ICIMOD
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FOR SUSTAINABLE DEVELOPMENT IN THE HINDU KUSH-HIMALAYAS

In this Issue

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Policy Focus for Mountain Development

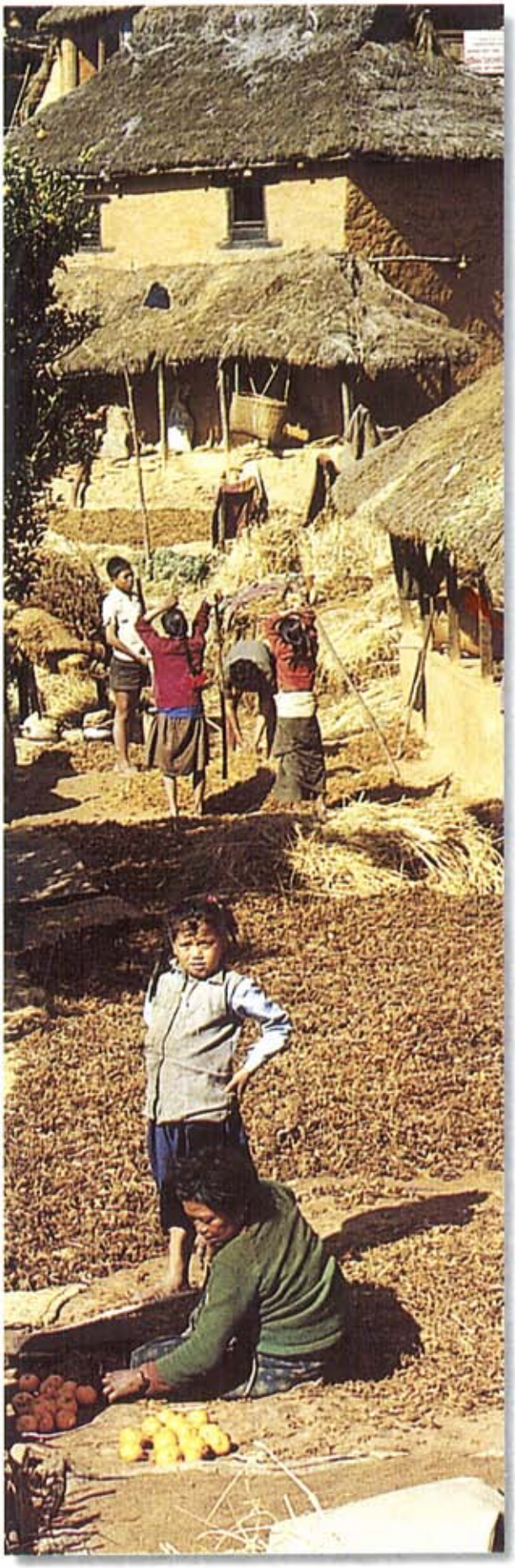
Policy preamble.....

Mountain development has become a new value. Like most other values, one either believes in it or does not. If one does, this is a good enough reason to start looking for ways to promote it. Without this kind of belief, mountain development will always play second fiddle to the needs of the contiguous plains. The history of recent development events in mountain areas of the Hindu Kush-Himalayas has shown that when policies have been guided by this value and belief, a whole array of favourable policies have emerged. Obviously one policy cannot be a panacea forever. With changing circumstances, new responses are always needed everywhere - even in the case of the much acclaimed new tigers. What have been these favourable policies? First, a strong policy commitment to the mountain people - their education, particularly their living conditions. Second, a policy focus on improving the economic activities of mountain households through increased support to infrastructure and access to services. Third, a policy focus on capacity building - a realisation of the need for local institution building. Himachal Pradesh's experience is an example of policy focus on all three aspects. Nepal's experience with tourism development demonstrates the second and third aspect. The Aga Khan Rural Support Programme in Pakistan demonstrates the third aspect and has now successfully embraced both the first and the second aspect also. The main challenge remains the multiplication of workable policies on a wide scale.

What about some of the policy difficulties in mountain development? There is no shortage of policies that are continuing but which have had little positive impact. Many anti-poverty policies that had very loosely defined target groups and areas and attempted to deal with many problems have not much to show except their expenses. Similarly, many non-specific, resource conservation activities are equally discouraging. Success and failure are relative concepts in terms of time, space, and people. Some activities work well in one place but are a miserable failure in another. It is the wisdom behind the experience of both successful and unsuccessful policies that is the foundation of progress and is also the basis for mountain development.

This present newsletter is an effort to focus on policies. Policies, like any production system, also have a set of inputs and some expected outputs. An adequate proportion of right factors is needed to get good quality outputs. The policy system is not much different. Wherever good quality inputs have been appropriately integrated, policy outputs have been highly satisfactory. Wherever inputs are half baked, outputs have been unsatisfactory.

Mahesh Banskota



Mountain Perspective and Policies

N. S. Jodha

The reason why development interventions appear to be ineffective (resulting in persistent poverty), although development efforts are increasing all the time, is because they have no mountain perspective. This leads to the paradoxical situation in which, in terms of development efforts, more and more energy is expended on ever decreasing returns.

What is a mountain perspective? Put simply, 'a mountain perspective' means understanding or explicitly considering specific mountain conditions and their imperatives in designing/implementing interventions in mountain areas. These conditions include limited accessibility (physical isolation, high transport costs, and poor road infrastructure), fragility, marginality, diversity, niche, and human adaptation mechanisms. Use of a mountain perspective implies an understanding of mountain specificities, their bio-physical roots, their manifestation and implications, as well as their imperatives in terms of appropriate responses to these conditions.

Some of these conditions, such as inaccessibility, fragility, and marginality, jointly or individually limit (a) the mountain area's capacity for intensive use and for absorbing inputs, (b) the production opportunities making them risky, and (c) the exposure to and replicability of development strategies from the plains. They also restrict the scope for upgrading and manipulating the resource base (even through infrastructural investment and external support) to increase the intensity of input use, secure advantages of scale, and generate surplus and trade it at equitable terms of trade. On the other hand, if properly harnessed, diversity, niche, and people's adaptation experiences can offer useful opportunities for sustainable use and development of mountain areas.

Disregard of the above conditions and their imperatives by policy planners and programme designers leads to extension of development models and methods designed for the plains to mountain areas; such models being inappropriate. Table 1 depicts such policy-programme approaches and their dominant orientation.

The table gives a general picture. There are some exceptions to the situation, in which, consciously or unconsciously, development interventions were designed to match the imperatives of specific mountain conditions and proved quite effective and relevant to mountain areas. This is an example of the validity of the mountain perspective framework (MPF).

The Mountain Perspective: From Conceptual Framework to an Operational Tool

The MPF should not be treated as only a means of indicating gaps in prevailing development approaches. Since 1988, when ICIMOD first articulated the concept, it has been used by different agencies as a relevant framework for discourse on mountains; as an important focus of development documents/plans; and as a tool for designing micro-level activities by NGOs. However, the concept has not yet been used as a popular tool for evolving and designing development interventions in mountain areas.

To promote wider application, the two most important aspects that should be given priority are operationalisation of MPF in a practical context and sensitising policy-makers and planners to the framework and its utility. The former involves developing and promoting easy to use methods of application in diverse areas and interventions. The focus on relevant mountain conditions needs to be differentiated on the basis of dominance of specific conditions (e.g., inaccessibility or fragility, etc) and the nature and magnitude of linkages between different mountain specificities. This will involve a reiterative process of making and revising the focus on key constraints and opportunities characterising a development unit/area. Work on this aspect is currently in progress at ICIMOD.

Regarding the sensitisation and familiarisation of policy-makers and planners, ICIMOD started interaction and dialogue with people associated with policy formulation and implementing agencies in selected HKH countries where the implications of disregarding MPF were focussed. Experts from China, India, Nepal, and Pakistan closely associated with policy processes indicated that the mountain areas themselves and their development concerns (even in the largely mountainous countries) often have a marginal place in the national development policies and strategies. Exploitation of mountain resources for the mainstream economy (e.g., for timber, hydropower, etc) is an exception. Inaccessibility, fragility, and diversity render mountains invisible to mainstream decision-makers and this seems to influence policy-makers' approaches to mountain areas in all countries under review.

However, of late, one finds a slow emergence of awareness about mountain problems, particularly in response to global discourses (e.g., UNCED's Chapter 13, Agenda 21) and lobbying by environmental NGOs, and, in some cases, pressure from donors. The main outcome of this awareness is the creation of organizations or special programmes/projects on different aspects of mountain situations and allocation of resources through grants or subsidies for development/welfare activities.

Notwithstanding, the structure and orientation of these institutions/interventions are generally top-down and rarely differ from their counterparts in the plains. In other words, design and functioning of interventions are rarely connected to the imperatives of mountain conditions.

One aspect related to the prevailing situation that emerged during the dialogue with policy-makers is that, in most cases, projects lead to the gradual evolution of policies rather than the other way around. Projects, in turn, focus on specific problems and rarely evolve through comprehensive understanding of the imperatives of mountain specificities and their inter-linkages.

Yet another aspect related to the above features is the alleged predominance of donor-driven development interventions. In the context of persistent neglect of mountain regions by national policy-makers; lack of an overall policy framework to guide development interventions; and donor agencies' preference for specific problem-centred, short-term projects; this situation is not difficult to understand.

In order to address the above problems and facilitate incorporation of MPF into the design of development interventions, persistent advocacy and demonstration of its usefulness are needed. This has to be based on concrete evidence about 'the difference' between the effectiveness and impacts of interventions using and those not using MPF. ICIMOD is trying to build an inventory of initiatives that have matched well with the imperatives of mountain specificities and proved more effective than other interventions.

TABLE 1: MOUNTAIN SPECIFICITIES, THEIR POLICY IMPERATIVES AND PUBLIC INTERVENTIONS

Mountain Specificities and Policies/Programme Imperatives (1)	Public Interventions their Orientation and Required Changes				
	General Development Approach (2)	Infrastructural Development (Sp. roads) (3)	Production Programmes (Sp. Agriculture) (4)	Natural Resource Management/Development (5)	Institutional and Social Development (6)
Limited Accessibility Semi-closedness, remoteness and high cost of mobility, and limited dependability of external supplies call for: local resource-centred, decentralized development focussing on improving accessibility	Promotion of mountain development without a mountain perspective, i.e., disregarding the imperatives of mountain specificities; extension of generalised inappropriate approaches/ models to mountains	Selective road development to exploit niche or meet, e.g., defence; need technologies, investment norms evolved in plains; vast gaps in accessible and less accessible areas, need: mountain-oriented approach	Inappropriate extension of programmes, technologies etc. from plains; need specific focus on local resource/input based products with high value, low weight/volume; priority to niche-centred activities/ products	Access. (roads etc) improved to harness selective niche resources (timber, hydropower, minerals) and their overextraction in response to external demand with limited local spread effects	Marginality and voicelessness of communities, continue to influence policy programme approaches, top-down, centralized institutional intervention designed outside
Fragility & Marginality Low usage-capability resources, vulnerable to degradation with intensification; limited, high-risk, low-productivity options; call for: diversified, low intensity resource use to balance the economic and environmental needs; people-centred participatory approaches to address social marginality.	Same as above and cols. 4&6, plus disregard and indifference towards the concerns of mountain communities; need MPF- based approach	General insensitivity of infrastructure works to instability of landscape, accentuating resource degradation, risks, and hazards; high environmental costs; require reorientation of approach, technologies and designs for civil works selective	Promotion of indiscriminate intensification, narrow specialisation; need specific focus on location-specific mix of intensive and extensive resource use; recognition and promotion of indigenous knowledge-based production systems	Strong focus on exploiting niche disregarding environmental and socioeconomic side effects; rapid resource degradation and associated hazards require: reorientation of approach balancing production and protection needs	Physical, economic integration made of mountain/communities the latter marginal entities, this made policy-makers indifferent to their concerns; ineffectiveness of externally imposed interventions, require: empowerment and participatory focus
Diversity[a] Environmental and resource variability as a basis for diversified and location-specific development interventions rather than the generalised, uniform scale, neutral, top-down interventions.	Same as above and col. 4	Exploitation of diverse resources supported by infrastructure and other facilities; physical and market integration adversely affecting diversified systems of resource use	Support to systems focussed on narrow specialisation (e.g., limited crops/crop attributes), eroding diversified production systems; need reorientation to have diverse, location-specific potential	Disregarding range of diversity, only 'selected resources' extracted with negative side effects on other components of diversity; resource extraction equated with management	Decentralized, diversified, and participatory institutional arrangements are a missing dimension of public interventions with top-down, externally evolved approaches
'Niche' (including human adaptation mechanisms and indigenous knowledge systems) as sources of products/activities with comparative advantages to mountains.	Same as above and cols. 4 and 5	Access to niche (mineral, timber, hydropower, tourism, etc) as a guiding factor for infrastructural development; enhanced pressure of external demand and overexploitation of niche with limited local development	Resource extractive approach disregarding/ marginalising micro-niche opportunities and traditional diversification production and knowledge systems	Focus primarily on extraction rather than regeneration and sustainability of resources, indifference towards resources unattractive to the mainstream; traditional resource usage systems ignored	Human adaptation experiences as a major niche of mountain areas ignored while imposing formal interventions for social and institutional development

