

The deep-rooted poverty and the rapidly deteriorating environment in the Hindu Kush-Himalayas call for new approaches to developing sustainable livelihood systems that build upon the comparative advantages that mountains have over the plains. The search for and promotion of off-farm opportunities

for gainful employment and income generation is at the forefront of ICIMOD's mandate and activities, and this is also reflected in the establishment of the Mountain Enterprises and Infrastructure Division on 1st January 1995. From this perspective mountain tourism provides major opportunities and challenges for institutions and individuals at all levels, whether they belong to government, non-government, or private sector institutions.

While the role of tourism in national economic development has received considerable attention from governments in the region, the actual impact and effect of tourism on the very source of attracting tourists - the nature, people, and culture of the mountains - have been subjects of only limited research, and even this has been very location-specific. Over the last three and a half years, with support from the Norwegian Government, ICIMOD has been trying to fill in

this knowledge gap, together with diverse specialists from this region. The results have been described in 11 documents, from which the present Newsletter has distilled the most salient points. A strong argument is made for a policy focus on **tourism for local community development** and supportive institutional mechanisms for capacity building in close association with the private sector. Once these are in place, mountain tourism can become a major vehicle for local development.

While mountain tourism is very relevant to the entire HKH region, this Newsletter comes also at a very opportune time for Nepal, which has declared 1998 as the Visit Nepal Year. I hope that by focussing on tourism in this Newsletter, ICIMOD can also contribute to achieving the theme of the Visit Nepal Year: 'Sustainable Development through Sustainable Tourism.'

Egbert Pelinck
Director General

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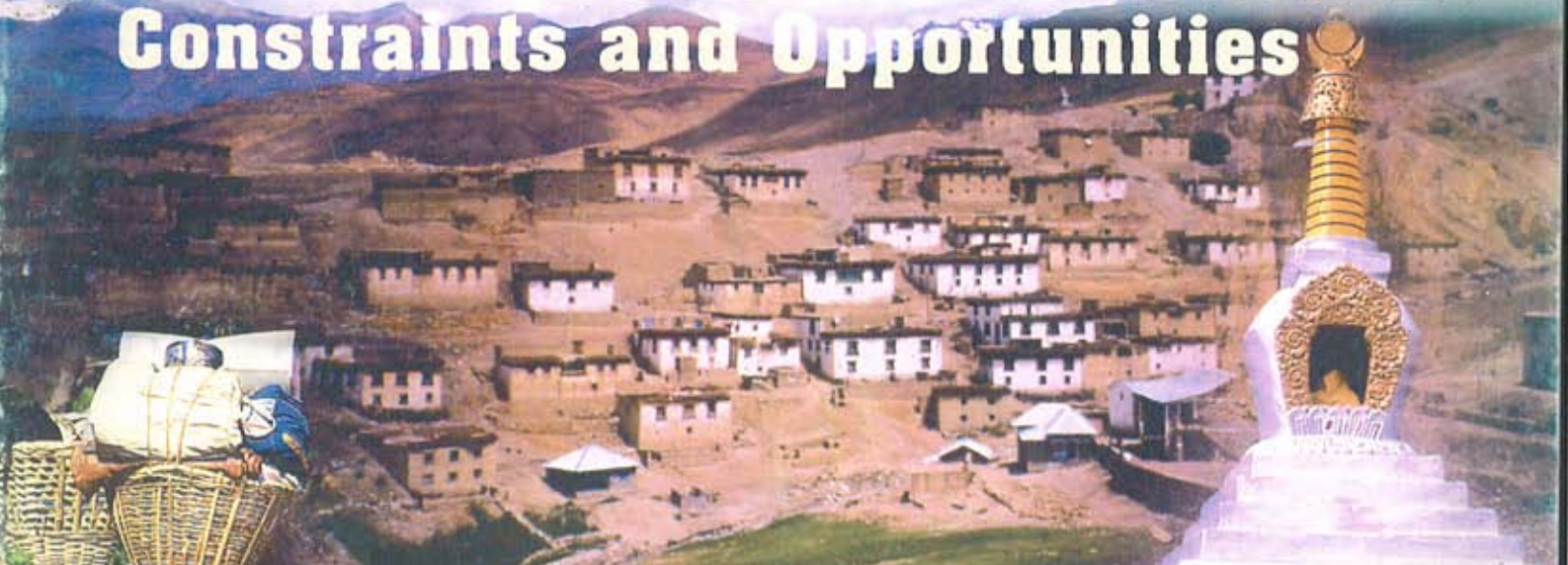
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Mountain Tourism

Constraints and Opportunities



Few areas in the world offer such a unique blend of breathtaking natural beauty and a rich diversity of culture, socioeconomic traditions, history, and lifestyles as the Hindu Kush-Himalayan (HKH) region. Historically, these mountain ranges have attracted people - pilgrims, ascetics, naturalists, explorers, and, in recent years, mountaineers, trekkers, and cultural tourists from far and wide and this is one of the major comparative advantages of the HKH. At present, there is an urgent need for activities that help diversify mountain economies, provide alternative livelihood opportunities for mountain people, promote environmental care, and, simultaneously, address the twin problems of poverty and environmental degradation, and tourism appears to be an activity with considerable potential. It is this potential that makes mountain tourism a singularly important sector in integrated mountain development.

While tourism provides a novel opportunity for development of often remote and mostly resource poor mountain communities, without adequate safeguards, it can also create problems and pose new challenges. Over the past few years, ICIMOD has collaborated with partner institutions in order to assess the impacts and implications of mountain tourism in selected areas of the HKH, to identify the constraints and opportunities, distill lessons from experiences, and to develop guidelines and training materials for sustainable mountain tourism. The premise has been that mountain tourism can be sustainable only if it contributes to the economic, environmental, and sociocultural development of mountain communities and be a vehicle for local development. Mountain tourism includes all those tourist activities for which the mountains manifest a unique advantage, e.g., mountaineering, trekking, adventure sports, resort tourism, and cultural tourism.

Patterns and Trends

Although the database on tourism in the Himalayas is poor generally, available information reveals that tourism is already an important activity and a significant contributor to mountain economies. The magnitude of tourist flows, both domestic and international, also testify to the increasing economic importance of tourism. In Himachal Pradesh (HP) and Uttar Pradesh (UP) hills of India the tourism sector is estimated to contribute IRs 2 to 2.5 billion annually to the state economy. Similar figures for the U.P. hills are IRs 2.5 to 2.75 billion. More than 20 per cent of the domestic product in each case is contributed by tourism. For Nepal, tourism is also an important source of foreign exchange. Tourism accounted for as much as 20 per cent of all foreign exchange earnings and, in 1992, 3.8 per cent of the GDP. In Pakistan, foreign exchange earnings from tourism amounted to 120 million USD in 1992 and was the ninth largest foreign exchange earner. China earned 3,947 million USD from tourism in 1992. The contribution of mountain tourism to the economy, however, remains relatively small.

For larger countries and economies of the Hindu Kush-Himalayan region, such as China, India, and Pakistan, domestic tourism is overwhelming. In China, as a whole, the volume of domestic tourists exceeds 300 million, compared to around 38 million foreign tourists. In H. P. and the U. P. hills in India 95 to 96 per cent of the total tourist flow (of 3.5 million in 1992 and 13.8 million in 1987/88 respectively) is domestic. In the North West Frontier Province (NWFP) and Northern Areas in Pakistan 85 to 90 per cent of the total tourist flow is domestic, and it is

estimated that mountain tourism involves about one third of the total flow of foreign tourists (352,000 in 1992). In smaller economies of the region, such as those of Nepal and Bhutan the concept of domestic tourism is not accounted for in official statistics. Tourism in these countries essentially means foreign tourists. In 1992, Nepal and Bhutan received about 334,000 and 3,000 foreign tourists respectively. The absence of reliable statistics on mountain tourism makes it difficult to estimate growth trends. In H. P., the average annual growth rate of tourism was estimated to be 17 per cent between 1989/90 and 1992/93. In the U.P. hills the agitation for a separate hill state has dampened tourist flow, but the estimated growth rates lie in the range of 8 to 9 per cent per annum. Between 1990 and 1992 foreign tourist arrivals in Pakistan actually declined, but the annual growth rate in domestic tourism remained at 3.5 per cent. In Nepal, the growth rate between 1990 and 1992 remained at 14.5 per cent.

The nature and type of tourism vary a great deal from country to country. In Nepal, trekking and mountaineering accounted for 31 per cent of the total non-Indian tourists in 1992. In the U.P. hills in India Pilgrimage is a major motivation and 60 per cent of tourists were pilgrims in 1992. In H.P. pleasure and sightseeing are major motivations for tourism and over a quarter of the tourists arrivals are destined for Shimla - a hill resort and the State capital. Visiting family and friends accounted for 60 per cent of tourists in Pakistan, followed by holidays-makers (22%). Resort tourism is quite important in the NWFP, while trekking and mountaineering are important in the Northern Areas. An important observation in the Himalayas is that adventure tourism, mainly trekking and some mountaineering, is prominent in the high mountains and the trans-Himalayan regions.

Impacts and Implications

Environmental Degradation

Even without the intrusion of tourists, the possibilities of soil erosion, and mass wasting are high in the mountains. Further, many mountains areas are under tremendous pressure due to the demand made on environmental resources by growing populations. The most obvious examples of environmental stress are forest degradation and deforestation resulting from the increased demand for fuelwood and timber to cater to tourist need; loss of biodiversity in areas with endemic species of flora and fauna; environmental pollution due to garbage and littering along trekking routes and on campsites; pollution of creeks and rivers and water bodies; overburdening of the basic infrastructure and sanitation systems of destination settlements, and so on.

Deforestation and forest degradation due to tourism has been widely reported. Many tourist destinations receive tourists in numbers that are at least two to three times the number of native inhabitants. In the Everest area in Nepal, for example, the tourist demand increases the local

demand for fuelwood by an estimated 85 per cent. In the Karakoram range, forest degradation and the destruction of vegetation are major problems, particularly on the route to Gasherbrum and Broad Peaks. In general, the level of pollution was related to mountaineering traffic. The demand for timber for construction and the very short growing season add to the problems of forest degradation and deforestation. Lack of alternative energy sources, failure to monitor of energy use by trekking parties in areas where the use of fuelwood is banned, and the problem of design and dissemination of efficient energy technologies are some of the issues associated with forest degradation and depletion.

Increased amounts of bio-nondegradable garbage littering, inappropriate disposal of human waste and contamination of water supplies along trekking routes, campsites, and settlements are among the most negative effects of tourism in the mountains. Ecological stress in terms of pollution and destruction of natural vegetation has been noted across the HKH. An average trekker in a group reportedly generates 1.5 kg of bio-non-degradable and non-burnable

garbage in a day. Between 1979 and 1988 about 770MT of garbage, were left behind by about 840 mountaineering teams in the Everest area. High levels of pollution due to human waste, left-over gear and bio-nondegradable packing material, and congestion have been reported in the Nanga Parbat area and over a dozen staging camps between Skardu and the base camp of K2 in Pakistan. At higher altitudes, where decomposition is a slow process and the assimilative capacity of the environment remains quite limited, the problem is further exacerbated. In some areas, measures are being taken to deal with these problems.

Conservation of biodiversity in high altitude meadows or *bhugyals* are quite pronounced in the tourist areas of the U. P. hills and parts of H. P. In the Northern Areas of Pakistan, demands for fuelwood, forage, and minor forest products are significant as the growing season is short and only one crop is possible in a year. All of these demands on the natural resource system have contributed to the dwindling of the population of wildlife in many areas in the northern mountains. The snow leopard, Marco Polo sheep, Ibex, Markhor, the Tibetan wild ass, blue sheep, and exotic pheasants have, as a consequence, become endangered species in many areas. The scope for maximising tourism revenues from wildlife conservation also remains considerable in many HKH areas.

