

Mountains of the world: Tourism and sustainable mountain development

Mountain Agenda

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Background

Mountain Agenda is an informal group of people with professional interests in sustainable mountain development, drawn from the academic and development co-operation communities. The group was created prior to the Rio Earth Summit (UN Conference on Environment and Development, 1992) to enhance the position of mountains on the global environmental agenda.

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FAO Food and Agriculture Organization of the United Nations, Rome
ICIMOD International Centre for Integrated Mountain Development, Kathmandu
IGU International Geographical Union
TMI The Mountain Institute, Franklin (USA)
UNU United Nations University, Tokyo
WTO World Tourism Organization

Front cover photo:

Trekking tourism in the Simen Mountains, Ethiopia, a World Heritage Site (H. Hurni)

Back cover photo (from above):

View from Pheriche Valley, Nepal (S. K. Nepal); Haleakala Crater, Hawaii (I. Jost); Hang-glider in the Alps (P. Donatsch); Facing Mount Kenya (R. Brunner); Machu Picchu, Peru (M. Price)

Contents

- Foreword
- Why tourism and mountains?
- Local and regional experience
 - Huascarán National Park, Peru: Consensus building for tourism management
 - Whistler Mountain, Canada: Implementing a vision for a resort community
 - The Appalachians, USA: Valuing cultural heritage in a tourist economy
 - Oaxaca, Mexico: Ecotourism: a basis for commitment to the land and opportunities for young people
 - Svalbard, Norway: Tourism in an arctic wilderness
 - Grindelwald, Switzerland: Striking a balance in community-based mass tourism
 - Rhodope Mountains, Greece: Women's co-operatives, rural renewal, and conservation
 - The Caucasus, Georgia: New opportunities for implementing sustainable tourism
 - Taybet, Jordan: Recycling a village
 - Simen Mountains, Ethiopia: Trekking in a challenging mountain landscape
 - Virunga Volcanoes, Central Africa: Conserving a rare species in a troubled region
 - Ranomafana National Park, Madagascar: Reconciling local development, biodiversity conservation, and income generation
 - Khumbu, Nepal: Successes and challenges in locally-based mountain tourism
 - The Altai Mountains, Russia: A remote mountain area within an economy in crisis
 - The Mountains of Korea: A need for information to move towards sustainability
 - Baguio Bioregion, Philippines: Formulating a strategy for tourism, amenity migration, and urban growth
 - Uluru, Australia: Respecting a sacred mountain
- Global trends and issues
 - Mountain pilgrimages
 - Finding sustainability in winter sports: large or small?
 - Mega Events: short-term profit - long--term loss?
 - New trends in the mountains
 - Dependence, risks and opportunities in mountain tourism
 - Tourism and climate change
- Mountain tourism: reconciling growth with sustainable development
- Creating opportunities for the 21st century

Foreword

Tourism is a business. Despite attractive brochures that advertise international understanding and exchange between local people and tourists, tourism is clearly a business proposition for those who supply tourist services and those who market these services worldwide. It is also clear that tourists themselves are more interested in relaxation, a change of scenery, and their own enjoyment than in international understanding and exchange.

The rise of tourism as a business has brought great benefits to mountain regions. Many Alpine valleys became accessible by modern transportation only as a result of the growth in demand for tourist services. Tourism has also been responsible for opening mountain regions to new ideas, new modes of production, and cultural exchange. Today people in many mountain regions of the world owe their survival to tourism. Tourism has provided farmers with additional income and employment, opened new career opportunities, and created markets for both high-quality traditional products and local products from mountain areas. But positive economic impacts are only part of the story. Tourism also exhibits an unmistakable tendency to destroy the foundations of its own development, and it does much to rob local populations of their identity. Two points seem especially worthy of consideration in this regard:

The desire for short-term gain is part of human nature. This is particularly evident in the tourist industry, where growing demand is almost automatically met by increased supply (i.e. development of roads and infrastructure), motivated by the fear of losing out in the competition for profits. As a result, natural landscapes that have attractive resources are subjected to environmental stress, exploitation and degradation. Ultimately, a region becomes so overbuilt and over settled that it loses its attractiveness for tourism. There are abundant examples of this phenomenon in the Alps. Responsible integrated planning, sustainable management of natural resources including limits on resource use, and gradual change of a moderate and appropriate nature could help to foster local and regional development, giving balanced consideration to the needs of the local population and the interests of tourists.

Tourism can and does cause significant environmental stress in the mountains. Despite their grandeur and size, mountains are home to some of the world's most fragile ecosystems. Today, they are in danger of becoming "international playgrounds", with consequent threats to their particular economic, social and cultural environments. Traditional resource use, experience indispensable to survival in the mountains, and linguistic and cultural diversity are all part of a rich heritage and are all being undermined and threatened with rapid extinction.

Can these adverse impacts be avoided? And if so, how? Can we find appropriate forms of development that safeguard natural resources, and can we make tourism in mountain regions sustainable in the broadest sense of the word?

The present publication uses concrete examples to illustrate how the problems of development can be dealt with in different mountain regions, and how solutions might be found to make tourism more appropriate and environmentally friendly. It also addresses some of the thinking, the concepts, and the innovations currently being discussed in this area, as well as the question of how environmental protection and sustainable management of natural resources can become integral components of development in the tourist industry.

This brochure should serve to illustrate "good and bad practices" in the light of concrete experience. It offers ideas, proposals, criteria, elements and approaches that can be considered in an appropriate form and applied - or in some cases avoided - in the planning and development of new tourist destinations. It is also intended to help promote sustainable development that will allow mountain regions to remain attractive places for tourists seeking relaxation and enjoyment, but above all to remain environments which are treasured and seen as places worth living in by their inhabitants.

Walter Fust

Director of the Swiss Agency for Development and Cooperation

Why tourism and mountains?

Mountains of different altitudes, with a great variety of shapes and climates and specific combinations of ecosystems, are found on every continent, from the equator to the Polar Regions. For millennia, mountains have been important for human livelihoods, in terms of agriculture and livestock raising as well as transport and trading of goods. Yet in the current world economy, many mountains have become marginal areas where few investments are made, people are economically disadvantaged, and resources are being degraded through many types of overuse. Given these conditions, tourism raises many hopes.

Chapter 13 of Agenda 21 - "Managing Fragile Ecosystems: Sustainable Mountain Development" - was a great step forward towards realizing the significance of the world's mountains. This chapter, adopted by the UN Conference on Environment and Development in Rio de Janeiro in 1992, states that the fate of the mountains may affect more than half of the world's population, and that particular attention should be paid to mountain resources, especially water and biodiversity. Thus, increased research and development efforts are essential.

Tourism has become a primary source of revenue for many mountain areas, providing a rare opportunity for mountain people to participate directly in the global economy. There are many opportunities for the development of tourism in mountain regions. Yet this development also brings many challenges, which are addressed in this document.

The importance of tourism for mountains - and vice versa

Tourism is important because it is the world's largest industry. The annual global turnover is US\$ 444 billion, which exceeds the combined Gross National Product of the world's 55 poorest countries. Additional revenues from domestic tourism must be added to this figure. In terms of growth, tourism has remained at the forefront of global economic growth, with an average increase in annual turnover of 4.7% over the past 10 years (1989 -1998). Forecasts estimate an average annual growth of 4.1% up to the year 2020. Many tourist destinations are located in mountain regions. About 15 -20% of the tourist industry, or US\$ 70 -90 billion per year, is accounted for by mountain tourism. In contrast to the generally small contribution of mountain regions to national economies, the value of mountains to tourism is thus significant.

The diversity of opportunities for tourism and the diversity of mountain areas

Tourism offers a great variety of opportunities. Tourist activities include swimming, walking, visiting cities and national parks, skiing, snowboarding, bird-watching, diving, and a number of extreme sports such as bungee jumping, river rafting, paragliding, and mountaineering - just to mention a few. Many activities are specific to mountain areas, which provide a variety of natural and cultural settings.

Mountains are highly diverse. Climatic zones are condensed over distances of a few kilometers. On a single mountain, one can experience a tropical climate at the base, a Temperate Zone at medium altitudes followed by alpine conditions higher up, and finally an arctic environment with snow and glaciers on the highest peaks. Biodiversity is also impressive. To give but one example, Mount Kinabalu in Sabah is estimated to harbor over 4000 plant species, more than one-quarter of all the species in the entire United States. Land-use systems are equally diverse, and many different forms of social interaction and a multitude of cultural lifestyles characterize communities.

The specific impacts of tourism in mountains

Tourism affects mountains in many ways. Economically, tourist resorts in mountains directly depend on their customers. In addition, there are direct and indirect benefits to many sectors and communities inside and outside the resort areas. However, a considerable share of tourism revenue leaks to areas outside

the mountains. In addition, tourist activities have biophysical impacts. For example, paths and ski runs may modify sensitive alpine areas; tourists have well-known impacts along mountain trails; and wildlife may be disturbed. On the social and cultural side, tourists may disrupt traditions, influence mountain communities by their numbers and lifestyles, and attract service providers from outside the mountains to become permanent residents in mountain resorts. These negative impacts have to be counterbalanced against positive influences, including economic benefits.

The specificity of mountains for global tourism development

The promotion of tourism in mountains is based on special features that are attractive for tourism. Among these are the clean, cool air, the varied topography, and the scenic beauty of mountains and cultural landscapes. There are also the many diverse natural landscapes and resources, the local traditions, and simple lifestyles - even if these are sometimes perceived as such only by tourists. There are the inherent dangers - or challenges - which attract some daring tourists, and particular mountain arenas for special sports and leisure activities. And not least of all, mountains have specific qualities that are conducive to health and wellness tourism and activities that focus on contemplation and meditation.

Dimensions of sustainability - some key questions

The development of tourism in mountains requires that a number of key questions related to sustainability be addressed, including:

- Does tourism contribute to sustainable mountain development?
- Who benefits, in economic terms, from mountain tourism?
- Are the biophysical resources of mountains degraded due to tourism activities?
- Does tourism affect mountain communities and societies positively or negatively?

The present report addresses these key questions by:

- Documenting local and regional experience (pages 6 -34)
- Discussing trends and issues of a more global nature (pages 35 -43)
- Summarizing experience, trends and issues in a final synthesis (pages 44 -45)
- Presenting opportunities for sustainable tourism in mountains, with concrete suggestions and recommendations addressed to different stakeholders (pages 46 -48).

Local and regional experience

Huascarán National Park, Peru

Consensus building for tourism management

Huascarán National Park is the core of a Biosphere Reserve in the Cordillera Blanca, Peru, protecting the highest peaks of the Peruvian Andes, which are also the world's highest mountains in tropical zones. Since the park's establishment in 1975 and its declaration as a World Natural Heritage Site in 1985, its scenery and good accessibility have attracted an increasing number of domestic and international tourists. These now amount to 150,000 a year; tourism accounts for 20% of the local economy. While Huascarán is now the main destination for adventure tourism in South America, only 30% of visitors, mainly from Europe and North America, are adventure tourists; most tourists, largely Peruvians, are conventional tourists.

In spite of the increasing influx of visitors, tourism management was weak into the 1990s. No efforts were made to design tourism programs or explore alternative destinations, resulting in over-saturation and environmental deterioration of a few locations. Other negative impacts included lack of cooperation between tourism stakeholders, low involvement of indigenous communities in tourism management, and inequities of income.

Strengthening linkages and collaboration

In order to tackle these problems, a Tourism Management Plan was developed in 1995 and 1996, aiming to reorientate tourism towards conservation and development and to explore ways in which local communities and tourism promoters could contribute to the park's overall management. The planning process included three main components:

- A field inventory of the park carried out by park staff;
- Seven workshops and meetings involving the main stakeholders concerned, including promoters of adventure tourism and domestic tourism, local tourism operators, guides, government officials, porters, mule drivers, and local mayors;
- A mostly informal process of gaining political support for the plan among decision-makers in Lima, Peru's capital - which proved valuable for the success of the planning process.

Participation and consensus building were thus key words for elaborating the plan, which emphasizes strengthening co-operative linkages and fostering conflict resolution between the park administration, tourism business groups, and the peasant communities that use the park's resources. The plan stresses the potential of tourism for mountain community development; opportunities

to promote private investment in services and infrastructure within the park; and the need to give priority to conservation and development alternatives based on low-impact tourism operations.

