative impacts.

This leads to the questions 'what is to be done with the large sum of the money channellised?' *Who is going to manage it? Is the current form of tourism (group tourists) going to benefit the local people and stimulate community development? What types of programme should be introduced?* HMG has mandated these responsibilities to ACAP, because of its experience in the Annapurna area. ACAP/UMCDP has also established an office in Lomanthang.

The main tourism objectives of ACAP/UMCDP are consistent with its overall philosophy of conservation, participation, and sustainability. The long-term goal of the project is to make people the custodians of their areas by involving them in the planning, implementation, and maintenance of all projects. The focus is, therefore, on strengthening

Table 7: Economic Indicators: Current Status and Impact on Economic Carrying Capacity

Broad areas	Indicators	Current Status	Perceived Impacts			Remark
			Minor	Moderate	High	
Agriculture	Cultivated land	Scarce		v		Limited potential for diversification; agricultural productivity declining. Animal dung is the major source of energy, thus reducing supply of agricultural inputs as manure. Animal husbandry becoming less viable.
	Agricultural productivity	Low			v	
	Irrigation facility	Limited				
	Manure availability	Declining	v	v (?)		
	Livestock population	Fairly high			v	
Food sufficiency	Percentage of households	Very low			v	Growing magnitude of deficit.
Poverty	Percentage of households	Very high		v		It is rampant.
Migration	Percentage of households	Fairly high		v		High, seasonal migration but not among the poor.
Dependency on trade	Percentage of households	Fairly high		v		Improves carrying capacity.
Employment opportunities	Tourism-induced	Very poor	v			Group tourism does not provide local people with the opportunity to earn income. Labour productivity and income very low in off-farm.
	Off-farm induced	Very poor	v			
	Tourism-induced	Very low	v			
	Off-farm	Relatively higher	v			
Linkages between tourism and community	Traditional sector	Non-existent	v			Linkages have to be induced through innovative efforts. Very few linkages now.
	Tourism sector	Very poor	v			
Income disparity	Community	Very high			v	High disparity between rich & poor visible.
Knowledge and technology	Human resource development	Very poor	v			Mass illiteracy. Scope for introducing new technology to save firewood.
	New technology	Almost none	v			

See notes to Table 6.

Table 8: Environmental Indicators: Current Status and Impact on Environmental Carrying Capacity

Broad areas	Indicators	Current Status	Perceived Impacts			Remarks
			Minor	Moderate	High	
Forestry	Forest cover	Sparse			v	Regenerative capacity is low.
	Firewood Supply	Deficit			v	Scope for community plantation is limited. Firewood saving stoves
	Fodder Supply	Deficit	v			have scope. Animal dung used
Private tree plantation	Number per household	Low				increasingly for cooking and
Pasture land	Livestock/ha	High density	v			energy. Some community plantation. Overgrazing visible.
General landscape	High visibility	Attractive	v			Erosion visible.
Littering/garbage/pollution	Perceptive visibility	Fairly low	v			Visible in tourist areas but is still limited.
Wildlife habitat	Quality	Fairly good	v			Damodar Kund area rich.
Unique fauna	Density	Fairly good		v		Endangered species found and
Unique flora	Density	Declining	v			need protection. Livestock depredation reported.
Alternative energy	Installed capacity (hydro)	Low	v			Electricity for lighting purposes
	Potential capacity (hydro)	High	v			only in Charnag. Kerosene too
	Kerosene consumption	Low	v			expensive. Other new gadgets
	New energy saving gadgets (per/hh)	Low	v			may be too expensive unless highly subsidised.

See notes to Table 6

the decision-making and management capabilities of the local community. The major source of funding comes from the Ministry of Tourism and Civil Aviation and the American Himalayan Foundation.

A reconnaissance study was conducted by KMTNC/ACAP in 1992 through participatory discussions with local people and various institutions in the area (local leaders, line agencies, NGOs, VDCs and ward representatives, lamas, the *Raja of Mustang*). Altogether six VDCs, including Lomanthang, were covered in this study. The programme activities which have been carried out by the project to date have been based on the recommendations of the First Need Assessment Study conducted by a team from ACAP in 1992. In addition, ACAP/UMCDP also conducted feasibility surveys and studies in response to requests made by the villagers.⁶ In the following years too, activities were carried out in a similar fashion, i.e., a needs' assessment survey was carried out and meetings were held in each village to prioritise the needs. Project activities were then identified and a feasibility study carried out⁷. UMCDP, therefore, does not have a management plan and, hence, neither an action plan, and the resulting planning and budgetary allocations are carried out on an annual basis. The major programme activities of ACAP/UMCDP cover the areas listed below.

- Institutional Development
- Natural Resources' Conservation
- Heritage Conservation
- Alternative Energy
- Community Development
- Tourism Management

The activities are being implemented through the local committees/institutions which ACAP/UMCDP has facilitated. Helping local people to develop their capabilities and capacities to run projects on their own (participatory approach) is an integral part of the work being carried out by ACAP/UMCDP.

Activities Undertaken by ACAP/UMCDP

Institutional Development

The Conservation and Development Committees (CDCs) are the main institutions responsible for policy and programme formulation related to natural resource management and community programmes identified by the community such as the construction or renovation of trails, bridges, schools, and drinking water schemes. CDCs are formed at the VDC level and are comprised of 15 members (see Box 1). The chairman

⁶ KMTNC/ACAP/UMCDP: Annual progress report for fiscal years 1992 to July 15, 1993, submitted to the Ministry of Tourism and Civil Aviation and the American Himalayan Foundation.

⁷ KMTNC/ACAP/UMCDP Annual Progress Report for the fiscal years 1994/95.

Box 1

Institution-building Process in ACAP

Local institution-building in ACAP comprised of the seven stages listed below.

1. **Initial Contact (Ice Breaking):** Committees are not formed as soon as the project steps into the area. Several programmes such as home visits, general meetings, and special events with audio-visual programmes are organized as a first step to develop rapport between the project staff and local communities.
2. **Investigation and Consultation:** The second step includes using RRA and PRRA methods to assess the local social, cultural, economic, and environmental conditions. Meeting formally and informally with various interest groups (village leaders, farmers, women leaders, school teachers, lodges owners, students, and so on) frequently takes place to disseminate and share information and experiences and promote two-way communication between the project staff and the communities. This is the time for the project staff to explore and understand local issues and prepare baseline data for future monitoring and evaluation. During this phase, close attention is paid to identifying key players, the existing social institutions, and other important matters.
3. **Building Understanding:** Based on information collected through the above steps a mass meeting is organized in the presence of local leaders or officials of the VDC. The meeting is generally attended by at least one member from each household. This is the time the project staff inform the community of the importance of the Conservation and Management Committee (CAMC), Lodge Management Committee (LMC), and other groups that may need to be organized. The project's programme and policies are also explained. Generally, such a meeting lasts for five to six hours. In this meeting, it is also customary to discuss issues related to forests and their management and social development are discussed. If a consensus develops and the need for committees is realised, then step four is taken straight away (this is very rare). Otherwise, villagers are requested to have their own meetings to resolve issues raised and are requested to report to the project with the agreement or disagreement (sometimes this process goes back and forth for more than a year or even two, particularly when local people are concerned with forest boundaries and who is to be chairman of CAMC).
4. **Committee(s) and Group Formation:** When consensus is obtained from the community, another mass meeting is called. Wards are asked to elect one member from each ward for CAMCs and sub-CAMCs. Elected members are called for a meeting and are then asked to elect a chairman, vice-chairman, secretary, and a treasurer. In the case of LMCs and Mothers' groups, all general members attend the meeting and elect the chairman, vice-chairman, a secretary, and a treasurer.
5. **Orientation:** Elected members receive a day or two of orientation from the project staff. During this period, roles and responsibilities of committee groups are discussed and members are briefed on policies for making use of and protection of natural resources. Other matters, such as tourism and community development, are also discussed.
6. **Consolidation:** Communities are authorised thereafter to work independently as per the understanding drawn between them and the project. Support, which will be discussed later, is provided to empower and consolidate their authority.
7. **Monitoring:** All committees have to send the minutes of their meeting to the project office for review and references. If a decision made is controversial, the project staff holds a meeting with members of committees to obtain a solution in a mutually agreeable manner. In most cases, a representative(s) from the project attends the committee meetings.