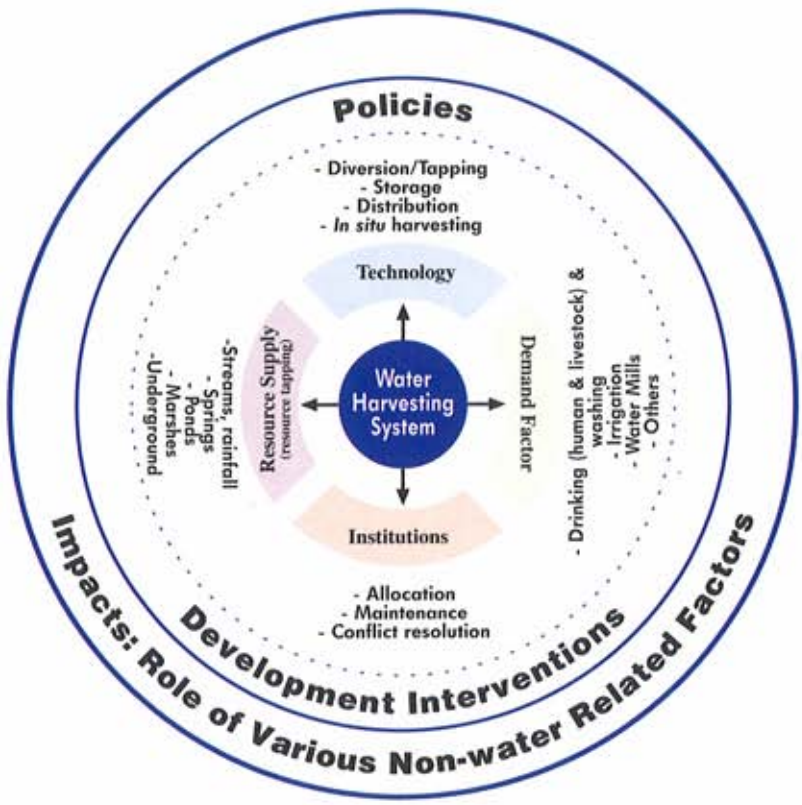
a) Diversity is an overriding feature of all the mountain conditions described here. Accordingly, not all areas are equally fragile or marginal etc. Similarly, the relative importance of each of the mountain specificitY will vary from area to area. The table gives a generalised view of the situation which becomes more pronounced when mountains are compared with the plains.

Sectoral Policy Dimensions

Water Policies and Local Water Harvesting

Mahesh Banskota

An Overview of a Water Harvesting System and Its Components



*Source: Banskota, M. 1999. *Local Water Harvesting Systems: An Overview of Selected Practices in the Hindu Kush-Himalayas*. Kathmandu: ICIMOD.

How do policies look at local water harvesting ? Do they seek to empower local people by granting the control over water and its uses to households/communities? Traditionally, communities have managed water without much help from the government. The Figure shows the different components of a local water harvesting system. There are opportunities for policies to influence these either positively or negatively. Unfortunately many government policies (at least in Nepal) have moved towards creating parallel systems rather than improving existing systems. A recent seminar organized by ICIMOD raised some of these policy concerns. These are drawn mainly from experiences in Nepal.

Customary Water Rights - In all of the countries, even ownership rights of all the water resources in the country are vested in the state, rejecting the customary ownership rights of the community. There is however, recognition of use-rights, although this is also not mandatory. Fortunately, in many of the hill areas of Nepal and India, governments have not felt the need to assert their ownership rights, and most systems are operating as they have over the centuries.

Informal and Formal User Groups - Water laws have been amended or changed to recognise the role of water user groups. However, most of the existing water user groups are informal and, furthermore, there is a strong reluctance on the part of these bodies to become formal. There are many reasons for this. First, these informal groups have their roots in the social, religious, and cultural traditions of the community, and the government does not support or recognise them. Second, there are new rules that have to be followed in order to become a formal group. Third, they fear the loss of autonomy. Fourth, there are transaction costs of various kinds which are not acceptable. As a consequence, many informal groups continue. However, when new development activities have started and a participatory process has been used to mobilise the community, new formal groups have also been established and have functioned quite well.

Policies facilitating the linking of trust, transparency, and technical support appear to be critical in the process of moving from informal to formal groups in local water resource harvesting and management.

Cost-sharing Systems - It is being increasingly recognised that direct beneficiaries of water projects should assume the burden of the project or at least a major part of it. While the existing policy clearly states the role of cost sharing, this is not enforced, giving rise to a situation in which, in the same area, households pay for one project while another is entirely subsidised. The government department follows a cost-sharing approach, but many others working in local water resource development do not. There are important considerations of social justice as well as misuse of scarce resources.

Emergence of Policies for Participatory Forest Management

Anupam Bhatia

Forest policies in the Hindu Kush-Himalayan (HKH) areas incorporate issues of ownership, protection, rehabilitation, use, and management of these important resources. Many government policies, especially those on trade, local governance, human resource development, and infrastructural development, have important bearings on sustainable forest management. A recent policy, which has been increasingly adopted and refined in the region, is on participatory forest management.

The will of policy-makers in the countries of the HKH is evident. In 1990 the Government of ***India*** approved an order to encourage joint forest management in degraded forest areas. Currently, 22 States of India have approved enabling government orders; and these include all the three states of the Western Himalayas - Jammu and Kashmir and Himachal Pradesh in 1993 and Uttar Pradesh in 1997. Three states in the North Eastern Himalayas have also approved similar government orders -- Tripura in 1991 and Arunachal Pradesh and Nagaland in 1997. ***Nepal*** approved a new Forest Act in 1993; and this provides legal support to community forestry and remains one of the most progressive legislations for participatory forest management. ***Bangladesh*** approved a new forest policy in 1994, incorporating the concept of participatory forest management for the first time. ***Myanmar*** gazetted a new forest law in 1992 and issued its first Community Forestry Instructions in 1995. ***Bhutan*** enacted the Forest and Nature Conservation Act in 1995 and approved its revised Social Forestry Rules in 1996. ***Pakistan's*** national draft Forestry Sector Policy of 1998 is currently under discussion and people's participation in forest management is a strong element in the proposed policy. The NWFP of Pakistan drafted, for the first time, a people-centred forest policy in 1997; it awaits discussion and approval. Yunnan Province, ***China***, put into place provisions to auction the tenure of barren mountain areas in 1993; and this stimulated people's involvement in forest management. Forest policies were revised in 1994 in the Tibetan Autonomous Region to encourage and support the involvement of the local population in forestry activities.

Impact of Policies on Participatory Forest Management

There are indications that policies on participatory forest management have had positive impacts; the quality of forests and, in some regions, forest areas have improved.

The improvements in the productivity of community forest resource management have a direct, positive impact on the livelihoods of the local people. Increased supplies of forest products are an obvious benefit, but many local communities report improved water flows in local water sources. Increases in forest management activities, resulting from community management, have also meant increases in opportunities for local employment.

One important outcome of participatory forest management has been the creation/revival of local community institutions. This is amply illustrated by the experiences in Nepal where forest user groups are involved in a variety of community activities from infrastructural development and education to industry establishment. Formation of women's user groups in many areas has been important in increasing the empowerment of women in decision-making.

Promotion of participatory approaches to forest management has also contributed to a better relationship between the government and local people. Many government employees

now find that this gives them a better status and job satisfaction. As part of this participatory atmosphere, many non-government organizations have started to support government and community actions related to forestry.

Key Issues for the Future

A regional workshop on participatory forest management in the HKH region, organized in 1998 by ICIMOD with the participation of senior forest policy-makers from the region, identified many areas that required strengthening. These areas in policy on forestry are summarised below.

Many policies are weak, complex, conflicting, and top-down and do not promote appropriate, participatory forest management. Often, policy and policy guidelines are not backed by legislation. Participatory forest management has not been granted the priority it deserves in national programmes.

Many forestry policies and programmes take into account only the technical and the bio-physical aspects of forestry and have failed to address complex social, institutional, and political realities.

Most policies do not address the issue of security of tenure over land which is being managed in collaboration with local communities. Most policies on participatory forest management are silent on mechanisms for conflict resolution and many do not enshrine the principles of gender and equity. There are no clear feedback mechanisms on policy or mechanisms for regular updating.

Policies on human resource development in forestry were also identified as being in need of a the change in focus. It has been recommended that changing attitudes and behaviour of government staff needs to be given priority.

Web Sites Related to Mountain Policies

Policy and Law Documents and Citations on the Mountain Forum's On-line Library
http://www.mtnforum.org/mtnforum/archives/reportspubs/library/liblevels/lib2c.htm#policy - A comprehensive archives of full-text documents and citations mostly compiled for and during the electronic conference on Mountain Policy and Law held in 1997.

Mountain Policy and Law Report - Draft
http://www.mtnforum.org/mtnforum/whatsnew/mpl/mpl_download.htm
The report of the 1997 Mountain Forum e-conference on "Mountain Policy and Law" is now available for review. Owen Lynch and Greg Maggio of the Centre for International Environmental Law have gone well beyond a simple summary of the conference to give an overview of mountain laws in the context of global human rights and environmental law.

International Environmental Policy Reference Guide, Harvard University
http://environment.harvard.edu/cgi-bin/wrapper?pageid=guides/intenvpol/home.html - This reference guide contains an annotated bibliography of selected international environmental policy resources available from Harvard University libraries and the Internet. It provides a starting point for research in the field of international environmental policy.

LAND POLICIES AND LAND DEGRADATION

Under the Mountain Farming Systems and the Global Mountain Programme, ICIMOD initiated a series of studies in the region to look at the issue of land policies and land degradation. Prof Piers Blaikie of East Anglia University was the principal advisor for the project while Dr. S. Z. Sadeque, a social scientist at ICIMOD, was the coordinator. After almost two years of case study reviews and meetings, they have prepared a synthesis. Some of the important findings are highlighted below.

Examining the evidence from the case studies as well as other sources, the authors argue that agricultural practices and forest clearance have contributed to degradation of the environment. Underlying agricultural practices and forest clearance (there may be others but these were not part of the study) are different types of land policies that have played some role. However, the authors point out that there are also land policies that have controlled deterioration of the environment.

An important aspect of land policy is its dynamic nature. In China, land policy has had a profound impact on the environment with its focus on economic gains rather than on conservation of the environment. Policy shifts have been reported from Nepal. The authors also talk about 'unintentional land degradation' as a result of land policy - referring to nationalisation of forests in Nepal and potato monoculture in the northern areas of Pakistan.

The future of land policy appears to be problematic for a number of reasons. First, there is evidence of a marked receding of state authority in the implementation of laws in most of the areas for various reasons, e. g., poor morale and service conditions of staff, attractive non-official transactions, increase in special interest groups, and development of new priorities.

There is an increasing shift towards participatory planning, and management and experience in this area are still limited. However, most policies only provide what the authors refer to as 'an enabling environment.' If policies are not supported by 'learning organizations' with 'open minds' and new skills, the tendency for 'more paper, less practice' will continue.

Policy Issues on Hazard Mitigation in Mountain Areas

Li Tianchi

Rugged topography in combination with young weak geology, high intensity monsoon rainfalls, and frequent seismic activities contribute to significant mountain risks and disasters in the Hindu Kush-Himalayan (HKH) region.

There are policies that directly influence how people, technical experts, and government officials mitigate mountain hazards. Yet there are other policies in the forest, land use, soil, and water management sectors that could have both positive and negative influences on hazard mitigation. These vary enormously from area to area and from country to country.

National strategies for hazard mitigation

The natural, technical, social, economic, and institutional implications of the increase in damage from mountain hazards are very complex. In the past, hazard mitigation or management was mostly a post-event set of responses in most HKH countries. An integrated management approach from anticipation to preparedness, relief, rehabilitation, and recovery is vital. This change from a curative approach to a preventative one should be taken at the national policy level. In China and India, hazard management is guided by a preventative approach, but, in Nepal and other countries, hazard management is still guided by the curative approach.