In many hill resorts and pilgrim centres, the build-up of infrastructure such as roads, electricity, water supplies, large civil constructions, and rapid urban expansion, has occurred at the expense of the natural beauty and the environment - the very assets which supposedly attract tourists to these destinations. In the NWFP

Each year thousands of trekkers and mountaineers flock to the Everest region contributing to the accumulation of garbage, a problem that has attracted international attention. The Sagarmatha Pollution Control project was initiated in 1991 with WWF and

Example of NGO and Local Initiatives:

Sagarmatha Pollution Control Project

later MTCA support and the active involvement of local community. The Project has a wider mandate including garbage management, clean up of Sagarmatha Base Camp, conservation education etc. Two fuel efficient incinerators have been set up at Lukla and Namche. Visitor Information Service Centres and rubbish pits and public toilets have been set up at strategic locations. Also revenue raised from Park fees is shared by the government and the local communities. The Project has acted as a catalyst in educating and directing peoples' participation in development as well as conservation activities, and also in educating the visitors.

High-payoff and alternative forms of tourism have considerable scope and potential in the mountain areas of Pakistan. Wildlife conservation in some areas has been so successful that trophy hunting is catching up as one form of high-payoff tourism. In certain areas of Chitral in the NWFP, where the

populations of Markhor and Ibex have achieved a

Maximising revenue from wildlife conservation

certain size, specified permits are granted for hunting these animals in particular seasons. A permit for one Markhor is US \$4,000 and for one Ibex US \$3,000. This revenue is currently shared between the government and the local community; the latter receives 25 per cent of the permit value. With better monitoring and community participation in managing and benefiting from trophy hunting and with more equitable revenue-sharing mechanisms, wildlife conservation efforts can also receive substantial community support.

and Northern Areas of Pakistan, the environmental impacts of mountain tourism are also manifest in terms of the pollution of soils and glaciers, and problems caused by congestion in

resort locations in the Swat, Kagan, and Kalam valleys. Land-use planning for mountain tourism destinations is the biggest challenge.

Linkage with the Local Production System

The promotion of tourism in mountain environments is rationalised on the basis of the multiplicity of impacts it can have on the production regime. Tourism has generally induced petty trade, lodge keeping, and catering for tourists. Productive activities linked to the agro-ecological resource base have been less impacted.

Tourism almost everywhere has impacted on land use. The most obvious effect has been through conversion of forest land to agriculture; encroachment on public open space to build lodges, tea stalls, etc; and the tendency to leave land fallow to rent as

Development of a production base in which trekking tourism played a major role is exemplified by the case of Mustang, a trans-Himalayan valley in north-western Nepal. The valley is part of the Annapurna trekking circuit. Tourism, particularly in the Jomsom-Marpha area in southern Mustang, has encouraged a number of economic activities such as lodge and hotel keeping, orchards for apples and other temper-

Tourism linkages with the production base: Case of Jomsom-Marpha in Mustang, Nepal

ate fruits, fruit processing, commercial vegetable farming, cottage crafts, and mule transportation; the latter to transport goods from Pokhara or Baglung for market. The area has an airstrip at Jomsom but is not connected by road. However, these activities together have opened up novel off-farm employment and income opportunities in this basically food-deficit region and have contributed to a significant rise in the living standards of the local people. The Jomsom area, which was basically an area of out-migration, is one of the richest trans-Himalayan areas in Nepal today. A number of factors has contributed to the success of Mustang including its peculiar ethnic blend, the extension support to temperate horticulture provided by the government, and selective barriers to entry into the area created by formal and informal institutional set-ups, thus effectively shielding the area from the influence of big business from outside. The region demonstrates the advantages that can be derived spontaneously from relative inaccessibility.

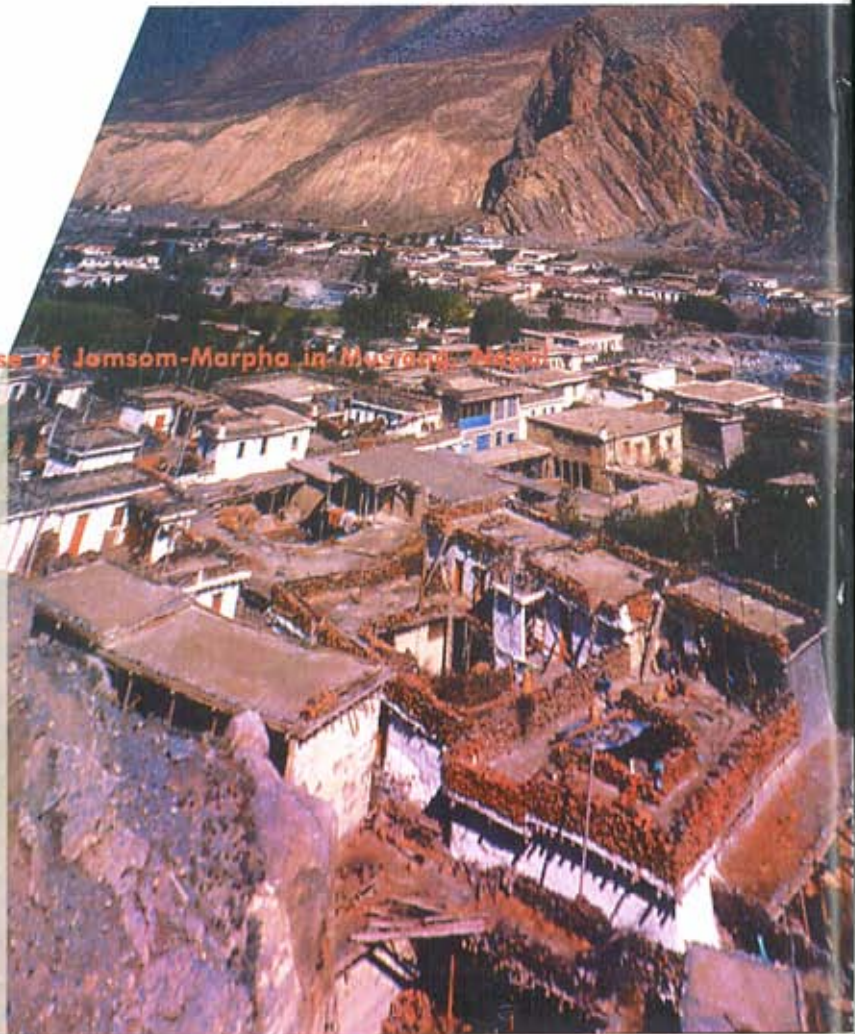


Photo: P. Sharma



Fairy Meadows: Conservation for tourism and resource extraction for revenue, Pakistan

Photo: P. Sharma

camping sites. Tourism is often blamed for the neglect of traditional resource management systems such as the management of upland pastures and livestock upkeep in the Rolwaling area in Nepal. Resource-use conflicts resulting from the growth of tourism are quite pronounced in certain areas such as the Fairy Meadows in Northern Pakistan. Also, in spite of the employment created by tourism in pocket areas such as the Khumbu region in Nepal, the income generated rarely induces local resource-based productive activities in these areas.

The effect of tourism on land use and production systems is often manifested in the preference for fruit and vegetable farming as opposed to traditional crops. There remains a very wide scope for such developments in most areas of the HKH.

Development of horticulture, vegetable farming, livestock, poultry, commercial wood lots, and cottage crafts are areas in which such activities can thrive because of the demands created by tourists. Improvement of the prospects for local food purchases by tourists add to the strength of the local economies in favourable areas. Domestic tourism, which is quite significant in the HKH areas of India and Pakistan, offers greater scope for such developments.

The Fairy Meadows which lie at the base of Nanga Parbat in the Raikot Valley constitute one of the most attractive tourist locations in the Northern Areas. The Fairy Meadows received about 1,600 tourists in 1995. Tourism began to pick up around 1988 with the completion of an access road from the Karakoram highway at Raikot bridge. The road was built by a timber contractor to facilitate the down-country transport of timber in return for a contract allowing him to cut up to 18,000 trees in demarcated blocks in and around Fairy Meadows over a period of 10 years. Illegal logging of unmarked trees has also

been rampant. The local community receives a royalty from the contract. With the opening of the Fairy Meadows to tourism the economic advantages of tourism and the need to preserve the pristine environment are being realised by a section of the community. The community is effectively divided among those that advocate conservation for tourism and those that, together with the contractor, advocate resource extraction for revenue and royalty. It is in areas such as the Fairy Meadows that Government policies can facilitate and NGOs could play a role to help communities realise the process and advantages of sustainable tourism.

Retention of Benefits

The very low level of retention of benefits from tourism, particularly income, has been a matter of serious concern in the HKH. The employment effect in many areas is limited to portering but often porters hail from areas far from

In the past, there were *Chutti(es)* (resting places for pilgrims) at every 10-15 km in the circumambulation route to the major *Dham* (pilgrimage site) in the U.P. hills, namely, Yammunotri, Gangotri, Badrinath, and Kedarnath. The *Chutti(es)* had facilities such as *Dharmasala*. These were mainly controlled by the locals.

Impact of mass tourism

The trekking days have

been reduced and the *Chutti(es)* have become dysfunctional in many areas. Pilgrim centres are overcrowded, while *Chutti(es)* are deserted. The pilgrims hardly spend a night in the major *Dham(s)* and are handled by travel agencies and tour operators from places like Delhi, Ahmedabad, Bombay, Calcutta, etc. Hardly any benefit goes to the locals. Instead, they have been at the receiving end of an overstressed local infrastructure, shortage of essential facilities, and degradation of the local environment and ecology. Clearly, if the benefits from tourism are to go to the locals, a very practical and well-planned strategy is needed.

Due to the development of roads, luxury buses can now reach many shrines.

in centres of pilgrimage

in Uttar Pradesh hills, India

tourist destinations. In Nepal, for example, most mountaineering porters come from the Khumbu region, irrespective of the location of the peak to be climbed. Further, portering is only a seasonal occupation, although the total number of persondays involved is estimated to be quite considerable. It is estimated that the total employment from mountain tourism, basically trekking and mountaineering, ranged from a high of 2.3 to a low of 1.1 million persondays in Nepal in 1994. Porterage accounted for about 21 per cent of this total employment.

Experiences from trekking and mountaineering areas in the

HKH suggest that the bulk of the income that accrues in mountain areas is not retained locally, as lodge owners are often from outside the region, foods and other essential goods have to be imported, and income is remitted to family members living in urban areas. There are also considerable income leakages in the form of benefits to urban, large city based trekking and travel agencies and in the form of royalties, taxes, and fees of various kinds to the central government. However, there are also areas such as Hunza where local traditions forbid the ownership of land by outsiders and tourist facilities are locally owned.

There seems to be, in general, a lack of integration of tourism sector activities with local resource-based economic activities, with the result that not much economic benefit is retained at local level. Studies in Pakistan show that the benefits of tourism tended to be higher at the national level than at the level of local mountain communities who bore the brunt of the economic and ecological problems resulting from tourism. Thus, a situation obtains in which outsiders have been successful in capturing the benefits

The Annapurna region is by far the most popular tourist destination in Nepal and annually receives over 45,000 foreign trekkers. Trekking tourism here started in the late sixties but together with some positive effects also exacerbated problems of environmental degradation mainly deforestation and forest degradation and pollution. In response to this ecological crisis the King Mahendra Trust for Nature Conservation (KMTNC) was created as a nongovernmental, nonprofit organization in 1982 to implement conservation measures in order to strike a balance between tourism, economic

development and nature conservation in the Annapurna region. Under the KMTNC, ACAP has been operative since 1986. The ACAP takes a grassroots approach where traditional rights and local institutions are respected and the activities rely heavily on local participation, and local management of natural resources including that of managing tourism impacts. ACAP programme activities include forest conservation, alternative energy, conservation education, tourist awareness programmes, eco tourism, women's development and a variety of community development programmes. Conservation and local development activities of the ACAP area are funded partially by the entry fee (presently NRs 1000 per trekker) to the conservation area collected from the tourists. The ACAP has demonstrated the potentials of an NGO in playing a catalytic role in planning and implementing programmes in which the dual aims of resource conservation and maximization of economic benefits of tourism in affected communities can be fulfilled simultaneously.