From plan to policy

The outcome of this process has been encouraging. The plan has become official government policy. Stakeholders have a higher level of mutual trust; investments in training and infrastructure have increased; and new complementary plans have been produced. The plan has fostered co-operation between the park administration and local communities, and catalyzed community-based tourism initiatives that link the benefits of conserving the park's resources with strengthening local organizations. In spite of these positive results, reinforcement of training and practice regarding the application of sustainability concepts to the plan's tourism objectives is necessary. (*Miriam Toreros*)

Huascarán Tourism Management Plan

Management Guidelines

- economic and social benefits of tourism in all areas surrounding the park
- inter-institutional CO-operation in the management of tourism
- negative impacts and environmental damage due to tourism and other activities
- park management capability, including more efficient collection of entrance fees
- in the redistribution of visitors to a greater percentage of the park (according to park zoning and specific management policies for each zone)
- the quality of the experience for visitors and minimize the risks they are exposed to

"Although seasonal, there are many opportunities to work in tourism...I 'm investing in educating my son to learn English as well as involving him in trekking with specialists in nature conservation. We must learn to be more than mule drivers and to be independent of tourism agencies, which do not always pay well and which do not always allow us to develop professionally."- *Local mule driver*

"The participatory process to design the management plan has helped resolve the conflicts between local adventure tourism specialists who have always had difficulty exchanging ideas and making agreements. The plan is also very useful for raising money from national and international donors."- *Huascarán National Park Director*

Whistler Mountain, Canada

Implementing a vision for a resort community

In less than three decades, Whistler has grown from a small community with a population of 500 to one of North America's best known four-season mountain resort communities. The 8,700 permanent residents can now host more than 30,000 visitors daily. More than 1.9 million people visit Whistler annually, resulting in tourism-related revenues in excess of 500 million Canadian dollars.

To achieve success as a premier mountain resort community while minimizing adverse impacts, policy-makers have jointly implemented a resort marketing program and a systematic growth management strategy. The Whistler Resort Association (WRA), funded by a levy on local business operators, markets the "Whistler Experience" to a worldwide audience. To achieve increased visitation in a competitive marketplace, the WRA has created a broad portfolio of recreational and cultural events and activities designed to meet the changing demands of existing and emerging tourism markets. The WRA works in close co-operation with the local government, merchants, and the mountain facilities operator.

From logging camp to tourist resort

Since 1975, Whistler has been developed as a "resort community" at a location previously occupied only by logging camps. The Resort Municipality of Whistler, a local government unique in Canada, manages growth while planning for the special leisure requirements of a tourism town. Growth management challenges include: providing high-quality recreation and leisure facilities; supplying an efficient transportation system; developing community facilities; protecting habitat for indigenous species; and creating affordable facilities and services for residents.

The growth management initiative has resulted in: a compact, pedestrian-oriented "Whistler Village"; an upper limit to the total number of dwellings; an advanced wastewater collection and treatment system; a "locals only" affordable housing program; and a comprehensive monitoring program that tracks social, cultural, economic and environmental trends. Results of the monitoring program are discussed at an annual town meeting.

The community's long-range view of growth management is defined in Whistler 2002 - a comprehensive resort community vision. Whistler 2002 is not only based on extensive stakeholder input, but also articulates how Whistler intends to achieve its goals for 2002. It includes financial and business plans to ensure that the vision becomes a reality.

Tourism development and community building

Community support for the four priorities identified in Whistler 2002 is as follows:

- Moving towards environmental sustainability: 100%
- Building a stronger resort community: 91%
- Enhancing the Whistler Experience: 91%
- Achieving financial sustainability: 90%.

Each priority is supported by a number of specific policy directions and tasks. For each of these, the business plan articulates specific policies and programs. For example, the Whistler Housing Authority, wholly owned by the municipality, manages housing which only employees may own or rent. From just over 800 dwelling units, the authority hopes to add another 600 by 2002. Economic diversification, through advanced communications technologies and home-based businesses, is encouraged. The business plan also includes provisions for developing new library, day-care, and school facilities. New facilities for sporting events, music, dance and theatre, complemented by a public art program are part of the vision and business plan developed by the entire community.

However, recreation opportunities are still Whistler's main attraction. The municipality continues to guide the development of world-class recreation and leisure facilities, and the resort association markets them to the world. Through this partnership, within a sustainable community and environment, Whistler continues to prosper. *(David Waldron, Jim Godfrey, Peter W. Williams)*

The Whistler Environmental Strategy

The Whistler Environmental Strategy (WES) is a comprehensive, coordinated approach for improving environmental stewardship throughout the resort community. It will establish environmental values, principles, strategic goals and policies necessary to achieve the strategic goals. The WES will address the following environmental issues:

- an ecosystem-based approach towards land use (including a protected area network; recreational "greenways" and compact, efficient urban design);
- environmentally sustainable transportation (including a comprehensive strategy to encourage non-use of automobiles);
- water supply and wastewater management, including a program to minimize water use and wastewater production;
- solid waste reduction and re-use;
- energy conservation; and

- An implementation strategy that addresses community partnerships; local government's role; local business practices; education and research; and an adaptive approach to monitoring and policy re-evaluation.

In order to monitor progress towards strategic goals, environmental indicators and targets are being established. Policies will be re-evaluated and adopted based on observed trends. Below are some examples of environmental indicators that may be monitored:

Pressure (Stress) State (Condition) Response

Ecological: Natural Habitat

visitors/ha./year	species extinction,	visitor number
		restrictions,
and land area	species abundance beyond	conservation areas in
	historical range	hectares

Social: Transportation

number of	number of days of traffic	promotion of mass transit
vehicles/day	congestion,	use,
	levels of service	parking fees for private
		automobiles

The Appalachians, USA

Valuing cultural heritage in a tourist economy

Located in the Appalachian Mountains of the eastern USA, western North Carolina has historically been a tourist destination. The Blue Ridge and Great Smoky Mountains, 250 km long, include the region's highest peaks. Visitors come to escape the hot summer heat of the south, or the cold winters of the north, and to renew themselves. Local people have traditionally owned and operated businesses that support the tourism industry, a major component of the regional economy. Yet tourism often conflicts with the social and environmental desires of rural mountain communities, as land developers from outside usually exclude them from decision-making.

Tourism potential of traditional crafts

In 1993, a non-governmental, citizen-founded organization called HandMade in America (Hand-Made) began exploring how to create sustain-able local economies while renewing civic action in rural communities. Searching for an

alternative to the traditional economic development approach of industry recruitment, Handmade focused on renewing communities around their most undervalued asset: their rich craft heritage, or "handmade industry", which originates from the subsistence economy of the early settlers of these isolated mountains. The region is home to many of the USA's finest craft schools and oldest craft organizations. However, the making and selling of crafts that enrich the lives of both residents and visitors had never been considered a tourism "product" or "attraction". Handmade in America's economic impact study found that the craft industry directly contributed US\$122 million a year to the region's economy: over 50% of craft sales were to tourists.

The organization's approach to sustainable community development is based on the region's assets, valuing each community's uniqueness and sense of place. One major asset is the Blue Ridge Parkway, a scenic highway running along the entire Blue Ridge range, which brings 22 million visitors a year through western North Carolina. With guidance from citizens, HandMade developed a self-guided driving trail system to direct visitors off the Parkway to places local residents decided to feature - residents identified and excluded sacred community places where they do not want visitors.

Craft purchases made by tourists on the Craft Heritage Trails as of September, 1998

Through these projects, cultural traditions unique to the Appalachian Mountains link with enterprise development, resulting in increased income for craftspeople and adding to the local economy. The driving trail system successfully manages the concentration and flow of tourists to maximize economic benefit to rural communities without compromising their cultural integrity. *(Kim Yates McGill)*

"Since publication of the Craft Heritage Trails guidebook, my studio sales have increased 50 percent."

Pottery owner, Penland, North Carolina

A guidebook leads the way

In 1996, HandMade published The Craft Heritage Trails of Western North Carolina Filled with descriptions and pictures of crafts and the people who make them - together with maps to studios, galleries, restaurants, historic inns, and craft heritage sites - the guidebook features seven driving trails looping on and off the Parkway and taking in scenic side roads. Over 21,000 copies of the first edition were sold, leading to a second edition in 1998. Craftspeople have reported sales increases averaging 30 percent since publication.

Oaxaca, Mexico

Ecotourism: a basis for commitment to the land and opportunities for young people

In one of the most biologically diverse countries in the world, the southern Mexican state of Oaxaca is among the richest in cultural and biological diversity. The Sierra Norte Mountains of Oaxaca, inhabited for over 1,000 years by the Zapotec people, are endowed with an extraordinary range of environments and cultures.

Over the centuries, Oaxaca's mountain passes have connected the coastal peoples with the Central Valley culture. Religious activities, commercial trade, and now ecotourism thrive along these trails. Every dry season, local people in communal work groups maintain the trails.

Out-migration and competition for land

Many young people have migrated away in search of greater economic opportunities. Community life and the management of communally owned lands have become more difficult. Without clear definition of land tenure and rights to natural resources, Zapotec lands are threatened by the expansion of unplanned human settlements and ecologically inappropriate agricultural systems. At the same time, the Zapotec have a strong conservation ethic in which religion plays a powerful role. For example, the people of Ixtlán de Juárez, a village in the Sierra Juárez, a range within the Sierra Norte, have preserved 80% of Ixtlán's forest as a natural and religious reserve. The lord of the mountains, a religious deity known as "Guzio", is said to live here, and takes care of the mountain people. Thanks to "Guzio", many of the forests remain untouched.

Reinforcing local capacity

In 1994, Zapotec communities in the Sierra Juárez initiated a community-managed ecotourism strategy. Training was provided by a local organization whose aim is to find common ground between conservation aims and local needs. Some communities which first viewed ecotourism as a purely economic activity have found much more in it: a powerful tool to address their urgent need to secure the use and ownership of their lands and restore their communities. In Ixtlán, revenues from ecotourism are combined with income from sustainable community forestry - from the area outside the preserve - into a single community fund, which provides social security for the families working in the enterprise. Ecotourism has also proved profitable enough to pay for a land survey, a first step towards resolving the problem of land tenure. All additional revenue has been used to reinforce local capacities through training and a regional plan for ecotourism development. (*Antonio Suarez Bonilla*)

"Our communities see tourism as an option to mitigate the out-migration of our young people to urban areas and to the United States...we want to see them stay here and take root."

Regional conservation leader, Oaxaca

The Monarch Butterfly - a tourist attraction: children offering handicrafts to tourists flocking to see the spectacle of the Monarch Butterfly at El Rosario, Michoacán, Mexico. Limited community involvement and anarchic tourist trade combined with bureaucratic impositions represent key challenges to tourism development in an economically depressed region. (*Jürgen Hoth*)

Svalbard, Norway

Tourism in an arctic wilderness

The Polar Regions are often termed the last wilderness on Earth. However, industrial development, extraction of mineral and marine resources, and rapidly growing tourism are leaving their marks on this fragile environment.

Svalbard receives a quarter of all tourists to the circumpolar North. Located halfway between northern Norway and the North Pole, the archipelago covers 64,000 km² of mountain landscapes, extensive glaciers, broad valleys, rugged fjords, and scenic coastlines teeming with arctic wildlife. A few tens of thousands of tourists come to Svalbard each year, mainly in summer. Most are cruise ship tourists experiencing the arctic from the ship, or are participants on the "safe adventure" of a guided ski or hiking trip or on long expeditions, or brief visitors to the town of Longyearbyen.

The recreational opportunities are diverse. Compared to most of the arctic, Svalbard provides relatively easy access to pristine landscapes where tourists can encounter large seabird populations, seals, walruses, reindeer, arctic foxes, and polar bears. Although there were no indigenous populations, signs of former human activities are many. The cultural relics of centuries of whaling, fur trapping, and more recent coal mining are salient messages about the human and cultural history of this unusual environment. Tourism has a long history in Svalbard. Commercial trips have been arranged for a century, only interrupted by the world wars. Since the 1980s, tourism has evolved from an exotic phenomenon for the select few to a major travel destination supported by a local tourism industry. Significant integration between outside tourism forces and the local community has taken place. Tourism is now an integral part of local economies, providing significant employment.

Managing tourism in a highly fragile environment

The potential for sustainable tourism development in Svalbard is considerable, but there are important challenges. Both the landscape and wildlife

populations are highly fragile. Use is increasing. Management planning has begun, but carrying capacities are not well known. Tourist behavior seems to be changing, and effective communication and management strategies must be developed to influence behavior. Much has been done to integrate tourism development in local community development, but conflicts still exist, and the local employment potential is not fully realized. Initial land use and management planning is under way, but concepts and techniques need to be evaluated and refined, and a model for monitoring the effects of tourism on the environment established. A conscious and complex effort is required to ensure that Svalbard remains a desirable wilderness tourist destination. (*Bjørn P. Kaltenborn*)

Grindelwald, Switzerland

Striking a balance in community-based mass tourism

On peak days in summer and winter, the 4,000 inhabitants of the valley of Grindelwald host up to 20,000 tourists from the Swiss lowlands and from all over the world. Many different types of tourists provide the economic basis for the community of Grindelwald, generating income levels comparable to those of Switzerland's major growth centers.