Policy related use of modern technologies

By careful planning, design, and appropriate measures, the impacts of most hazards can be minimised, even those of earthquakes. The most effective methods of doing so are through pre-disaster preventative action and rapid measures for repair and restoration. In earthquake and seismic hazard prone areas, earthquake-resistant construction designs and building codes must be adopted. In China and India, earthquake-resistant construction designs and building codes have been developed; and they are strictly adopted in China. In Pakistan, Nepal, and other HKH countries such designs and building codes are being developed. The problem lies in strict adoption and enforcement of these codes through laws and enforcement. Where new construction in hazard prone areas is undertaken, the recommended safe designs must be incorporated into building codes. Where buildings already constructed in such hazard-prone areas are at risk,retrofitting must be undertaken.

GIS, remote sensing, GPS, better databases, more effective monitoring equipment, and improved forecasting and warning systems have been developed by China, India, and Nepal. Monitoring critical landslides and debris flows can avoid the worst impacts of an immediate hazard. In China, 3 recent, large landslides were accurately predicted based on the deplacement information obtained from monitoring systems. As a result, loss of human life and property was reduced substantially (Box 1).

Avoiding landslide areas and debris flow ravines is a basic principle in road construction in order to minimise natural hazards. Hazard zonation and risk assessment methods have been developed for China, India, and Nepal. The problem again lies in strict adoption and enforcement of these techniques according to national construction codes or regulations in building roads and other infrastructure.

Hazard publicity and education

Hazard reduction is not only a government responsibility, publicity using the public media, holding popular knowledge contests, exhibiting and showing relevant popular-science telefilms, and publishing easy to read articles will improve people's awareness tremendously.

There are some policies directly related to education. In recent years, China has given importance to education in natural hazard mitigation. Basic and special curricula on hazard mitigation have been introduced into research institutions and university systems. In addition, basic knowledge of hazard reduction has been incorporated into the courses on geography and basic natural sciences in middle and primary schools. Public education in hazard mitigation has been conducted and supplemented in some hazard-prone areas by rehearsal of hazard reduction. All these activities have

Box 1: Landslide hazard prediction: Examples from China

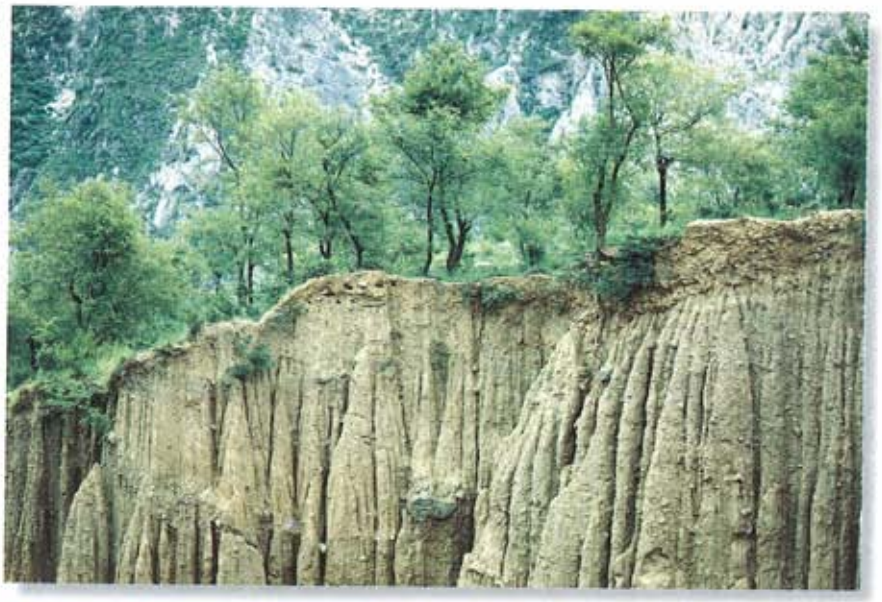
Name of landslide	Type and volume of landslide	Threatened area	Early warning	Failure time	Number of people saved
Xintan	Debris, 18 mm3	Xintan town Hubei	One day before failure	12.6.1985	1,371
Jimingshi	Rock, 0.6 mm3	Guojiaba town, Hubei	One day before failure	09.6.1991	more than 2,000
Huangci	Loess, 6 mm3	Huangci village, Gansu	One day before failure	30.1.1995	1,350

contributed to raising the awareness of the general public. Similarly, in Nepal, the concept and curriculum for mountain risk engineering developed by ICIMOD has been introduced and adopted by Tribhuvan University for masters' students.

Need for upstream-downstream cooperation

In the HKH region, many rivers flow down from the high Himalayas into more than one country. Flash floods related to heavy rainstorms, glacial lake outburst floods, and landslide dam failures cause havoc in the plains downstream. A good deal of what happens below depends on what happens upstream, and the people downstream have little control over it. There is a pressing need for upstream-downstream cooperation. Inter-country flood warning systems should be set up in the river valleys. Such problems should be addressed by relevant international organizations.

Appropriate techniques to control landslide and debris flows in mountain areas would greatly reduce soil erosion and sedimentation in rivers and can make a significant contribution to flood management and sustainable agricultural practices downstream in the plains.



An integrated management approach to hazard mitigation is vital - from anticipation to preparedness, relief, rehabilitation, and recovery.

The role of ICIMOD in mountain hazard mitigation

ICIMOD, since its inception, has been promoting a better understanding of natural hazards in relation to mountain infrastructural development. Various activities have been completed, and these include several training programmes dealing with (1) mountain risk engineering, focussing on improving road construction along unstable mountain slopes and (2) landslide hazard management and control, focussing on a better understanding of mountain hazards and identification of mitigation measures on the basis of reviews of landslide hazard management activities in China, India, Nepal, and Pakistan. The efforts of ICIMOD have mainly been in capacity building at the national and local levels and at international exchange of information and experiences. ICIMOD's efforts in future will be to ensure that these training programmes and training materials are fully used in the regional countries. These efforts also need to be decentralized and widely disseminated by holding national workshops and training programmes and similar interactions at district and community levels.

FACILITATING POLICIES
DISTRICTS OF NEPAL: INDICATORS OF DEVELOPMENT

Pitamber Sharma

The policy-making constituency is a diverse one that includes political decision-makers, legislators, and elected representatives at various levels; bureaucrats and technocrats occupying key positions; and a whole host of non-government groups - including researchers and academics - that influence policy making. Often the facts on which policies may be based are simply ignored or contested, presented in too complex a manner for all the stakeholders to understand, or there may simply not be enough time to comprehend all the facts involved in particular decision-making processes. Simple and graphic presentation of available information can at times facilitate policy orientations.

Districts of Nepal: Indicators of Development is a study that ICIMOD undertook at the behest of SNV/Nepal. The study ranks districts of Nepal in relation to 39 key indicators of development and a series of composite development indices. The ranking and categorisation of districts are displayed in tables and simple maps. This atlas has been made available to all legislators, all District Development Committees, all key decision-makers in all the Ministries and Departments of His Majesty's Government, and to all donor agencies involved in Nepal's development. The publication has had a tremendous response from all categories of users. The atlas does not provide answers but confronts the diverse constituency of policy-makers with questions and, to that extent, facilitates the formulation of better informed and, hopefully, improved policies.

Assessment of Mountain Tourism Policies

T. S. Papola & Pitamber Sharma

Tourism is recognised as an important sector that can contribute to sustainable livelihoods and improved economic opportunities in the mountains. A broad assessment of mountain tourism related policies in Nepal, India, and Pakistan reveals the need for clarity and focus at the policy level in integrating tourism with concerns for local economic development. Issues emerging are highlighted below.

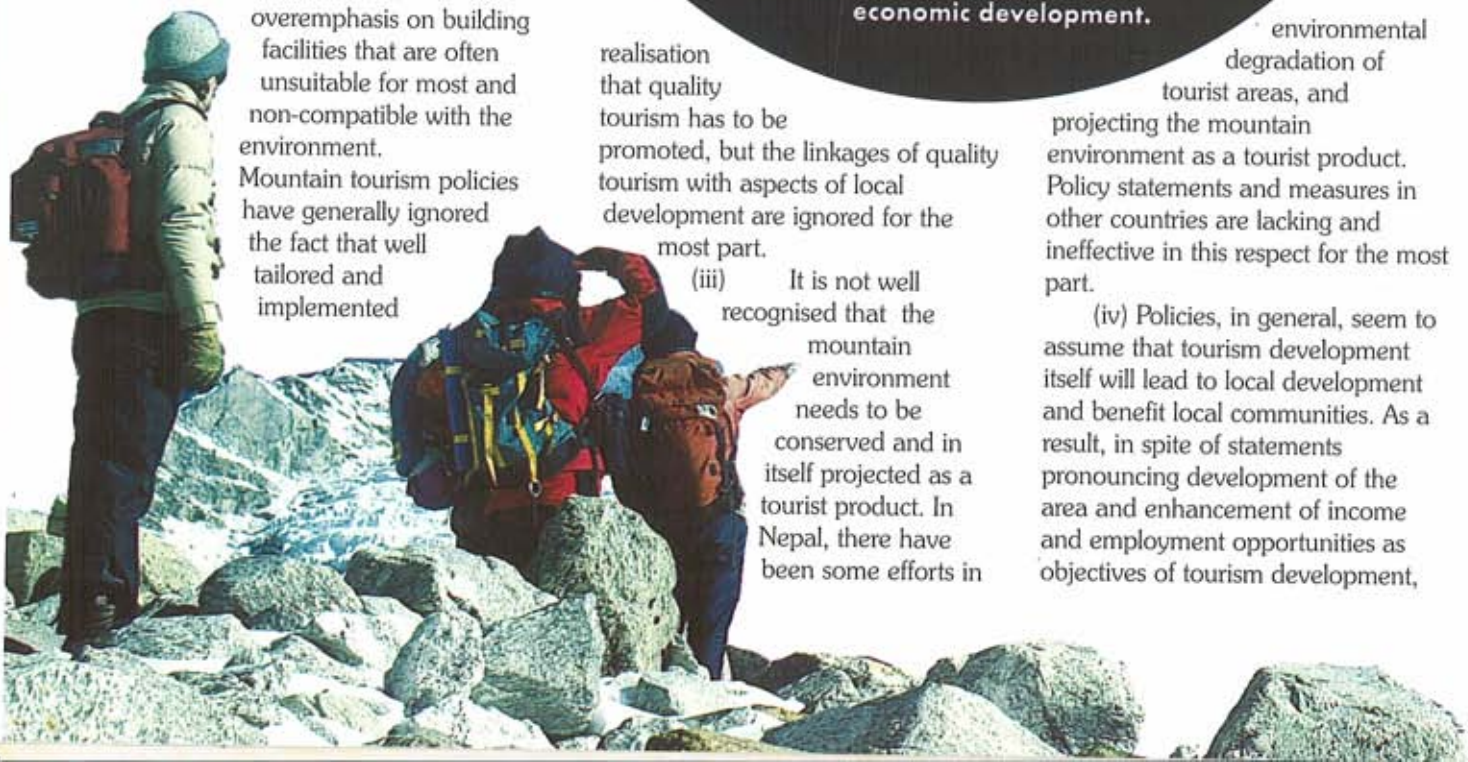
(i) Mountain tourism, understood as tourism activities for which mountains have a comparative advantage, does not find a distinct place in national policies except in terms of specific measures to promote certain types of tourism, e.g., trekking and mountaineering, which are mountain specific. Thus a mountain tourism perspective is important to the extent to which these types of tourism prevail in a country. In that respect, Nepal's tourism policy is reasonably mountain specific insofar as these activities form an important and growing part of its tourism sector.

(ii) As a result, national tourism promotion activities do not focus on marketing mountain-specific products, such as ecology, natural beauty, clean air, and environment; instead they emphasise the conventional approach of advertising facilities. Again, in the development of tourism infrastructure, there is an overemphasis on building facilities that are often unsuitable for most and non-compatible with the environment. Mountain tourism policies have generally ignored the fact that well tailored and implemented policies and programmes can also influence the type of tourists that visit mountain areas. There is a realisation that quality tourism has to be promoted, but the linkages of quality tourism with aspects of local development are ignored for the most part.

Clarity and focus at the policy level are needed in integrating mountain tourism with concerns for local economic development.

(iii) It is not well recognised that the mountain environment needs to be conserved and in itself projected as a tourist product. In Nepal, there have been some efforts in terms of subjecting tourism development projects to environmental impact analysis, emphasising methods and technologies for minimising environmental degradation of tourist areas, and projecting the mountain environment as a tourist product. Policy statements and measures in other countries are lacking and ineffective in this respect for the most part.

(iv) Policies, in general, seem to assume that tourism development itself will lead to local development and benefit local communities. As a result, in spite of statements pronouncing development of the area and enhancement of income and employment opportunities as objectives of tourism development,



tourism has made little positive impact in most tourist areas.

(v) One way to ensure linkages and benefits in local areas for local people is to encourage participation of local communities in tourism-related activities. This does not seem to be a key element in tourism policies, nor have institutional mechanisms evolved to ensure such participation or the ploughing back of some of the revenue generated from tourism into the area for its development and conservation (except in some cases in Nepal).