Linking tourism with local development: Annapurna Conservation Area Project in Nepal

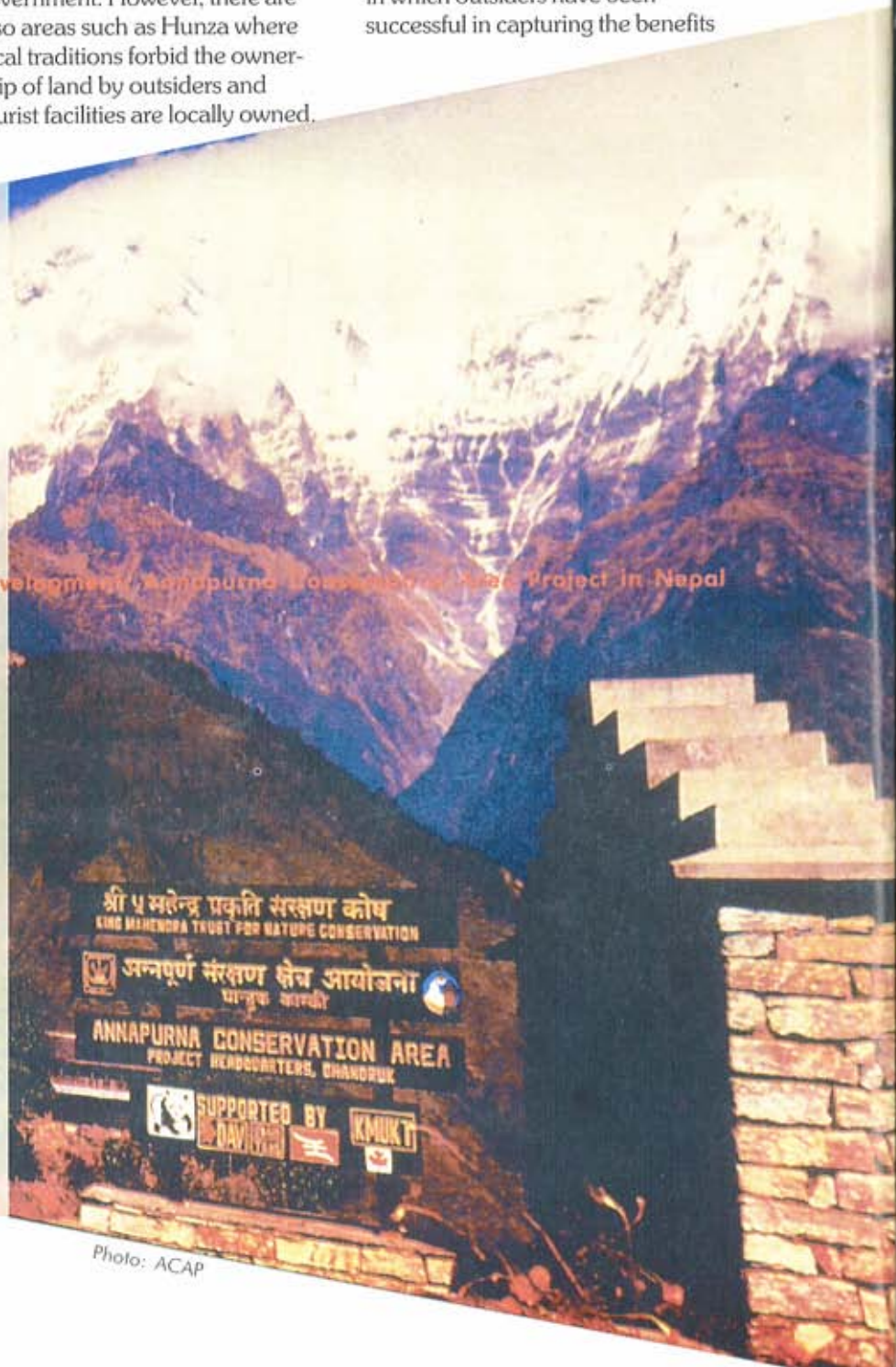


Photo: ACAP

of mountain environmental resources while the resultant environmental costs have been externalised to the local communities. In the Annapurna area in Nepal, as much as 60 to 65 per cent of the local tourist expenditure leaks out; in the Kalam valley in Pakistan this figure is in excess of 80 per cent. Over 40 per cent of the trade in the Badrinath pilgrimage circuit is directly controlled by outsiders. The problem, however, is not leakages *per se* but the failure to share tourism benefits for local development.

Seasonality

A distinct seasonality is evident in all tourist areas of the HKH. In Nepal, for example, October through November and February through March are the two peak seasons for tourist arrivals. Almost 40 per cent of trekkers and mountaineers come in the months of October-November. In the Darjeeling area of West Bengal, April-June and September-October are the two peak seasons. This is a pattern typical of many hill resorts in the Indian Himalayas. Pilgrimage tourism is affected by the temple opening seasons. In the NWFP and Northern areas of Pakistan, where

the monsoons become gradually weaker, the tourist season extends from June to September.

The most obvious implication of seasonality is that tourist capacity in these areas remains unutilised during the slack season. Since income and employment are dependent on tourist flow, the incomes earned during the tourist season have to compensate for the non-tourist seasons. Seasonal unemployment and slackness in commercial activities are noted phenomena in all tourist centres. Also, the concentration of tourist activities into a limited time and space means congestion, overcrowding, pollution, bottlenecks, and frequent breakdowns in the provision of infrastructural services; a situation not uncommon in resort towns, pilgrim centres, and along favoured trekking routes.

From an environmental point of view, however, seasonality may also be a blessing in disguise. The fact that the tourist flow dries up during the monsoons in most of the HKH means that the environment receives a *period of rest and regeneration* precisely during the period when the ecological metabolism is at its peak. Also, since the monsoons signal the period of

hectic agricultural activity, a lowered tourist flow is also a period for the population to contribute to agriculture on which the economic well-being of the communities depends.

Socio-cultural Impacts

Tourism has the potential of bringing about changes in people's ideas, behavioural patterns, lifestyles, social systems, institutions, values and norms, expectations, and other manifestations of material and non-material culture. Awareness about the maintenance and upkeep of cultural and historic monuments, increased pride in one's cultural identity, and resurgence in the observation of some cultural festivals (e.g., the Mani Rimdu in the Khumbu area in Nepal) are some of the positive impacts. Tourism has also contributed to the resurgence of traditional crafts all across the HKH. Decline in the support to and participation in local cultural practices and institutions, commercialisation of traditional cultural practices, pollution of sacred places, and introduction of alien architectural styles and



Chhorten, Mustang, Nepal

building materials are some of the noted negative impacts of tourism on society and culture. It remains difficult, however, to differentiate between the impacts made by tourists and the impacts resulting from increased incomes, increased exposure to the worldwide television network, and, of course, the educational system.

Commercialisation of culture due to tourism has been widely noted. In the Khumbu region of Nepal, the vibrancy of Sherpa family life is fast fading. In Ladakh, India, the symbolism of many festivals is reportedly lost. Objects and artifacts venerated for their

cultural and religious values are often stolen and sold in the black market. In the Chitral area in Pakistan, the culture and lifestyles of the Kalash people are being negatively impacted due to the influx of tourists, and it is the domestic tourists who seem to be having a stronger impact. Inflation, a handmaiden of tourism, hits the local economy hard. The poor and the disadvantaged, who derive little benefit from tourism, are often the ones

affected the most. However, with inbuilt mechanisms of benefit sharing, tourism can also provide resources to deal with the negative impacts.

A major sociocultural aspect of tourism that is often ignored is the impact

Photo: K. Banskota



Tourism and Women's Entrepreneurship (Nepal)

Launched in 1991, the Developing Women's Entrepreneurship in Tourism (DWET) programme in Dhampus village in the Annapurna region is specifically geared to develop the entrepreneurship skills of women in tourism. Most of the trainees in DWET are from poor families. Trainees are encouraged and assisted to start new businesses or to improve the profitability of their existing businesses. The programme, which is supported by UNDP/ILO, also links trainees to credit through banks or revolving loan funds without being restrictive in terms of collateral requirements or group formation. By 1995, more than 200 women had benefited directly from the programme. While this has encouraged women's entrepreneurship in tourism, some shortcomings are also evident, e.g., basic educational requirements for trainees in a context of very low female literacy, length of training period, and lack of linkages between training and follow up.

of tourism on women. Among the Sherpas, for example, in spite of the relative prosperity that it has brought, the burden on women has increased as menfolk are away for most of the year in mountaineering expeditions or in urban areas. In the Annapurna region, in Nepal, slowly the social and psychological barriers against women's participation in tourism activities are giving way to quiet acceptance. In Pakistan, however, for cultural reasons women's participation in tourism activities remains negligible, although mountain societies have a better integration of women in their economies. In all cases, greater efforts are called for to develop the requisite skills and capabilities of women

and to mainstream gender issues into local development efforts, in general, and tourism in particular.

Policy and Institutional Development

The fact that many of the above issues are far from adequately addressed in the HKH countries clearly demonstrates a policy vacuum. ICIMOD studies reveal that *tourism can be a catalyst for development only when it is integrated with the overall development concerns of mountain areas and that a positive linkage between mountain tourism and the central development concerns in*

the mountains, namely, poverty alleviation, environmental regeneration, and empowerment of local communities, are not spontaneous processes, but need to be deliberately planned and managed through an effective partnership with all concerned actors.

At the policy level, a number of issues stands out. There is no defined policy perception on the *role of tourism in mountain development* in particular regional contexts and the kind of tourism that is desirable. With few exceptions, there has been a general lack of effort in relating tourism to local commu-



Photo: K. Banskota

nity development. Policies are mostly guided by revenue and foreign exchange earning considerations rather than the need to reinforce positive linkages of tourism with the mountain economy and the environment. Policies and regulations, in most cases, remain *ad hoc*, and the

understanding/analysis required to enforce policies and regulations and monitor their efficacy are absent. Most policies, further, are *control oriented* rather than based on a system of incentives and disincentives. The problem of policy basically appears to be one of limited comprehension of the

ramifications of the environmental, economic, and related issues emerging from mountain tourism; lack of a sectorally integrated perspective; and the lack of a perception of the desired objectives of tourism development.

With respect to institutions, tourism development requires

institutions at different levels that are capable of promoting, marketing, facilitating, monitoring, regulating, and orienting the impacts and effects of tourism in desirable directions. This means that the role of the government, non-governmental organisations, community groups, and the private sector in translating the policies into actions through incentives and initiatives at each level need to be clearly defined so that an environment of trust and partnership can be built for the promotion of tourism in the mountains. The comparative advantage of each actor in the tourism policy-programme-implementation continuum with respect to defined tasks and objectives has therefore to be adequately appreciated.

