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ICIMOD WISHES ALL ITS READERS A HAPPY AND PROSPEROUS 2000!

Mountain Commons: An Overview

More than 60 per cent of the Hindu Kush-Himalayas (HKH) and the Tibetan Plateau consist of forests and rangelands. Together with water and genetic resources they constitute an immense wealth, often called the mountain commons. What they have in common is that they are for the most part formally not owned by individuals but by governments or government-related institutions. In practice, however, traditional societies have managed these resources as common properties. Local communities have devised systems of sustainable management for these on which most households can depend directly for day-to-day survival.

However, resources are fast deteriorating and ways and means to improve the condition of these natural resources are an important priority for most mountain communities.

The depletion of natural capital has come about because of many different factors. These include excessive use, improper management, and, in some cases, wanton destruction. Changing values, new institutional arrangements, and increasing priorities for development and commercialisation have all played a part. The loss of natural

resources has affected some groups of people more than others. The poor who were supplementing their meagre agricultural incomes from natural resource activities are finding it increasingly difficult to find them. Women are having to travel greater distances than before to harvest common property products used by households. Artisans no longer find themselves able to get the resources needed to support their trades. Growing shortages of fresh water, increasing soil erosion from agricultural and common lands, and increasing vulnerability to different types of natural hazards are other less discriminatory changes that affect entire communities.

However, the prospect is not all one of 'doom and gloom'. Mountain forests and glaciers are reservoirs that can buffer the effects of climate change, without which mountains can be a source of hazard and hardship. The vertical range of conditions, especially low latitude and high altitude, in the HKH provides a natural habitat for a great variety of species and indigenous crops. Although most people depend on forests and fuelwood for their energy requirements, the mountains also offer other sources of energy. The

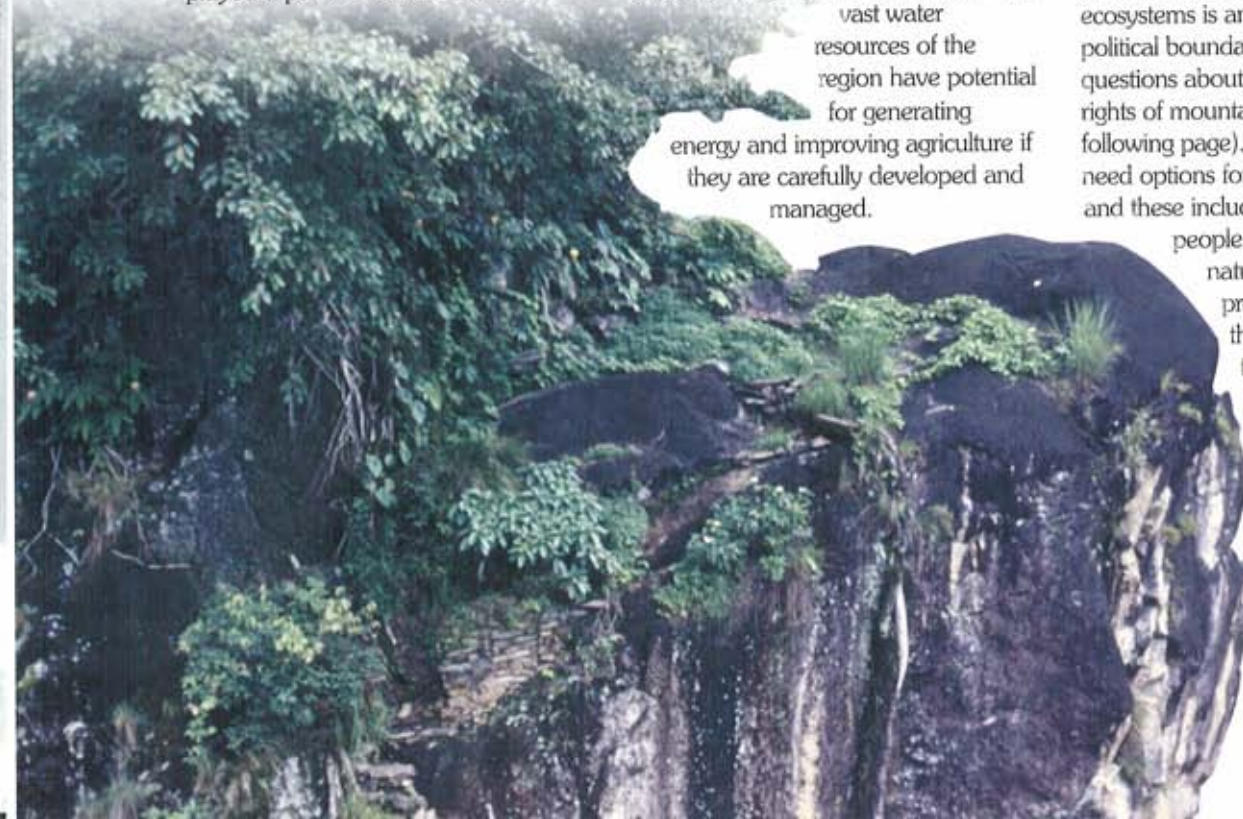
vast water resources of the region have potential for generating energy and improving agriculture if they are carefully developed and managed.