(vi) It is sometimes recognised that tourism should form a part of the integrated development of an area (as in the Nepal Policy statement of 1995 or the Himachal Pradesh Tourism Policy), but this does not seem to have been operationalised in the absence of an institutional framework for integrated planning to supersede the line-agency based approach in local development.

(vii) A greater role for the private sector is advocated in all policy statements. In some cases the policy also attempts a broad, and often vague, demarcation of the role of the government and private sector, scarcely, of course, of NGOs, local communities, and community-based organizations. Confusion about the roles of different agencies persists. In some cases, the government seems to have abandoned its role, even that of a regulator, leading to serious environmental degradation by private sector operators in tourism (as in some valleys in Northern Areas of Pakistan). In other cases, the government has dominated to such an extent that it is unwilling to withdraw from building commercial infrastructure for tourism and it leaves little scope for the private sector or local communities to participate (e.g., in the UP Hill areas where the two regional development corporations dominate the tourism scene except in urban areas).

AREA FOCUS IN MOUNTAIN POLICIES

Mahesh Banskota

Environment and changing economic considerations have made it imperative that development policies in mountain areas maintain a strong area-based orientation. Most sectoral policies have been area-neutral and suffer from the need for major adjustments and, consequently, increased costs on account of failure to incorporate various spatial parameters. Regional and local-level planning attempted to incorporate some area-specific concerns, but over time these have also lost their sensitivity to area-specific issues, and they are based mainly on engineering and economic issues.

With the increasing importance of environmental issues and rapid changes in transport and communications, the entire concept of space has become more dynamic. Throughout history, human activities have always modified physical space one way or another. In the past, these activities were limited in scale and consequently had little impact on the environment. Today, this is not so. Changes are having a cumulative impact on the environment. Improvements in transport and communication have redefined rural areas, making them equally sensitive not only to external economic signals but also to political signals. A new type of spatial interdependence has developed. While looking after the interests of each area, one must carefully consider the new opportunities afforded by these changing interdependencies and spatial linkages.

The opening up of rural areas in the mountains has contributed immensely towards increasing the movement of human and financial resources, mostly out of the areas unfortunately. While there are some areas in which new opportunities have checked this outflow to some extent, in most areas the problems are getting worse. This situation could lead to disintegration of the basic economic system as well as of basic services.

An important major implication of this for new area planning would be to look at emerging settlement systems and support potential development corridors, triangles, or sub-regions. Trying to keep people and capital in places where there is little incentive for them to stay has proved to be a very costly policy in the long run. Selected areas need to be carefully promoted.

The next important point is that rural areas are increasingly being recognised as repositories of natural resources such as land, air, and water. For mountain areas, domestic rural tourism will play an increasing role with the rising middle class, and preservation of the biodiversity is very important. Unless these areas are well protected and carefully managed, future economic opportunities will be reduced, forcing outmigration. The other issue for mountain areas is the impact of different economic activities on the environment. Careful monitoring is needed to develop appropriate regulations and pricing mechanisms so that the real costs of environmental protection and management are recovered, limits to the scale of activities are recognised, and the spatial linkages (trade, transport, services, etc) are fully developed.

With the adoption of participatory approaches to development, the roles of different stakeholders are being recognised. This has also become an important source of conflict, particularly when it comes to specific spatial decisions such as dislocation of people by projects, downstream environmental impacts, and other factors impeding the diffusion of new ideas and innovations. It is no longer just the decision of the government. Thus opening up of development dialogue is very essential but needs to be supported by realistic assessment of area-based potentials and problems. There are many examples of wasted efforts - of wrong roads leading to nowhere. Proper area-based assessment can help reduce the wastages as well as assist in promoting different opportunities.

Uttarakhand Development
Whose Priority ?

H.C. Pokhriyal*

The process of policy formulation for development in the Uttarakhand Himalayas has been guided by a top-down approach originating from the Central Planning Commission of the Government of India. Development strategies in the last 25 years remained mainly a 'minority decision' taken at the state level and dictated by the directives given by the Central Government. Participatory and sustainable development in the mountains has never been a priority in the macro-policy framework of the Government. Although the concept of hill area development was introduced quite a long time ago, it has been limited to allocation of funds for various schemes by respective departments. Two main factors are responsible for designing certain policy guidelines for Uttarakhand; the Indo-China war of 1962 and the *Chipko* movement of 1973-74. After the Indo-China war, the need for infrastructural development was officially accepted. The *Chipko* experience highlighted the conflicts between the 'felt needs' of the local people (especially women's priorities) and the 'commercial demand' of the 'outsiders' reflected through government forest policy. Some of these developments are reflected in policy documents but, in the formulation of the 'policy' as such, the main stakeholders were never involved or even consulted about the policy formulation and planning process.

A review of major policies during the last two decades indicates that different approaches have been attempted for developing mountain areas - with seemingly little success. These include the Task Force Report of 1982 which introduced the concept of eco-development, but fell short of implementation as it could not specify how interdepartmental and interdisciplinary integration was to take place to achieve the goal of eco-development. This was followed by the Expert Group appointed by the Planning Commission which gave top priority to conservation of biodiversity, forestry, and promotion of agricultural development.

In 1999 an expert group appointed by the Planning Commission gave top priority to conservation of biodiversity, followed by forestry and agricultural development. The hazards in earthquake prone areas and crisis management related to them were also highlighted. The GB Pant Institute of Himalayan Environment and Development published the Action Plan for the Himalayas in 1992. The Action Plan was full of noble intentions and good hopes, but it did not specify the actual implementation process.

Generally it is said that, due to the high cost of installation in the mountains, more funds are required. Yet, the million-dollar question is related to the 'process', 'quality' and ownership'. The problem is not whether there are schools and hospitals, but whether there are teachers and medical staff. If such people are available, what quality of service do they provide ? Does the community own these facilities? These are vital questions that need proper answers. Merely installing electricity lines (without electricity) and water taps (without water) in a village is not a sufficient condition for development in the mountains. Emphasis has been given to completing the quantitative targets rapidly even without verifying the needs and local requirements. The completion of concrete structures has another economic agenda, mainly concerned with making money for contractors, officials from line departments, and even village heads (*gram pradhans)*, using them in the name of participation.

The litmus test for the success of policies can be seen in terms of creating awareness about the sustainability not only of the mountains but also of the mountain communities. Issues about owning the process, quality of services, and long-term interests of local communities are the neglected dimensions in the planning process. It can be said that even mountain-specific policies in this area were dominated by outsiders' perceptions, and this puts local communities on the defensive as defaulters invading the forests and destroying the biodiversity of the Himalayas. This bias is clearly seen in some policy documents on the mountains and on the Uttarakhand area also.

The issues of an integrated planning process and coordination among various implementing agencies are equally important. In UP, a Hill Development Ministry (Uttaranchal Ministry) has been created to coordinate among various departments responsible for the implementation of sectoral programmes. Yet, the Hill Development Ministry does not have the statutory powers to really coordinate these activities.

In summing up, it can be said that the mountain policy of the government of India was initiated under a compulsion to show the concern of the government for eco-development. The hard fact is that mountain development has never remained a national priority. Reorientation is needed to emphasie the process, participation, ownership, and empowerment. This is a radical and alternative people-centred approach (contrary to the present practice) and requires strong political will and commitment on the part of implementing agencies.

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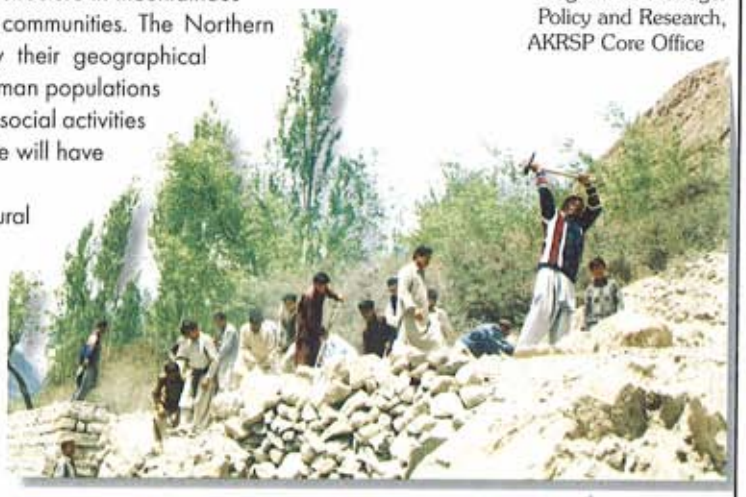
POVERTY ALLEVIATION THROUGH IMPROVING PHYSICAL INFRASTRUCTURE NORTHERN PAKISTAN

Safdar Parvez
Programme Manager
Policy and Research,
AKRSP Core Office

It is widely acknowledged that poor physical infrastructure in mountainous areas is a major constraint to development of local communities. The Northern Areas and Chitral in Pakistan are characterised by their geographical expanse and small scattered settlements supporting human populations with little basic infrastructure to support productive and social activities in the villages. Any attempt to improve the quality of life will have to address physical infrastructure constraints.

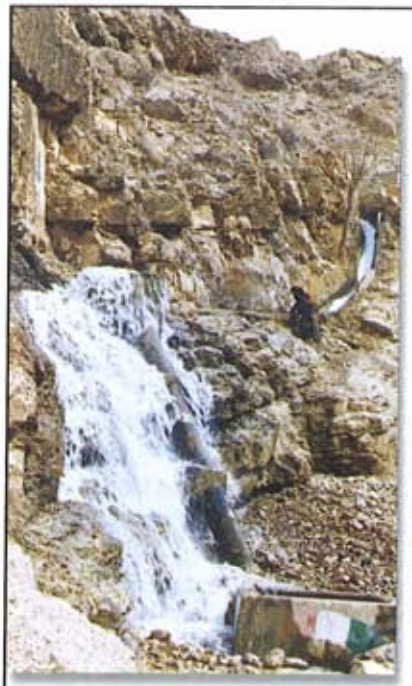


Improvement of productive physical infrastructure is one of the main areas of focus for the AKRSP.

Within its multi-sectoral approach of participatory rural development, improvement of productive physical infrastructure is one of the main areas of focus for the Aga Khan Rural Support Programme (AKRSP) in the region. Over the past sixteen years, the AKRSP has helped support almost 2000 infrastructural projects with active physical and financial contributions from communities in villages and valleys of the North. These include a large number of irrigation schemes making cultivation of barren lands possible; link roads to connect villages and valleys to towns and national highways; micro-hydels to generate electricity; water supply schemes to bring drinking water to villages; and flood protection bunds to protect village life and property from seasonal floods.

AKRSP's infrastructural programme policy takes an integrated view of the diverse needs of communities, while at the same time attempting to address overall programme concerns regarding alleviation of poverty, promotion of equitable development concerns regarding the alleviation of poverty, promotion of equitable development, and environmental conservation.

In the thirteen years since the programme began operating, the nature of these projects has evolved because of internal learning and the changing needs of beneficiaries. Some important changes in infrastructural projects are: (I) evolution from income generating to need-based projects and (ii) micro-projects have evolved into medium-sized projects which include village-level projects, village cluster projects, valley projects, etc. In addition, AKRSP complements public sector efforts at micro- and macro-levels in collaboration with the local government and the communities.



NEGATIVE IMPACTS OF POLICY ON SUSTAINABLE GROUNDWATER USES IN BALOCHISTAN

Saleem Sial

Both the provincial and federal governments have been encouraging over-exploitation of groundwater by providing subsidies for the installation of tubewells, electrical power supply and lower power tariffs. But all this has resulted in an alarming depletion in water tables in many areas of Balochistan as discharge through tubewells is much higher than recharge to aquifiers. Annual depletion rates of 3 to 6 metres have been reported. This phenomenon resulted in drying up of centuries old kareze (underground water channel) systems and open wells used by small farmers. This also created inequity among water users, depriving small farmers of irrigation water. As installation and operation of a deep tubewell are very expensive in Balochistan, many small farmers cannot afford them despite the above-mentioned subsidies. Another problem with depletion in water tables is that farmers have to lower their boreholes and reinstall tubewells once after every few years; an extra economic burden. Diminishing water tables have created a situation that is not sustainable in the long run. There is fear of desertification of areas irrigated by tubewells, due to lack of groundwater for irrigation, if exploitation continues at the present rate.

One policy suggestion to overcome this problem is to immediately discontinue all subsidies for groundwater exploitation in such areas. The same subsidies may be diverted to extend the use of local surface water harvesting systems by building small ponds, reservoirs, and trenches in micro-watersheds. Increase in surface water will not only help to reduce the mining of groundwater, but seepage water from these structures will also help to increase the rate of recharge to depleting aquifiers in the uplands.