Government agencies have the comparative advantage in creating a policy environment conducive to the growth of international and domestic tourism by prioritising the creation of infrastructure in partnership with the private sector, by developing standards for services, regulations for environmentally and community-friendly tourism, standards for monitoring impacts and creating an institutional framework for monitoring, by enforcing carrying capacity limitations where such are warranted, by helping create the manpower needed for quality tourism, by setting a system of

Comparative advantage of different actors in the tourism sector

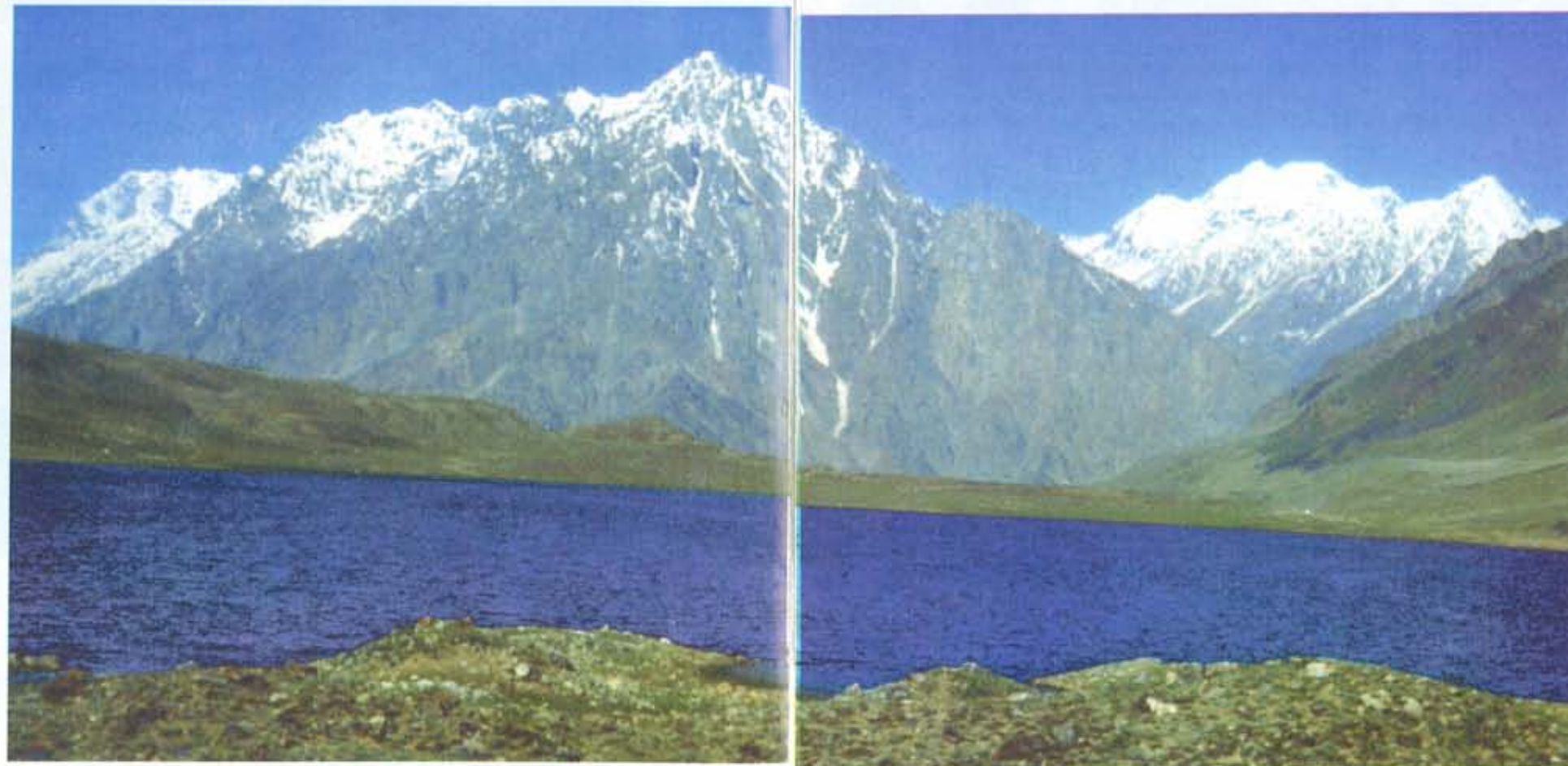
judicious revenue-sharing between the central exchequer and the areas and regions where tourists go, and by promoting and marketing the type of tourism desired in the international and national markets. Non-government organisations have generally the comparative advantage of being able to work closely with communities, organising and mobilising the communities and generally acting as catalytic agents in developing and implementing programmes linking tourism with economic and environmental development of local communities, as well as in providing the training which could help local communities to benefit from tourism. NGOs can also help in the process of participatory planning of tourism and aspects of natural resource management. Local community organisations and groups have the comparative advantage in monitoring the environmental and cultural as well as economic impact of tourism and, with some external inputs, these organisations can be crucial players in the planning of tourism at the local level. The private sector is most effective in the provision of services and in running service establishments and with clear policy guidelines in making productive investments in the tourism sector.

The Partnership for Quality Tourism Project in the village of Syabrubesi has been successful in establishing a fairly strong institutional foundation at the grass roots' level by the creation of a Community Development Committee, a body that has representation from lodge owners as well as non-lodge owners. The duties and responsibilities of the committee are

determined by the Syabrubesi community.

A Participatory Institution Building Process: The Case of Syabrubesi, Langtang

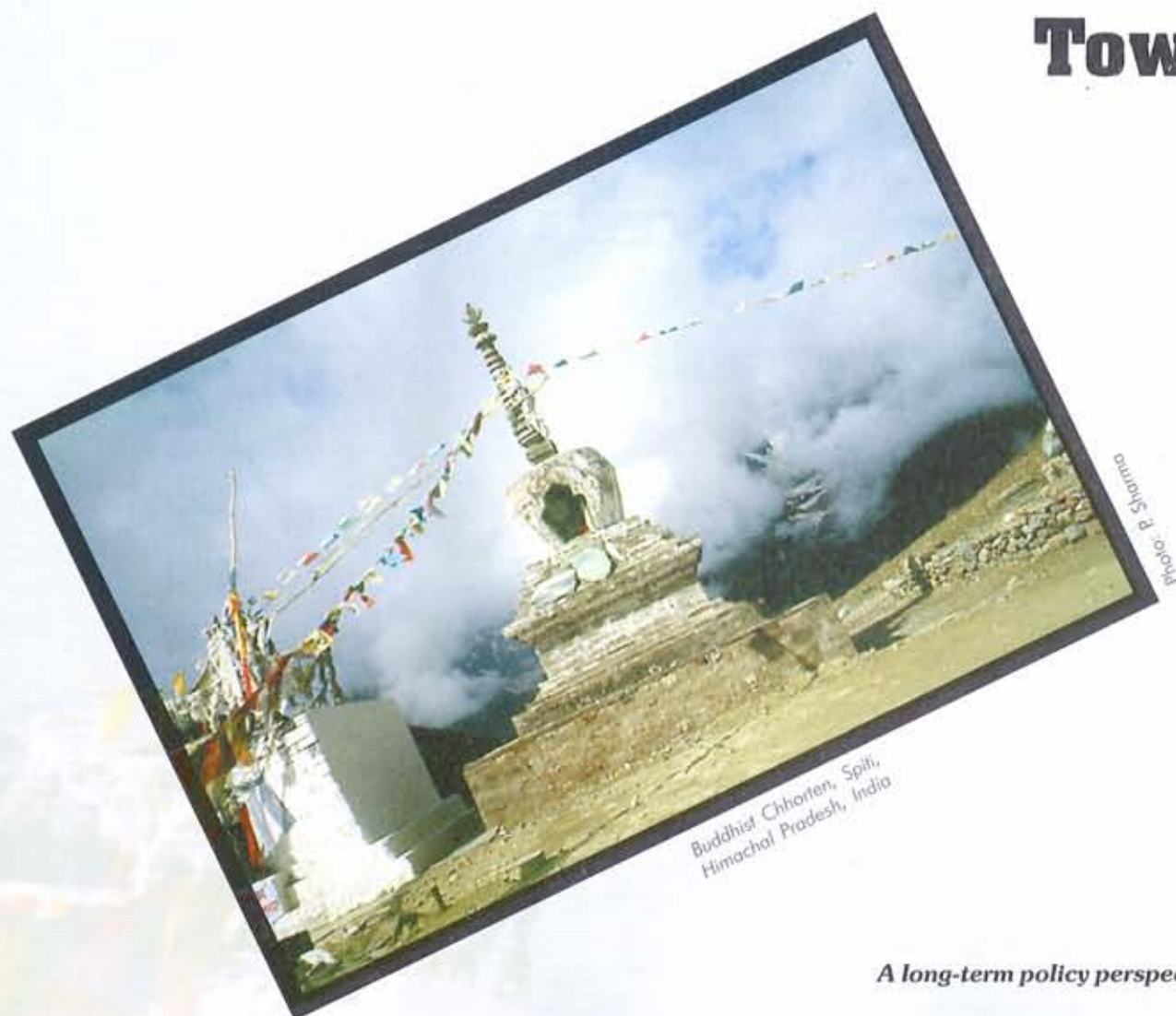
Guidelines for the CDC in tourism promotion and environmental management have been provided by the Project. The need for them was realised by the lodge owners through an observation tour to Ghandruk where such CDCs are in operation. The CDC has stopped price undercutting and introduced standard rates for lodge accommodation and for meals. The rules and regulations are effectively enforced. Transparency in decision-making of all types is ensured, and decision-making is by consensus. One of the lodge owners acts as a secretary to keep the books and the minutes. The CDC has also been able to generate funds from various sources in order to become a financially self-sustaining institution.



Sandur Lake, Chitral, Pakistan

Photo: P. Sharma

Towards Sustainable Mountain Tourism



Buddhist Chhorten, Spiti, Himachal Pradesh, India

A long-term policy perspective

Sustainability of mountain tourism in the HKH hinges pretty much on the extent to which tourism can contribute to three interrelated objectives: improvement in the livelihoods of the population (and by implications poverty alleviation), environmental regeneration, and the empowerment of local communities. Sustainability is not an end-state, but a process that has to be set in motion through a series of initiatives in a number of areas of policy and programmatic action. Some of the principle initiatives required for sustainable mountain tourism in the HKH are highlighted below.

Tourism development occurs within the policy framework provided by the state. A long-term policy perspective regarding the role tourism is expected to play in the overall development process in the mountains and the type of tourism that may be desirable in particular mountain environments needs to be articulated. Such a policy can be developed on the basis of comprehensive appreciation of the value of mountain environmental resources. A long-term perspective is needed because the benefits from tourism can be maximised only through a coordinated set of complementary sectoral policies. This perspective is essential also because tourism development requires investments in infrastructure as well as in the production apparatus of tourist areas.

A tourism resource inventory and carrying capacity considerations

Baseline information on most tourist destinations and routes and an inventory of tourism resources in the areas are not available. Most tourist areas in the HKH are fragile and diverse with a wealth of often endemic floral and faunal species. There is no accounting for or appreciation of the value of what is lost and what remains. In order to derive maximum benefits from tourism resources and to allow tourism product diversification, baseline information on ecology, economy, and social and cultural systems is required. This means that more emphasis needs to be placed on tourism-related research. It is on this basis that tolerable limits of acceptable change, or environmental, economic and social carrying capacity considerations can be brought to bear in the planning and management of tourism. Such baseline information can also provide the basis for mobilising NGOs, local community groups, and so on to monitor and deal with the impacts and implications of mountain tourism. Carrying capacity considerations can warrant a search for other forms of tourism that are soft on tourist resources in an area.

Integrated programme development

Tourism planning and development have to be conceived in the context of overall development in an area. The linkages of major economic sectors in the mountains — agriculture, horticulture, forestry, energy, etc — with tourism have often been ignored, resulting in a

If tourism contributes to the maintenance and improvement of biological resources and their diversity; if it ensures the preservation of culture and values of people and strengthens community identity; if a process is set in motion in which the benefits of tourism are broadly shared and a wider participation in decision-making related to development and the management of natural resources is promoted; if economically efficient, positive backward and forward linkages among economic activities are increased to relieve the pressure on fragile resources and contribute to improvements in the quality of life of the population; and if resources are managed in ways which not only support present needs but also support the needs and aspirations of future generations, then the presumption is that tourism is sustainable.

Sustainable Tourism

failure to integrate tourism with the local economy, low linkages and high leakages, problems of land-use conflicts, and so on. The demands of the tourism sector on other sectors and vice versa need to be better appreciated if tourism is to develop in an integrated fashion.