Sources : Adapted from Thakali, Sailendra (1997) " Local Level Institutions for Mountain Tourism and Local Development: The Annapurna Experience;" Report Submitted to the International Centre for Integrated Mountain Development (ICIMOD)

of the VDC automatically becomes an ex-officio member of the committee. From the remaining number, nine are democratically elected from each ward by the local people and must be sub-CDC members. The elected members then nominate two members from among themselves to the position of chairman and vice-chairman; these two have the authority to nominate one more person each from their respective wards. The remaining three members, one woman, one socially-disadvantaged person, and one social worker are nominated by the project. The CDCs function within the traditional boundaries (an area that is within the jurisdiction of one *mukhiya*) with the cooperation of the neighbouring CDCs from other VDCs. The CDCs meet once a month to discuss and decide upon important community matters related to forest use and conservation.

Sub-Conservation and Development Committees (sub-CDC)

The CDCs are supported by a number of sub-CDCs. The formation of sub-CDCs depends on the locality, geographical distribution, and traditional forest ownership structures. In other words, the sub-CDCs are allowed to form in relation to traditional property rights, ownership patterns among communities, sharing of pastures, and so on. Hence the sub-CDCs are formed to allow autonomy and traditional rights to whatever extent possible. As such a sub-CDC may look after one or more village wards and, thus, usually does not compete with the traditional institution, if one exists (at least theoretically).

Lodge/Campsite Management Committees (L/CMC)

The L/CMC is formed by the lodge/campsite owners and is mainly concerned with tourism-related matters, but these have not been effective.

Kerosene Depot Committees (KDC)

Kerosene use is being encouraged in the area. Kerosene has to be imported from Pokhara and carried by porters or mules. Kerosene use by tourists is mandatory in Upper Mustang. Kerosene use by the local people is confined to illumination purposes only, and it is expected that it will be replaced by electricity soon. The price of kerosene (Rs 35/litre) is too expensive to make it a viable source of energy to meet cooking and heating needs. KDC management is carried out by the lowest bidder-decided through tender calls.

Electricity Management Committees (EMC)

The EMC is responsible for the management of micro-hydropower plants, repayment of loans raised for construction, and to raise revenue from electricity tariffs. The committee is also responsible for fixing the tariff rate. The EMC is supported by a small technical staff who execute day-to-day affairs.

Mothers' Groups (Ama Toli)

The *Ama Toli* or 'Mothers' Groups' are active in the area. This group initiates community activities such as clean up campaigns, trail repairs, and community plantations in their own communities. The core *Ama Toli* is comprised of 11 to 15 women from among whom a chairperson, a vice chairperson, a cashier, and a secretary are elected. Every woman in the village is automatically a member of the Mothers' Group.

Gombha Management Committees (GMC)

GMCs are responsible for supervising and managing work related to *gombha(s)*; and this is mainly concentrated in Lomanthang.

Natural Resource Conservation

CDCs and sub-CDCs are the two key local institutions responsible for conserving natural resources in Upper Mustang. The committees, at the same time, maintain concern for the diverse issues and activities of the local community by coordinating the other committees such as the EMC, LMCs, *Ama Toli*, and others. The project facilitates the formation of different committees by mobilising local people.

The ACAP/UMCDP provides materials at the time the local institutions are established. Meanwhile, each committee is encouraged to create its own endowment fund through the revenue it raises in order to be financially sustainable. The CDCs can use the cash income to support community work and to provide small loans to individuals. They also have the authority to issue timber permits and exact fines for illegal hunting, fishing, tree felling, and collection of non-timber products. At present, only two CDCs and 23 sub-CDCs are functioning in seven VDCs in Upper Mustang. One CDC is two years' old and all the remaining CDCs and sub-CDCs are new.

Nursery Establishment and Operation

Nurseries are necessary for fulfilling the local demands of fodder, fuelwood, and timber species' seedlings and saplings. The easy availability of the seedling/ saplings has encouraged villagers to carry out plantation work. The project nursery in Lomanthang (only one nursery so far) covers 2.5 *ropanis* benefiting about 200 households in Lomanthang (ACAP/UMCDP Progress Report 1995/96). Fuelwood and fodder, grass, herb species, and some vegetables are grown in the nursery. Tree-cuttings, also available in the nursery, take about three years before they are ready for transplantation and have already been distributed.

Plantations

As of July 1996, 10,2749 tree-cutting saplings (cut from mature trees) were planted by the project in different villages of Lomanthang, Chhosher, Chhonup, and Sarkhang

VDCs. Of the total plantations, 34,614 cuttings are on private lands and 68,135 are on community lands (ACAP/UMCDP 1996). The most commonly planted species on community land are *Populus ciliata*, although in some places other species such as the willow and yule, and as well as other high altitude species, are also planted. The project pays Rs 10 per tree-cutting planted on private land and Rs 14 per tree-cutting planted on community land. This incentive system encourages people to plant trees on private as well as on community land. However, people reported that the incentive has not been easy to obtain from ACAP/UMCDP, and the incentive scheme was reported to have been revised to make it more attractive. The support for fencing planted areas for protection from livestock and wildlife is, however, not provided by the project. The survival rate is not known.

Alternative Energy

Given the severe pressure on existing natural resources, alternative sources of energy have also been identified. But hydro-electricity is not likely to relieve pressure on sparse forests and development of other gadgets, such as solar water heaters, improved stoves, and back boilers, is needed urgently.

Micro-Hydro

There are three micro hydro-electricity power plants in Upper Mustang. They are located in Charang (9 kW benefiting 85 households), Chhonup (9 kW benefiting 78 hhs), and Marang (6 kW benefiting 45 hhs). All three were constructed about seven years ago by the local people with technical assistance from Butwal Technical Institution and a loan from the Agricultural Development Bank of Nepal, Jomsom branch. Electricity is used exclusively for lighting purposes. The tariff rates are respectively Rs 5,10,15, and 20 per 25,40,60, and 100 watt bulb/month. At the time of the survey, the generator of the power plant in Chhonup was out of order. It will resume operations when the necessary equipment is purchased. Another plant with an installed capacity of 29 kW is being constructed at a cost of Rs 5.8 million by ACAP/UMCDP in Lomanthang. A major problem that has already emerged in this sector is the capacity to maintain and repair the system, for which neither materials nor the skilled manpower are readily available.

Solar Energy

Although the solar water heater is an appropriate alternative energy technology in most of the Annapurna region, this technology in Lomanthang, however, needs further refinement as galvanized steel water pipes burst due to freezing temperatures. Also, experimentation with solar cookers made by the Centre for Rural Technology (CRT) is being carried out.

A solar mill was installed in Ghara village in Upper Mustang. It has the capacity of grinding 30kg of grain per hour. The Centre de la Recherche Scientifique (France), ASVIN, provided all the necessary equipment and technical support and also paid for part of

the transportation costs for getting different parts from the solar mill to Jomsom. Also, with the initiative and support of the same agency, six solar lighting sets were set up in the monastery school and at the project's office in Lomanthang. This system is still in the experimental stages. The wider adoption of this system in the study area depends on installation and on transporting materials to this inaccessible area, the cost of which can prove to be exorbitant.

Kerosene Depot

The ACAP/UMCDP supports the establishment of kerosene depots by providing a soft loan once a party has been selected and agrees to abide by the rules set up by the project. The ACAP/UMCDP monitors the activities of the depots. The use of kerosene is encouraged because it is an immediate alternative to fuelwood, although many cannot afford it due to its high price (Rs 35/litre), difficulty in transportation, and irregular supply. Two kerosene depots located at Kagbeni and Charang supply kerosene to the Upper Mustang region. About 40 kerosene stoves have been distributed in Lomanthang area also.

Distribution of Pressure Cookers

Pressure cookers minimise the cooking time required and also use less energy. About 160 pressure cookers were distributed at subsidised rates in Lomanthang. But the field study shows that there is a need for both user training and repair and maintenance training.

Heritage Conservation

The cultural heritage of Upper Mustang is rich and a prime resource for attracting tourists. It, however, needs to be protected and renovated and conserved. The ACAP/UMCDP plans to accomplish this through extension and awareness efforts and also by providing physical support for renovation. Presently, the project is supporting the building of shelves to protect different artifacts of different *gombha(s)* from theft. Likewise, the project is supporting the monastery school, the *Teeji* festival and other minor activities carried out by some monasteries. The summary of the major activities undertaken and progress achieved so far in heritage conservation is presented in Annex I.