Six to eight generations ago, the ancestors of today's inhabitants were suffering from severe poverty. Increasing population pressure and decreasing prices for agricultural products meant that the local community could no longer be maintained by traditional alpine farming. As there was hardly any hope for development in the valley - which was not within the reach of the main Alpine trading routes - many poor families were forced to leave their farms and migrate to the industrializing centers or overseas.

The situation started to change when the urban elite of Europe discovered nature and culture in the Alps. Mountain environments, which had previously been perceived as hostile, were now positively regarded in terms of their scenic and scientific value. In addition, the interaction between alpine people and their environment was idealized as an alternative to the 'unnatural' urban life. The valley of Grindelwald was an outstanding example of this new perspective, with its striking contrast between steep, high Alps and their glaciers reaching down to the valley floor, and the traditional use of the less steep parts of the basin for farming.

From crisis to local command

Against this background, Grindelwald developed as one of the first alpine tourist resorts. During the second half of the 19th century, the valley experienced an initial boom in tourism due to the growth in new tourist activities such as mountaineering and winter sports. This boom resulted in a

substantial accommodation and transport infrastructure and created employment for local people. However, outsiders from the Swiss lowlands and from abroad mainly controlled development.

The First World War prevented the tourists, who were predominately wealthy and foreign, from visiting the Alps, leading to a total collapse of tourism in Grindelwald. After the war, some development resumed, but tourism did not fully recover until the 1950s. Yet this long phase of stagnation was crucial to Grindelwald's further development. There was a diversification in demand, with tourists from a wider range of socioeconomic strata and origins, and the proportion of domestic demand increased. Furthermore, the tourist services were taken over by local people, so that the community gained control over the sector. Increased local control did not, however, prevent an unplanned and mushrooming development of infrastructure, settlement, and tourist supplies when Grindelwald, like many other Alpine resorts, experienced a second boom almost immediately after the Second World War. There was continuous growth of mass tourism for almost three decades, resulting in a series of negative ecological, economic, and social impacts.

An evaluation of these impacts showed that they could be kept in a positive balance, mainly due to the close links and interactions between a traditionally oriented Alpine farming sector and an indigenously controlled tourist sector. Tourism now constitutes the economic basis and is the major source of wealth for the local community, while agriculture provides its cultural basis and maintains high environmental quality. Recognizing these complementary functions and multiple relations, the community of Grindelwald formulated binding policy guidelines and concrete measures in the late 1980s in order to maintain a positive balance between the economic, social, and environmental dimensions of local development based on mass tourism.

Lessons learned: diversification and autonomy

During the 1990s, growth in tourism was unsteady, and there were considerable uncertainties relating to trends in tourist demand and the changing conditions for agriculture with respect to markets and subsidies. Consequently, the balance struck in local policy guidelines has had to be continuously modified, based on the two key lessons learned from two centuries of tourism development in Grindelwald. First, the potential for diversification within tourism has to be maintained in order to respond to unpredictable changes in the demands and attitudes of tourists. Second, local people must maintain a high degree of sociopolitical and economic autonomy in order to achieve sustainable community based mass tourism. (*Urs Wiesmann*)

Rhodope Mountains, Greece

Women's co-operatives, rural renewal, and conservation

The Dadia Forest Reserve in the Rhodope Mountains of northeastern Greece is an important habitat for many birds of prey and over 40 species of reptiles and amphibians. It was declared a protected area in 1980, and includes two core areas in which human activities are restricted. Conservation bodies followed the initial identification of the site's scientific importance by developing public awareness, education, and conservation activities. These investments gradually attracted visitors, who were able to appreciate the area's significance through the information provided.

In 1994, a women's co-operative with 32 participants was established in order to prepare meals and traditional products sold through a visitor center. Women from Dadia provide support services such as cleaning and preparation of rooms, slide presentations, guided tours, environmental education, merchandising, and administration. The supplementary incomes of the residents have served to change attitudes towards the reserve and to raise awareness of, and local pride in, the area's ecological values. In addition, the social life of the area has changed, and young people remain in the village to settle. This is a reversal of the trend in most rural areas in Greece, whose young people emigrate in large numbers to cities and larger towns. After the co-operative was formed, the idea spread throughout the region: three co-operatives were established in nearby villages. By cooking or preparing handicrafts, women developed a means to organize themselves and supplement their incomes in a manner that has now become socially acceptable.

Local participation as a means to overcome rural isolation

Dadia is a model for integrated rural development in the Mediterranean, where human habitation has coexisted with natural landscapes for thousands of years. The most important factor in the transformation from an isolated village to a well-known ecotourism center was the active involvement of the local community. Attracting visitors to a remote area brought a change of focus from traditional occupations that were declining, and diversified the local economy. The social changes affected villagers in intangible ways, by dramatically changing feelings of isolation and marginality which characterize rural mountain communities in Greece. Ecotourism not only has given the local community a chance to benefit from conservation, but also ensures their sustainable and long-term involvement in the management of the area.
(*Georgia Valaoras*)

The Caucasus, Georgia

New opportunities for implementing sustainable tourism

The Caucasus stretches more than 1,000 km from the Black Sea to the Caspian Sea, dividing Europe and Asia. Nine peaks rise to more than 5000 m. The Caucasus has unique biodiversity, preserved landscapes, diverse climates,

endemic fauna and flora, glaciers, and even beaches. The region was one of the prime tourism destinations in the former Soviet Union due to its rich cultural and natural heritage: in 1989, more than 170,000 foreign and more than 1.7 million domestic tourists visited the region's mountain resorts.

Since the end of the Soviet era, tourism has declined dramatically. The main reasons are poor infrastructure, international competition, unstable political conditions, lack of a favorable business environment, and lack of strategy and experience to reorientate existing institutions according to new tourism standards and demands. The current problems provide opportunities to implement new ideas of sustainable tourism, in an area where tourists may still discover untouched landscapes and traditional mountain communities and villages, where many local people believe that "guests come from God". Environmentally friendly forms of tourism - such as "nature tourism", "ecotourism", "community tourism", "heritage tourism" - can create a new attractive image of the Caucasus, help develop new jobs in a low-income region, and thereby improve the living conditions of the local inhabitants, as well as contribute to the preservation of the cultural and natural heritage.

International joint ventures for reorienting tourism

Georgia has demonstrated a strong intention to reorientate and develop its tourism sector, with support from the World Bank and European governments, companies, and non-governmental organizations. Special attention is being focused on the development of tourism in the Caucasus. One example of co-operation between international tourism enterprise, government, and local communities is the Georgian-Austrian joint venture "Sport Hotel Gudauri". Despite political and economic challenges, this has operated successfully since 1987, with more than 1,000 foreign guests every winter. Relying on energy supplies and communication guaranteed by two provinces, the hotel employs 150 staff, provides free first aid, a primary school, and a kindergarten, and stimulates local residents to develop small-scale economic initiatives providing accommodation, transport, and food. (*Vano Vashakmadze*)

Taybet, Jordan

Recycling a village

On the southern escarpment of the Jordan valley near the sacred mountains and ancient city of Petra, one of Jordan's prime tourist attractions, lies the village of Taybet. Well into the 20th century, nomadic farming was the dominant form of livelihood of its inhabitants. Each family owned one or several stone dwellings which served as winter shelters, each with a space for animals and a second room for family members to sleep in. The rooms were small and without windows. In spring and summer, the entire community would

journey with their tents and animals into the upland pastures in search of grazing.

In the 1950s, the old ways of life began to change; a metalled road was constructed. People started to move into more modern houses, with more space, better access, and modern conveniences. As a result, the old village was abandoned by 1980, with the exception of some families who rented space there.

From cemetery to hotel

There was much debate about what to do with the old village, which was beginning to fall into disrepair. The local council suggested knocking it down and replacing it with a cemetery. Some local residents, however, had another idea: to turn it into a hotel. They made contacts with a Jordanian company which had recently renovated an old estate just outside Amman and turned it into a series of restaurants and craft shops. The company was ready to become involved, and negotiations with the local community started. After much talking, agreement was reached for the many owners - some of them owning just a fraction of a building - to retain their ownership and to rent the land and buildings to the operating company on an escalating leasehold basis renewable every five years. Investors were to give priority to hiring local people for construction work and to pay 6% of the net operating profit to the owners. Eventually, 360 rent contracts were signed, involving more than 150 landowners. Around 200 local people were involved in construction work. In 1994, the hotel was officially opened.

"We still have sheep, chickens and goats at home, but my father has a shop and someone else keeps an eye on the animals. My ambition? to improve my English and to climb higher up the hotel ladder."

Young local resident, working as assistant head waiter in Taybet's new hotel

Partnership in development

Looking back at what has been achieved, the following factors appear to have been instrumental for the project's success:

- Community base: the project was initiated by members of the local community - including members enjoying a high status in the village
- Partnership: a competent partner was found, within the country, who had the required expertise for carrying out the project and was willing to accept the local community as a partner in sharing the benefits from the project
- Demand: tourism is a growing market in Jordan. The country has a wide range of environmental and cultural attractions.

The hotel is built around the principle of efficient use of water and energy. Water is reused for growing vegetables for the hotel and for watering new olive groves.

Stopping rural exodus

Most members of the local community are happy with the new development. The hotel helps to prevent the exodus of young people in search of employment in Amman or other towns far from home. To ensure long-term benefits for the local community, the company opened a training center in Amman. As a result, 125 of the 171 hotel employees come from Taybet village, and most others from the surrounding areas. The reconstruction of Taybet has also stimulated the local economy. Building activities have increased fourfold. A bank, a restaurant and a supermarket have been constructed alongside a new mosque, whose construction was substantially supported by the local community. The school has been renewed. The population has grown from 3,800 in 1993 to over 4,200 in 1997, thus reversing the common trend of outmigration from remote areas. However, land prices have increased fivefold since the early 1990s, making it more difficult for local residents to build new homes. The aspirations of young people are also changing; only 40% of the village are now involved in farming. Are old traditions being challenged by the project? This is a difficult question for outsiders to answer. Local residents have adopted a more pragmatic approach, as shown by the statement of the former mayor of Taybet, who sees the new hotel as part of the local culture. In his own words, "Taybet is an Islamic community and we have a tradition of hospitality". (*John Rowley*)

"I am proud to see people using my old house, very proud. We are an Islamic community and we have a tradition of hospitality."
- *Elder local farmer, Taybet*

Simen Mountains, Ethiopia

Trekking in a challenging mountain landscape

Northern Ethiopia's Simen Mountains National Park is an exotic setting with traditional agriculture, breath-taking views, and unique wildlife. To reach the park, the visitor travels about 1,000 km on dusty roads from Addis Ababa to Debarq, the last town on the road, changes to mules and horses, and treks on mountain trails for several days.

The park was established in 1969 to preserve one of the world's rarest mammals, the Walya ibex, of which less than 150 remained. There are also other endemic mammals such as leopard, hyena, bushbuck, bushpig, baboons, monkeys, and about 150 species of birds. In 1978, after modest tourism development, the park was receiving about 300 visitors a year, and was listed

as a UN World Heritage Site. The political situation then worsened, making tourism impossible for over a decade. By 1993, the situation stabilized, and tourists returned. Over 1,000 a year now visit, giving rise to many hopes for development and income for the people of this remote region.

Park, people, and poverty

Visitors are often impressed, if not shocked, by the poverty and minimal infrastructure. There is little difference between the areas inside and outside the park; more than half of it, except the steepest cliffs and the highest peaks, is used for livestock grazing and cultivation. About 15,000 people either live inside the park, or use it for agriculture, including grazing about 10,000 cattle and even more sheep and goats.

One major concern is human population growth: 2% per year, or a doubling in 35 years. Concurrently, livestock numbers grow, cultivated land expands, and fallow periods decrease, from 1964 to 1994, mixed cultivation land expanded by 43%. Because of the steep topography, soil degradation has been accelerated through soil erosion from cultivated and overgrazed land. Farmers are well aware of dwindling yields on steep land inside the park. Other concerns relate to wildlife. The Walya ibex, the primary asset for tourism development, recovered to over 350 animals in the mid-1980s. During the late 1980s, many animals were poached; only 250 remained in 1994. Long-term survival requires at least 1,000 animals. This goal is far off, as the steep cliffs, which are the main habitat of the ibex, are increasingly used for shifting cultivation, livestock grazing, and fuelwood collection. Yet the number of ibex seems to be increasing because of better control of poaching - and they can be more easily observed due to behavioral changes.