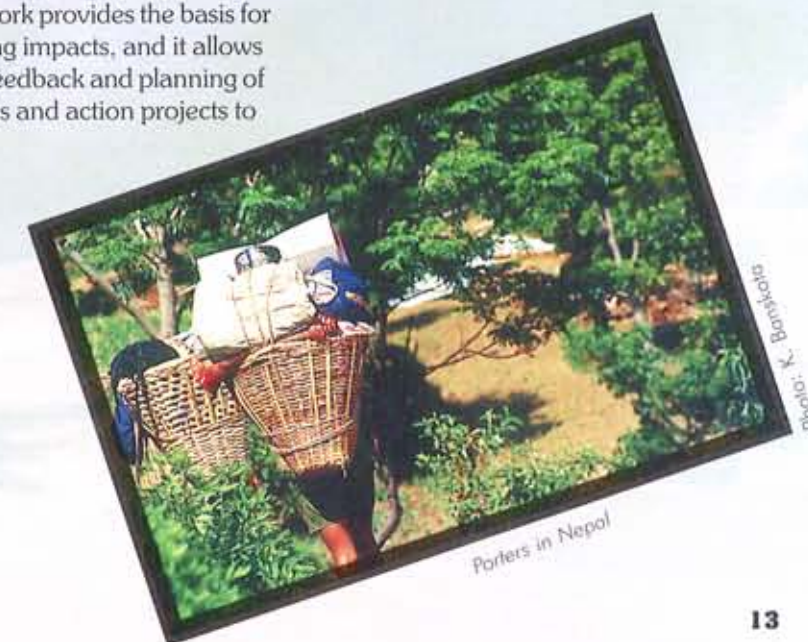
Institutionalisation of an impact monitoring framework

The development and institutionalisation of an environmental, economic, and cultural impact monitoring framework related to tourism are urgently needed throughout the HKH. Communicable indicators can be developed, as these can be readily perceived by local people. Such a framework provides the basis for assessing impacts, and it allows better feedback and planning of activities and action projects to

mitigate adverse consequences. ICIMOD studies reveal very clearly that in spite of a plethora of anecdotal evidence, understanding/analysis of environmental effects and impacts resulting from tourism remain very limited. Without proper understanding and analysis, sustainable systems of environmental pollution control, alternative energy, sanitation and building technology, and a whole host of related issues cannot be developed or addressed.

Capability building of local institutions

For mountain tourism to aid and complement the process of local



Porters in Nepal



Community meeting in the ACAP area, Nepal

Photo: ACAP

development, participatory institutions need to be nurtured at the local level that can monitor impacts, orient the benefits accruing from tourism to environmental regeneration and provision of basic services, and introduce the requisite efforts to bring the poor and disadvantaged groups to benefit from tourism. The experience in mountain development in various countries of the region shows that local receiving mechanisms need to be strengthened to benefit from the various kinds of support that governments may provide. In the case of tourism in remote

mountain areas, a system also needs to be developed whereby the revenues from tourism can be shared with local bodies, community groups, etc for local level environmental, economic, and community development work. *Participatory local institutions* could play a key role in planning tourism activities, raising popular awareness among the host population and the tourists, in discouraging pollution, monitoring proper sanitation, encouraging and disseminating new energy and building technologies, maintaining cultural integrity, and advocating the cause of sustainable tourism.

Human resource development and training

The creation of skills locally to cater to tourist needs is an extremely important aspect in promoting tourism for local development. Impetus for local enterprise development and provision of quality services are essential in order to realise the large revenue potential of mountain tourism. A well-conceived HRD strategy can also be a way of minimising the economic and social inequities that often accompany tourism development and of ensuring the participation of disadvantaged groups in tourism-related activities.

Dimensions of tourism carrying capacity in Shimla, Himachal Pradesh

Environmental factors

- Waste accumulation
- Unsanitary disposal of waste
- Plastic littering
- Environmentally unsound construction practices by both government and private builders
- Water scarcity and contamination
- Pollution due to vehicular emissions and burning of coal during winter
- Lack of sanitation and inadequate sewage

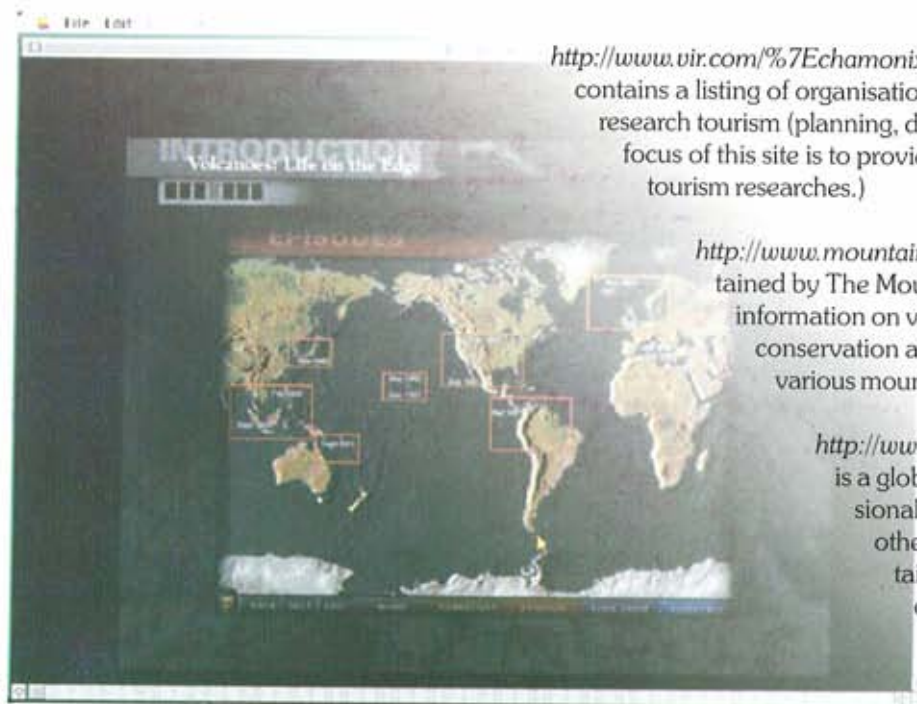
Socioeconomic factors

- Affordability of commodities
- Poor maintenance of cultural assets along slopes
- Change in land use
- Social and economic inequities due to subsidies and encouragement offered to migrants/outside
- Lack of promotion and support to small enterprises

Institutional/Management Factors

- Shortage of accommodation even with 200 hotels operating
- Parking spaces are limited in Cart Road
- Expensive local travel due to increasing tourist inflows
- No mechanism for prior information about the availability of accommodation, parking spaces at entry points
- Lack of enforcement of land-use controls

Mountain Tourism on the Web



<http://www.vir.com/%7Echamonix/tourism.htm> (This web site contains a listing of organisations that manage, consult, or research tourism (planning, development, policy...). The focus of this site is to provide useful information for tourism researches.)

<http://www.mountain.org/> (This web site, maintained by The Mountain Institute, contains information on various mountain research and conservation activities of the Institute in various mountainous regions.)

<http://www.mtnforum.org/> (This web site is a global forum for various professionals, people, organisations and others involved in various mountain activities to interact. It contains various link sites.)

<http://www.waiariki.ac.nz/~oppermam/aboutptr.html> (This web site is of a

tourism journal named Pacific Tourism Review. The Pacific Tourism Review is designed to meet the needs of the fastest growing tourism region. The tremendous changes in outbound and inbound travel patterns occurring in the wider Pacific area and their associated effects on the economy and environment demand a publication that specifically focuses on this area.)

http://kaos.erin.gov.au/life/general_info/biodivuser_5/twoch7.html (This web site titled the Two Way Track provides research information biodiversity conservation and ecotourism: an investigation of linkages, mutual benefits and future opportunities.)

<http://oneworld.org/patp/vol5/feature1.html> (This is the People and the Planet web site on tourism. In the feature article 'Taming the Tourist' Martin Price writes: "Tourism and travel is the world's largest industry; it employs a tenth of the world's workforce and has an output of US \$3.4 trillion. Mountains, once visited only by a few climbers and pilgrims, have not escaped the tourist crowds. Today tourism forms the basis of the economy of many mountain regions, with uncertain consequences.")

King Mahendra Trust for Nature Conservation **A Profile**

The King Mahendra Trust for Nature Conservation (KMTNC), with its headquarters in Kathmandu, Nepal, is an autonomous, non-profit making, and non-governmental organisation dedicated to conserving, managing, and promoting nature in all its diversity, balancing human needs with the environment on a sustainable basis for posterity through a process in which people are both the principle actors and beneficiaries. KMTNC was created because of the realisation that the relationship between nature conservation and economic development is mutually dependent. KMTNC was established in 1982 and its present Patron is His Majesty King Birendra Bir Bikram Shahdev. KMTNC operates under a Governing Board of Trustees comprising prominent persons from diverse fields including non-Nepalese members.

Projects under KMTNC

- Annapurna Conservation Area Project
- Bardia Conservation Programme
- Central Zoo
- Manaslu Eco-tourism Project
- Nepal Conservation Research and Training Centre

King Mahendra Trust for Nature Conservation
P.O. Box 3712, Jawalakhel
Lalitpur, Nepal
Tel: 977-1-526571 526573
Fax: 977-1-526570

ICIMOD Publications on Tourism



From early 1970s, a number of studies on tourism across the Hindu-Kush Himalayas (HKH) have been carried out. However much of these are in grey literature and is comprised of reports on probable tourism impacts for project donors, all masterplans, and so on. ICIMOD has made concerted efforts to study all aspects of tourism in the HKH and the results are published in the documents listed below.

Sharma, P. 1995. A framework for tourism carrying capacity analysis. MEI discussion paper, 95/1. 34pp.

Sharma, P. R. 1995. Culture and tourism: defining roles and relationships. MEI discussion paper, 95/2. 48p.

Gurung, D. 1995. Tourism and gender: impact and implications of tourism on Nepalese women - a case study from the Annapurna Conservation Area Project. MEI (Mountain Enterprises and Infrastructure) discussion paper. 95/3. 84p.

Shrestha, T. B. 1995. Mountain tourism and environment in Nepal. MEI discussion paper 95/4. 48p.

Sreedhar, R. 1995. Mountain tourism in Himachal Pradesh and hill districts of Uttar Pradesh: an overview. MEI discussion paper, 95/6. ICIMOD and the Academy of Mountain Environics, Dehra Dun. 101p.

Banskota, K.; Sharma, B. 1995.

Mountain tourism in Nepal: an overview. MEI discussion paper, 95/7. Kathmandu, ICIMOD and Centre for Resource and Environmental Studies. 158pp.

Saiyeda Zia Al-Jalaly; Mian M. Nazeer. 1995. Mountain tourism in the North West Frontier Province and northern areas of Pakistan: An overview. MEI discussion paper, 95/8. ICIMOD and Development Research Group, Peshawar. 157p.

Sreedhar, R. 1995. Mountain tourism for local community development: a report on case studies in Kinnaur district, H. P. and the Badrinath tourist zone. MEI discussion paper, 95/10. ICIMOD and the Academy of Mountain Environics, Dehra Dun. 89p.

Banskota, K.; Sharma, B. 1995. Tourism for community development: case study report on the Annapurna and Gorkha regions of Nepal. MEI discussion paper, 95/11. Kathmandu, International Centre for Integrated Mountain Development Kathmandu, Centre for Resource and Environmental Studies. 233p.

Banskota, K.; Sharma, B. 1995. Carrying capacity of Himalayan resources for mountain tourism development. MEI discussion paper, 95/14. Kathmandu, ICIMOD and Centre for Resource and Environmental Studies. 27p.

Sharma, P. 1995. Sustainability of mountain tourism in the Hindu

Kush-Himalayas towards an agenda for action. 12p.

ICIMOD. 1995. Perspectives on tourism: papers presented by participants at a workshop on Mountain Tourism for Local Community Development in the Hindu Kush-Himalayan Region held on 19-21 Jun 1995 in Kathmandu. 63p.

Saiyeda Zia Al-Jalaly; Mian M. Nazeer; S. A. Qutub. 1995. Tourism for local community development in the mountain areas of NWFP and the northern areas of Pakistan: phase two case studies of Kalam and Hunza. ICIMOD and Development Research Group, Peshawar. 114p.

Sharma, P. 1995. ed. Tourism for local community development in mountain areas: perspectives, issues, and guidelines - proceedings the Workshop on Mountain Tourism for Local Community Development in the Hindu Kush-Himalayan Region, 19-21 Jun 1995. 76p.

For further information/comments on issues raised in the preceeding articles please write or e-mail to:
Dr. Pitamber Sharma, Regional Planner, Mountain Enterprises and Infrastructure Division, ICIMOD. G.P.O. Box 3226, Kathmandu, Nepal
Fax: (9771) 524509 536747
Email: pitamber@icimod.org.np

CENTRE NEWS

Release of Annual Report - 1996

On 13 May, ICIMOD launched its 'Annual Report - 1996' to Kathmandu-based regional and international media personalities at its trail and demonstration site in Godawari. In his address, the Director General, Mr. Egbert Pelinck, highlighted the progress and efforts made by ICIMOD in striving towards its dual mandate of poverty alleviation and environmental conservation in the Hindu Kush-Himalayan region. He requested the Fourth Estate to help draw the world's attention to the plight of mountain people and thereby be a catalyst in bringing about sustainable development to mountain communities. He, along with other staff members, answered and clarified the numerous concerns raised by the guests.