Reflecting on Mountain Development Policies in Nepal

Mahesh Banskota

Nepal is generally referred to as a mountainous kingdom. It would therefore be surprising if policies and programmes did not reflect a fairly strong mountain orientation, i.e., development policies/strategies responsive to mountain conditions, characteristics, and specificities. Nepal is also a relatively poor country and has to look for external support. To what extent are policies and programmes externally driven, i.e., donor driven, in Nepal? Does the nature of these driving forces have any influence on their mountain orientation? Close interaction of bio-physical and socioeconomic processes in mountain areas makes it necessary to develop an integrated policy response and yet, in most instances, it is easier just to talk about it. To what extent have the responses in development been primarily project driven rather than policy guided?

Former ministers, politicians, planners, bureaucrats, academics, and researchers, with decades of experience in policies and programmes in Nepal, were assembled by the Institute for Integrated Development Studies and ICIMOD to reflect on these questions regarding mountain development in Nepal. The purpose of the round table was not to seek yes or no answers, nor was it to come up with a report card on Nepal's development. It was primarily to highlight the broad understanding, assumptions, and values regarding mountain development amongst a diverse group of professionals involved in mountain areas. Some of the important points that came up in the discussion are highlighted below.

- The term mountains is all embracing. In Nepal people refer to different types of mountain areas. Greater clarity is needed in understanding the term.
- Mountain people are invisible to policy-makers, even in a predominantly mountain country like Nepal. This is primarily because of the lack of sensitivity towards mountain people, just as there has been insensitivity to caste, ethnicity, gender, and class.
- Mountain areas have experienced top-down policies. Leadership in the villages and communities has also been extremely non-responsive to addressing local problems and issues.
- Mountain development policies work better when these are framed with an understanding of the sociocultural and economic settings of different mountain environments and the ingenuity and adaptive strategies of the local people. These aspects are critical when considering empowerment of deprived rural communities and groups. Identifying the most vulnerable and the displaced, and including the factors behind these, has become an important aspect of mountain development policy.
- Mountain households are undertaking innovations in many areas where government policy is totally absent. Self-help groups from among the beneficiaries, organized with the help of non-governmental organizations, are planning and implementing a whole host of income-generating , social, development, and environmental management activities. These have full participation from all the stake holders and maintain a high degree of transparency. Mountain policies should seek to promote the replication of such successful initiatives on a wide scale based on the key lessons in terms of choice of activities, resource mobilisation, and organization and management of such activities.
- Mountain areas, on account of their diversity, have many different ecological belts with different niche. Mountain policies should seek to promote complementarity and interdependence between these areas through appropriate technology, infrastructure, and human resource development.
- Mountain development policies should emphasise human resource development, focussing on building scientific, technical, and managerial capabilities for improving livelihoods in a difficult mountain environment. Without improvements in the quality of human resources, the outputs from mountain areas are likely to remain inferior. The capacity to manage the environment will also be weak and much of the development will continue to be externally driven.
- In view of the complexity of mountain environments, policies should be flexible and adjustable to local conditions. In this context a system of carefully tailored projects responding to special needs of different areas, but reflecting a broad policy concern, may be the linkage between policy and projects in mountain areas.Development in countries such as Nepal were found to be extremely donor driven, but this did not rule out the opportunities to make these programmes more responsive to local mountain conditions
- A regular think tank - a national forum where issues and options are examined and assessed for their appropriateness for mountain development - was considered necessary.

Policy Impact: The Case of Apples

Tej. Partap

HIMACHAL PRADESH, INDIA: A SUCCESS STORY

In Himachal Pradesh (HP), the government recognised the fact that its comparative advantage lies in apple production - in addition to other fruit and vegetables. It, therefore, introduced favourable government policies to promote this crop. As a result, HP underwent rapid economic transformation. The policies and measures that led to this are summarised below.

Infrastructural development:- Roads and communication infrastructure were built to improve accessibility

Institutional development - The establishment of strong horticultural development organizations and regional research centres

Subsidies and input distribution in terms of plantations, farming equipment, fertilizers, pesticides, etc, including crop loss compensation, were provided.

Post harvest processing and marketing support - Right from the beginning the government provided packing material to farmers at reduced prices, at first from its own forests and now farmers buy Eucalyptus from the nearby plains for which a transport subsidy is provided. Use of cardboard boxes has also been introduced by installing manufacturing plants in the state.

Land policy - The Land Ceiling Act of HP does not apply to apple orchards. The court ruled that apple plantations, once established, cannot be uprooted, even if they are illegally occupying the land

Support Price - The Government fixed a minimum support price implying that if the market price went below that then the government agencies would buy the crops. This acted as a catalyst to keep the market price above the support price line, thus assuring farmers of no loss.

JUMLA AND MUSTANG, NEPAL: PROBLEMS AND POTENTIAL

Jumla and Mustang Districts of Nepal have extremely favourable agro-climatic conditions for producing good apples. Apple plantation was introduced in both districts about thirty years ago. Unlike Himachal, there were no favourable government policies on roads, education, research, and development. Nevertheless, the Mustang farmers benefitted from the demand created by local tourists while the Jumla farmers suffered.

Jumla and Mustang are rugged and inaccessible with no road networks. At present, apples from these areas either require air transport, pack animals, or human transport for a number of days. This makes the apples vulnerable to damage and spoilage on the route to market. Strong and good quality packing material can prevent damage and spoilage to a great extent. However, these strong and good quality packing materials are not available in Nepal. They need to be imported from India or abroad. Heavy import duties discourage apple exporters from importing good quality packaging materials, and this has a direct impact on apple transport and the business as a whole. The Mustang farmers, however, were successful in diversifying their products (e.g., dried apples, apple brandy) to cater to the flourishing local demand by tourists without any government intervention. There is also the issue of prices and the extent to which local apples can compete with imported ones. However, the increasing urbanisation throughout Nepal and the rise in middle income families with good educational backgrounds as well as incomes proved favourable for the development of horticulture in Nepal. There was a time in Nepal when fruit was given primarily to the sick. Only the rich could afford it. Fortunately that seems to be changing, albeit somewhat slowly.

Mountain Development Policies
ICIMOD's Facilitative Role

N. S. Jodha

Policy Advocacy

ICIMOD as an institution is mandated to facilitate sustainable mountain development and the well-being of mountain people. Appropriate policies and their implementation play a key role in this. ICIMOD's policy advocacy work is directed to sensitising and facilitating policy directions and contents on the basis of knowledge and understanding generated by its work. In order to understand and assess ICIMOD's policy facilitating role, the Centre has developed a simple methodology and reviewed some of its projects and activities (or their outputs) to identify their contributions to policy-programmes in the Hindu Kush-Himalayan (HKH) countries. (It must be stated at the outset that the said 'outputs' are products of collaborative activities of ICIMOD and national partner agencies.)

Methods to Assess Contributions

As a first step towards assessing the 'contributions', the term 'policy' is interpreted in a wider and operational sense, in which policy formulation as a process rather than as a final product (e.g., operational directive, a piece of legislation, etc) is emphasised. This 'process' consists of several interrelated activities: information generation and dissemination about development options, designing and disseminating approaches and methods for specific public interventions, and training and capacity building to manage constraints and harness opportunities. Together they equip and induce the decision-makers to bring about specific policy decisions and actions.

Second, the assessment exercise looks at different stages of specific development interventions in HKH countries where ICIMOD output, i.e., research results, synthesised information packages, and skills imparted through training were used as inputs.

The third step in the methodology involves listing the important influence-building projects/activities of the Centre. These included (i) the promotion of the mountain perspective framework for planning; (ii) seabuckthorn for fragile, dry mountain areas; (iii) SALT (hedgerow system) for soil-moisture conservation on steep slopes; (iv) risk engineering options; (v) mountain tourism for local development; (vi) micro-enterprises in mountain areas; (vii) user-group forestry; (viii) renewable energy options; (ix) transboundary biodiversity conservation initiative; (x) GIS/RS initiatives for mountain environmental monitoring; (xi) market towns; (xii) advocacy in global initiatives; and (xiii) advisory services by the Centre. The specific features of the above projects/activities, particularly their key thrusts, useable outputs, and the agencies and the stages of intervention using the output were identified.

Finally, the influence or impact of ICIMOD's work is judged in terms of consideration, partial, or full adoption of the results of the above activities by different agencies. The adoption did vary between different countries as well as different categories of ICIMOD outputs used by the agencies. The total number of cases of output used in relation to the above activities, by different agencies at different stages of development intervention, was 224. More than one-third of these related to awareness, one-fourth to planning and preparation, and over 17% to training and capacity building related activities of ICIMOD.

Factors Helping Policy-Programme Impacts

An analysis of circumstances influencing the use of ICIMOD output by development agencies as input into their interventions indicated that important factors operated on both the supply and demand sides.

Nature and type of product - The most important factor influencing the acceptance and use of ICIMOD output by decision-makers was the utility of the product/option offered by ICIMOD. Thus the right choice of product, which related to 12 out of 13 projects/activities reviewed, is a key lesson for policy-influencing work by ICIMOD.

Intensive dialogue, advocacy - From the supply side, another important factor influencing the use of ICIMOD output by different agencies was promotion or advocacy of the option through intensive dialogue, interaction, and follow-up activities on the part of ICIMOD. Out of the 13 impact-making activities, these factors were effective in 11 cases.

Effective dissemination - Dissemination through target-oriented printed material, films, and workshops was another important factor that helped in the use of ICIMOD output by different agencies. Equally important was the research and knowledge back-up which helped, especially in convincing high-level decision-makers. The correct choice of collaborating agencies, demonstration, and training were other associated factors.

Nature and utility of the output or option - The most important demand side factor related to the utility and feasibility of the option promoted by ICIMOD and its collaborators. Wherever the promoted option met the felt needs, in terms of responding to constraints and opportunities or helped to fill a critical gap in knowledge, methodology, or action plan, it was more readily accepted.

Government commitment /cooperation - Government commitment and cooperation were found to be crucial in the case of components belonging to 8 out of 14 projects. The associated factors were local capacity and understanding of the option, community participation and incentives, and useability of local skills, experience, and traditional knowledge in the process of using the option.

Institute for Integrated Development Studies (IIDS)
A policy-oriented institution

IIDS is a non-profit, non-governmental organization registered under the Societies' Registration Act 1977. Established in 1990, IIDS is a successor to the Integrated Development Systems, or IDS, founded in 1979.

The **mission** of IIDS is to contribute to identification, analysis, understanding, and response to major development policy issues facing the country. It **envisions** becoming Nepal's leading private, independent non-partisan research institute committed to holistic and sustainable development based on human values.

Since its establishment, the **major goal** of IIDS has been to improve policies and programmes through technical assistance and dissemination of research findings and recommendations in different formats to target audiences, mainly the government. It has helped to build an informed understanding of different key priorities of national importance. It conducts policy research to demonstrate the potential and critical roles the Institute can play as a think tank in the non-government sector.

IIDS has been recognised as a centre for policy, for research and for study at the non-governmental level, both nationally and internationally. Besides collaborating in regional and sub-regional studies and programmes, it is serving as a core member in the South Asia Network of Economic Institutes and is also associated with the South Asia Centre for Policy Studies. It has also been providing technical assistance and policy options to His Majesty's Government of Nepal in a number of sectoral aspects. The Institute stands poised to advance in the formulation of informed policies and increase the visibility and reach of the country's policy advocacy efforts.

IIDS has selected and defined four **key priorities/areas** of study for its operations: poverty alleviation and human development; water resource development; the Nepalese economy with a focus on economic reforms; and social development (e.g., gender and development, grass roots' institutions, natural resource management). Besides general research, it works on training and learning processes focussed on action research programmes with three key areas of interest: self-reliant development programmes, women-targetted action programmes, and specialised programmes such as training and documentation.

IIDS has engaged the services of highly qualified and experienced professional staff for its multi-dimensional activities. At present, 80 full-time staff are engaged in various general and action research activities. IIDS has also maintained and constantly updated a list of resource persons who are drawn upon to provide specific services as and when required.