Rural development with a tourism component

Local authorities have recently built a road through the park to provide access for people living in remote areas behind the park. The road runs along the most vulnerable escarpment crest, adjacent to ibex habitats; alternative routes would have required greater investment. Local people greatly appreciate the road, but it is a challenge to the park authorities, especially regarding tourism development. Day-tours with vehicles from Debari are now a possibility.

The authorities realize that the region's sustainable development needs more than park management and tourism development, and must focus on resolving conflicts between traditional land uses and the need to protect the world heritage and natural habitats of rare wildlife. Half of the 30 villages with land inside the park could improve their land-use systems with external assistance, focusing on agricultural development on land outside the park, with better access, social infrastructure, and land conservation. Land-use planning and reallocation of land will be needed to reduce pressure inside the park. Its

boundary may have to be redrawn, to include more wildlife habitat and exclude some land with agricultural potential. For villages with much land inside the park, the problem will be more complex, as they may have to be moved to areas outside the park before land degradation turns their land into badlands.

The development of tourism must follow the concept of sustainability. Trekking could be organized along trails with modest infrastructure. Income could be generated for guides and helpers. Handicrafts could be sold. Vehicle-based tourism could be guided to a few spectacular observation points along the road, but at a price. Sharing of park revenues between local communities and the administration is planned. Such moderate forms of tourism should help to create a favorable environment, ensuring that local people's livelihoods are significantly improved through concerted government and international action.
(*Hans Hurni, Gete Zeleke*)

"When I was a child, there was forest on the valley slopes. Until 10-15 years ago, the yields on the fields were good, but nowadays the soil has become old, and the fields are almost useless."

- *Farmer in Simen, Ethiopia*

"The tourists are coming here to develop the region. But they are also coming to bring the village to another place."

- *Woman farmer, Simen, Ethiopia*

Virunga Volcanoes, Central Africa

Conserving a rare species in a troubled region

The Virunga Volcanoes form the border between Uganda, the Congo (formerly Zaire) and Rwanda. These mountains and nearby Bwindi Impenetrable National Park in Uganda are the last refuges of the most endangered gorilla subspecies, the mountain gorilla. Only about 630 remain. The region's rich volcanic soil is also highly valued for agriculture. This is one of the most densely populated parts of Africa. Pressure on forest habitat is huge, and there is a high level of environmental decline, linked to decreasing socioeconomic levels.

Opportunities and risks of gorilla tourism

Gorilla tourism can provide a sustainable and realistic means for conserving the species and its habitat, but must be examined in relation to the region's political and socioeconomic realities. It generates high levels of foreign exchange, benefiting conservation, national parks, and local communities living around or near protected areas. It provides economic arguments for conserving

forest habitats and species in areas where policy-making requires such justification.

The greatest risk of tourism to mountain gorillas is transmission of human disease. Strict controls are needed on numbers of tourists, the distance at which they view the animals, and the time and frequency of visits. These controls are not easily enforced. The gorillas' habitat is surrounded by a densely populated area. Risks of transmission of diseases are high, especially where contacts between humans and gorillas cannot be controlled. Behavioral disturbance is also a risk. However, monitoring suggests that habituated gorillas, visited by tourists or researchers, continue to reproduce, and that animals remain rather healthy.

Impacts of the civil war

Political instability and crisis rapidly and negatively affect tourism. Civil unrest in the Congo and Rwanda has almost stopped tourism in the area, resulting in very high demand on the few viewing sites in Uganda. During the 1990-94 war in Rwanda, when fighting took place around and in the Virunga Conservation Area, both sides recognized the potential national and global value of gorillas, and stated their intention to avoid harm to them. In 1994, when 750,000 refugees moved from Rwanda to Zaire (now the Congo), tens of thousands of people per day, with their cattle and belongings, passed through the Parc National (PN) des Volcans in Rwanda and the PN des Virungas in Zaire. People camped and hid in the parks for months. The impact of such intensive human presence overshadows the potential impact of tourism. From 1994 to 1998, rebel militias hid in the PN des Virungas. There was heavy pressure to conduct large-scale military operations in the park. The conservation community in both Rwanda and the Congo persuaded the political and military authorities of the parks' value and of the need to associate park guards with military patrols - ensuring the protection of the gorillas was a political and an economic priority. After the war and refugee crisis in Rwanda ended in 1996, there was pressure on the PN des Volcans to provide land to reintegrate refugees. Only economic justification and the attention of the global and national conservation community halted the degazettement of parts of the park.

A fragile basis for tourism

Endangered species like gorillas are a fragile basis for tourism. Though gorillas should not provide the sole argument for conservation, what other viable options exist? African forests are disappearing rapidly, especially through logging and clearing for agriculture. Ecotourism not only provides an alternative non-consumptive use of land, but focuses international and national attention on an area in ways that pure conservation cannot. People know and care more about gorillas than many other species because they have been able

to see them, either in reality or in films. For this, some animals need to be habituated, so that tourists, researchers, and film crews can visit them.

Tourism based on a fragile resource like gorillas should emphasize conservation and equity, as well as economic and political objectives. Regulations may be inadequate to minimize the risks and ensure the conservation of these animals. Tourism programs need to increase emphasis on distributing benefits to people living around the park, and ensuring that protected area authorities have access to and utilize resources in ways benefiting a park and its wildlife. In the poor countries of Central Africa, with pressures such as human population growth and political instability, income from ecotourism cannot be rejected. *(Annette Lanjouw)*

"We never thought that vermin like these monkeys could become a source of money...now they pay for our schools..."
-Farmer, Budongo Forest Reserve, Uganda

Budongo Forest Reserve, Uganda: revenues from tourism and the participation of the local population made the construction of this primary school possible. *(Council D. Langoya)*

The population density of the Virungas is over 400 people per km² and is growing by 3% per year.

Ranomafana National Park, Madagascar

Reconciling local development, biodiversity conservation, and income generation

Madagascar is renowned for its exceptionally high biodiversity. The country's flora and fauna are characterized by a high degree of endemism, i.e. by species which occur nowhere else in the world. Mountains and uplands, which cover much of the country, contribute greatly to this unique natural heritage.

The parkland-people dilemma

Aiming to capitalize on this heritage, Madagascar has adopted an ambitious policy for promoting tourism. Tourism is now second only to coffee as a source of foreign exchange, and is seen as the most important factor for economic recovery and growth. From 1984 to 1996, international arrivals increased from about 10,000 to over 80,000. While coastal tourism continues to be dominant, mountain tourism increased significantly in the 1990s. A major factor has been the establishment of new national parks and other protected areas, many in mountains and uplands above 1000 meters altitude. By 1998, Madagascar had 40 protected areas, including seven national parks which cover about 2% of the

country's surface. Two more national parks will shortly be established in some of the highest mountain regions of Madagascar, above 2000 m.

As in many other tropical countries, Madagascar's mountains and uplands are densely populated and intensely used because of their favorable climate. The promotion of tourism thus interferes with the needs and interests of local communities, who derive their livelihoods from these areas and have been coming under increasing pressure through the liberalization of markets, globalization, and population increases. To reconcile the interests of farmers and the tourist industry, the official tourism policy, within the framework of the National Environmental Action Plan, promotes an approach based on participatory ecotourism. Revenues from tourism are shared with local communities to compensate for restrictions on land use due to parks and protected areas, to ensure that tourism has positive impacts on these communities.

Revenue sharing and local participation

Ranomafana National Park is one example. The park, created in 1991 with an area of 406 km² mainly covered by tropical rain forest from 400 to 1400 m, is on the eastern escarpment of the central highlands. It owes its existence to the discovery of the Golden Bamboo Lemur (*Hapalemur aureus*) in 1986, although the area was already a tourist destination because of its hot springs. From 1993 to 1996, tourist numbers increased from 2,800 to almost 6,000. As the park is mentioned in most tourist guides and infrastructure is being improved, a continued increase in visitor numbers is likely. Half of the revenue generated by the park - probably the highest percentage by global standards - is earmarked for the development of the buffer zone surrounding the park. This is intensely used for farming, including irrigated rice production, coffee, horticulture, and shifting cultivation based on slash and burn.

The funds are used mainly for intensified rice production, agroforestry, and the development of infrastructure (small dams, schools, health services, credit schemes), aiming to reduce pressure on natural resources and preserve mountain forests and wildlife. Through local and regional committees, the local population decides which projects are supported. The first results of this approach are encouraging, but much remains to be done before it can be called a success. Mutual trust and confidence, both within local communities and between them and the different institutions involved in the management of the park, has to be enhanced. Increased information and training of all stakeholders - park authorities, tourism industry representatives and people - is needed. Most importantly, efforts must be made to guarantee equitable distribution of park revenue within local communities. The reconciliation of rural development, tourism and conservation needs time. If appropriate management can be ensured, this should result in substantial positive impacts on both tourism and local development even when visitor numbers are

relatively low, without threatening the aim of preserving unique mountain habitats. (*Joselyne Ramamonjisoa*)

"In the beginning, we thought that the 'Park' was a new president"
- *Farmer from around Ranomafana National Park, Madagascar*

Endemism is high for most plant and animal species in Madagascar. Endemic species account for 86% of plants, 100% of lemurs, 95% of reptiles, and 50% of birds.

Khumbu, Nepal

Successes and challenges in locally-based mountain tourism

In 1923, shortly before the first attempts to climb the world's highest mountain, George Mallory was asked why anyone would want to climb Everest. His answer was plain and simple: "Because it's there." If someone were to ask today's trekkers and mountaineers the same question, their response would more or less reflect Mallory's opinion. Many local Sherpas believe that as long as Everest is there, tourists will continue to visit the area. Everest is one of the main factors in a tourist economy that is Nepal's principal source of foreign exchange.

The dominant role of tourism

Home to the world's highest mountain, the Sherpa people and, since 1976, Sagarmatha National Park, the Khumbu region illustrates the positive and negative aspects of tourism development in remote mountain communities. Visitors agree that Namche Bazar, the region's hub of tourism at 3400 meters, is the most sophisticated tourist center in the Himalayas. In this "lodge city", small scale, locally controlled capitalism is clearly evident; Sherpa life in the tourist seasons revolves around tourists.

Tourism's rapid development has transformed the region in an unprecedented way. Visitor numbers increased from 20 trekkers in 1964 to over 17,000 in 1996. During peak tourist seasons, visitors (tourists, guides, porters and staff combined) outnumber the local Sherpas by a factor of five. The number of lodges, almost all locally owned, grew from seven in 1973 to 224 in 1997.

By the mid-1980s, over 80% of households derived an income from tourism, a proportion which has since increased. Tourism has made the Sherpas one of the most affluent ethnic groups in Nepali society. The area also offers employment and cash income to people from outside the region, including porters and lodge employees from other areas of Nepal, and traders from Tibet, who come across the border in growing numbers to sell their produce to both local residents and tourists. In spite of these trends, natural resources and local culture have

remained remarkably intact. Forest cover has remained constant and even increased within the national park. Monasteries are in better condition, and many private houses have restored and embellished their private chapels. Monks hold influential positions in community development and environmental protection, and some are engaged in tourism. Educational standards have gone up, especially among the young. Farming is still widely practiced, and traditional terraces are well maintained.

Problems: garbage, firewood, and trails

However, specific environmental and sociocultural problems may diminish future benefits from tourism. The Everest region has been labeled "the world's highest junkyard", and the trail to the Everest base camp as "the garbage trail". As the visitor numbers increase every year, so does garbage. It is estimated that there are 17 metric tons of garbage per kilometer of tourist trail. Owing to heavy visitor traffic, trail conditions are also deteriorating. Over 12 percent of the trails are severely degraded, requiring urgent restoration and maintenance.

Despite the availability of electricity in some villages, firewood has remained the major source of energy for the lodges, and timber is the main construction material. It is therefore probable that energy demands have gone up significantly with the numbers of both visitors and lodges. Since cutting trees inside the national park is prohibited, forested areas outside the park boundary are increasingly under pressure to meet growing demands for firewood and timber. Several villages outside the park have emerged as centers for marketing firewood and timber. Several efforts are under way to counter the environmental problems. Emphasis is on collecting garbage regularly, promoting alternative energy, reforestation, and environmental education. The Nepalese government, as well as local Sherpas, are committed in their efforts towards improving environmental conditions and making sure that tourism is a basis for sustainable livelihoods in the future. The Sherpas realize that their affluence is solely the result of tourism and, as such, they must ensure it does not erode its base. (*Sanjay K. Nepal*)

"It was the poor people who first benefited from tourism, because they did not hesitate to carry loads for tourists. The rich were too proud to do this."
-*Local resident, Khumbu, Nepal*

In 1993/94, 126 metric tons of garbage was collected by the Sagarmatha Pollution Control Committee (SPCC), a local NGO supported by the Nepalese government and international donors. This increased to 243 metric tons in 1996/97. Visitors are confronted with empty beer bottles waiting to be airlifted at Lukla and Syangboche airports along the main trekking routes.