Expanding Partnerships

The Indian Council on Agricultural Research (ICAR) and ICIMOD have agreed to closely collaborate in the field of mountain agriculture. To this end, an MOU was signed by Mr. B.K. Chauhan, Secretary, ICAR, and Mr. Egbert Pelinck, Director General, ICIMOD, on 5th June, 1997.



New Support to the Centre

- People and Resource Dynamics in Mountain Watersheds - The Swiss Development Cooperation (\$ 1.2 million for three years)
- Mountain Development Policy Review - The Ford Foundation (\$ 230,000 for two years)
- Forestry and Key Watersheds in Asia - Canadian International Development Agency (Canadian \$ 60,000 from March to Oct 1997)
- District Review Study - SNV (US \$ 23,000 from March to May 1997)
- Water Harvesting - The Ford Foundation (US \$ 100,000 from May 1997 to Oct 1998)



Congratulations!

The ICIMOD family extends its hearty congratulations to Prof. L. R. Verma, Vice Chancellor of the Y. S. Parmar University of Horticulture and Forestry and our former colleague, on being given an extension for three more years. The University is an old and continuing partner of ICIMOD. Professor Verma was instrumental in establishing the current Austrian Beekeeping Project at ICIMOD.

Workshops, Seminars, and Training Programmes

With the objective of providing a mountain development forum, ICIMOD has been organising a number of workshops and seminars on wide ranging issues pertaining to mountain development. It is not possible to report on all of these, however selected ones have been profiled below.

Mountain Farming Systems

A seven-day Regional Trainers' Training on Farmer - Led Integrated Watershed Management was jointly organised by ICIMOD and the Participatory Watershed Training in Asia (PWMTA) Programme at ICIMOD, from April 7- 13. There were twenty-eight participants from Bangladesh, Bhutan, China, Myanmar, Nepal, Pakistan, Sri Lanka, and Thailand. The training was able impart knowledge on better and more effective training and management skills and update professional knowledge with the latest state-of-the-art thinking and doing as well as close some of the gaps identified in watershed management, education, and training.

Themes of the Trainers' Training Programme

- The mountain perspective, farmers, and sustainable watershed management
- Processes for farmers' integrated watershed management
- Social issues in farmers' empowerment and participatory methods
- Integrating gender concerns into farmers' watershed management programmes
- Mountain farmers' livelihood/food security concerns leading to agricultural transformations for watershed management
- Experiences in managing waste lands/support lands of watersheds
- Common property resources in the watersheds: user group experiences from Nepal
- Some available technologies for watershed farmlands (Sloping Agricultural Land Technology, Plastic Film Technology, Water Harvesting Technologies, Effective Microorganisms [EM], some indigenous technologies)

Mountain Natural Resources

A Regional Inception Workshop for the People and Resource Dynamics' Project (PARDYP) was held at ICIMOD from March 24-29. Discussions on the following with the country coordinators from China, India, and Nepal took place during the workshop.

- Review of project progress to date
- Detailed methodologies and procedures for the different facets of the project
- Detailed work programmes for the period March 1997 to the end of 1997
- Identification and organisation of scientific, technical, and logistic support to project partners and identification of training needs for the staff involved from collaborating institutes and departments
- Identification of mechanisms and verifiable indicators to be used for monitoring and evaluating the progress of the project

A Regional Consultative Meeting on Water Harvesting for Mountain Households in the HKH Region was organised from April 9 - 14 in Chengdu, Sichuan, China. The meeting reviewed country experiences in water harvesting policies, programmes, and technologies for rural households in the HKH mountains and identified key issues and priorities for a regional participatory programme on water harvesting to meet the critical water needs of mountain people at the household level. One important activity at the workshop was a field visit to Meishan hills near Chengdu to observe successful application of various water-harvesting methods and techniques on a wider scale.

A National Training Workshop on Applied Ethnobotany was held at the Department of Ethnobotany, Kunming Institute of Biology, China from April 24 - 29. Twenty-one participants attended the Training Workshop that was conducted in a participatory manner. All participants agreed on the establishment of a National Society of Ethnobotany. The need for a textbook on Ethnobotany in the Chinese language was expressed, and this is being pursued under a different project.

A Meeting of the International Commission on Snow and Ice (ICSI) Working Group of Himalayan Glaciology was held at ICIMOD from May 6 - 8. Reports from each country were presented and discussions held. The group came up with several recommendations in the context of research.

Recommendations for a future research programme on snow and ice in the Himalayan-Karakoram region

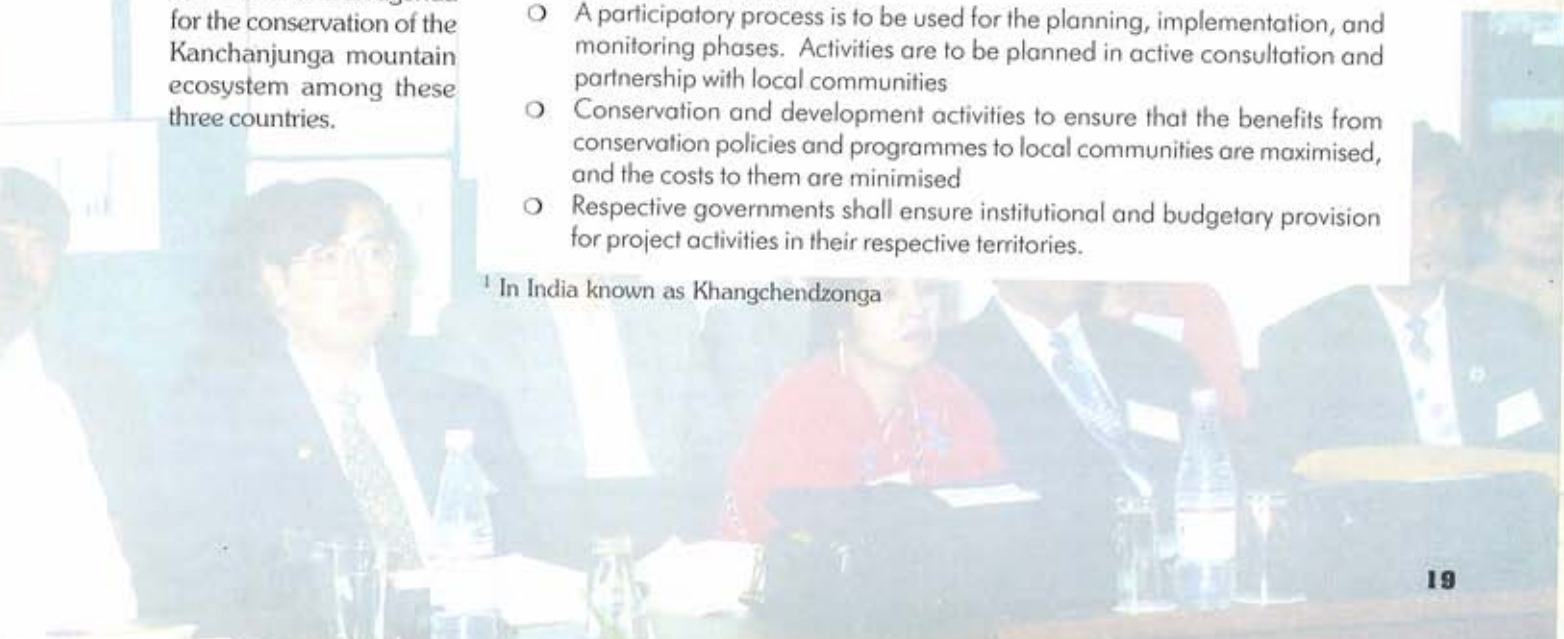
- Two typical glacierised basins (debris covered and debris-free glaciers) should be identified in each country (Nepal, India, Pakistan, China, and Bhutan) for long-term study
- A glacier inventory should be completed for each country as per the UNESCO format
- Establish in each country a National Glaciological Database (similar format to the World Glaciological Data Centre, Boulder, Colorado)
- The ICSI - 1998 training programme to be held in Nepal and coordinated by ICIMOD in collaboration with DHM/HMG
- An International Symposium on Himalayan Glaciology to be organised by ICSI during the IUGG General Assembly, scheduled to be held in 1999 in Birmingham UK
- Include glaciologic research activities in ICIMOD's newsletter. News of the activities from India will be provided by the Society of Indian Glaciologists and in Nepal by the Dept. of Hydrology and Meteorology. Similarly the agencies in China and Pakistan will be identified by ICIMOD.

A Regional Workshop on the Conservation of the Kanchanjunga Mountain Ecosystem was held at ICIMOD from March 31 - April 2. Kanchanjunga¹ is the third highest mountain in the world, straddling the borders of the Tibetan Autonomous Region of China, India, and Nepal. The workshop was organised by ICIMOD and the World Wildlife Fund Programme for Nepal and Bhutan to discuss common issues and an agenda for the conservation of the Kanchanjunga mountain ecosystem among these three countries.

Recommendations of the Kanchanjunga¹ Workshop

- Respective governments shall provide a policy, institutional, and management framework for their respective areas to ensure that the Kanchanjunga Mountain Ecosystem is a functional Protected Area (PA) system by the year 2000.
- By November 1997, establish a Kanchanjunga Mountain Ecosystem Coordination Forum facilitated by ICIMOD & WWF and comprised of officials and experts from the three countries and NGO partners. This forum is to identify and constitute an interdisciplinary experts' team from all three countries that will design, plan, and implement a Regional Planning Workshop by March 1998.
- The Regional Planning Workshop will identify a common framework, methodology, and protocol for the development and documentation of knowledge and establishment of an information base, ecological and monitoring assessment, and socioeconomic needs' analysis of the proposed PA to be developed by March 1998
- A participatory process is to be used for the planning, implementation, and monitoring phases. Activities are to be planned in active consultation and partnership with local communities
- Conservation and development activities to ensure that the benefits from conservation policies and programmes to local communities are maximised, and the costs to them are minimised
- Respective governments shall ensure institutional and budgetary provision for project activities in their respective territories.

¹ In India known as Khangchendzonga



Mountain Enterprises and Infrastructure

From April 16 - 18, a *Regional Meeting on Energy Use in Mountain Areas* was held.

Thirteen energy experts and professionals from the HKH member countries participated in the programme. The purpose of the meeting was to discuss the findings of the studies commissioned by ICIMOD in four countries namely, China, India, Nepal, and Bangladesh to identify future priorities for energy development. Two focal areas were covered in the discussions: i) emerging issues in energy use and ii) energy policies and programmes. With the broadened understanding of these issues, future priorities for energy development in the mountains were discussed and a number of suggestions were made with regard to both policies and studies to improve understanding.

The meeting discussed issues related to data base development and planning; energy development; and sectoral linkages, energy resources, and technological options; and subsidies and incentives for renewable energy technologies. The meeting was helpful in understanding emerging trends in energy use in mountain areas and emphasised that continued efforts need to be made in terms of programme advocacy, information exchange, sharing of knowledge, and improving capabilities in the field of mountain energy systems.



A *Regional Experts' Consultation Meeting on Implications of National Policies on Renewable Energy Technologies (RETs)* was held in Nagarkot, Nepal, from July 3 - 4 with support from the Canadian Cooperation Office in Nepal. Twenty-nine participants from China, India, Pakistan, and Nepal attended the meeting.

Policy Recommendations

- Recognise and measure benefits of renewable energy technologies (RETs) with emphasis on drudgery reduction
- Reform energy-price signals (i.e., conventional energy forms are subsidised)
- Revamp the energy decision-making process. Change energy users' investment incentives Accelerate investment in RETs' commercialisation
- Develop commercialisation plan for each RETs
- Besides these, technology-specific (micro-hydropower, solar photovoltaics, biogas, biomass stoves) recommendations were arrived upon with particular reference to Nepal

Documentation and Information Exchange

The *First Consultation of the Asia Pacific Mountain Network (APMN) Sub-regional Focal Point Coordinators* was organised at ICIMOD from March 17 - 19. The meeting was, in particular, face to face interaction for further defining and redefining the activities of the APMN. The issues and topics discussed at the meeting included the structure, role, and responsibilities of each sub-regional focal point and of the APMN as a whole, their proposed future activities, the gaps, new thrusts, and priorities as identified collectively as well as individually by each focal point. The meeting had twenty-three participants.