There are also many promising innovations that provide much hope. They include the emergence, through formal and informal interventions, of numerous forest user groups, water user groups, and rangeland management committees among individual communities and in individual countries. The real challenge lies in replicating these throughout the mountains. Multi-dimensional approaches are needed to devise means to restore the commons through appropriate sociocultural processes and institutional mechanisms that build upon social capital in mountain communities.

Creating a sense of community ownership of common resources and decentralizing decision-making regarding their management can renew sustainable systems for their use and conservation.

There is a vast reservoir of indigenous knowledge and practices, e.g., for pasture rotation and soil fertility maintenance; of which the value for sustainable development is only recently being recognised. Genetic resources of the mountain environment will play an even greater role in the future as mono-cultures are threatening to destroy agricultural biodiversity. Protecting the biodiversity of both natural and agricultural ecosystems is an issue that cuts across political boundaries as well as raising questions about the intellectual property rights of mountain communities (see following page). Policy-makers now need options for managing biodiversity, and these include acknowledging local

people as the custodians of natural resources. The present Newsletter is the third one in a period of three years that emphasises (aspects of) common property resource management. Volume No. 27 focussed on Rangelands and Volume No. 31 on Biodiversity Management in the HKH.



Urgent Need to Protect Farmers' Rights to Natural Resources

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Farmers have been managing, conserving, and using natural resources since time immemorial and have also contributed to increasing the diversity of natural resources. The current diversity of crops and livestock is neither accidental nor purely natural, but results from thousands of years of deliberate selection, planned exposure to various natural conditions, field-level cross-breeding, and other experimentation. Thus, a single species of rice collected from the wild by a forest dweller in the distant past has diversified into 50,000 varieties due to a combination of evolutionary/habitat influences and the ingenuity and innovative skills of farming communities. Rural farmers and forest dwellers are, in a very real sense, the original 'Scientists'.

Farmers' Rights have been defined as rights arising from the past, present, and future contributions of farmers in conserving, improving, and making available plant genetic resources, particularly those in the centres of origin. Those rights are vested in the international community, as trustees for present and future generations of farmers and supporting the continuation of their contributions as well as the attainment of overall purposes of the International Undertaking on Plant Genetic Resources (FAO Resolution 5/89). Although this definition of Farmers' Rights acknowledges the contribution of traditional farmers in conserving and developing flora and fauna, the rights are not vested in the individual farmer.

Rural farmers and forest dwellers are in a very real sense, the original 'Scientists'



Farmers' complex agricultural systems are based on diversity and have proved their resilience over time. Now as farmers and their production systems face new challenges from genetic erosion, ecological degradation, and pressures to increase farm produce the conservation and improvement of plant genetic resources are central to their evolving strategies.

However, the role of traditional farmers in maintaining food security has not been sufficiently recognised. The economic forces that are opening markets to global agribusiness and dispossessing traditional farmers are myopic. In fact, as Pat Mooney wrote in the 1996 special issue of *Development Dialogue*, only small-scale farmers and their communities can both put food on the world's table and do so with a grace that is just and sustainable.

The Convention on Biological Diversity

The 1992 Convention on Biological Diversity (CBD) for the first time considered the issue of various rights and responsibilities in relation to conservation and sustainable use of biodiversity. The connection between conservation of biological diversity and the protection of intellectual property rights is now well known. The Convention has extended intellectual property laws to indigenous and local communities' knowledge and practices, and genetic resources are brought into the domain of sovereign control.

The Convention mainly calls upon and gives leverage to States to promulgate national legislation to protect their rights to their bio-resources. The Convention gives special care to the role of communities and their knowledge. Their knowledge, innovations, and practices are to be protected, preserved, and maintained. Wider application and the equitable sharing of the benefits arising from such knowledge, innovations, and practices, with the approval and involvement of the knowledge holders, are to be encouraged through national legislation.