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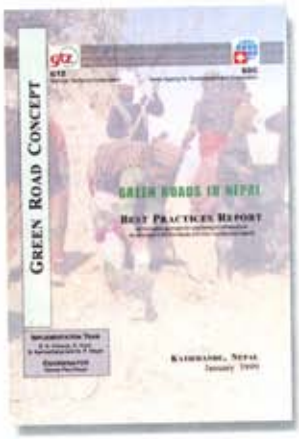

Green Roads in Nepal

BEST PRACTICES REPORT

Co-ordinator: Werner Paid Meyer; Implementation Team: B. N. Acharya, R. Aryal, B. Karmacharya, & W. P. Meyer, Kathmandu: GTZ and SDC, January 1999

HARKA GURUNG - Advisor NEW ERA

One of the main constraints to the development of hill and mountain areas has been their inaccessibility. This precludes market access and diffusion of innovations. Nepalese development plans have been emphasising road infrastructure that has proved expensive both in construction and maintenance due to the rugged terrain. Several countries have assisted Nepal in road construction, and the main highways were constructed with donor assistance. The donors have employed a wide variety of construction techniques. This is reflected in work cost per kilometre: Russian Rs 754,270, British, Rs 486,158, Indian, Rs 285,425 and Chinese, Rs 269,731 (Hans Rieger & Binayak Bhadra, *Comparative Evaluation of Road Construction Techniques in Nepal.* Kathmandu: CEDA, *1978, p.7).*

The publication under review is about a new approach to rural infrastructural development, based on long-standing experiences in the hills of Nepal. These are derived from two decades of Swiss and German endeavour in 'integrated rural development' and realisation of the critical role of basic infrastructure; viz, rural roads. The basic components of the green road concept are labour-intensive, low cost, environmentally - friendly, and participatory. The construction cost for a fair-weather road (green road) is Rs. 1.2 million per kilometre, and 65 per cent of this percolates to the local area as labour costs. The environmental aspect stresses avoidance of destructive physical forces and optimum use of supportive natural processes. The participatory aspects include local capacity building with decentralized decision-making in planning, construction, and road ownership.

The volume is presented in the form of a manual with explanatory chapters on planning, construction technology, implementation, and maintenance/rehabilitation. The annex includes six sections on some technical aspects of green roads that will prove useful to practitioners.

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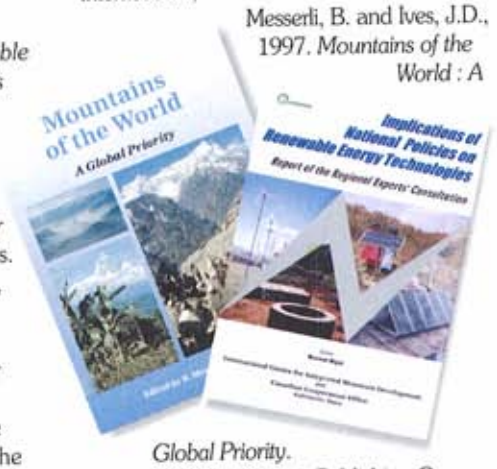

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Centre News

Highlights of the Twenty-seventh Board Meeting

The Twenty-Seventh Meeting of the ICIMOD Board of Governors was held in Kathmandu from 8-11 July, 1999. The main highlight of the Meeting was the selection of a new Director General and Director of Programmes for the Centre (see following page). The Board Meeting was chaired by Mr. Md. Sakhawat Hussain, Secretary, Ministry of Chittagong Hill Tracts' Affairs, Government of the People's Republic of Bangladesh, and was attended by representatives from Bhutan, China, India, Myanmar, Nepal, and Pakistan. In addition to the Country Representatives, the ICIMOD Board of Governors also has independent Board Members, selected for their expertise relevant to mountain development, from Germany, Holland, Austria, India, China, and Japan. The Chairman of the ICIMOD Support Group, Dr. Hans Peter Maag, (Switzerland) also participated in the Meeting as an observer.

The Director General of ICIMOD, Mr. Egbert Pelinck, provided an overview of the six-monthly progress of the first year of implementation of the Second Regional Collaborative Programme of ICIMOD (1999-2002) in the Programme Advisory Committee (PAC) Meeting, which took place prior to the Board Meeting. Staff members also made presentations on different programmes. The PAC made suggestions on the various activities and emphasised the need for greater clarity about impacts and outputs. It also pointed out the need for continual monitoring of high priority activities based on key indicators. The overall performance in the first six months of the first year of the new programme cycle (RCP-II) was found to very encouraging. One very interesting point was the agreement that Board Members from different countries in the region would also monitor ICIMOD activities in their respective countries.

Following the presentation of the Programme Advisory Committee's Report to the Board on the programme activities of the Centre, the Board also made a number of valuable suggestions. It was pointed out that ICIMOD should come up with a plan of activities leading to the International Year of the Mountains in 2002. A very interesting subject raised by the Chairman of the ICIMOD Support Group was the keen interest being shown by the Central Asian States in ICIMOD's activities and the willingness to strengthen interaction. It was agreed that ICIMOD should increase its interaction with Central Asian Countries in relevant areas whenever opportunities were available.

The Board of Governors once again requested all the regional member countries to increase their contributions to the Centre. This was considered important for convincing existing and new donors to contribute to the Centre's activities. The next meeting is scheduled to be held in Chengdu, China, in November 1999.

ICIMOD Board of Governors

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ICIMOD

NEW LEADERS IN THE NEW MILLENNIUM

Dr. J. Gabriel Campbell

The 27th Meeting of the Board of Governors of ICIMOD appointed new leaders for the Centre. Dr. J. Gabriel Campbell is to become the new Director General and Dr. Binayak P. Bhadra the Director of Programmes. Both will take up their positions in early 2000 when the present Director General, Mr. Egbert Pelinck, and the Director of Programmes, Dr. Mahesh Banskota, complete their respective terms.

Dr. Binayak. P. Bhadra

Dr. Campbell has a Ph.D in social anthropology from Columbia University, USA. He was born and brought up in the region and is fluent in Nepali, Hindi, Urdu, and Punjabi. During the past ten years, Dr. Campbell has been responsible for developing, managing, and raising funds for the Himalayan programme of The Mountain Institute, an international NGO based in the Appalachian mountains in the United States. Prior to that he worked many years in Nepal and India in community forestry and related fields for FAO, the World Bank, the USAID, and others. *"The prospect of addressing the challenges of this region through the one institution having the regional mandate, a global legitimacy, and the professional capacity to make a significant contribution is exciting,"* according to the newly-appointed Director General.

Dr. Binayak P. Bhadra has a Ph.D in resource economics from Oregon State University, USA, and is also an electrical engineer. He is currently a Professor of Economics at the Centre for Economic Development and Administration of Tribhuwan University. He has also been a Member of the National Planning Commission, HMG/Nepal, and consultant to many multilateral and bilateral agencies. *"I am looking forward to providing leadership in formulating interdisciplinary programmes in sustainable mountain development that respond to the needs of the people and the potential of the resources of the Hindu Kush-Himalayan region,"* states Dr. Bhadra.

ICIMOD is happy to welcome these two individuals with rich experiences in both research and development, as well as first-hand knowledge of the region's problems at both policy and grass roots' level.

New Support to the Centre

ICIMOD is very pleased to announce the recent signing of the following agreements.

CORE SUPPORT

The ***Government of Finland*** and the ***Government of The Netherlands*** have agreed to continue their substantial support to implement ICIMOD's core programme for Sustainable Development in the Hindu Kush-Himalayas. Finland will provide US $ 520,000 for a period of four years and the Netherlands US $ 940,000 for a period of two years.

PROJECT SUPPORT

The ***Australian Centre for International Agricultural Research (ACIAR)*** under the Global Mountain Programme will support the project on *Investigating Issues and Options for Improving Livelihoods of Marginal Mountain Farmers*. The total budget of the project is US$ 300,000 and it will be implemented over a period of three years.

The ***Government of Austria*** has extended support of US$ 728,000 for a period of two years towards a project on *Indigenous Honeybees in the Hindu Kush-Himalayas: A Community-based Approach to Conserving Biodiversity and Increasing Farm Productivity.*

The ***International Potato Institute (CIP)*** has provided US$ 100,000 for a period of one year for the *Global Mountain Programme: Strategic Research on Land Policies and Characterisation of Mountain Agroecosystems.*

The ***Ford Foundation*** will provide US$ 650,000 for a period of three years to implement the project on *Policies, Governance, Participation and Practices for the Sustainable Management of the Mountain Commons of the Hindu Kush-Himalayas.*

The Government of The Netherlands is extending support to *Institutional Capacity Building for Highland Agriculture in the Tibetan Autonomous Region* with US$ 50,000 for a period of one year.

The ***United Nations Environmental Programme (UNEP)*** has provided support to the project on *Development of Glacier Lake Outburst Flood Monitoring and Early Warning Systems* with an amount of US $120,000 for a period of eight months.

The Hindu Kush-Himalayan Flow Regimes from International and Experimental and Network Data (HKH-FRIEND) project is one of the seven regional sub-programmes of the International Hydrological Programme. ICIMOD functions as the Secretariat for this programme. In 1998 the Steering Committee of the HKH-FRIEND formed six research groups. Reported on below are meetings of some of these groups.

The **Inception Workshop of the Database Group** was held in March. The Group reviewed the objectives of the Regional Hydrology Data Centre (RHDC) and agreed on its terms of reference. The main responsibility of the Database Group will be to assist the RHDC in collecting from and providing data and information to the HKH-FRIEND Projects. After discussions on the Draft Policy Guidelines, the Group agreed to the following.

- RHDC will be responsible for coordinating the data, maintaining the master version, applying quality control procedures, and providing data to HKH-FRIEND research groups and other users for research purposes.
- RHDC will acquire data - including information (metadata) directly from data providers and other HKH-FRIEND project groups.
- RHDC will disseminate data to each HKH-FRIEND project group and new participants and to researchers outside HKH-FRIEND with certain conditions.
- Disclaimer of the data

The group also agreed on a project proposal for the physical establishment of RHDC. It recommended that the HKH-FRIEND Secretariat should develop and install a home page including, *inter alia*, information on each of the HKH-FRIEND groups.

The Inception Workshop of the Snow and Glacier Group was held in March. During the technical session, the group reviewed its terms of reference and agreed on the objective for its research activities. For the development of the Science Plan and consequently for the development of an Implementation Plan, the group identified some gaps in research and knowledge and a general lack of sufficient data and information - especially related to hydrology, meteorology, and long-term mass balance. The Group also decided to establish close links with relevant national and international programmes and projects such as GAME, WCRP, GTOS, etc. The group will also enhance its public relations by posting its programme and activities on the web page of the HKH-FRIEND.

The Group agreed that first its Science Plan should be prepared. Based upon such a plan, after assessment of three glacierised basins (Batura glacier - Pakistan, Docriani glacier - India, and Langtang glacier - Nepal), a broader regional project will be developed with support from the Secretariat of HKH-FRIEND. The group agreed that its main research objective will be to contribute to improvement of the understanding of the hydrological processes and response and climate interaction with the cryosphere. The Group also decided that snow and glacier related time-series' data and additional non-time series' data (RS/GIS) will be transferred to RHDC under the format agreed upon between the Snow and Glacier group and the Database group.

The **Inception Workshop of the Low Flow Group** was held on 24th April. During the workshop there were three presentations of case studies; one each from Bangladesh, India, and Nepal. Discussing future activities, the Group identified three projects to be implemented within the time-frame of three years.

- Recession Curve Analysis for Rivers of Southern Nepal
- Low Flow Analysis for Ungauged Catchment in Bangladesh using GIS
- Hydro-Energy Development of Uttar Pradesh

The group will meet every year for three years to monitor the progress of the above projects and decided to organize similar training to that organized by the Group preceding the workshop.

Regional Training on 'Low Flow Measurement and Analysis' was held in April. Altogether 15 participants (including three women) from Bangladesh, China, India, Nepal, and Pakistan participated in the training, Thirteen resource persons, 9 experts from participating institutions of HKH-FRIEND and 4 experts (including two women) from the Northern European FRIEND Low Flow Group, assisted in the training. The main topics covered during the 5-day training were *hydrological concepts; definition and modelling of drought events; flow measurements (HKH region); hydrological database management; flow duration curve; and estimation at the ungauged site*.

A special session was also arranged for discussion on the *'Role of Hydrology in Poverty Alleviation in the HKH Region'*. It was felt that low flow studies can assist the region from economic, environmental, and ecological perspectives. The training programme also included a field exercise in order to give the participants hands-on experience in flow measurement, using current meters and tracer techniques at a hilly stream in a forested watershed upon the Sundarijal area. During the training programme, computer facilities available at ICIMOD's Mountain Environment and Natural Resources' Information Service (MENRIS) were used for hands-on training on computer-based analyses. The participants were also provided with copies of lecture notes especially compiled for the training programme; a UNESCO/IHP, four-volume publication on *'Applied Hydrology for Technicians'*; a set of manuals on design and installation of micro-hydro projects prepared by ICIMOD; and Report No 18 of the Institute of Hydrology, UK, on *Low Flow Estimation in the United Kingdom*. *(Contact person for above four: Prof. S.R. Chalise; E-mail: chalise@icimod.org.np)*

The **Planning Workshop for People and Resource Dynamics Project (PARDYP) Phase-II** was held in Kathmandu between May 24th and 28th. It was attended by senior representatives of the three funding organizations (SDC, IDRC, and ICIMOD), by senior members of the two strategic

Reviewing the past and planning the future - PARDYP Planning Workshop

alliances (the Institute of Resources and Environment of the University of British Columbia and the Hydrology Group of the University of Bern), representatives of the four participating institutes from China (Kunming Institute of Botany), India (GB Pant Institute of Himalayan Environment and Development), Nepal (ICIMOD), and Pakistan (Pakistan Forest Institute). Also represented were senior staff from the HMG Nepal Departments of Forestry and Soil Conservation and Watershed Management, from the Nepal Agricultural Research Council, and representatives from local NGOs.