A two-year Electronic Networking Project for Sustainable Mountain Development, coordinated by ICIMOD and funded and supported by the PAN - Asia Programme of IDRC, commenced in April 1997. The project will develop an Internet-based network of organisations and institutions involved in socio-economic and scientific research and development in Nepal as well as develop and promote an information network among the regional member countries of ICIMOD. A consultation of potential participants for a project on *Electronic Networking in Nepal* was held at ICIMOD on April 28 and 29. The consultation was the first activity of this project, and its purpose was to brief the potential participants on the project and get initial feedback.

As reported in the last Newsletter, ICIMOD is in the process of preparing its Second Regional Collaborative Programme (RCP II) for the period from 1999 to 2002. For this it is adopting a decentralised and participatory approach and in so doing seeking inputs from its partners and potential partners. During the past few months staff have been travelling within the region to hold in-country consultations and to disseminate, collect, and analyse the RCP Questionnaires. Travel outside the region has also been undertaken.

Broadening Linkages in the Region

BHUTAN

One of the major ongoing programmes under ICIMOD's Gender and Development Programme is the Fact-finding Missions which have been fielded across all the eight member countries. In order to collect information for this purpose, from 17 to 23 March Ms. Phuntshok Tshering travelled to Thimphu and visited the Ministry of Agriculture (MOA), Women's Association of Bhutan (NWAB), and the High Court of Bhutan. Along with compiling information and documents, she also explored opportunities for strengthening ICIMOD's relationship with the organisations she visited, especially the MOA which is ICIMOD's focal point in Bhutan.

CHINA

Prof. Li Tianchi, the Mountain Risk Engineering (MRE) Project Coordinator, visited China from 18 Feb. to 18 March to assist and monitor the MRE on-the-job training in Dongchuan, collect questionnaires for ICIMOD's RCP II from Sichuan and Tibet, and to do some preparation work for the Water Harvesting Meeting in Chengdu. Prof. Li had meetings with officials of different Government institutions to introduce ICIMOD and RCP II. Responses to the RCP Questionnaires were received from most of the important government line agencies, research institutions, and universities with which ICIMOD could

collaborate. With regard to the training programme, significant improvements in the course content, monitoring methods, and trainees' profiles were observed.

The Director General, together with Prof. Li Tianchi and Prof. S. R. Chalise, visited Yunnan and Sichuan for consultations on RCP II, to review the MRE Training Programme, and to participate in the meeting on Water Harvesting for the first few days.

Mr. Anupam Bhatia visited China from 4 to 15 March. In Beijing, Mr. Bhatia had meetings with the Academy of Sciences, Ministry of Forests, Chinese Academy of Forestry, Research Centre of Forestry Economy Development, and Ford Foundation. Similarly, in Kunming, he visited the South West Forestry College, Forest Bureau of Yunnan, Institute of Rural Economy, Yunnan Academy of Social Sciences, Kunming Institute of Botany, Save the Children, and OXFAM. The purpose of his visits was to develop programmes and plans in the context of Participatory Forest Management. The visit was a major breakthrough in establishing linkages with a diversity of institutions. The three case studies that were commissioned are in progress, while funding for a workshop that has been planned in Kunming is now assured.

Mr. Daniel J. Miller visited the Qinghai Provinces from 28 March to 18 April. Mr. Miller visited the

rangeland field sites in Hongyuan County, Sichuan Province, with scientists from Chengdu Institute of Biology. He noted that these rangelands are undergoing considerable changes as China is striving to develop these areas, and that the sand dunes are also receiving considerable attention. At the Gansu Agricultural University, he presented a special seminar on "Better understanding of rangeland ecosystems on the Tibetan Plateau". At the end of the seminar, he was awarded the title of 'Honourary Professor' by the President of the University. He then visited the Qinghai Academy of Animal Science and Veterinary Medicine, Xining, to check on arrangements for the Second International Yak Congress that ICIMOD is cosponsoring.

From 17 March to 9 April, Mr. Pramod Pradhan and Mr. Basanta Shrestha travelled to China and Thailand. They met high-level personnel from many institutions in Beijing, Chengdu, Lhasa, Shigatse, and Kunming and discussed possible collaboration on networking in the context of Geographic Information Systems and Remote Sensing. They then installed a GIS System in the Bureau of Irrigation and Water Conservancy in Lhasa. Interaction with various distinguished professionals provided them with good exposure to the activities of various organisations not only in GIS/RS but also in other disciplines of interest to ICIMOD.

From 30th March to 5 April, Dr. A. A. Junejo visited Hangzhou Province of China to participate in the Seminar on 'Triangular Cooperation among Developing Countries, Developed Countries, and International Organisations' with a focus on small-scale hydro. While it provided a good platform for sharing mutual problems and prospects in this context, ideas to promote and make cooperation among the three more effective were also proposed.

Prof. Li Tianchi and Prof. Chalise, travelled to China from 4-18 April, primarily to conduct and participate in the 'Regional Consultative Meeting on Water Harvesting for Mountain Households in the HKH' in Chengdu and to visit the Debris Flow Research Station in Dongchuan to assess its suitability as a training site for the Landslide Hazard Management and Control Project. The site visit provided them with an excellent opportunity to see the damage caused by debris flow on agriculture, settlements, roads, railways, and irrigation channels as well as the benefits derived from the control measures to mitigate such damage.

Prof. Li Tianchi led a team of 10 Indian and 3 Nepalese professionals on a study tour to Yunnan, Sichuan, and Chengdu from 25 April to 14 May to familiarise them with methods and techniques to control mountain hazards and to study the experience of the MRE on-the-job training. According to Dr. R. Gecolea, Training Specialist, "It can be concluded that the planning and execution of the study tours were excellent. It was highly successful not only in creating awareness about MRE but also in offering great potential for follow-up action by the participants when they return to their own countries." Prof Li also held meetings to assess the needs of China for the next phase of the MRE Project.

In April, Prof. Pei Shengji and Mr. Ajay Rastogi participated in the Eastern Himalayan and South Asia

Grantees' Meeting of the World Environment and Research Programme of the John D. and Cathrine T. MacArthur Foundation organised in collaboration with the Kunming Institute of Zoology. Prof. Pei presented a paper entitled 'Policy Action/Collaboration for Biodiversity Management in the Eastern Himalayas' and Mr. Rastogi on 'Existing and potential areas for trans-boundary conservation in India along the Sino-Indian border of the Eastern Himalayas'. ICIMOD has been asked to play a coordinating role in the Eastern Himalayan Region of the MacArthur Foundation's Biodiversity Programme. Mr. Rastogi then visited the Tropical and Research Garden Centre while Prof. Pei attended the National Training Workshop on Applied Ethnobotany.

Ms. J. D. Gurung and Phuntshok Tsering went on a two-week visit to China in April to meet the researchers that had been given contracts to write reports on the Gender and Development Fact-finding Mission in Yunnan and Sichuan and to attend the seminars that the researchers had arranged. They also went on field visits to see first-hand the situation of mountain women of some ethnic minority groups. The overall impression was that the mountain women of China have not been the recipients of development assistance and that there is much to be done to pull them out of their drudgery. Arising out of the inaccessibility of the mountains, very low literacy levels have had adverse affects on women's position in society, their health, and agriculture-related issues like marketing.

INDIA

At the invitation of the Government of Arunachal Pradesh and NEPED, an ICIMOD team comprising of Mr. Egbert Pelinck, Prof. Pei, Dr. Partap, and Dr. P. Tulachan

visited the North Eastern Himalayan States of India from 24 Feb. to 9 March. The mission was reciprocating to a visit led by the Chief Secretary of the Government of Arunachal to ICIMOD in late 1995. During the visit, each member of the team had meetings with high-level Government Officials of the States. The visit was successful in exposing the ICIMOD team to different issues of sustainable mountain development in the area, to establish partnerships and networking on the issues of common interest with various institutions, and finally to explore possibilities for collaboration with the State Forest Research Institute and the Department of Forests and Environment.

Dr. A. A. Junejo attended an International Seminar on Small Hydropower Systems in New Delhi from 10 to 16 March. On the occasion, he presented a paper on 'Private Mini/Micro Hydropower for Less Developed Mountain Areas'. The seminar provided him with a good opportunity to meet personnel of prospective collaborating and relevant agencies of India.

From 8 to 23 April, Dr. N. S. Jodha travelled to Delhi and Hyderabad to participate as a keynote speaker in a Workshop on 'The Social Reconstruction of Community Participation in Joint Forest Management' organised jointly by the University of Edinburgh and the Indian Council of Forestry Research and Education (ICFRE). The workshop provided a unique opportunity to see critics and admirers of the JFM programme sharing the same platform and exchanging perceptions and experiences on Participatory Natural Resource Management (PNRM). He later visited several organisations in Delhi and Hyderabad to share ICIMOD's ideas/experiences on policy issues in the thematic work areas, the effectiveness of PNRM, and Food Security and Poverty.

In May, Dr. Tej Partap participated in an International Seminar on Bioresource and Biotech Policy for

Asia in Delhi. In Himachal Pradesh he organised an RCP II related institutional feedback meeting in Shimla. Representatives from various provincial and national institutions attended the meeting and showed a keen interest to be involved in ICIMOD activities. A one-day training programme on EM technology was organised for the farmers in Kullu Valley. He also visited Solan University to review progress on the Seabuckthorn Research Centre and to monitor the progress of the Gender and Development Cell.

To review the progress in selected watersheds under the PARDYP project, Mr. Richard Allen, the Project Coordinator, went to Kausani in Almora in May. Excellent progress is being made by the project team and discussions pertaining to work programmes, activities' schedule, financing, and staffing took place.

From 30th May to 8th June, Dr. Tang Ya visited Nagaland in connection with the ATSCFS project. He observed that four Sloping Agricultural Land Technology models had been established and the local people showed much interest in tree farming with hedgerows; which provided different alternatives to jhumming (slash and burn).

A training programme for farmers had also been successfully conducted by the national project team.

At the invitation of the Ladakh Ecological Development Group, a Leh-based NGO, and the Ladakh Autonomous Hill Development Council, the Director General, Dr. Tej Partap, and Dr. Kamal Rijal visited Ladakh from 9 to 18 June, primarily to acquaint themselves with the development issues facing the area, with a focus especially on agriculture, energy, and tourism. The team held extensive discussions with relevant officials and experts from government and non-government organisations. The exposure provided an opportunity to identify areas for possible collaboration and programme development in areas of mutual interest. The main areas are: seabuckthorn, energy, micro-enterprise, and agriculture.