Community Development

Currently, there are several activities being supported by ACAP/UMCDP in the area of community development which can be broadly grouped into health services' support, infrastructural development, and agricultural development activities. Health services focus on improving the general health and sanitation, clean up campaign, mobile health camp, training, and so on. Infrastructural development covers rehabilitation of irrigation canals, reservoir ponds, drinking water, agricultural field walls, construction of wooden bridges, and so on. Agricultural development activities include distribution of vegetable seeds and fruit saplings and holding training sessions.

General Health & Sanitation

The extension programme is to encourage people to keep their village surroundings clean, build proper toilets, and maintain kitchen garden plots (part of the agricultural programme). The ACAP/UMCDP has assisted financially in the construction of one health post in Chhuksang which is run by HMG staff. Since 1993/94, the project has provided medical service throughout the year, even in the winter months, in Lomanthang. Efforts are also being made to create a community-based health fund. The health post in Charang is also being equipped gradually. Presently, a service charge of five rupees per person is collected for each patient. Health workers charge Rs 50 per home visit. The funds raised from this service are channelled to respective CDCs.

Women's Development

A registered women's group (the name of *Ama Toli* has been changed to Women's Group because unmarried women and married women without children were reluctant to join the 'Mothers' Group'). The Women's Group has a core committee comprising of the elected chairperson, vice chairperson, secretary, and cashier. All the women from the village automatically become members and meetings are held regularly. ACAP/UMCDP provides assistance in the form of subsidies and technical support. In most of the villages where conservation awareness programmes have begun, toilet construction and regular village clean-up campaigns have improved the sanitary conditions. This toilet and village clean-up campaign is becoming fairly successful due to the active participation of women. In some places women have been able to curb excessive drinking and gambling on the part of men as well. At present, there are five Women's Groups in Lomanthang. While *Gurung* women in the Annapurna region have a tradition of raising funds through performing dances, this is not so among the women of Lomanthang. With the help of the ACAP/UMCDP, the women's groups were organized to perform Tibetan dances to the visitors and raise funds.

Agricultural Development

In Lomanthang area, the project also encourages farmers to grow fresh vegetables for their own consumption by providing seeds and seedlings from its nursery. In other places in Upper Mustang, the project is also encouraging farmers to cultivate fruit by distributing fruit saplings. Given the topography and other natural factors, the area does not possess much potential in agricultural development. Besides, marketing of surplus products will always be a problem for many years to come, given the area's remoteness. High-value, low-volume products such as apples are, after many years of trial in the lower part of Upper Mustang, showing some productivity (see Annex 1).

Tourism Management

The project has not yet developed a tourism development and management plan, and this is necessary. This must be done immediately and a phase-wise implementation plan

needs to be developed. As already indicated, high-paying tourists must be targetted and plans made accordingly. The plan must meet all aspects of a destination plan with emphasis on supply side development and management. At present, ACAP/UMCDP is carrying out various activities to manage tourism in the area. The major activities undertaken so far to mitigate the negative impact of tourism include awareness and extension, visitor information and checkpost, signpost and waste management, and training. Unless the management plan is approved by the government, ACAP/UMCDP officials say they are handicapped from carrying out activities beyond simple management. However, this should not hinder them from developing a tourism destination plan for Upper Mustang.

Awareness and Extension

The main aim of the awareness campaign is to educate the people about the importance of natural resources' conservation and tourism promotion. Awareness education includes training people to be hospitable to visitors. Such training is provided by the field staff through person-to-person contact and through various meetings in the villages. Also, films and videos are shown as part of the extension programme.

Visitor Information and Checkpost

The main purpose of the visitors' information centre is to sensitise the visitors to the nature and culture of the region. This is done by providing the visitors with information on the region, the conservation and development efforts being made by the local people, a code of conduct for visitors, and so on. Such information is being provided by the project through signposts, photo displays, and demonstration models (e.g., use of dustbins made from recycled materials) located in the information centre. There are two information centres or checkpoints in Upper Mustang area, one in Kagbeni and the other in Lomanthang. These centres also keep visitor records.

Signposts

The project has kept signposts showing the name of important places on the main trekking route in the Nepali, English, and Tibetan languages. It would have been more informative had these signposts included some more key information on the height of the place, distance from pre- and post-destination, and time required for the next stop.

Waste Management

The waste management in Lomanthang area is quite poor and needs to be improved. The project had made waste collection bins which are kept in different places. Trekking agents are encouraged to dig rubbish pits for garbage disposal. The CDCs, sub-CDCs, and Mothers' Groups are made responsible for monitoring waste management. A garbage recycling unit has been set up in Kagbeni where used cans and tins are converted into chimneys, dust pans, and other items.

Major Gaps and Issues in ACAP/UMCDP Activities

Lack of a Tourism Development and Management Plan

UMCDP can be considered tourism-led, since the major financial resources for this project come from the trekking fees paid by the visitors to Upper Mustang. Without tourism development, the sustainable flow of financial resources required for community development will be difficult to obtain from other sources. Since tourism appears to hold the key to the development of Upper Mustang, sustainability requires that tourism development has to receive more attention than it has currently received. This focus must first begin with a destination plan (see below), and KMTNC/UMCDP has not been able to develop one as yet.

Mismatch between Expectations and Incentives

While there has been growing awareness and expectation from ACAP/UMCDP activities in Upper Mustang, the existing scale of incentive packages or achievements is small in relation to what is required to sustain the local people's involvement. Ensuring a realistic balance between aspirations and economic incentives is one important area of concern for sustainability of ACAP/UMCDP efforts in future.

Lack of Vision

There is a general lack of clear-cut perspectives and priorities in ACAP activities in Mustang despite the long experience it has had. While it has identified some possible areas of work through a needs' assessment survey, the activities identified by ACAP/UMCDP do not seem to have guided a broad vision of improving the linkages of tourism with local production potentials.

Weak Participatory Process

An important element of ACAP/UMCDP's philosophy is to involve local people in all aspects of the conservation and development process; and this includes tourism promotion activities. This philosophy of the project has yet to reach the local community because of lack of an adequate awareness campaign at the grass roots. Participation of the maximum number of people, particularly women, has yet to be encouraged in areas that are off the trekking routes. The officials of the CDCs and sub-CDCs are selected rather than elected. Most of them are from the elite of the community. There is a general lack of awareness among the beneficiaries and local community leaders about preparing projects in income-generating activities such as agriculture, livestock, cottage industry, and tourism.

ACAP's staff are of the opinion that the context of participation in the Upper Mustang should be different from that of Ghandruk, particularly since ACAP/UMCDP has to abide by the norms of traditional institutions, values, and the culture of Upper Mustang.

This is a very sensitive issue because 'outsiders' like ACAP/UMCDP are expected to abide by traditional practices and respect them. It is essential for ACAP/UMCDP to work with all segments of the community, but a balance has to be struck or else UMCDP decisions will be influenced more by the elite than the poor. This is already happening, as indicated by the people who live outside the walled area who feel that ACAP/UMCDP and tourism are not for them but for the people inside the Wall. This is an indication that participation has not really worked in the fullest sense.

Additionally, already lack of transparency in ACAP/UMCDP activities was observed in terms of the operational process, identification and prioritisation of activities, amounts budgetted for each activity, and actual expenditure. Lack of such transparency is one of the reasons for the apprehension shown by some of the people and local institutions (VDCs, DDCs) towards ACAP/UMCDP. The DDCs and other district-level institutions are not made aware of the programmes carried out by ACAP/UMCDP. The ACAP/UMCDP should strive to project itself as a transparent national NGO working with a mission and dedication.

Poor Coordination

Currently, linkages and complementarity of ACAP/UMCDP activities with regular government programmes, as well as programmes of the district and other local-level institutions, are virtually non-existent. Since these regular government agencies and the local-level institutions (including VDCs, local NGOs, and user groups) are the only institutions that are going to be sustained beyond the ACAP/UMCDP period, there is a need to work together with such institutions whenever possible. Good public relations are also necessary. Many of the institutions complained about the poor coordination between them and ACAP/UMCDP. While ACAP/UMCDP officials complained about the lack of motivation and bureaucratic hassles from the government when it came to undertaking coordinated efforts, government officials complain about the ACAP/UMCDP operational style in the area which has a tendency to bypass the district-level agencies in making decisions.