The Altai Mountains, Russia

A remote mountain area within an economy in crisis

The mountains of the Altai are shared by Russia, Kazakhstan, Mongolia and China. Extending over 2,000 km in length, with the highest peaks just above 4500 meters, the Altai range forms the water divide between the Arctic Ocean and the dry highland plains of Central Asia. The Russian part of the Altai is an autonomous republic within the Russian Confederation.

The Altai Mountains have never been an important tourist destination. In the early years of the Soviet Union, scientists visited the area in search of the Badan plant, which under the Soviet policy of self-reliance was an important industrial resource owing to its high content of tannic acid. In the regulated recreation industry of the Soviet Union, the Altai played a marginal role. Like many other mountain regions of the industrialized world, however, the Altai benefited from substantial transfers of funds from the central government to support general infrastructure, public transport, education and health, agricultural production (state farms), and national parks. After the breakdown of the Soviet Union, these funds were greatly reduced or ceased to flow altogether. At the same time, promoters from Russia and Western Europe initiated trekking and adventure tourism, taking advantage of economic and political deregulation and the liberalization of the tourism industry. Local groups and individuals joined them in a bid to benefit from this new economic opportunity. A women's group in a village on the main route between Russia and China opened a restaurant, which was popular with tourists and truck drivers. A former director of a state farm started his own business as a bus driver and tourist guide. Wardens of the national parks, which had been established under Soviet rule, started to take paying tourists along on their control rounds in the parks. With the deepening of the Russian crisis, however, most of these initiatives have come to a standstill. Russian tourists were thrown back into the struggle for economic survival, and Western tourists appear to have lost interest after their initial enthusiasm for the new developments in Russia.

Special interest tourism: an opportunity for regional development?

Despite the present crisis, the Altai has a considerable potential for tourism. Nature is an unspoiled wilderness in this region, with its population density of only 2 people per km², one of the lowest figures in the world. Its national parks are home to rare and endangered species such as the snow leopard, the golden eagle, and the Aghali mountain sheep. To this is added a rich cultural heritage including ancient stone carvings and pastoralism maintained in its traditional way by the local communities.

The present economic crisis could thus present a chance to establish the legal and institutional framework required for the preservation of natural and cultural heritage, and for the establishment of forms of tourism which support the local economy without endangering conservation. In following this line of thinking, the government of the Altai Republic has recently established two new national parks (22% of the territory of the republic is protected) and found international support to ensure conservation of the unique nature of the region. This will include:

- Snow leopard and Aghali sheep conservation
 - Establishment of a network of protected areas
 - Capacity-building at governmental and non-governmental level, e.g. for training in park management, including tourism.
- (Katharina Haeberli, Hartmut Jungius)*

"Before Perestroika, we had a decent salary and the helicopter provided us with what we needed. Now everything is much more difficult. My last salary came in four months ago. My colleague left with his family in search of a better life elsewhere. Poaching is also becoming a problem here now."
-Park Warden, Altai

Forests occupy 2 /3 of the area. Fauna and flora diversity is high. The area is one of the 200 globally important ecoregions identified by WWF.

The Mountains of Korea

A need for information to move towards sustainability

Almost 70% of the Republic of Korea is covered by mountains, which are major attractions for domestic as well as international tourists. Nearly one-third of tourism activities are closely related to, or take place in, mountain settings: there are about 100 million visits to the mountains every year. This figure means that, on average, every adult participates in mountain activities more than four times a year.

In spite of these high levels of use, the various impacts of tourism on Korea's mountains have never been identified systematically. This lack of information makes it difficult for policy-makers to move forward towards utilizing tourism as a tool to improve the economic and social condition of mountain communities. Similarly, recent drives to develop tourism at a local level are not equipped with sufficient marketing information, which makes development plans vulnerable. As a consequence, the tourism industry is likely to inflict irreversible damage on mountain communities and their resource bases. Imprudent decisions such as easing regulations or allowing development in precious ecosystems, particularly national parks, threaten natural resources and the environment.

National parks and recreation forests are two major mountain tourism resources designated within the current legal system. The sixteen mountain national parks cover about 4% of the total area of the Republic of Korea and attract 30 million visitors a year. A total of 70 recreation forests have been established, and about 3 million people visit these remote and resource-oriented areas each year. Annual visits are increasing rapidly, and are expected to reach 10 million within 20 years.

Minimal local benefits

The growth of mountain tourism over the last two decades has paralleled that of national economic growth. Yet, in contrast to expectation, the positive impacts of tourism on local mountain economies turned out to be minimal, and there have been many detrimental effects. Korea failed to incorporate the concept of sustainability into the development of tourism complexes at the beginning. Most of the problems related to mountain tourism can be found in private-sector developments in national forests and the 60 million visits to under-staffed areas and unmanaged mountains which are often privately owned. Many luxurious resorts have been built around superb natural resources, resulting in habitat destruction and environmental deterioration. In particular, large-scale resorts have been built to accommodate the largest possible number of tourists. These include 13 ski resorts in remote forested areas, which serve 3 million visitors during a short season, but have significant year-round environmental impacts. Such tourism businesses are likely to concentrate on generating more revenue by attracting more tourists - rather than preserving the environment on which they ultimately depend. These practices are also likely to trigger competition among these businesses and place an excessive strain on the environment.

Threats to further development

In addition to environmental problems, the discrepancy between those who benefit and those who bear the costs of tourism development is a crucial issue. The vast majority of revenues generated from tourism go to tourism businesses and out-of-town investors, not local communities. Minimizing revenue leakage should be one of the most important tasks. With a high leakage level, local mountain people have no motivation to protect the mountain resources on which future generations depend. Recent studies on perceptions of tourism impacts have shown that people residing in mountain tourist destinations think they should have a greater share of economic benefits generated by tourism.

If tourism continues to wreak havoc on the mountain environment and cannot meet the needs of local communities, it will deter prospective tourists from visiting mountain destinations, causing the tourism industry to lose its momentum. Thus, the successful incorporation of the concept of sustainability

in tourism is critical not only for the conservation of the mountain resources, but also for the long-term future of mountain economies. (*Seong-il Kim*)

Baguio Bioregion, Philippines

Formulating a strategy for tourism, amenity migration, and urban growth

Within the Philippine Cordillera lies the Baguio Bioregion, 7,300 km² of pine forests, rice terraces, waterfalls, hot springs, magnificent vistas, and human settlements reflecting many cultures, including traditional indigenous and post-industrial. The urban and agro-business landscapes of Baguio City, the bioregion's commercial and administrative hub, are home to over 300,000 people. The highest peak, Mt. Pulag, rises to 2929 m. Despite considerable degradation, this bioregion remains rich: in plant and animal life, with many rare species; in human culture, especially of its indigenous peoples; and in natural resources. Along with a cool climate, these attributes attract amenity migrants and tourists, as well as economic migrants hoping to make a living from the other two groups. The resulting uncontrolled growth of settlements threatens the very amenities which draw people to the bioregion.

Booming tourism and immigration

Tourism is an important socioeconomic activity for the Philippines, responsible for 5% of annual Gross Domestic Product. Although beaches are the premier attraction, mountains play a significant role, particularly those of the Baguio bioregion. Three localities within the bioregion, Baguio, the Banaue Rice Terraces (the first cultural landscape among UNESCO's World Heritage Sites), and Ifugao- ranked 2nd, 3rd, and 14th respectively among the nation's tourist destinations. Except in outlying areas, domestic tourists far outnumber international ones, as the bioregion's cooler climate is very appealing, particularly to those from coastal Manila, the national capital.

In 1990, the bioregion experienced a major earthquake; and, in 1991, the devastating eruption of neighboring Mount Pinatubo and closure of the principal regional American military recreation facility. While these events led to a brief hiatus in tourism and amenity migration, both are once again on the rise, along with the considerable problem of supporting this influx in a fragile mountain ecosystem. The annual number of tourists to Baguio City has increased 275% since 1993, so that tourists more than twice outnumber the inhabitants, and they and amenity migrants are increasingly penetrating outlying indigenous communities.

Problems and solutions

The management of these stresses in order to sustain the bioregion's ecosystem, aesthetic and spiritual attributes, and natural resources is severely

constrained by poverty, inadequate knowledge, underdeveloped human resources, and exploitation for short-term profit. These constraints are exacerbated by an overburdened physical and social infrastructure. In particular, Baguio's water management systems, which date mainly from before the Second World War, were designed for a population of 20,000 and now support over 300,000, resulting in severe water shortage in summer, and flooding in the wet season. Other problems include waste disposal and housing; a high percentage of poor inhabitants, growing with immigration; and cultural changes brought about principally by insensitive external political-economic pressures. Yet positive forces are evident. Reviewing local conditions after the 1990-91 events, many Community Based Organizations (CBOs) concluded that primary reliance on tourism, with its negative environmental and sociocultural impacts, is both unwise and economically unnecessary. Aided by a new decentralization policy and a law mandating their participation in local decision-making, CBOs agreed that tourism should be reduced and changed in character, and that the economic base should be diversified into education, high technology, and adding value to other activities. Additional priorities are to significantly reduce the negative environmental impacts of settlement growth, agro-business, and mining. Baguio City's last election substantially increased the power of an alliance espousing this new orientation and, beyond the urban center; indigenous peoples appear to be strengthening their community organizations. This change is also reflected in the Cordillera Administrative Region's 1999 - 2004 development plans. The objective is a sustainable bioregion to which limited ecocultural tourism makes a significant and eco-systemically integrated contribution. While systemic linking of amenity migration, economic migration and tourism within an urbanizing bioregional context is only beginning, a strategy for an appropriate tourism component is being formulated. (*Laurence A. G. Moss, Romella S. Glorioso*)

Uluru, Australia

Respecting a sacred mountain

Standing at the base of this sacred mountain in the center of Australia, one has the overwhelming impression of the tremendous forces at hand. Tourists come from around the world to visit Uluru-Kata Tjuta National Park, many to climb Uluru, or Ayers Rock, and others to learn of its sacred-ness to the local Anangu community.

Each part of the sacred mountain has great significance to the Anangu, and this is related in the numerous stories passed down in oral histories. Many of these stories are conveyed to tourists by tour guides and site markers. Certain areas of Uluru are places where secret knowledge - for both men and women - is discussed and/or stored, and these are extremely powerful places. The Anangu ask that tourists avoid these areas or approach them with caution. One such

area is the top of Uluru and the route leading to the top, which is associated with Mala Tjukurpa, or the traditional law of the Hare-Wallaby.

Information as a crucial aspect

Because of the number of tourists who persist in climbing this sacred mountain, and the many injuries and fatalities that occur, the park rangers have fixed a climbing chain into Uluru's side. This not only brings physical impacts, but also has cultural impacts. Most fundamentally, it ignores local sacred beliefs. In an effort to balance the positive and negative impacts of tourism to Uluru, the local Anangu community and the Australian Nature Conservation Agency have co-operated in developing the Uluru- Kata Tjuta National Park Cultural Centre. The center is designed to give tourists an opportunity to better understand the cultural and spiritual significance of Uluru and nearby Kata Tjuta to the Anangu people. The effectiveness of this cultural center lies in the context, content and quality of displays. Some displays are recordings of stories in the voices of park managers, both indigenous and non-indigenous, as well as local elders and other Anangu community members. These recordings are accompanied by pictures and usually contain strong messages about the spiritual significance of Uluru as well as requests not to climb it. As a result, the number of tourists climbing Uluru is steadily declining, while tourist numbers remain unchanged. *(Jim Kelly)*

Global trends and issues

Mountain pilgrimages

Because of their extraordinary power to evoke the sacred in a multitude of different ways, mountains serve as inspiring places of pilgrimage for religions and cultures all over the world.

The Hopi of North America go on group pilgrimages to the San Francisco Peaks to invite the Katsina spirits to bring them the summer rain on which they depend for their very existence. People from around the world come to Egypt to ascend Mount Sinai, the primordial peak where Moses is said to have come face to face with God. Chinese pilgrims seek shining visions of Buddhas and Bodhisattvas on the heights of sacred mountains such as Wutai Shan and Emei Shan. Peruvians climb up to the glaciers above Cuzco in the pilgrimage festival of Qoyllur Rit 'i, the Star of Snow, to pray to Jesus and the deity of Mount Ausangate.