NEPAL

From 9-11 April, Dr. Tang Ya, with two interns, visited the two sites of the Appropriate Technologies for Soil Conserving Farming Systems (ATSCF)

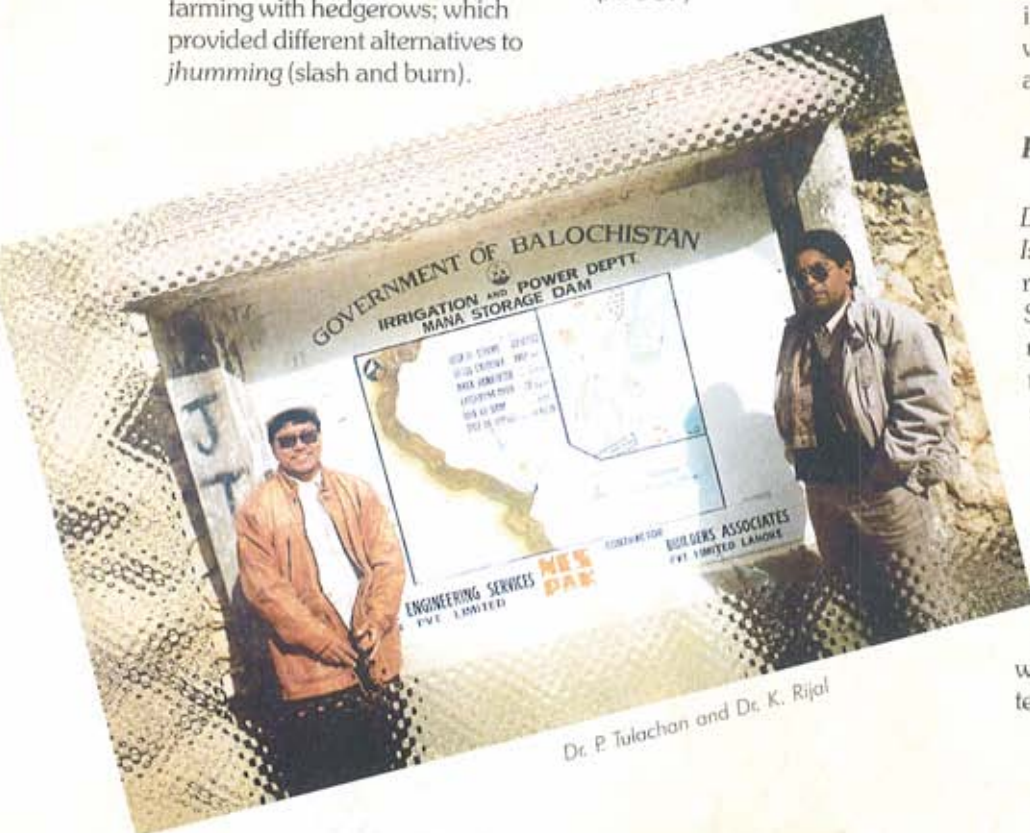
Project in Mugling and Tistung to monitor the progress of the Project. On the way, the team observed many places with serious soil erosion problems and were quite surprised to see that farming activities were being practised on sloping lands of more than 40 degrees. The progress on the sites is not taking place at the expected level.

Dr. Kamal Rijal visited Kabhre and Dhading Districts from 10 May to 31 May to participate in field surveys, to evaluate biogas plants and micro-hydro plants respectively. While biogas plants were being adopted quite successfully, a number of bottlenecks in the successful implementation of micro-hydro plants were observed. The surveys were carried out by the Centre for Rural Technology (CRT) for ICIMOD under the CCO-funded energy project.

Dr. P. Tulachan and Mr. Iftikhar Uddin Sikder visited Rampur, Pokhara, and Lumle from 5-9 May to visit relevant institutions involved in research on food security and related research and development activities. Meetings and interactions at both professional and institutional levels and observation of various programmes undertaken by the institutions gave them insight into what has been done in this context and what remains to be done.

PAKISTAN

Dr. Shaheena H. Malik visited Islamabad from 6 to 24 February in relation to the RCP II questionnaires. She also organised a last follow-up meeting to evaluate and discuss the recommendations and future strategies under the appropriate farm technologies' project being carried out in collaboration with the Department of Agriculture. More than 50 technologies related to farm and natural resources have been identified and the methodology and constraints under each were discussed. A video film on farm technologies has been prepared.



Dr. P. Tulachan and Dr. K. Rijal

In May, Mr. Richard Allen, the PARDYP Project Coordinator, visited Peshawar and Islamabad and discussed various issues related to the commencement of the project.

In June, Dr. T. Partap and Dr. S. M. Malik attended an Expert Meeting on 'Mountain Agricultural Biodiversity', jointly organised by the Ministry of Agriculture and ICIMOD in Quetta. They then visited the Pakistan Agricultural Research Council in Islamabad to monitor the progress of the ATSCFS project. They noted the poor performance and technical inappropriateness of the site and discussed possible solutions.

The Director General visited Peshawar and Islamabad from 20 to 24 June. The highlight of his visit was a meeting with the President of Pakistan who expressed keen interest in the regional mandates of ICIMOD and various technical issues related to the rehabilitation of degraded lands. In addition he had discussions on RCP II with representatives of some 25 institutions.

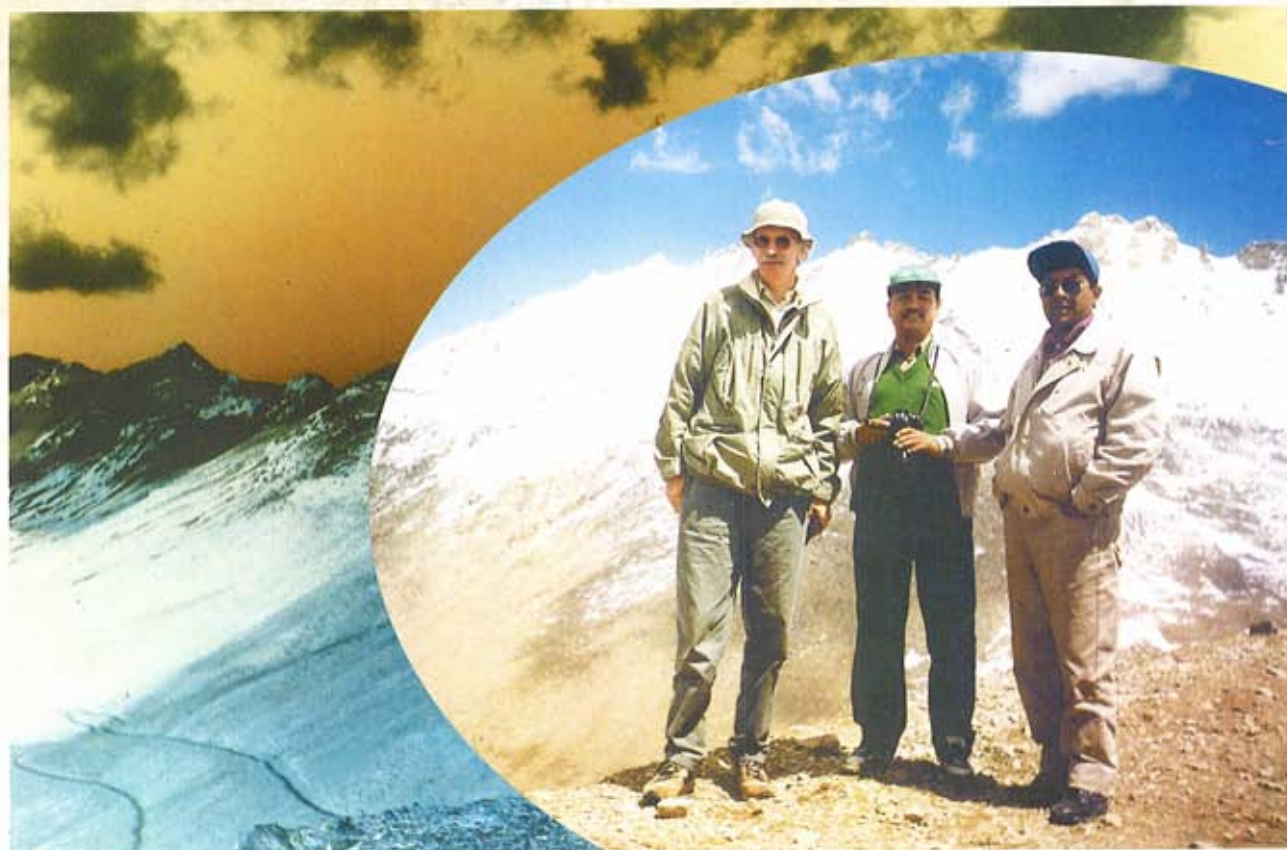
Linkages beyond the Region

Finland, Denmark, The Netherlands, Belgium, Germany, Austria, France, and Switzerland

Mr. Egbert Pelinck, the Director General, went on a tour to the above countries from 18 May to 3 June. He met the core donors to appraise them of the progress on ICIMOD's Regional Collaborative Programme (RCP) and discussed with them the preparation for RCP II. He also met potential donors to explore the possibilities for additional funding. During his trip, he was able to present the progress of selected projects and provide feedback on them. On 17th June he attended the 'Symposium on Environmental Changes in High Asia' in Marburg, Lahn, Germany, which brought together researchers from Germany, Austria, France, Switzerland, Russia, China, and Mongolia on a wide range of subjects.

The Netherlands, France, and UK

Mr. Ajay Rastogi visited France, the Netherlands, and the United Kingdom from 9-26 March. The purpose of his visit was to meet the UNESCO Coordinator for the People and Plants Programme, visit the Wageningen Agricultural University, and the International Agricultural Centre. He participated in a Training the Trainers Workshop on Biodiversity Information Management at the World Conservation Monitoring Centre, Cambridge. This visit has strengthened ICIMOD's linkages with WCMC in terms of sharing the expertise for data handling in the HKH region.



The Director General, Egbert Pelinck, Dr. T. Partap, and Dr. K. Rijal at 5,500 m, in Ladakh.

1997. *A Manual of Private and Community-based Mini- and Micro-Hydropower Development in the Hindu Kush-Himalayas*

Kush-Himalayas: A Reference document for Decision-Makers, Planners, and Assessors. 126pp.

This Manual provides basic information and guidelines for developing and improving the performance of private/ decentralised mini- and micro-hydropower (MMHP) in remote and underdeveloped areas of the Hindu Kush-Himalayan (HKH) Region. The Manual is targeted at decision-makers, financiers, planners, and assessors of such programmes to assist them in formulating appropriate plans and implementation methodologies for using this environmentally friendly, indigenous, and renewable resource to meet the energy needs of inaccessible and underdeveloped mountain areas. Information is given on the comparative advantages, current status, achievements, and impact of MMHP; and also about technology, implementation methodology, operation, management, and other relevant aspects leading to optimising the benefits of MMHP programmes. In addition, the Manual contains guidelines on the selection of appropriate technology choices, management systems, institutional arrangements, and other necessary inputs. Material on the financial analysis/assessment and monitoring of MMHP has also been included.

Banskota, M. and Partap, T. (eds.), 1997.

Investing in the Future: Agricultural Research and Education for Sustainable Mountain Agriculture - Report of a Regional Consultation. 106pp.

Sustainable mountain development emphasises the need

for some fundamental changes in agricultural research and education. ICMOD's initiative in bringing together the agricultural education and research organisations active in the Hindu Kush-Himalayas was motivated by the need to assess the current state of mountain agricultural education and research and to identify future research and educational priorities for the region. The theme papers presented touch upon a number of critical dimensions of agricultural research and education in the region. Presentations of micro-level experiences from different countries emphasise the overall role of infrastructure, service, and processing in order for subsistence agriculture to move towards high-value activities. Recommendations focus on four major areas - transforming education systems, redefining research priorities, internalising gender, and creating regional and international partnerships and alliances for sustainable mountain agriculture.

tain perspectives in the earlier work of mountain professionals is reviewed. The author's vision is to think innovatively about old problems and to devise means of

involving the very people who benefit or suffer most from development interventions; mountain farmers.

The review of past conceptualisations on mountain development in the early part of the book is thoroughly undertaken, and the perspectives of all of the previous approaches are addressed under the categorisations of 'half-empty', 'half-full', and 'empty' glasses in terms of socioeconomic approaches to mountain problems.

This is supported by a thorough examination of the different perspectives of 'sustainability' in general and sustainable agriculture in particular. Well thought out recommendations to promote sustainable mountain agriculture in the 21st century are presented.

Among them the establishment of a mountain science, a composite of disciplines applied to mountain research and development, namely, montology, is strongly recommended by the author.

Partap, U., 1997. **Bee Flora of the Hindu Kush-Himalayas - Inventory and Management.** ISBN 92-9115-6620

This publication aims to increase awareness about the significance of honey plant resources for beekeeping management; make available a practical guide on honey plant resources; and provide beekeepers of the HKH region with tools for identifying bee flora. The first section of the book



Rhoades, R.E., 1997. **Pathways Towards a Sustainable Mountain Agriculture for the 21st Century - The Hindu Kush-Himalayan Experience.** 176pp.

New conceptual ground is broken in this book in addressing the problems of sustainable agriculture in the Hindu Kush-Himalayas. The Himalayan dilemmas and moun-

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