Lack of a Database and Lack of Monitoring

Currently, ACAP/UMCDP has not been able to develop an appropriate database that identifies the baseline situation of the people and has not been able to identify what the key variables of the area are, what types of visitor come there, their interests, and so on. Establishing a monitoring system is still a long way off.

Lack of Linkages between Tourism and the Local Production System

As has already been made clear, the current tourism practices and action plan provide no basis for the local people to derive economic benefits from tourism. This has to be planned; it can never be spontaneous. To start with, this can be achieved through employment generation in infrastructural projects.

RECOMMENDATIONS

Introduction

In the preceding chapter, several of the programme activities undertaken so far by the ACAP/UMCDP have been described along with the gaps in these activities and the approach. In the absence of a management plan, it is almost impossible to develop an action plan in a manner that is consistent with the overall management objectives and strategies for prioritised activities. Hence this Chapter is devoted to outlining a management plan for Upper Mustang, in general, and Lomanthang, in particular.

The development of a unique area such as Upper Mustang should not be seen from a myopic point of view. A vision has to be developed. Development based on short-sightedness can lead to undesirable outcomes that will undermine sustainability. Sustainability in the context of Upper Mustang requires that tourism development has to receive more attention than it has currently received, as no other alternatives to tourism appear to hold a key to development of this area. Developing sustainable tourism requires that sound destination and site planning be designed within the framework of a long-term management plan. Such planning should be guided by the goal of sustainable mountain tourism development – defined as *the state of development in which the quality of life of the mountain people is improved and visitors' satisfaction is increased without depleting the natural resources for future generations to come*. More specifically, achieving the goal of sustainable mountain tourism development requires an integrated package of interventions to attain the following four basic objectives of SMTD; namely: poverty alleviation, improved visitor satisfaction, growth with equity, and conservation of the environment (Banskota and Sharma 1995b).

As Upper Mustang has a comparative advantage in tourism development and the scope for other development activities is fairly limited, tourism development must be the focus of development in the area. Since high paying and controlled tourism is already introduced, the vision should be to establish Upper Mustang as premium destination by providing visitors with a high quality experience. High quality tourism can be achieved through integrated planning and management of tourism destinations. Equally important is the need to ensure that a wider community also benefit from tourism directly or indirectly, so that the people feel more motivated and responsible while participating in tourism management and community development. Note that the current group tourism practice is not permitting local people to benefit from tourism directly. However, it is not easy to ensure a wider sharing of benefits from tourism, unless efforts are made to design complementary programmes that strengthen links between tourism and the local economy. Since part of the tourism fee is already recycled by the government into the development of Upper Mustang, scope exists to invest these financial resources in critical infrastructures and other projects that can benefit a wider local community. Although tourism may benefit a small section of the population, the tourism-generated resources can be used to provide sustainable benefits to a larger segment of the

community through community development. Development in Upper Mustang would thus be tourism driven.

Assuming that the current level of visitors to Upper Mustang continues to remain at 800, and given that the visitors spend an average of 10 days, the total revenue generated is substantial enough for a good start (Box 2). An additional source of revenue for the development of Upper Mustang can also come from the present government grants to VDCs (Rs 500,000). Hence, for a start, financial resources for sustainable tourism development in Upper Mustang should not be a problem. Over time, as the management capabilities of the local people improve, the necessary infrastructures are in place, and community development picks up momentum, the tourist numbers can be increased or with improvement in quality there will always be scope to raise prices, which can all generate additional resources.

Box 2 **Sources of Revenue for Development of Upper Mustang**

1	Rs 31,360,000	Total revenue generated with 800 visitors.
2	Rs 8,467,200	Currently only about 27 per cent of the amount generated is provided to UMCDP.
3	Rs 15,680,000	Resources available if the diversion would increase to 50%.
4	Rs 3,500,000	Total government grant to the 7 VDCs @ Rs 500,000 per VDC.
5	Rs 11,967,200	Total (2+4)
6	Rs 19,180,000	Total (3+4)

"A destination may be defined as a geographic area containing a critical mass of development that satisfies traveller objectives."

Source: Gunn 1994.

Imperatives of Management Plan

Many parts of Upper Mustang have potential for tourism development, i.e., if natural resources can be harnessed, if appropriate infrastructures can be developed, if required human resources are developed, and if concerted efforts are carried out to benefit local communities. As such mountain tourism development complemented by community development can be an important source of employment and income to a large number of people in the poverty-stricken mountain areas and where opportunities are extremely scarce and difficult to develop otherwise, as in Upper Mustang.

Formulation of a long-term management plan for Upper Mustang is perhaps an important step before devising successful policy strategies for ensuring sustainable mountain tourism. In the absence of such management plans, there is no basis for developing a plan of action at both the site and destination levels. Nor would it be

possible to make sound future allocation/investment decisions. Under such circumstances, it is conceivable that tourism in Upper Mustang may also develop haphazardly in a similar manner to that in other mountain areas. This is, however, not to underestimate the existing efforts of UMCDP in terms of its programme activities but rather to emphasise the issues of long-term management perspectives and visions which are still needed.

Although ACAP is mandated to address both the issue of conservation and development in Upper Mustang, sustainable tourism development requires coordinated efforts and programmes from the different stakeholders working in the area. In a situation in which there is no agency at the national level to deal solely with the development of mountain tourism, the role of ACAP/ UMCDP as a leading national NGO becomes critical for establishing a sound partnership among all the institutions working in Upper Mustang. Clearly the role of government as a facilitator in this process becomes important. Highlighted below are some important areas of focus of a management plan for Upper Mustang.

A Management Plan for Upper Mustang

Develop a Destination Plan

Proper planning and management of tourism in Upper Mustang is essential both at the destination and site levels to maintain its integrity and to ensure that the unique attractions are conserved to provide visitors and host population with quality experience and improve the quality of life of the local people. Destination planning is also essential for linking the tourism sector with the local production system. Tourism planning must be comprehensive and must consider all the relevant supply components of tourism and be backed by sound overall land-use planning. The plan must demonstrate how tourism functions as a system; how well services are provided; how well sites are developed and managed and how attractively tourism products are developed, marketed, and promoted. Destination planning requires strong local participation and partnership among government, non-government, the business community, and the local people.

As a destination, Upper Mustang qualifies for tourism development given the numerous assets (both natural and man-made). Upper Mustang is a fairly large area to traverse on foot and to ascend high elevations. What meanings do the local people assign to the beauty and what names do such places have? Meanings of landscapes can be further supplemented by scientific facts (altitude, latitude, longitude, temperature, rainfall, geology, flora and fauna, etc), which all put together give the landscape a special meaning. Although such meaning may exist for the local people, it must exist for the visitors in the form of books and other media. Human attributes, when blended with the 'place attributes', give the destination life.

- Develop a practical destination plan that portrays sufficiently both the physical and human dimensions of Upper Mustang, in general, and Lomanthang, in particular.

- Identify the key areas within the destination for site planning on a prioritised basis and develop tourism attractions/assets of activities that are of interest to visitors and which they can enjoy.
- Carry out a detailed inventory of Upper Mustang and establish area-specific carrying capacity standards as tools for destination and site planning.

A proper understanding of the carrying capacity of the area is a key to destination planning for sustainable mountain tourism development. Upper Mustang is an environmentally fragile area. The level of community development in terms of basic facilities, infrastructure, services, and production are limited. The level of human resource development among the people is fairly poor. All these factors put together indicate that the carrying capacity of Upper Mustang is fairly low and this provides the rationale for controlled forms of tourism in Upper Mustang. However, promoting whatever form of tourism without consideration of the area-specific carrying capacity and its dynamics is likely to make tourism unsustainable. For a better understanding of the opportunities and constraints that increase or decrease the carrying capacity, it becomes essential to identify important socioeconomic and environmental factors in the destination area and evaluate their level of acceptability from the perspective of both visitors and host population. Once the limit of acceptable changes has been established, the planning goal can be set so that tourism development stays within these limits. This calls for more systematic research on the inventory of natural, cultural, and human resources as well as on the socioeconomic situation of Upper Mustang in order to establish a baseline scenario.