An ancient form of mass tourism

Pilgrimages involve millions of people and can have major impacts on mountain cultures and environments. Many more pilgrims than trekkers or tourists visit the Himalaya, for example, and heavily frequented shrines like Gangotri and

Badrinath in India have been severely degraded. Because of their scenic value, cultural significance, and human interest, places of mountain pilgrimage have also become prime places of tourism. Growing numbers of visitors who know little of local traditions threaten to destroy what makes many of these sites sacred. Busloads of noisy tourists, for example, have made the practice of monasticism impossible at the spectacular monasteries of Meteora in Greece. To preserve the sanctity and integrity of pilgrimage sites, both tourism and pilgrimage need to be managed with care and respect. The international furor provoked by plans to construct a cable car up Mount Sinai and open a "casino" on the summit illustrates the perils of tourism development that ignores the cultural and spiritual significance of a sacred site. The proposed project had to be cancelled when people from all over the world expressed outrage at what they considered the desecration of a major symbol of revelation and ethical values in Judaism, Christianity, and Islam. (*Edwin Bernbaum*)

Finding sustainability in winter sports: large or small?

Winter sport areas can now be found in mountains around the world. Their development has been a major driving force in mountain tourism, allowing the mountains to become playgrounds for urban areas - a market estimated at 65-70 million people worldwide.

In resorts in traditional mountain tourism countries - such as Austria or Switzerland - most companies in the winter sport industry (hotels, cable cars, retail stores, etc.) are small and medium-size. They are generally linked through a co-operative organization responsible for marketing, information, and public services such as ice rinks and hiking trails. Because of their co-operative structure, local people tend to accept these organizations and their decisions quite well. However, decision-making can be slow, and incentives for one company to outperform others are small.

New destinations - for instance in North America, France, and Italy - are controlled and managed by one company. From 1985 to 1997, through a consolidation process, the number of North American winter sport areas decreased by 22%, to 800. In this period, four public companies were formed, each owning or managing the major operations - the mountain transport system, ski school, major restaurants, hotels, retail stores, and ski rentals - in a number of destinations. Traditional winter sport areas in Switzerland also face increasing competition from such consolidates, and profits have decreased; yet very few areas have ceased operation. The relative disadvantages of traditional areas include slower adaptation to new customer needs due to democratic decision-making; problems in co-ordinating customer-oriented service chains; and fewer possibilities to invest in innovations and future-oriented competencies. They are less able to benefit from supply, labor, financial, and marketing networks.

Small is beautiful, but does it pay?

Economically, consolidated resorts may appear more sustainable - but there are negative social effects. Many of the new North American destinations are in areas with no historical local population. Over the years, through immigration, local communities emerged, increasingly wishing to influence development policies. This is important because social sustainability includes the possibility of guaranteeing local identity and culture, which are becoming increasingly important. Thus, the resort companies have to find new ways to ensure public participation. At the same time, small and medium-size enterprises in traditional Alpine resorts have to co-operate more and even to merge into larger structures along the service chain (economies of scope) to provide service quality at lower cost, as well as to improve the efficiency of decision-making. *(Thomas Bieger)*

Mega Events: short-term profit - long-term loss?

Mega Events such as major fairs and festivals, and major cultural, religious, or sports events, have gained increasing importance in recent decades. With respect to mountains, the Winter Olympics are of special interest, as they depend on mountain resources - most importantly on topography and snow.

High expectations are associated with the Winter Olympics, especially with regard to modernization, tourism development, and economic growth. Experience, however, tells a different story. Speculation, negative environmental impacts, underused sports facilities and huge public debts are among their main legacy, while long-term positive economic impacts are marginal. In the case of Innsbruck, the Olympics were shown to have only a small net effect on tourism development. In Calgary, there are indications that the Olympics may have had a positive long-term effect on tourism. In Lillehammer, overnight stays of tourists increased by 14% in the two years following the Olympics, and an estimated 500 new jobs were created - but compared to these achievements, the costs of over US\$ 1 billion for hosting the games are out of all proportion. Maintenance of sports facilities continues to create substantial costs, and so does the public transport network that was greatly improved in conjunction with the Olympics. Nonetheless, Lillehammer was a step in the right direction, as negative environmental impacts were kept to a minimum and nature was established as a third dimension in the Olympic value system alongside sports and culture.

With Nagano, however, the Olympics fell back into gigantism. Investments totaled between US\$ 10 and 15 billion. Unfortunately, the expected stimulus to economic growth has not materialized. Albertville presents much the same picture. After the Olympics, unemployment and huge public debts beset the area, with some local communes close to bankruptcy. Environmental impacts

were severe: 33 hectares of forest were cut down, close to 1 million m³ of rocks blasted, and a whole mountain reshaped for a single event.

Establishing guidelines for events in mountains

Events can provide an extraordinary experience for a specific region or nation. In general terms, however, they are of much less value for sustainable mountain development than commonly believed. There is thus a need to establish guidelines for carrying out such events in mountain areas. These should include checklists for assessing environmental, social, and economic impacts. Most importantly, the post-event era needs to be planned as carefully as the event itself. *(Hansruedi Müller, Thomas Kohler)*

New trends in the mountains

Canyoning, hydrospeed, bungee-jumping, carving, hang-gliding, snowboarding - these are all new mountain trend sports that have developed in the last few years. Most participants are urban people thirsty for action and new experiences.

The popularity of sport-oriented mountain tourism has increased greatly in the past 30 years. It has spread from traditional locations such as the Rocky Mountains and the Alps to mountain areas that had been largely untouched by such activities - including parts of Central Asia, the Himalaya/Karakorum, Caucasus, Andes, and even Antarctica. Sport tourists often have significant disposable incomes, and tend to travel ever-greater distances for shorter periods.

A major reason for the spread of trend sports is the rapid development and marketing of new technologies by sports companies. At the same time, the global spread of these sports is facilitated by the expansion of transport networks into new locations, and by the use of modern technologies. For instance, helicopters are now used to gain access to high locations that could previously be reached only by walking for many days or even weeks. This is advantageous not only for those who practice trend sports, but also for those who wish to climb high mountains on a private or commercial expedition during the few weeks of their vacation.

Establishing codes of conduct

In traditional mountain tourism regions, many trend sports - especially winter sports such as snowboarding and carving - are typically practiced in areas that have already been mechanically and technically prepared. Others may have environmental impacts, especially on rare species and habitats. In other mountain regions, the impacts of mountain sports may be as much social and cultural as environmental. These diverse impacts are increasingly recognized

by mountaineering and ecotourism organizations, which have established codes of best practice for expeditions, including minimization of packaging, reduced dependence on local fuelwood, and waste removal. In contrast, those enjoying and promoting trend sports and commercial mountaineering often do not belong to such organizations, and are less aware of their potential societal and environmental impacts. This is particularly true for small companies offering exciting activities in a highly competitive market. Mountain sports may be able to bring both existential benefits to those who enjoy them, and economic and social benefits to those living in the areas where they are practiced. Yet, too often they bring only negative environmental and cultural impacts, with nearly all of the economic benefits accruing to the manufacturers of sports equipment and urban tourism operators. *(Dominik Siegrist)*

Amenity migration - a new trend in mountain areas

From the Rocky Mountains to the mountains of the Philippines and of northern Thailand, from the hill stations of northern India to the Alps and to the mountains of Great Britain and Scandinavia, a new migrant has made an appearance - the amenity migrant. Amenity migration is a societal phenomenon based on attractive features of the culture and natural scenery of a specific place or region, such as clean air, beauty of landscape, or remoteness. Typically, amenity migrants are from the middle or upper economic strata, originate in metropolitan regions in both the industrialized and developing countries, and reside in their host area either periodically or permanently, considering themselves residents of the amenity place they have chosen. Amenity migrants may earn a full-time or part-time income in the amenity place or no income at all. Many are not locally employed, but live from income earned elsewhere. While some are retired, others are economically active, mostly in large cities. Amenity migration is closely linked to, and heavily dependent on, modern transportation and information technologies.

"It is the era of the educated. But once young people are educated, they run away. Those who have intelligence and money are coming to the mountains, and our people are running away to earn money."

- *Woman farmer, India*

Dependence, risks and opportunities in mountain tourism

Tourism is the world's leading industry. Since 1950, total annual expenditure on tourism has risen from \$2 billion to \$444 billion in 1998, and the number of international arrivals has reached 625 million. According to the World Tourism Organization, turnover in the tourist industry has risen at a rate of 4.7% in recent years. Tourism now accounts for 6.3% of international trade and is growing faster than any other economic sector, with enormous potential for expansion. However, the revenues generated by tourism are unevenly distributed worldwide. Today tourism provides approximately 210 million jobs -

10% of the world's population is involved in tourism. Seacoasts, cities, and mountains are the most important tourist destinations.

Despite its impressive growth, international tourism exhibits vulnerability. In the 1990s, economic recession affected tourism more severely than other sectors. Tourism is sensitive to currency crises, political instability, terrorism, and disruptions in traffic, transport, and communications systems. Pollution and environmental threats also influence tourist demand. Volatility of demand is a significant market risk, as tourist services cannot be produced and kept in stock.

Global tourism - global competition

Tourist destinations, including mountain regions, now compete with each other on a worldwide scale. Tourist destinations are complex systems of production in which product quality depends on an elastic interplay among the branches of the economy involved. International accessibility to new destinations has intensified the pressure of competition among them, while advances in media technology have increased their visibility. As a result, demand no longer depends on season or geographical location: these can now be chosen virtually at will. Thus winter in the northern mountains competes with summer in southern latitudes, while cities and cultural points of interest are alternatives available year round. Landscape, nature, and snow, as well as cultures that have been preserved more or less "intact", are all important features that make mountain destinations attractive. Rates of growth in new markets and destinations in South East Asia, Latin America, and Central and Eastern Europe reflect a trend that contrasts with the situation found in domestic Tourism. In traditional tourist countries, the domestic tourist trade usually accounts for more than 50% of total revenues. New tourist markets, on the other hand, have a much higher proportion of international tourism and are thus dependent on international capital, which increases their vulnerability. International capital, which plays an increasingly important role in the growth of tourism, has few links to specific locations and is also risk-averse. Destinations that hope to attract international capital must therefore make major investments that require much experience and know-how. However, the need to earn an immediate return on investment can lead to situations in which international capital is used to exploit new tourist destinations and then abandon them. Developing countries and undeveloped regions are pinning their hopes on tourism because of its enormous potential for employment. But in order to exploit value chains in the tourist industry to the fullest extent, the industry's many suppliers, from the transport sector to banking services, must be well developed. Mountain regions that open themselves to tourism without this infrastructure run the risk of seeing most of the value added by their inputs ending up elsewhere - often in foreign hands.

Haves and have-nots in international tourism

Tourism revenues are unevenly distributed worldwide. 49% go to Europe, 27% to North and South America, and 19% to Australia, New Zealand and the Pacific island states. Other regions share an additional 5%.

Maintaining competitive advantages

In today's climate of international competition, mountain resorts can only fully benefit from their strategic advantages of location if they are in areas of permanent settlement and/or are easily accessible. Mountain tourism survives on the basis of unique natural scenery, well-tended cultural landscapes, and opportunities for specific sports. It is therefore particularly dependent on the further development of agriculture and forestry, and is also exposed to particular risks. Environmental risks associated with variations in climate and climate change represent a threat primarily in relation to the possibility of more frequent natural disasters and, in many mountains of the industrialized world, uncertainty regarding the reliability of snowfall. Traditional methods of land use are disappearing with the decline of agriculture and forestry in areas where forced migration occurs due to poverty, or where forced expansion of infrastructure for tourism puts undue stress on the local economy. In addition, the loss of social and economic integrity and cultural authenticity, resulting from the rapid expansion of tourism, is irreversible. This reduces the special attractiveness of mountain regions in countries with no experience of tourism. Mountain regions have strategic competitive advantages in tourism that can be maintained - or which must be created - based on concepts of sustainable development. *(Paul Messerli)*

Tourism: an arena for big business

The world's 200 largest hotel chains, with a capacity of 2.7 million rooms, represent a 27% share of global hotel capacity.

Tourism and climate change

Tourism is the movement of people from their homes to other destinations; long-distance movement at the end of the 20th century relies mainly on the combustion of fossil fuels. Thus, global tourism is closely linked to the central global environmental issue of climate change. Tourism accounts for about 50% of traffic movements; rapidly expanding air traffic contributes about 2.5% of the anthropogenic production of carbon dioxide. Thus, tourism is more than an insignificant contributor to the increasing concentrations of "greenhouse gases" in the atmosphere, which are expected to cause a higher average global temperature, altered precipitation patterns, and changes in frequencies of extreme events.