Following recommendations from the Review Mission and indications from SDC and IDRC that they were willng in principle to fund a further three-year phase of PARDYP, the purpose of the workshop was then to plan for the new phase through establishment of goals, project and specific objectives, and workplans and verifiable indicators for Phase II.

Five days were spent by the participants reviewing past activities and the present status of the project. Work went on both in a plenary session and small groups to define the goals, objectives, workplans, indicators, and budgets.

The new phase will remain as a regional and collaborative research programme for development undertaking. However, the goal and project objectives reflect the feelings of the participants at the Planning Workshop that there needs to be more emphasis on social issues, equity issues, and poverty issues in the future.

Seven components, each with a specific objective, have been defined; they cover the following issues - community institutions, inequity and gender, economic potentials, water resources, common resources, on-farm resources, and implementation and management.

Drafts of the proposal for PARDYP Phase-II have been circulated widely for comments. The final draft has recently been distributed, and it is hoped that agreements between ICIMOD and the two external donors will be signed in September 1999.
(Contact person: Richard Allen; E-mail: rich@icimod.org.np)

The **Regional Training on 'Application of GIS and Remote Sensing to Slope Instability Analysis and Hazard Mapping'** was conducted from 31 May to 25th June at MENRIS, ICIMOD. There were altogether 13 participants from different countries; 2 from China, 4 from Nepal, 4 from Pakistan, and one each from Bangladesh and India. Professionals from ICIMOD were the resource persons. The training focussed on concepts of GIS, remote sensing, aerial photo interpretation techniques, field data collection and their integration into GIS, and hands-on-exercises on slope instability analysis and hazard mapping using GIS. The software used during the training was ILWIS for Windows.

The participants carried out extensive field work in the Kakani area of Nepal, where the simulation and verification of satellite data-oriented lab results were carried out against existing and potential landslides. The lab results were found to be very close to ground realities. This proved extremely useful in convincing the participants of the validity of the application of RS/GIS technologies to earth science studies such as slope instability analysis and hazard mapping. The participants found the training course very useful in terms of work activities in their own organizations.
(Contact person: Pradeep Mool; E-mail: mool@icimod.org.np)

From 14 to 25 June, altogether 12 professionals from various agencies based in Lhasa participated in the first part of the **"Hands-on Training for the Application of GIS and Remote Sensing to Planning for Mountain Agriculture and Land Use Management"** in Lhasa-China. Although exercise datasets from Nepal were used they were translated into Chinese. As a result of this introductory course, the trainees and staff of the Tibetan Academy for Agriculture and Animal Sciences are working more intensively on the preparation of a spatial database of Duilong Deqing County, Tibet. It is planned to hold the second part of the training early next year. The Duilong Deqing County databases will be used for the project work.
(Contact person: Shushil Pradhan; E-mail: spradhan@icimod.org.np)

The DG, Mr. Egbert Pelinck, inaugurating the Tibet Centre for GIS Application and Training at TAAAS.

ICIMOD, the Regional Community Forestry Training Centre (RECOFTC)/Thailand, and the King Mahendra Trust for Nature Conservation/Nepal jointly organized the **'Regional Training Course on Participatory Approaches to Rangeland Research and Development'** from June 7-20, 1999. Scientists and extension workers from five of ICIMOD's member countries, Bhutan (2), China (11), India (3), Nepal (10), Pakistan (4), and Thailand (1) participated in the training course. The training was held in Jomsom, Mustang, in the trans-Himalayan region of northern Nepal. The objectives of the training course were to: introduce and explore the concepts and processes of Participatory Action Research (PAR); provide participants with the opportunity to plan project activities for the Regional Rangeland Programme, using the PAR framework; incorporate an agro-ecosystem perspective into project design; and, introduce and apply particular tools and techniques applicable within the PAR framework such as Participatory Rural Appraisal (PRA) and rapid natural resource assessment.

The training consisted of classroom exercises focussing PAR techniques, followed by field exercises to practise methods such as Participatory Rural Appraisal (PRA). Field exercises were designed so that the international trainees assisted KMTNC/ACAP staff in gathering preliminary information on issues related to rangeland conservation and development in Mustang, using the PAR framework learned in class. Participants completed the course by developing a work plan for an action research programme in their particular area. These plans will form the basis for the Regional Rangeland Programme which will continue until 2000.
(Contact person: Camille Richard; E-mail: camille@icimod.org.np)

The National Level '**Hands-On' Training for the Application of GIS and Remote Sensing to Mountain Natural Resources' Assessment, Monitoring and Management** was held from 12th April to 7th May in the Geoinformatics Lab of the GB Pant Institute of Himalayan Environment and Development (GBPIHED). GBPIHED was the local/national host institution and Kumaon University in Nainital and the Indian Institute of Remote Sensing in Dehradun were closely collaborating institutions. The final curriculum and course material included a number of Indian case studies relevant to this field. Besides the ICIMOD course coordinator, several distinguished technological and academic professionals were available to impart key lectures and exercises on various topics in the course. These resource persons mainly came from GBPIHED, Kumaon University, Nainital and Almora, and the Indian Institute of Remote Sensing in Dehradun. Altogether 12 professionals (2 were women) from various institutions engaged in the Indian Himalayas participated in the course. Recently ICIMOD signed three new agreements with UNEP/EAP-AP to carry out various activities related to environmental studies.

- Implementation of the Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia.
- Strengthening Environmental Assessment and Monitoring Capabilities in Nepal - State of the Environment Report
- Development of Glacial Lake Outburst Flood Monitoring and Early Warning Systems

Through these agreements, ICIMOD and the UNEP Environmental Assessment Programme for Asia and the Pacific (EAP.AP) envisage extended cooperation focussing intensively on institutional capacity building and servicing, database development and management, and assistance to the Asia-Pacific countries in preparing national and sub-regional State of the Environment (SoE) reports.Collaboration will strengthen the environmental assessment and monitoring capabilities in South Asia through increasing the capacities of national governments to make accurate environmental assessments; improve decision-making on sustainable development; enhance the availability of information on all aspects of environmental and socio-economic development; and establish a strong information network with a uniform data format. The aims are not only to contribute to the preparation of the decadal 2002 Global SoE Report, but also to set in motion a continuous and regular assessment process in the region to facilitate the decision-making process. Further, the SoE report will provide the leaders of South Asia with an assessment of the State of the Environment of their nations and early warnings of future problems. It will also be a contribution to the regional report and an input to the "**2002 Global State of the Environment Report**" and the "**2002 Earth Summit**".

Through this collaboration, a **Regional State of the Environment Training Course** was conducted at ICIMOD from 14 to 18 June. Seventeen environmental professionals from Bangladesh, India, Nepal, Sri Lanka, and UNEP-Thailand took part in the training.

(Contact person: Pramod Pradhan; E-mail: pramod@icimod.org.np)

Communicating through Pictures

The Right Hounourable Prime Minister, Mr. Khrishna Prasad Bhattarai,and MPs, Mr. Basu Risal and Prakash Man Singh, viewing ICIMOD posters at the exhibition organized by the Ministry of Population and Environment on the occasion of the World Environment Day (June 5-7). ICIMOD is also hosting an exhibition stall (see picture above) at the International Horticultural Exposition in Kunming, China (May to October 1999). The theme of ICIMOD's pictorial presentation is 'Sustainable Livelihoods in Mountain Environments'.

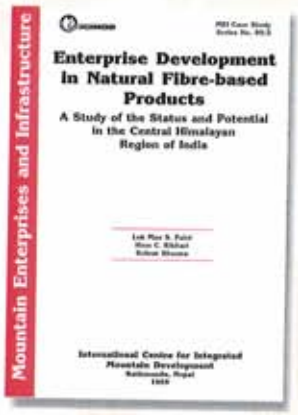
Recent ICIMOD Publications

Documents that were published from January to April are given below with abstracts. The three prices quoted for each publication are applicable to Developed Countries, Developing Countries, and ICIMOD's Regional Member Countries respectively. For institutions actively involved in sustainable development of the Hindu Kush-Himalayas, relevant publications can be provided free of charge

Bhatia, A. M.; Hazarika, N.; Singha, R. 1999. ***Spices and Fruit for Micro-enterprises: A Study of the Potentials of Ginger and Pineapples in West Garo Hills, Meghalaya, India.*** (MEI [Mountain Enterprises and Infrastructure] case study, 99/1). 97p. ISBN 1561-8692. Price: US$ 15.00, 10.00, 7.50

This case study examines the feasibility of developing micro-enterprises based on processing of ginger and pineapple crops in the West Garo Hills, Meghalaya. Based on secondary information, an intensive primary survey was carried out to interact with farmers, traders, and credit institutions. While ginger drying emerges as a viable option, pineapple processing requires large-scale investments, unsuitable for household/community level enterprises. Integration of improved farming methods and market regulation with value addition were identified as imperatives for the success of micro-enterprise development.

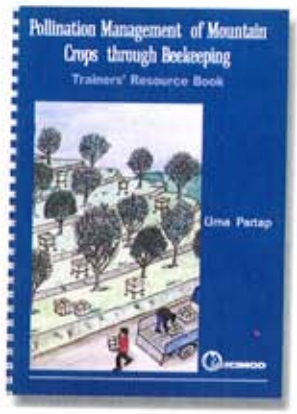
The options for value addition would not only increase returns for farmers but also provide them with alternatives, thereby enhancing their bargaining power.



Palni, L. M. S.; Rikhari, H. C.; Sharma, S. 1999. **Enterprise Development in Natural Fibre-based Products: A Study of the Status and Potential in the Central Himalayan Region of India.** (MEI case study, 99/2). 52p. ISSN 1561-8692 Price: US$ 15.00, 10.00, 7.50

This study explores several aspects relating to a few important fibre-yielding plants (viz., *Agave sp, Cannabis sativa, Girardiana heterophylla, Grewia opposi-tifolia*, and *Daphne papyracea*) of the Central Himalayas and their fibre products. These traditional products are an integral part of the typical rural system because of their durability, flexibility, and ecofriendly nature. These fibre products not only fulfill rural needs and/or augment the economy, but are also of use in various household activities, including animal care.

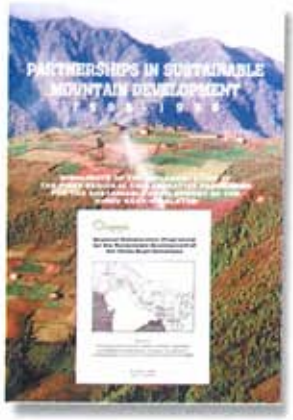
Market indicators show that there is potential for enterprise development of various non-traditional fibre products, particularly in light of the growing preference for natural products over synthetics. These products can compete in the market because they are unique. This document could serve as a useful basis for future research to develop appropriate strategies for achieving sustainable and feasible development of cottage industries based on fibre plants.



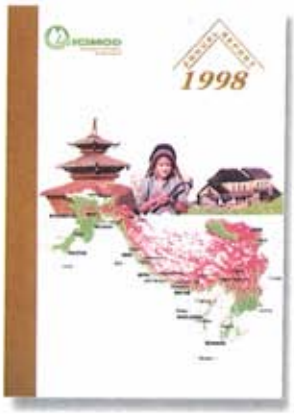
Partap, U. ***Pollination Management of Mountain Crops through Beekeeping: Trainers' Resource Book.*** 1999. 117p. ISBN 92-9115-69-0. Price: US$ 20.00, 15.00, 10.

This publication is part of ICIMOD's initiative to promote wider use of honeybees to contain declining crop productivity due to pollination failure. This resource book is for training extension workers and mountain farmers to use bees for pollination. Several illustrations have been added to facilitate understanding of the various processes. The book provides a general introduction to pollination; explains the reasons why different kinds of bees are important crop pollinators; and describes how they pollinate a crop. It describes the limitations in using bees in traditional fixed-comb hives for crop pollination and explains the advantages of movable-frame hives. The role of the hive bees, *Apis Cerana* and *Apis mellifera*, as crop pollinators rather than wild bees and how to manage them for pollination of crops in general are described in detail. Descriptions of the management of hive bees for pollination of particular crops have also been given.

The **Folder** and **Fact Sheets** (right) are companion documents that go together. The Folder gives an overall brief introduction to ICIMOD's major aspects. The Fact Sheets, which include 17 separate sheets, give more detailed information on 17 different aspects of ICIMOD. These provide answers to questions usually asked by those wanting to know about ICIMOD.