- Carry out a detailed inventory of the biodiversity resources of Upper Mustang
- Carry out a detailed inventory of the condition of monasteries, caves, *stupa*(s) their paintings, and sacred imagery
- Develop a land-use plan for Upper Mustang in consultation with local people and experts
- Set standards for and limits to acceptable changes in environmental, social, and economic dimensions of carrying capacity

Develop Supply Components of Tourism

In other mountain areas of Nepal, tourism development has been entirely demand-driven, and this has created different types of problems (Banskota and Sharma 1995a). In the case of Upper Mustang, tourism has only begun and ACAP/UMCDP is already in place. Supply-side planning and management, at both destination and site levels, should, therefore, begin immediately. Such planning should strive for the interrelated development of five major supply components of tourism, namely: attractions, transportation, service, promotion, and information.

Attractions

In the case of Upper Mustang, there are many attractive features, as already discussed above. Without proper management in place 'attractions' can be destroyed as visitors begin to arrive. For each site (e.g., the wall, *gombha(s)* etc.) both meaning and value has to be developed in a simple manner such that different kinds of visitors can understand and appreciate them. In certain cases, different sites need to be treated as one unit. The main focus in developing attractions should be such that visitors get an opportunity to better appreciate what they see.

Some historical and cultural assets in Upper Mustang are delapidated, and they need to be restored. ACAP/UMCDP has already identified the need for restoration, and work in this area has already begun. Other settlement clusters in Upper Mustang outside the Wall have not received much attention. Tourism development can be planned in other settlement clusters as well, so that visitors are willing to spend more days in the area and the need to increase the numbers does not arise. Nature-based attractions need to be developed. For example, the Choosher Cave can be renovated as an additional attraction to visitors. There are many other caves in the area which could be gradually developed over time on a priority basis. Places that provide good sightings of wildlife can be identified and put on the itinerary. Locations that provide excellent views need to be identified and made accessible to visitors.

- Classify sites in terms of the tourism assets (nature and man-made) and prioritise them for development
- Develop practical site plans that portray both the natural and man-made attractions and activities of interest to visitors in different areas of Upper Mustang
- Develop standards and a code of conduct for the management of tourism assets and facilities

Services

It is the quality of service provided to visitors by the host community that results in the greatest economic impact. Accommodation, food service, infrastructure, travel agencies, and other travel businesses generate employment and income at various points in the tourism sector. This development will enable the local people to generate employment and income. In addition, the trekking agencies will not have to carry tents and other supplies from Pokhara or Kathmandu. This will also reduce costs for the local travel agencies in catering to their guests, and accommodation facilities at the destination can provide an added source of income.

In the case of Upper Mustang, the local people have not been able to enjoy the benefits of tourism to any desirable extent. As already pointed out, the benefits of group tourism, as currently practised, do not accrue to the local people directly, but, indirectly, much can be done. Development of infrastructure that benefits tourists should also benefit the

local people, although this may not always be possible. Thus, drinking water, irrigation, health posts, and schools are deemed by the local people to be essential infrastructure. When such local needs are developed through tourism revenue, local people begin to develop appreciation for tourism in their area, even if benefits do not accrue individually. Hence, ACAP/UMCDP needs to design the necessary infrastructures and implement them. This will generate employment and income for local people and local people will be able to appreciate tourism better as tourism-generated revenue will be used for local development. Development of new tourism products can help increase visitor days in the area without increasing the number of tourists.

- Develop community-owned lodges in Upper Mustang
- Develop community-owned kerosene depots to benefit both the locals as well as the tourists
- Develop campsites to increase tourism benefits for the local people
- Develop complementary infrastructure (drinking water, alternative energy, health posts, etc) to benefit tourists and the local people
- Develop codes, standards for the construction of hotels, lodges, tea shops, and campgrounds that are environmentally safe and in harmony with the local culture and architectural traditions

ACAP/UMCDP's Current Activities

- Kerosene Depot Establishment
- Lodge Management Training
- Waste Management
- Liaison Officers' Training
- Camp Site Construction
- Incinerator Installation

Transportation

ACAP/UMCDP's mandate area stretches from Kagbeni to Upper Mustang and hence this part of the trail (as well as bridges) must be well-developed as it serves both the local people as well tourists. Other areas visited by tourists as well as those deemed important by the people of Upper Mustang need to be developed on a priority basis. Mules are used extensively in Upper Mustang for transportation. However, due to increased competition, the rates are decreasing on the one hand and demand for mule feed is increasing. Either way the local people are losing out. This problem may be resolved by creating a mule syndicate so that an equal opportunity is provided to all mule owners.

- Improve trails used by tourists. Expand the bridge over the Kali Gandaki River or the one adjacent to Mustang Gate and make it reliable during floods.
- Develop a trekking circuit route of the destination to cover a wider cluster of the community.
- Create a mule syndicate to provide an equal opportunity to all mule owners.

Information

Generating information, organizing it, and presenting it in an appropriate manner can help both the host population and visitors to appreciate the natural resources. Information and its quality can play an important role in increasing visitor satisfaction. Additionally, good information is useful for marketing and promotion as well. Information can be generated in different forms; namely, maps, brochures, videos, posters, magazines, tour guides, and so on. In the case of Upper Mustang, maps and brochures are essential to provide to tourists when they receive their trekking permits. The existing map and brochure need to be improved. They could be on sale as well, so other visitors who purchase them are enticed to visit Upper Mustang.

- Provide visitors with accurate and interesting information about the area and assets developed
- Make local people aware of the value of such assets to encourage their conservation
- Develop quality maps and brochures of Upper Mustang
- Develop a visitors' information centre and provide effective visitor interpretation facilities

ACAP/UMCDP's Current Activities

- Develop a Conservation Information Centre
- Sign Posting
- Language Classes for Guides
- Tourism Awareness Camps
- Brochure and Information Materials

Promotion

Promotion should take place only after other supply components of tourism are in place. As such all promotional planning should be closely tied to all other components of supply side planning and development. Such promotional strategies should be able to influence not only the visitors but also all partners at the local, national, and international levels who are involved directly or indirectly in tourism.

- Encourage the government to promote Upper Mustang as a destination

Promote Mountain Community Development

The management plan for Upper Mustang must be comprehensive enough to integrate the above supply side planning for a tourism destination with the overall process of mountain community development. The ultimate goal of Mountain Community Development (MCD) is to significantly and sustainably improve the living standards of the people, complementing them through mountain tourism development (MTD), both of which require interventions in several related areas; namely:

- infrastructural development,
- human capital development,
- economic diversification,
- institutional development, and
- conservation of the environment (Banskota and Sharma 1994).

Although the programme activities of ACAP/UMCDP are currently concentrated on addressing the above dimensions of community development, the lack of a long-term management plan limits the prospects for designing these activities in a planned and prioritised manner with a clear-cut perspective of site scales and their linkages.

Infrastructural Development

A major problem in the area, by virtue of its very geography, is inaccessibility. The only means of reaching the area that is affordable to a large majority of the people is on foot, which from Pokhara takes almost 10-12 days. Being remote and inaccessible, the government machinery has not reached this area to any desired extent.

- Identify the critical infrastructural needs of the local people (drinking water, health, education, irrigation, electricity, etc) that will improve community development
- Promote the use of electricity to facilitate crop preservation

ACAP/UMCDP's Current Activities

- Irrigation Canal Rehabilitation
- Reservoir Pond
- Drinking Water Rehabilitation
- Wooden Bridge Construction
- Health Post Construction
- Solar Grinding Mill
- VDC Building Support
- School Support
- Agricultural Field Walls

Economic Diversification

The area is characterised by rampant poverty. Many households in the area are unable to produce enough food to meet the needs of their families. Besides working in the fields and raising a few livestock, there are no other employment opportunities in the area. Although the area has been opened up for tourism, many people are unsure how tourism can benefit them. The need to generate employment and income opportunities through linking tourism with the local economy is urgently needed. Seasonal vegetable

cultivation is possible in Upper Mustang. Vegetable cultivation should be expanded to supplement the household diet. Sun-drying through solar radiation to preserve vegetables for winter use can be promoted. During the summer season, vegetables can also be supplied to tourist groups.