These predicted changes might have many effects on mountain tourism. Among the principal attractions of mountain regions are their landscapes, which may alter significantly as changes in temperature and precipitation lead to new patterns of natural ecosystems and affect land uses. Attractive and endangered animal and plant species may die out or move, influencing economies which rely on them. A further important component of many mountain landscapes is their glaciers. In most parts of the world, these have been retreating in recent decades, with important implications for summer tourism. As this process continues, these landscapes will continue to change. In the short term, water supplies will increase but, as the glaciers shrink and disappear, water shortages will result.

Billions are at stake

For winter sports, particular attention has focused on rising snowlines. In Switzerland, a 2 C increase in temperature would bring an annual decrease in winter sports revenue of US\$ 1.7 billion. This is only one of many potential direct impacts on tourist resorts. Rises in temperature may also endanger installations and access networks through the melting of permafrost, destabilization of rocks and scree, and increases in the frequency of landslides and mudflows. Locations depending on their sunny climate, particularly sun terraces, would be particularly hard-hit by a higher fog line. Equally, the health risks of increasing levels of ultraviolet radiation may concern many potential tourists.

Mountain tourism may be particularly sensitive to climate change, both through the impacts mentioned above and through changes in seasonality, new competition from other destinations, and increases in the prices of fossil fuels, which are a major component of the cost of tourism to distant locations. To sustain mountain tourism in a period of climate change will require careful and informed planning and marketing. *(Hansruedi Müller)*

Mountain tourism: reconciling growth with sustainable development

Mountains, together with coasts and cities, are the most important tourist destinations. The Alps alone account for an estimated 7-10% of annual global tourism turnover. Long recognized as places of sanctuary and spiritual renewal, mountains will become even more attractive as places of escape in a rapidly urbanizing world.

Tourism as a potential corrective to global economic disparities

Just as mountains present interesting prospects for tourism, tourism presents remarkable opportunities for sustainable mountain development. Thanks to tourism, many mountain communities and valleys are among the most affluent and prosperous within their regions. In long-established mountain tourist

regions in the Andes, the Alps, the Rocky Mountains or the Himalayas, tourism provides up to 90% of regional income. Tourism has greatly improved access, communication and infrastructure, and levels of education in previously remote, resource-poor areas beset by problems of survival and out-migration. As shown by the examples from Central Africa and Madagascar, tourism is also increasingly perceived as an economic alternative in resource-rich tropical mountains and uplands facing rapid rural population growth and increasing strain on natural resources. Yet tourism is important beyond local and regional levels. For a number of developing countries, tourism revenues rank among the major sources of foreign exchange, and the share of these countries in global tourism has been increasing over the last 20 years in terms of both revenue and tourist numbers. Tourism is thus a potential corrective to the trend of widening global economic disparities.

Priorities for mountain tourism

However, the growth of tourism does not necessarily lead to sustainable mountain development. Mountain regions are highly diverse in terms of environment and culture, and with respect to their position in national economies. Tourism development must therefore be based on site-specific conditions and assets. This can help mountain destinations to achieve distinct strategic positions in global tourism markets, but it also implies adopting a multi-level and multi-stakeholder approach including local communities, governments, political decision-makers, NGOs, and the tourism industry. The experiences from Huascarán National Park, Peru, and the Appalachians, USA, which are presented in this brochure, are but two of many examples. Site-specific tourism development also implies consideration of environmental and sociocultural aspects. With increasing numbers of tourists faced with a growing choice of activities and destinations, managing the future of mountain environments becomes a major challenge. Current trends in tourism, especially in mass tourism, are not exactly environmentally friendly: the share of long-distance tourism is increasing, while the duration of stay is decreasing. In many mountain areas, an accelerated growth of resource-consuming forms of tourism can be observed, as can be shown by the growing number of adventure and leisure parks and by the increasing popularity of trend sports such as heliskiing and hydrospeeding. Tasks ahead include minimizing and reversing the degradation of environmental resources, maintaining and enhancing biodiversity, and safeguarding the aesthetic features of landscapes. Environmentally concerned tourism can provide local communities with means for nature conservation, as shown by the examples from Mexico and Switzerland.

"Tourists always take photos of us women without us knowing. Then they will show them to friends and give them to magazines and videos... if a photo of a woman is in a magazine, nobody here will want to talk to her and her family."
-*Woman from Hunza, Pakistan*

The issue of cultural integrity

What distinguishes tourism from many other industries is that producers and consumers come into close proximity - even if they do not interact. Direct and indirect forms of exchange between tourists and local communities are thus inevitable. Nor is tourism the only agent of change in a world where modernization has reached the most remote places. How can cultural integrity be maintained and respected in a rapidly changing world? It is difficult enough to establish standards for environmental sustainability; how can we possibly establish standards for cultural integrity? Culture is a process of change and transformation. Mountain communities should be free to adopt new ideas and trends, within political and economic structures that allow them freedom of choice and participation on equal terms in tourism development. Otherwise, they may not have the capability to respond to the changing demands of tourism and keep abreast of new developments in this global industry. This freedom may also make it easier for them to cope with negative aspects of tourism such as increasing local price levels, local equity problems, and economic risks.

"There is no alternative to tourism. There is no industry and the private sector is negligible, land holdings are very small and the future of agriculture is not bright with an increasing population."
- *Civil servant talking about Hunza, Northern Pakistan*

Safeguarding against volatility

Tourism, especially international tourism, is a volatile business. The flow of tourists to any given destination may alter or cease rapidly owing to shifts in demand for certain activities or types of destinations, political instability, or perceived or actual risk. In addition, the tourism industry is facing an increasing problem of overcapacity, and big business, which is less attached to specific destinations, is playing an increasingly important role. Mountain tourism must therefore be embedded in an overall concept of sustainable mountain development, with a view to diversifying mountain economies in order to prevent one-sided dependency on tourism, reduce leakage of revenues, and increase local and regional multiplier effects - as well as environmental and societal benefits.

Creating opportunities for the 21st century

Tourism and mountains: a precarious balance

In an increasingly urbanized world, mountains are primary tourist destinations not only because of their beauty and their natural and cultural diversity, but also because they provide opportunities to escape from the stresses of modern life. But in the long term, the diversity and attractiveness of the mountains will

depend on careful, far-sighted and sustainable management of their resources. If this - rather than short-term economic benefit - is respected as a basic principle, tourism can provide significant opportunities to maintain the diversity of the mountains and their role as a living space.

Mountain tourism and natural diversity

Remarkable mountain landscapes are the setting for many mountain tourist activities. Mountains are focal points of global biodiversity, particularly in tropical and subtropical regions, but also in the temperate zone, where they retain a greater number of species than adjacent lowlands, impoverished through centuries or millennia of human use. Many mountain areas with the greatest biological and landscape diversity are parks or other types of protected areas. In many cases, this diversity results from, and must be maintained through, human intervention. The management of mountain areas must strive for a careful balance between the protection of natural resources, the needs of local people, and the desires of tourists.

Mountain tourism and cultural diversity

Mountain people have a rich cultural heritage, including traditional practices, buildings, and ways of life. One key element of this heritage is recognized by the existence of many sacred places in mountains - not only for pilgrims, but also for local people. The cultural heritage of mountains is often threatened by tourism; yet tourism can also provide opportunities for mountain people to maintain their specific identity and to inform and educate tourists about their heritage. In the long term, cultural heritage is a key element of the attractiveness of mountain regions for tourists - and tourists should be aware of this heritage; it must not be sacrificed for short-term benefits.

Mountain tourism and its stakeholders: responsibilities for sustainable development

For those concerned with the sustainable development of mountain regions, there are many challenges and opportunities in balancing the local conditions of individual mountain communities, valleys, and regions with the demands of tourism - a dynamic global industry. This context was clearly recognized in Chapter 13 of Agenda 21, which noted the value of tourism for diversifying mountain economies and sustaining the livelihoods of mountain communities. Mountain tourism involves many stakeholders. As outlined in the following paragraphs, concerted action is needed to guarantee that they work together to ensure that mountain tourism is truly an opportunity for the 21st century.

Careful use of mountain resources, protection of unique environments, maintenance of biodiversity, and safeguarding the needs of local people must be balanced carefully against the wishes of tourists. The tourism industry has a

great responsibility in this regard which, unfortunately, has not always been acknowledged up to now. UNESCO has designated 42 World Heritage Sites and 141 biosphere reserves in mountains.

The challenges ahead for mountain communities

Every mountain community includes a great diversity of individuals and groups - individual citizens, entrepreneurs, communal groups, officials - each with specific interests in the local economy and the resources on which it depends, with or without tourism. In order to provide a flexible and appropriately broad portfolio of services, community members need to recognize the diversity of multiple and changing demands in tourism. Strategic positioning is a key word here, and it must be done in the context of a specific local image based on unique environmental and cultural assets. It should be linked to activities that build on local knowledge and tradition to ensure that tourists respect the natural and cultural diversity of the places they visit. Tourism constitutes part of a diverse local economy - other economic sectors must be maintained, recognizing that tourism is a business that is usually seasonal and typically unpredictable over the longer term. Income from tourism should be reinvested not only in tourism, but also in other elements of a sustainable economy and environment.

The challenges for mountain communities:

- Maintain a stake in tourism
- Diversify the local economy
- Think and invest beyond tourism

. . . for national governments:

In their policies on mountain tourism, national governments need to recognize the specificities and constraints of mountain conditions, and also the potential complementarities between mountain and other destinations. Decentralized and participatory decision-making is called for in this regard.

As mountain tourism is intricately linked to many other economic sectors, consistent sectoral and regional policies are required to address it. A significant proportion of the revenues from mountain tourism, especially those accruing outside mountain regions, should be reinvested not only in tourism, but to ensure long-term sustainable livelihoods for mountain people. All of these actions require adequate, accessible, consistent, and transparent information.

The challenges for national governments:

- Develop and communicate consistent sectoral and regional policies that include tourism

- Reinvest tourism revenue in sustainable mountain development

. . . for development agencies and non-governmental organizations:

There is need for development agencies, both governmental and non-governmental, to recognize that tourism - including modern forms- provides opportunities for locally-adapted sustainable mountain development, even in peripheral locations. Support should be targeted both to enhance the conceptual capabilities of recipient governments and NGOs to take advantage of such opportunities and to provide education and training in tourism services.

The challenges for development agencies and non-governmental organizations:

- Recognize the importance of tourism, including its modern forms, in mountain development
- Foster capacity-building in sustainable forms of tourism

. . . for research institutions and organizations:

Institutions funding and conducting research on tourism would do well to target their resources to ensure that both tourism and amenity migration are better understood. This requires long-term multi-disciplinary studies, and also the collaboration of scientists with other stakeholders, particularly members of mountain communities, in all phases of research - from problem definition to the dissemination of results. These results should be clearly communicated to the diverse stakeholders, and used as the basis for ongoing monitoring. Encouragement - and financial support - should be given to projects involving researchers and practitioners from different regions, to facilitate exchange of experiences and know-how regarding the challenges of including tourism in strategies for sustainable mountain development.

The challenges for research:

- Exchange and disseminate experience and know-how
- Develop concepts of sustainable mountain tourism in close collaboration with mountain communities and the tourism industry

. . . for the tourism industry:

Working with local communities and governments, those involved in the national and international tourism business could internalize concepts of sustainability, both environmental and sociocultural, in their practices in mountain regions. Such internalization would recognize the complementarity of mountains and other regions as destinations, as well as the specific characteristics of mountain regions. Global bodies such as the World Tourism

Organization (WTO) and the World Travel and Tourism Council (WTTC) could lead the way in developing a specific code of conduct which takes these characteristics into account. One topic in such a code could relate to the role of mountain landscapes as a key element of the image of mountain tourism, and the particular opportunities that this provides for appropriate design and technological development. In pursuing such development, there is a need to involve local people through consensus-building and targeted investment. At the global level, the reality that many mountains are at the far end of transportation networks, and the likelihood that global environmental policies will lead to reductions in short-stay and long-distance tourism, must be recognized. Consequently, both regional organizations and international organizations, such as the WTO and WTTC, should recognize the need to promote domestic and regional tourism.