1998 was a special year for ICIMOD as it was the culminating year of the *First Regional Collaborative Programme for Sustainable Development of the Hindu Kush-Himalayas* (RCP-I) which began in 1995. Highlights of the four-year period have been published in ***Partnerships in Sustainable Development*** which has been distributed to all addresses on our Mailing List. Therefore, **'Annual Report -1998'** is not as detailed as the earlier ones in terms of thematic coverage because it is complementary to the above-mentioned report. The Annual Report will be made available on request.



ICIMOD Briefs

Issues in Mountain Development

IMD 99/3 - Bitter, P. ***Application of GIS to Mountain Land-use Planning*** - Increasing experience in the operational use of GIS has taught us that the value of GIS in planning is not so much in making 'rational' decisions but rather in providing a technical platform through which data from diverse origins can be visualised, integrated, and managed, e.g., from different sectors, different planning approaches, and different sources.

IMD 99/4 - Myint, M. ***Integration of GIS, Remote Sensing and Ecological Methods for Biodiversity Inventory and Assessment*** - GIS and Remote Sensing both have special advantages in preparing inventories of species based on ecological parameters. This paper describes the methods and parameters in brief with the use of tables to define some of the parameters. Useful reference material is given for those interested in pursuing this topic in depth.

IMD 99/5 - Rijal, K. ***A Place in the Sun: Options for Space Heating in the Mountains*** - The text examines the availability of solar energy in the Hindu Kush-Himalayan region and the options for its application. Issues arising and the legislative framework are also discussed along with recommendations for its promotion.

ICIMOD's main Trail and Demonstration site is in Godavari, 15 kilometres southeast of the heart of Kathmandu. The site has been set up with the primary objective of testing and demonstrating various technologies for and approaches to sustainable mountain development. The ***Godavari Brochure*** gives an overall guidance to the activities and location of the undertakings in Godavari to prospective visitors.

ICIMOD has also released a new ***Brochure*** to match the emphases that the Centre has adopted with the implementation of its Second Regional Collaborative Programme from 1 January 1999.

GIS Course

Institute of Engineering, TU, Nepal

With the aim of promoting GIS education at the university level, ICIMOD's Mountain Environment and Natural Resources' Environmental Systems (MENRIS) Division was instrumental in introducing a Masters' Level GIS Course at the Institute of Engineering, Water Resources' Department, Tribhuwan University. Altogether 22 students have enrolled so far for the course.

Mountain Research and Development Journal

Enhanced Scope & a New Format

The well-known international scientific journal 'Mountain Research and Development' will be published from February 2000 onwards in a new format and by a new management and editorial team. The Journal will be based at the University of Berne and will move **from a predominantly scientific publication to a journal that balances research with sustainable mountain development.**

MRD is now part of a global communications' network, in partnership with the Mountain Forum (www.mtnforum.org), an informal group of institutions and individuals concerned about mountain development.

ICIMOD will be happy to send a brochure with further details about subscription, contents, etc to interested persons. Brochures are also available from:

The MRD Editorial Office
Centre for Development and Environment
Institute of Geography, University of Berne
Hallerstuasse 12, 3012 Berne, Switzerland

Tel: 41 31 6318822; **Fax:** 41-31-6318544
E-mail:MRD-journal@giub.unibe.ch
Internet: www.MRD-journal.org

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Assistant Coordinator, Mountain Forum Secretariat

ICIMOD adopts a decentralized approach to programme implementation, functions as a facilitator for access to knowledge and advice, and provides a regional perspective to national and local activities. In this respect, the staff of ICIMOD make frequent visits to the ICIMOD member countries. In addition, international travel is undertaken occasionally to maintain global linkages. It is not possible to give an account of every visit and therefore we have tabulated the travel information to each country.

BANGLADESH

E. Pelinck/April	To attend the workshop on 'Internet: South Asian Realities and Opportunities' in Dhaka and the ATSCFS workshop in the Chittagong Hill Tracts
Z. Sadeque/April	To attend various meetings and visit institutions (Dhaka, Rangamati, Khagrachari, & Chittagong)
A. Shrestha/April	To participate in the workshop on 'Internet: South Asian Realities and Opportunities'
S. Sharma/Apr	Exposure visit
T. S. Papola, S.Z. Sadeque & K.. Rijal/June	Programme development (Dhaka, Chittagong, Rangamati, Khagrachari & Bandarban)
S. Sial/June	In exploration of collaboration in the Water Harvesting Programme (Chittagong)
Li Tianchi/June	ICIMOD Mission to Bangladesh on Development of the Chittagong Hill Tracts

BHUTAN

B. Shrestha & P. Bitter/June	In preparation for the national training course on GIS/RS in mountain land use planning (Thimphu)
S. Akhtar & S. Pandey/June	To carry out needs' assessment for 'Training of Trainers' - Bhutan Project

CHINA

K. Rijal/April	To participate in the First EU-China Small Hydro Conference; to explore the possibilities of developing activities in his field; and to participate in the Gender Training
C. Richard/April	To visit institutions in the Qinghai-Tibetan Plateau (Chengdu, Xining, Langzhou, Kunming & Lhasa)
A. S. Karki/May	To participate in the International Horticultural Exposition - 1999 (Kunming)
T. Partap/May	To attend the International Horticulture Exposition and to supervise the work of a Ph.D student (Kunming & Beijing)
P. Tulachan/June	To attend a meeting for the CAC research proposal and development and to contact institutions/experts and collect information material (Tashkent, Kunming & Chengdu)
S. Pradhan/June	To conduct GIS/RS training course (Lhasa)
C. Guang/June	To attend the Regional Training Course on 'Participatory Approaches to Rangeland Research and Development'
Li Tianchi/June	To attend a symposium
M.R. Tuladhar/Jun	In preparation for the 28th Board Meeting (Beijing, Chengdu, & Lhasa)
E. Pelinck/June	In preparation for the 28th Board Meeting and to attend the closing session of the GIS training in Lhasa

INDIA

J. Merz/April	To visit project sites of PARDYP (Almora)
S. Pandey/April	To install/upgrade the GIS systems in Almora and Solan
M. Dhakal/April	To visit project sites of PARDYP
P. Tulachan/April	To contact institutions/resource persons for studies and agricultural database work for the ICIMOD-ICAR development programme
A. Neupane/April	Consultation on livestock database and data collection for the Indian Himalayas (Dehradun, UP Hills, & Himachal Pradesh)
M. Myint/May	To conduct National Level Training (Almora)
S. Pradhan/May	To assist and conduct a course on national training in Almora
P. Pradhan/May	To conclude National Training Course II and to visit partner institutions (Almora, Solan, Garhwal, Nainital)
M. Banskota & S.R. Chalise/June	To participate in the Regional Consultation in South-Asia on 'Water for Food and Rural Development' organized by World Water Vision. (New Delhi)
U. Partap	To attend to work related to the Asian Apicultural Association's Publication

MYANMAR

J.D. Gurung/April	Follow-up visit to the Gender Training Course participants (Yezin, Mt. Popa, Yangoon)

NEPAL

C. Richard/May	To meet ACAP staff and check on field logistics for upcoming training in Jomsom (Pokhara)
A. Neupane/June	To take two Bhutanese participants on field trips to the agricultural research farm (Pokhara)
R. Upreti/June	To escort the group and organize the field trip to Mustang (Jomsom & Jharkot)
C. Richard & Y. Raut/ June	To organize and attend the Regional Training Course on 'Participatory Approaches to Rangeland Research and Development
P. Sharma & K. Rijal/July	Field visit to oversee the mountain tourism field study (Sirubari & Syangja) To supervise Energy Action Programme being implemented by CRT/N (Sirubari & Syangja)

PAKISTAN

J. Merz/April	To visit PARDYP sites (Peshawar, Hillkot)
R. Allen/April	To promote progress in PARDYP Watershed in Pakistan (Hillkot & Peshawar)
M. Dhakal/April	To visit project sites of PARDYP
C. Richard/June	To attend the coordinators' meeting-MLURI/AKRSP Norwegian Projects - Northern Areas

GLOBAL LINKAGES

J. Gurung/April	To attend IFAD Seminar (Thailand)
P. Pradhan/April	To attend Environmental Assessment & Monitoring Capabilities in South Asia (Bangkok)
M. Banskota/April	To participate in IFAD Regional Workshop in Bangkok
Li Tianchi/April	To attend the First Asia Pacific Conference on Ground and Water Bioengineering (The Philippines)
I. Sikdar/May	To prepare project concept paper with Prof. Rhoades and to discuss with the DSS group in the USA & University of Texas A & M (USA)
P. Pradhan/May	To attend the Sixth Session of the Asia-Pacific Regional Space Agency Forum (Japan)
S. Akhtar/May	To attend the Pan Asia R & D Committee Meeting (Colombo)
N. S. Jodha/June	To attend the 11th Board Meeting of the Tropical Soil Biology and Fertility Programme (Zimbabwe)
P. Tulachan/June	To interact/discuss with ILRI scientists and develop survey forms for rapid survey of dairy farming (one of the components of RCP-II Activity 1.3) (Ethopia & Kenya)
T. S. Papola/June	To attend the Steering Committee Meeting in preparation for the DSE/ICIMOD Conference on Growth, Poverty Alleviation, and Sustainable Resource Management to be held in 2000 (Germany)
J Gurung/July	To attend a Conference and Consultation an gender (Boston)

Visitors to the Centre

- Seerp & Maailie Wigboldus, C/o QNP, North Road, Lhasa
- Arun Mehta, Indata, Delhi, India
- K N Johny, Director, Centre for S & T for Dev. Countries, Delhi, India
- K. L. Shrestha, Advisor, Ministry of Science & Technology
- Jena Tallakshn, Dept of Geophysics, University of Oslo, Norway
- Alan Gustard, Institute of Hydrology, UK
- B. L. Deekshatulu, Dircctor, CSSTEAP, IIRS, Campus, Dhera Dun 248001, India
- Sangay Thinley, Joint Secretary Forest, Bhutan
- K. Klennart, DSE, Germany
- Doug Moorey, David Molden, TWMI, Colombo, Sri Lanka
- Oliver Spawyair-Baginski, Leeds University, UK
- OK Prakash, Community Forestry Officer, Nepal-UK Community Forestry Project, Kathmandu
- Subhakar Baiday, Dhading, Dev. Project, Nepal
- Pabitra Subba Shrestha, Gorkha Development Project, Nepal
- Gunther J. Kohl, Team Leader, GTZ/LAOS, Integrated Food Security Programme, LAOS
- Peter P. Mollinga, Senior Lecturer, Dpt. of Env. Sciences, Irrigation, and Water Engineering Group, Wageningen Agr. University, The Netherlands
- Alex Peachey, Consultant, NACRMP, Kathmandu
- Pedro Medrano Rojas, Regional Manager for South Asia, WFP, New Delhi, India
- G F. C Koch, Ambassador of the Netherlands for India, Nepal, and Bhutan
- Sam Bickersteth, Natural Resources' Advisor, DFID, Nepal
- Nita Pachhai, Development Officer, DFID, Nepal
- J. P. Bhetwal, PAC, Chitwan
- Vanda Altarelli, Rural Socialist, Investment Centre Division, FAO, Rome, Italy
- Howard Macdonald Stewart Sustainable Development Analyst, UNDP Vancouver, Canada
- Madhukar Upadhya and Hum Bahadur Gurung, Programme Manager, Capacity 21, UNDP, Nepal
- Priya Shyamsundar, Env. Economist, The World Bank, Washington DC, U S. A.
- Manik Duggar, Consultant, Env Economics, IUCN, Nepal
- Sue Adams, Librarian, St. Francis Xavier University, COAD International Institute Antigonish, Nova Scotia, Canada B26 2W5
  Nancy Peters, CECI Nepal
- Sushma Shrestha, Didi/Bahini Nepal
- Carmen Thonnissen SDC Asia II, Switzerland
- Gillian Mellsop, First Secretary, Development Cooperation, Australian High Commission, Delhi, India
- Uli Lutz, SDC, Environment and Forestry Division, Switzerland
- Jitendra Prasad, Scientist SF Agriculture & Soils, IIRS, Dehradun, India
- K. S. Rao, Subrat Sharma, GBPIHED Kosi-Almora, India
- Khaled Hosan, EGIS Dhaka, Bangladesh
- A H. M. Kamrul Habib Khan SRDI, Krishibhamer Sarak Dhaka
- Andrew E. Manzardo, Institutional Structuring, Maryland, USA
- Koji Kamee, K. Sasaki, K. Iriguchi, S. Morikawa, Ministry of Construction, Japan
- Dimyati Nangju, Technior Advisor, ADB, Manila, The Philippines

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