- Identify and promote cultivation of high-value herbs and other floral species known to grow in the area. Promote vegetable and horticultural crops suitable to the area

The agricultural condition in the area is poor and most households are unable to meet their annual food needs. All adult male members of the community migrate annually for about three to four months each year to trade and leave the women and children behind to carry out household chores in the harsh winter months. This is a survival strategy. There is no doubt that the poor economic conditions in the area are also responsible for the low level of literacy, especially among the children. Additionally, to supplement food and perhaps export some to Tibet, the cultivation of potatoes has to be given serious attention. There has been considerable research done on potato improvement in Nepal. A suitable technology should be identified and it should be disseminated after field trials.

- Disseminate potato cultivation technology to mitigate food deficiency

Although the extent of income generated by sheep and yaks in the area is not precisely known, it is believed to be relatively significant. The potential to expand and improve this activity exists and has been emphasised for many years, but has not materialised. The fact that such livestock resources are found in abundance in the area proves that the area has a comparative advantage in the development of sheep farming. Sheep development for meat production has scope as Nepal imports a considerable number of sheep for meat from Tibet each year. Currently, this activity is not properly managed. Its promotion will, however, first require the development of pastures, breeds, and marketing. The traditional village organization (TVO) is an effective institution that can be used to develop and manage pastures and other resources. ACAP/UMCDP must identify the different alternative pasture development approaches; and the local people, the *Raja*, and other institutions should select the most appropriate approach after discussions with the TVO.

- Develop a long-term plan for pasture development and management in collaboration with local people and specialists
- Promote sheep farming
- Improve livestock productivity based on local knowledge and supplemented with scientific research
- Involve user groups in the development of improved livestock and pastures

ACAP/UMCDP's Current Activities

- Demonstration Plot
- Vegetable Seed Distribution
- Fruit Sapling Distribution
- Vegetable Seedling Distribution
- Grass Seed Distribution

Human Resource Development Planning

Many people are concerned about what use their children will make of the current education that is being provided. Simply providing education without practical relevance means it is unlikely to be accepted. Opening a monastic school alone is not likely to address the long-term issue of heritage conservation in the area unless proper curricula on conservation education are well integrated into the current formal education system. Many deserving students find it difficult to attend high school in the south and many do not have the incentive to continue education beyond middle school. If different development activities are to be introduced into the area then a cadre to manage these activities in the future is necessary. This will also provide better scope for the local people to participate in the development of their area. Moreover, if local people are trained, then the chance that they will participate in their area's development will also be greater. The establishment of a vocational training centre that ties up training with jobs can provide incentives for many students in the development of this region. Training can be imparted in a variety of topics such as herb production, pasture management, livestock management, tourism management (guide training), restoration of monasteries and other cultural assets, and so on. Conservation education should be an integral part of the training curriculum.

- Develop a vocational training centre in a suitable location in Upper Mustang to impart training to local people in sustainable mountain tourism development

ACAP/UMCDP's Current Activities

- Study Tour for CDC Members
- Farmers' Tours
- Tours for Mothers' Groups
- First Aid Training
- Scholarship for CMA Training
- Adult Literacy Class
- Health Education, Orchard Training, Pruning
- Vegetable Production Training

A detailed inventory of the biodiversity of Upper Mustang and land-use planning are necessary before devising a successful conservation strategy. Only through such a study will it be possible to develop an appropriate strategy. At the same time, without development that brings tangible benefits to the people, conservation will always be a low priority for the local people.

- Develop a land-use plan for Upper Mustang in a phase-wise manner in consultation with local people and experts
- Work closely with local groups and communities to develop appropriate, mutually beneficial management strategies, fully recognising traditional grazing as well as other resource-use practices

From a biodiversity point of view, several areas figure as being important in the region. Damodar Kund is returning to its pre-Khampa situation. It is perhaps the only pristine area in terms of biodiversity in the region and will require special care. Tourism is being permitted in the area and, if appropriate facilities and behavioural codes are not developed and enforced, problems can again begin to emerge. Additionally, grazing is being carried out in the area and this has to be studied, planned, and regulated. Timber extraction and hunting must be controlled. Therefore, a biodiversity conservation plan for the Damodar Kund area is warranted.

- Develop a biodiversity conservation plan for the Damodar Kund area
- Provide strict protection for vegetation communities in Damodar Kund and in similar areas
- Where traditional systems of natural resource use are shown to be appropriate and beneficial to long-term sustainability, recognise and incorporate them in efforts to promote conservation in other areas
- Prohibit cutting of green vegetation for all purposes
- Prohibit cutting of green vegetation for agricultural or pasture improvement purposes
- Prohibit any form of hunting and trapping to protect wildlife using local people's support

ACAP/UMCDP's Current Activities

- Private Plantation
- Community Plantation
- Plantation Management Plan
- Forest Management Plan
- Herbal Farming
- Nursery Operation
- Environmental Conservation

Preservation of Cultural Heritage

There is an urgent need to promote the rich cultural heritage of the area. Besides various conservation educational programmes, there is need to commercialise some of the potential characteristics of this culture. Different works of art can be used to promote local culture for sale to tourists as well as for export if appropriate sizes and patterns can be designed. Stone sculptures and *thangka* paintings can be used to decorate government buildings and homes not only in the area but also in Kathmandu.

- A team combined of an architect, an art historian, and a Tibetologist should make a detailed inventory of the condition of monasteries, caves, and *stupa*(s), their paintings and sacred imagery, through photographic documentation
- Local people who have an interest or skills in these areas should be part of the team
- Library resources in the region should be catalogued
- A study of local artists and craftsmen should be conducted to assess craft production in the area. Selected study areas need to be identified and advertised internationally so that scholars (who bring their own funding) from different universities can be permitted to conduct such studies. Such studies should be conducted in close collaboration with Tribhuvan University
- Carry out the periodic environmental impact assessment studies to monitor the negative impact on environment and culture
- Conservation education should be provided to the local people

ACAP/UMCDP's Current Activities

- *Gombha* Altar Class
- Compound Wall
- *Gombha* Fund
- Support to the Monastic School
- Support for Roofing Material and Musical Instruments
- Promotion of Local Dances
- Support for the Teeji Festival

Alternative Energy

Development of appropriate alternative energy and energy efficiency technologies is the key to solving the energy crisis in the area.

- Develop long-term rural energy planning to resolve the energy problems in the area
- Encourage development of micro-hydel plants as an alternative use for firewood and dung
- Generate hydropower and distribute it to households as an incentive to encourage conservation and development
- Promote use of electricity to preserve commercial crops

ACAP/UMCDP's Current Activities

- Micro Hydro Support
- Micro Hydro Installation
- Solar Lighting
- Smoke Water Heater
- Stove and Pressure Cooker Subsidies

Institutional Development

The TVO is still an active and respected institution in Upper Mustang. Its potentials must be tapped by ACAP/UMCDP with the ultimate goal of promoting a participatory institution. Currently, the head of TVO, the *Mukhiya* becomes the ex-officio member of the CDC. The existing government offices must work in coordination. Their work must be based on a development plan for Upper Mustang, rather than on national-level plans. All of the work for achieving sustainable mountain tourism development cannot be carried out by a single agency, such as ACAP/UMCDP, and a partnership approach is needed in many areas where the interests and activities of these agencies overlap.

The local institutions developed through ACAP/UMCDP must be strengthened and their capabilities developed so that they gradually become self-reliant in managing their development. Other agencies should be there to support and not dictate to local institutions. Often, an executing agency, such as ACAP/UMCDP, mandated to carry out different activities is constrained by existing policies. Policies designed for other areas may prove to be constraints in new areas. Impediments from different policies need to be removed and in certain cases new policies to facilitate development in the area may also need to be formulated. With the recent conservation area regulation, which has been passed by the cabinet, ACAP/UMCDP officials may sooner or later realise that such regulations may or may not be appropriate for Upper Mustang.

- Given the critical role tourism can play in the development of Upper Mustang, define the role and responsibilities of the different agencies to foster a cooperative framework to complement the development goal of Upper Mustang
- Support village initiated projects to increase capacity building
- Develop local support for long-term goals of Sustainable Mountain Tourism Development by providing small grants to each village
- Increase people's confidence in their capacity to identify, introduce, and complete development projects
- Develop and formalise user groups with authority and responsibility for joint protection and management of community forests and pastures and other resources in partnership with UMCDP personnel
- Develop women's user groups to address their economic and development needs

ACAP/UMCDP's Current Activities

- CDC Formation
- Mothers' Groups' Formation

Database and Monitoring

Finally, a good database is useful for developing good plans and good monitoring indicators. Such data have to be periodically collected and assessed in several areas of critical importance. In addition, the monitoring system needs to be institutionalised at both implementing agency level as well as at the local community organization level. Currently ACAP/UMCDP is weak in both respects.