The challenges for the tourism industry:

- Promote regional and domestic tourism
- Acknowledge responsibility and act with a view to enhancing compatibility between tourism and sustainability in mountains
- Respect local populations and accept them as equal partners - and communicate this respect to tourists

New initiatives - towards 2002

The year 2002 will be both the International Year of Ecotourism and the International Year of Mountains. 2002 thus presents particular opportunities for the collaboration of all mountain stakeholders, with a view to ensuring that tourism plays a constructive role in the sustainable development of the world's mountain regions into the 21st century. There is a need to reconcile - more satisfactorily in future than has often been the case in the past - the ends of sustainable mountain development and the needs of the tourism industry.

CAPTIONS

Bedouins meet tourists. Mount Moses, Sinai Desert, Egypt. (Still Pictures N. Dickinson)

Frontispiece: "My home". Ink drawing by 12-year old Chen Shui Hui from Jiaju, Eastern Tibet, 1993. (Courtesy M. Ryser)

Photo: Bird-watching, Mount Kupe, Cameroon - an example of special interest tourism. (Still Pictures M. Edwards)

Photo: Facing Kanchanjunga, Himalaya. (D. Morris)

Photo: Huascarán National Park is reintroducing llamas to carry trekking equipment, with a view to strengthening local participation in tourism and better conserving the park's fragile grasslands. (TMI archives)

Photo: The town of Huaráz, with Huascarán, the world's highest tropical mountain (6768 m), in the background. Population around the park has been increasing steadily, and so have tourist numbers. Balancing nature conservation and tourism development is thus a major task in Huascarán. (TMI archives)

Photo: Mule drivers training. Training is important for enhancing local-level participation in the tourist industry. (TMI archives)

Photo: Whistler Village in summer: the award-winning pedestrian village is the heart of the Whistler Experience. Ground floor commercial, and upper floor lodge and hotel units restricted to visitor occupancy, ensure year-round tourism. (P. Morrison/Whistler Resort Assn.)

Photo: The resort community of Whistler in wintertime. Renowned for its skiing terrain, Whistler also has year-round activities. Schools, a health care facility, a fitness center and a public library are also available. (R. Lincks/Whistler Resort Assn.)

Photo: The valley trail in Whistler covers 34 kilometers and connects every residential area with the village and major valley parks. It provides one of the most popular summer recreational settings as well as a good transportation network for commuting on foot or by bicycle. (L. Rathkelly/ Whistler Resort Assn.)

Appalachian landscape in autumn. ((c) J. Clark)

Cherokee Potter. The Cherokee Indians, a Native American people with territory in western North Carolina, produce crafts for sale through an arts and crafts co-operative. (HandMade in America)

Craftsperson weaving at a traditional loom at Penland, a historic site on the Craft Heritage Trails. Founded in 1929, Penland School of Crafts symbolizes the revival of traditional crafts in Southern Appalachia. (HandMade in America)

Mountains of the Sierra Juarez, Mexico. Income from ecotourism helps secure land rights for indigenous communities and stem migration of youth to urban areas and the United States. (BALAM)

Above: Once a center for coal mining, Longyearbyen, Svalbard's main settlement, has managed to survive the coal crisis, thanks to growth in tourism and polar research. (B. P. Kaltenborn)

Below left: Cruise ship tourists come ashore for lunch. Cruise ship tourism is large in numbers but less important than land-based tourism in terms of environmental impacts and economic benefits. (B. P. Kaltenborn)

Right: Hikers in inland Svalbard. Tourism is one of the few possible land uses in this arctic wilderness. (B. P. Kaltenborn)

Below right: Farming, important for maintaining the traditional cultural landscape and securing high levels of biodiversity, has largely benefited from tourism revenues. (Grindelwald Tourism)

Host to over 20,000 visitors on peak days, Grindelwald has largely managed to maintain its rural character. (Grindelwald Tourism)

Left: Bird-watching at a high point in the Dadia Forest Reserve, Greece. Ecotourism has brought visitors from all over Greece to this formerly remote and isolated area. (K. Pistolas)

Right: Women from Dadia, Greece: tourism has enabled local women to broaden their activities and to supplement their income in a way which has now become socially acceptable. (A. Wittgen)

A member of Dadia's Women's Co-operative drying dough used for baking traditional pies on a wood-burning stove. (K. Pistolas)

Left: Mount Kasbek, among the highest peaks in the Caucasus Mountains. (M. Price)

Right: Village along the ancient Georgian Highway. (M. Price)

Trekkers in a valley in South Ossetia, Georgia. Political unrest has brought an end to tourism in this part of the Caucasus in recent years. (H. Meessen)

View of Taybet, Jordan. The old village (left) has been restored and converted into a hotel complex. (Still Pictures M. Edwards)

Left: Pathway between hotel rooms. Traditional architecture has been preserved as much as possible. (Still Pictures M. Edwards)

Right: While the hotel was built around the principle of water efficiency, the demands of international tourism made it necessary to include a swimming pool - an environmentally questionable compromise in this dry area? (Still Pictures M. Edwards)

Traditional handicrafts are made in the village by local people. (Still Pictures M. Edwards)

An example of the park-and-people conflict: land use and land cover, Simen Mountains National Park

Below left: Rural road construction through the park: a blessing or a curse for nature protection and tourism development? (R. and U. Schaffner)

Conflicts between long-established land use (shifting cultivation) and nature protection. (E. Ludi)

The Walya ibex, a red-listed mountain goat, is a primary asset for tourism development in the Simen Mountains. The ibex population appears to have been increasing again in recent years due to better control of poaching. (B. Nievergelt)

Right: Trekking tourism in a spectacular landscape and World Heritage Site. (H. Hurni)

Left: Farming steep slopes in the Virunga area, Rwanda. Pressure on land and the impacts of civil war are the main threats to conservation of the gorilla habitat. (A. Byers)

Right: Afromontane forest in the Parc National des Volcans, Rwanda, the habitat of the remaining mountain gorillas. (A. Byers)

Parc National des Volcans, Rwanda: endangered species such as this young habituated mountain gorilla, of which only about 630 remain, are a most valuable but highly fragile basis for tourism. (A. Byers)

Left: How genuine is the interest of tourists in local culture? (M. Ehringhaus)

Right: The village of Ambatovory, adjacent to Ranomafana National Park, showing farming area and park forest. (M. Ehringhaus)

Isalo National Park, Madagascar. The country's mountain landscapes and their diversity have a great and still largely untapped tourism potential. (ANGAP)

The Golden Lemur (*Haplorhina aurea*) was discovered in 1986. Madagascar's mostly endemic fauna and flora are the main attractions for mountain tourism. (ANGAP)

Left: Weekly market in Namche Bazar. Tourism has given a boost to the local economy and regional trade. Over 80% of local households in the Khumbu region derive their income largely from tourism. (T. Kohler)

Right: Small hydroelectric power station, Sagarmatha National Park. Hydro-electricity can reduce the pressure on firewood, if capacities are sufficient and prices competitive. (B. Mattle)

Tengboche Monastery, Sagarmatha National Park. Local culture has remained remarkably intact despite increasing numbers of tourists. (T. Kohler)

Left: A solid asset for tourism development: the world's highest mountain, Everest, 8848 m, behind, with Lhotse, 8501 m, to the right. (C. Bichsel)

Right: A remote trading village in the 1950s, Namche Bazar has grown into one of the most developed tourist resorts in the Himalayas. (C. Bichsel)

Right: Altai girl wearing traditional dress. (O. Frei)

Below: Ancient stone carvings showing deer testify to the rich cultural heritage of the Altai Mountains. (K. Haeberli)

Altai: this sparsely populated mountain area in Central Asia is an un-spoiled, remote wilderness, which has hardly been touched by tourism. (O. Frei)

Left: Local culture and hospitality are important, but often overlooked, assets in tourism development. (O. Frei)

Below: Petrol station near the Russian-Mongolian border in the Altai. Poor infrastructure can be a problem for tourism development. (K. Haeberli)

Educational tourism can help sensitize the younger generation to environmental issues. Soraksan National Park, Republic of Korea. (M. Price)

Trail map in Odaesan National Park, Republic of Korea. Information such as this helps direct visitors to places of special interest - and keep them away from fragile areas within the park. (M. Price)

Ice-covered rhododendron flowers in spring, Republic of Korea. (Seong-il Kim)

Economic migrant neighborhood in Baguio City. Economic migration, a result of the booming tourism sector, is a serious threat to watershed management. (L. Moss)

Town center, Baguio City, Philippines. Managing infrastructure development, including road traffic, is a major challenge in the Philippines' most important mountain resort. (L. Moss)

Uluru (Ayers Rock), Australia. Climbing the mountain ignores local sacred beliefs and is thus discouraged by tourist authorities - successfully, as the decreasing number of climbers shows. (P. Godde)

Left: Mount Kailas, Tibet, the most sacred mountain in the world for nearly a billion people in Asia, including followers of Buddhism, Hinduism, Jainism and the Bon tradition. Pilgrims travel for weeks across the Himalayas and the Tibetan Plateau to circumambulate the peak as they would a temple or man-made shrine. (E. Bernbaum)

Below left: Pilgrims crowding the steps of the main temple at Badrinath, the major Hindu pilgrimage place in the Indian Himalayas. Every year, about 450,000 pilgrims visit this place between May and October, when the shrine is open. (E. Bernbaum)

Below: Xuan Kong Si (the "Temple Hanging in Thin Air") perches on a cliff facing Heng Shan, the northernmost of the five principal sacred mountains of China. The Chinese people have long found mountains ideal places for spiritual and religious practices, ranging from meditation and study to pilgrimage and sacrifice. (E. Bernbaum)

Cable car at Disentis, Switzerland. Economies of scale and scope are important for mountain tourism service providers such as cable car companies and hotels. (Cable Cars Disentis)

Below right: Cash-flow of Swiss cable railway companies (1996). Data: Swiss Cable Ways (SVS)

Ski-jump, Lillehammer. Imposing as they are, winter sports facilities create an ambiguous impression in summertime. (HR. Müller)

Mega Events have shown a tremendous increase in size in recent decades - growing out of all proportion for most mountain regions with their largely rural backgrounds. (J. Krauer)

In search of thrill and adventure - river rafters on the Simme River, Switzerland. Trend sports have found new ways of making profitable use of mountain resources and environments. (Courtesy U. Balsiger)

Accessibility is a key word in trend tourism. Helicopter in the Canadian Rocky Mountains. (M. Price)

Amenity migration near Kranj in Slovenia. (T. Kohler)

Left: Snowboarding - a new trend in winter sports activities, a favorite especially among the younger generation. (T. Minger)

Right: Rock climbing, a traditional mountain tourism activity. (Still Pictures H. Saxgren)

Well-tended cultural landscapes are an important asset for mountain tourism. Pays d'Enhaut, Switzerland. (M. Price)

Sanatorium in Tatra National Park, Slovakia. Health tourism, an old form of recreation and recovery, is one example of the competitive advantages of mountain areas. (M. Price)

Mountain landscape in Eastern Tibet. Unique natural scenery is a key asset of mountain tourism - and should be preserved and marketed as such. (M. Ryser)

In today's globalized tourism industry, mountains face increasing competition from other tourist destinations such as seacoasts. (Still Pictures M. Edwards)

Like most other glaciers in the world, the glaciers of Mount Parinacota, Northern Chile, have been re-treating in recent decades - an effect of climate change, which can have detrimental effects on tourism due to loss of scenic beauty, and which will result in declining water availability down-stream over the long term. (M. Grosjean)

Mexico City - a mountain area affected by rapid urban growth. Urbanization will lead to more people seeking relief from polluted urban environments. At the same time, an increase of carbon dioxide in the atmosphere might jeopardize the future of mountain tourism - both in industrialized and developing countries. (Still Pictures J. Etchart)

Below left: Snow cannon in operation, Scuol, Swiss Alps. Installations such as these are increasingly used to secure a sufficient snow cover in many winter tourist resorts worldwide. Rising snowlines due to global warming will deprive many of these destinations of their most precious resource - and hence of their main means of livelihood. (D. Siegrist)

Below: Centre at Vanh Vienh, Northern Laos. Changes in the timing and intensity of the monsoon would greatly affect those who depend on tourism in the mountains of South Asia. (T. Kohler)

Cultural landscape with traditional architecture in Eastern Tibet. Will tourism help preserve it? (M. Ryser)

Establishing codes of conduct. Signboard in Kanchanjunga National Park, Sikkim. The promotion of an ethic of responsible tourism has helped decrease fuelwood use by 25%, while local revenues from tourism have gone up 25%. Tourism is an important sector in Sikkim's economy, with over 120,000 visitors in 1997. (Nandita Jain, Ang Rita Sherpa)

Flamsdalen railway, Norway. Modern transportation systems such as railways have always been important for tourism development - in mountain areas as elsewhere. (M. Price)

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