- Develop a sound database for monitoring and assessing impacts

ACAP/UMCDP's Current Activities

- Fuelwood Consumption Survey
- Livestock Dynamics' Survey
- Kerosene Consumption Surveys
- Population Migration Survey
- Ghami Micro-hydro Survey
- Gombha Survey
- Evaluation of UMCDP

Action Plan for Lomanthang

Lomanthang has many prime tourist assets, all confined inside the City Wall, thus qualifying itself as an important tourism site. Built in the 15th century, this White City is unique and many of the assets are in a bad state of repair. To the local people this wall, the fort towers, and monasteries are part and parcel of their cultural heritage and important historical and cultural sites of this old city. These assets also acquire significance at the national level since they add to the diversity of Nepal's cultural heritage and generate revenue for the government. The fact that visitors are willing to pay substantial amounts of money to visit this area proves that Lomanthang as a site also has global significance. If properly developed these assets have the potential for ensuring wider community benefits. However, the quality of the products sold to visitors must be maintained and improved upon in order to command premium prices.

In order for such site planning to be effective and sustainable, an integrated planning approach is essential to establish a linkage between tourism and the local economy. In this context, the action plan should take into account the basic concept and design criteria for site planning, giving due consideration to both on-site and off-site factors. Equally important is the involvement of the community from the early stages of planning.

The management plan recommended for Upper Mustang is equally valid for Lomanthang, as Lomanthang is the economic, cultural, and tourism centre of Upper Mustang. The management plan sees Lomanthang as an important destination in Upper Mustang. Given the importance of this place, some specific actions that need to be taken by the ACAP/UMCDP to develop Lomanthang into a prime tourism site are identified below.

Build and Strengthen Local Institutional Capacities/Capabilities

Sustainability of mountain tourism development in Lomanthang (as well as in Upper Mustang) depends very much on the development approach, e.g., taking into consideration the role played by the project staff; institutional building and strengthening; and mobilising local institutions such as the VO, monasteries, and the local Raja. Efforts are needed to empower the socioeconomic subordinate groups to make decisions; traditional rules are biased against such groups. Building capacities and improving capabilities should be the main focus on this front. For this, a number of actions are needed.

- Provide managerial and skill training to all members of local institutions on finances and book-keeping, working rules, participatory planning, operation and maintenance, and participatory monitoring
- Establish an endowment fund and initiate action to mobilise resources on a sustainable basis
- Establish linkages and coordination with other institutions for conflict resolution, resource sharing, and integration of annual sectoral programmes
- Empower women and disadvantaged groups to take part in the decision-making process and augment their role and status in conservation and development
- Provide technical support and training to the *Ama Toli* and coordinate the groups with WEAN (Women Entrepreneurs' Association of Nepal) for savings and credit schemes
- Increase the skills of the *Ama Toli* in community sanitation and health care
- Continue support for formal and informal education programmes
- Develop monitoring indicators for institutional capacity building through participatory discussions with all members of the institutions and increase the self-monitoring capabilities of these institutions

Develop Tourism Products

The wall surrounding the white fort city, fort towers, and the monasteries is a prime tourist attraction (cultural heritage) of Lomanthang. This asset needs to be protected and renovated and conserved along with developing other supply components of tourism - following the planning guidelines as stated in the previous section. Although ACAP/UMCDP is currently supporting the monastery school, the Teeji festival, and work to build shelves to protect artifacts from different *gombha(s)* along with other activities carried out by the monasteries, the system is slowly working without a long-term vision because there is no management plan.

- Develop an operational plan to renovate the wall surrounding the city and two Fort Towers (north of Lomanthang) and monasteries as the physical condition of this cultural heritage is deteriorating
- Develop innovative mechanisms for providing employment to local people during the construction and renovation of these cultural sites
- Develop community-owned lodges and operational schemes for them to establish linkages with the local economy
- Continue supporting natural resource conservation activities (ACAP/UHCD)

Improve Health and Sanitation Facilities and Standards

Litter and garbage created by tourist facilities in Lomanthang are already a nuisance and the ACAP/ UMCDP system of waste management is working too slowly; it needs a more effective mechanism and it needs monitoring more carefully.

- Develop a mechanism to make the local institution more responsible for regular monitoring of waste management through empowering CDCs, sub-CDCs, and Mothers' Groups to make decisions on effective enforcement of the working rules

The sanitation and health standards in Lomanthang are currently poor, and this problem needs to be addressed immediately by the project through supporting a number of activities in close cooperation with the local community.

- Continue support for toilet construction and regular village clean-up campaigns to improve the sanitary conditions
- Develop standards for community sanitation and health
- Promote observation tours
- Develop the sewage system
- Develop and introduce a mechanism for mobilising resources on a sustainable basis for operation and maintenance of community infrastructure
- The current practice of medical service provided by the project in Lomanthang throughout the year is commendable, and this needs to be supported with the ultimate vision of establishing a sustainable health service scheme, perhaps through creating a community-based health fund.
- Develop a drinking water scheme

Develop Rural Energy

Severe scarcity of firewood has forced people to rely heavily on animal dung to meet their annual energy requirements (over 90%). A long-term solution to the energy problem in Lomanthang (and all of Upper Mustang) is necessary. The scope to increase the supply of traditional fuel, i.e., biomass, through plantation and improved management, appears to be limited. Possibilities to develop alternative types of energy, particularly micro-hydro, are there, but uses are likely to be limited to illumination only. Solar energy

is being tried out, but it will take some time before this alternative technology can be put into practice in the area. Improving energy-use efficiency through energy-efficient technologies should be given prime consideration. Detailed investigation is thus needed to arrive at viable alternatives to meet the existing energy crisis.

- Conduct detailed feasibility studies of alternative sources of energy and technologies and explore the viable alternatives for a long-term solution to the energy problem
- Develop long-term rural energy planning

Improve Livestock and Pasture Productivity

Animal husbandry plays an important role in the livelihood of the people. According to a survey carried out by ACAP/UMCDP, only 12 per cent of all households reported having sufficient fodder for livestock. Local pastures have undergone significant degradation due to overgrazing. As a result, livestock productivity, as well as herd sizes, have undergone significant reduction. Currently, there is no effective institutional regulation of pastures in Lomanthang, although community ownership of pastures is greatly respected. Livestock productivity is also believed to be low and needs to be improved. In addition to the recommendations provided below, refer also to the recommendations provided above for livestock and pasture development.

- Assess pasture resource ownership and develop a pasture management plan focussing on native forage species and traditional pastoral systems
- Establish a veterinary centre in Lomanthang and posts in other locations to develop a vibrant livestock enterprise
- Introduce a livestock breed improvement programme to increase livestock productivity

Establish a Baseline Database and Monitoring System

- Conduct socioeconomic, household, and visitor baseline surveys
- Conduct a natural resources' inventory survey
- Develop a participatory monitoring system

Conclusions

In the current situation of subsistence agriculture and infrastructure, Upper Mustang is experiencing a growing conflict between short-term survival needs for food and energy and long-term environmental sustainability. This problem stems largely from the overall problem of underdevelopment and lack of appreciation of the environmental resources. Local people in Upper Mustang are aware of the importance of tourism development as an income-generating opportunity, and this is clear through observations made in the lower Mustang area (Jomsom) and other parts of the Annapurna area. They are aware of various impacts which tourism can induce. Upper Mustang can learn from

the experiences that have been accumulated so far in order to minimise negative impacts and promote positive impacts. One important lesson that ACAP/UMCDP should take into account is that supply-side management of tourism is essential within a sound management framework, if tourism is to be a stimulus to local development. Supply planning should be flexible enough to adapt to changes in market demand. In order for such planning to be effective, partnership between the public and private sector is also deemed important and ACAP/UMCDP can begin to bridge this important gap.

To capitalise on the various positive aspects of tourism, the activities currently implemented by ACAP/UMCDP are not adequate. It lacks vision because of the absence of a long-term management plan. Nor is the present level of human resource development sufficient to deal with and manage tourism. In other words, improving the capacities/capabilities of local people and other stakeholders needs to be brought about through proper training to achieve sustainable mountain tourism development. Community development should be concomitant with tourism development to conserve the unique resources of Upper Mustang, in general, and Lomanthang, in particular. Financial resources already being generated by tourism provide a starting point for implementing a management plan.

The basic message of this study is that there needs to be an appreciation of mountain environmental resources and the key to mountain development lies in providing high quality tourism linked with the local production system. Tourism has been able to generate additional resources for the area's development, and tourism development has to lead mountain development in this direction. Therefore, tourism development in Upper Mustang has to succeed as it presents a hope not only for the development of Upper Mustang, but also for other similar areas within Nepal.

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**Annex 1: Summary of Progress: Upper Mustang Conservation and Development Project
(as of July 1996)**

Activities	Achievement	Site
Natural Resources' Conservation		
Private Plantation	68,135 cuttings	Villages of Lomanthang, Charang, Chhoshar, Chhonup, Surkhang VDCs
Community Plantation	34,614 cuttings	Villages of Lomanthang, Charang, Chhoshar, Chhonup, Surkhang VDCs
CDC Formation	23	Different villages
Nursery Operation	2	Lomanthang and Samar
Plantation Management Plan	18	Different villages
Forest Management Plan	1	Samar
Herbal Farming	33 species	Lomanthang
<u>Alternative Energy</u>		
Micro-hydro Support	3	Charang, Chhonup and Marang
Micro-hydro Installation	1	Lomanthang(ongoing)
Solar Lighting		Monastic schools; Samar, Chaile, Ghyakar (ongoing)
Smoke Water Heater		Samar, Chaile, Ghami, Charang, Lomanthang
Sustainable Tourism Management		
Conservation Information Centre	2	Kagbeni, Lomanthang
Kerosene Depot Establishment	2	Kagbeni, Charang
Sign Posting		Different villages
Lodge Management Training	2	Kagbeni, Charang
Waste Management	2	Different villages
Language Classes for Guides		Lomanthang
Tourism Awareness Camps		Different villages
Brochure and Information Materials		
Liaison Officers' Training	1	Jomsom
Camp Site Construction	1	Lo Ghekhhar
Incinerator Installation	1	Kagbeni
Sustainable Rural Development		
<u>Infrastructure Development</u>		
Irrigation Canal Rehabilitation	2	Dhi, Samar
Reservoir Pond	1	Surkhang
Drinking Water Rehabilitation	1	Samar
Wooden Bridge Construction	6	Arka, Chungjung, Marang, Tangye, Lower Chhoshar, Dhiluk
River Training		Marang, Charang, Nyamdo, Upper Chhoshar
Agricultural Field Wall	20,107 m	Ghami, Thinkar, Kimling, Dhakmar, Dhi, Ghara, Chhoshar, Marang, Ghiling
Health Post Construction	1	Chhuksang
Solar Grinding Mill	1	Ghara

Annex 1: **Summary of Progress: Upper Mustang Conservation and Development Project**
(as of July 1996) (Cont'd)

Activities	Achievement	Site
VDC Building Support	1	Lomanthang
School Support	furniture	Different Schools
<u>Agricultural Development</u>		
Demonstration Plot	1	Lomanthang
Vegetable Seed Distribution		Different villages
Fruit Sapling Distribution	185	Dhi and Surkhang
Vegetable Seedling Distribution		Different villages
Fruit Training, Pruning	2	Chhuksang
Vegetable Production Training	2	Lomanthang
Farmers' Tour	1	Marpha
Grass Seed Distribution	9 kg	Different villages
<u>Health Service Support</u>		
General Health Service		Different villages
Mobile Health Camp in Winter		Different villages
First Aid Training	3	Charang, Kagbeni, Jomsom
Health Post Support		Charang, Chhuksang, Chhosher
Scholarship for CMA Training	1	Charang
Amji Workshop	1	Jomsom
Clean up Campaign		Different villages
<u>Heritage Conservation</u>		
Gombha Altar Class		Chhodde
Compound Wall		Charang, Namgyal
Closets		Ghiling, Charang, Chhuksang
Construction	2	Yara Dhey
Gombha Fund	1	Luri Gombha Ghara
Receipt Pad Publication		3 Gombha(s) of Lomanthang
Monastic School Support		Lomanthang
Support for Roofing Material and		Different Gombha
Music Instruments		
Promotion of Local Dances		Different villages
Supports for Teeji Festival		Lomanthang
<u>Women's Development Programme</u>		
Mothers' Group Formation	16	Different villages
Mothers' Group Tours	1	Ghandruk, Lwang
Stove Pressure Cooker Subsidy		Different villages
Adult Literacy Class	1	Ghami
Health Education		
Conservation Education and		
Extension Programme		
Study Tour of CDC Members		Ghandruk, Chitwan
World's Environment Day Celebration	2	Different villages
Extension Drive		Different Village

Annex 1: **Summary of Progress: Upper Mustang Conservation and Development Project**
(as of July 1996) (Cont'd)

Activities	Achieve- ment	Site
Survey and Evaluation Fuelwood Consumption Survey Livestock Dynamic Survey Kerosene Consumption Surveys Population Migration Survey Ghami Micro-hydro Survey Gombha Survey Evaluation of UMCDP		Samar Lomanthang Lomanthang Ghami Different villages

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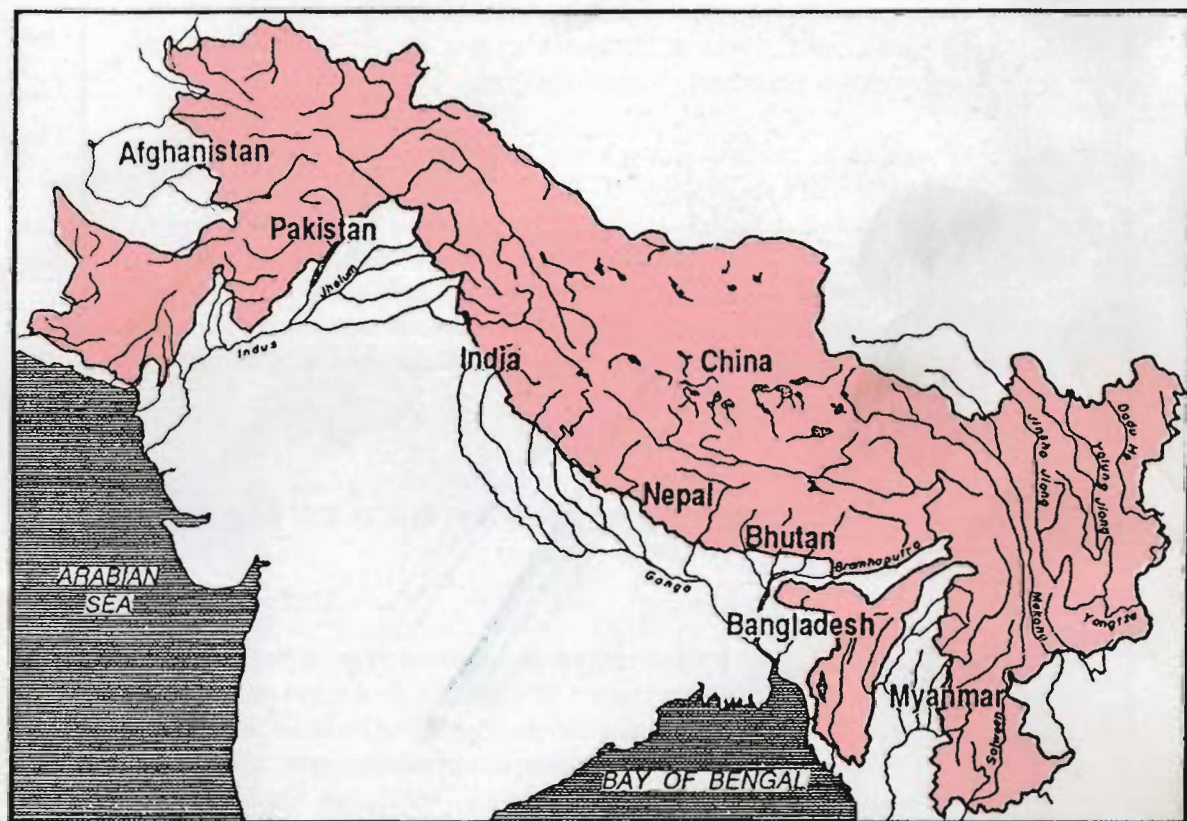
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