Since domestic legislation in most countries recognises neither communal rights in property nor the communal invention, the national legislation giving effect to the Convention must define the role of communities and indigenous knowledge. 'Indigenous Intellectual Property Rights' are a tool for reinforcing and defending cultural integrity and are particularly relevant to cultural survival, as they lead the way in developing markets for indigenous peoples' sustainably produced, natural products. The Convention thus can be used to pressurise governments into taking local communities seriously.

Catastrophic consequences will result for Third World countries if living resources like plant varieties and the genes that give them commercially-desirable traits are patented. The descendants of the very farmers who created the food crops will have to pay royalties to buy seeds that their ancestors brought into existence.

Individualising the Commons

Privatisation of Grazing Lands

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Wu Ning

Is fencing the solution?

In the Hindu Kush-Himalayas (HKH), almost all households rely on livestock to help meet basic subsistence needs, as well as to provide surplus for trade (either cash or barter). By far the most extensive use of the commons in the HKH is for grazing domestic livestock. Common grazing lands used in this context refer to both native rangeland and forest grazing lands, and these cover approximately 60% of the region. These vital grazing resources have been used for centuries in many areas and managed as a common property resource through complex institutional arrangements among pastoral groups and agricultural communities. Many factors now threaten pastoral livelihoods; and these factors include policies that are aimed at converting land into individual tenureship.

Throughout the HKH, whether in lowland forests or on the high altitude Tibetan Plateau, grazing commons are rapidly becoming a scarce resource. Major factors contributing to their decline include sedentarisation of pastoral communities, conversion of land to

agriculture and its intensification, restriction of grazing in government and community-managed forests, establishment of protected areas (see box text), and urbanisation along migratory corridors. As a result, livestock are becoming concentrated into smaller and smaller spaces, leading to localised degradation and exacerbated by population pressures, especially in lower elevation agricultural areas. In pastoral systems (those relying primarily on natural forage for grazing), animals must be able to track good forage - something that becomes increasingly difficult when the land is fragmented by private agricultural land, forest closures, and fences.

At the heart of these changes are policies affecting common property tenure. Perhaps one of the most influential academic works to influence land tenure policy has been Hardin's (1968) concept of the 'Tragedy of the Commons'. Using grazing as an example, Hardin argued for private tenure, based on the assumption that access to a common resource leads to overexploitation because

the livestock owner will view the grazing resource as a free commodity, thus maximising herd size at the expense of other herders. Refuted extensively in the academic literature, his argument fails to recognise common property arrangements, and in reality reflects a situation of open (or unregulated) access, a situation that is the exception rather than the rule. Despite the overwhelming evidence against his argument, the concept of the 'Tragedy of the Commons' still holds strong sway amongst policy-makers throughout the globe, resulting in inappropriate land tenure policies for marginal lands such as the high elevation rangelands of the HKH.

The Ecological and Economic Rationale for Communal Grazing Management

Most rangelands of the HKH are naturally low in productivity and are often extremely variable in terms of climate and forage production across the landscape. The marginal nature of these lands means that mobility is a fact of life for pastoralists; the more harsh the landscape, the further people must roam in order to procure forage for their livestock. Thus the pastoral production systems adapted to these landscapes are by nature diverse in order to reduce risk associated with a variable environment. This is reflected by diverse herd structures, well-defined customary use rights for pasture access, and extensive trading networks to procure products from distant agricultural communities. This interdependence between extensive and intensive land use systems has been the basis of survival for communities residing on marginal lands.

Communal grazing management in variable landscapes makes sense from both an ecological and economic perspective. Although counter-intuitive, a large area of communally managed rangeland will support more animals per hectare than small parcelled ranches. A herd moving as a cohesive group can track higher quality forage across the diverse mountain landscape more effectively. Private ranchers would have to restrict their herds to smaller, sometimes unproductive, parcels, thus overgrazing their land during bad years and under-utilising it during good years.

Economies of Scale in Livestock Operations: Two Perspectives

From the development perspective, economies of scale are viewed in terms of economic efficiency. Individual tenure works for those ranchers who control relatively large areas of land and who have the capital and access to markets to invest in land and livestock intensification; the larger the area the less investment is required on a per unit area basis. In the pastoralists' world view, economies of scale are manifest in terms of both efficiency and equity; common property arrangements favour more equitable distribution of benefits than individual tenure by supporting more people and livestock across a variable landscape. Given the heavy dependency on livestock among the population in the HKH, sufficient land for each family to have their own winter hay fields and seasonal pasture simply does not exist, nor can people afford to intensify without government subsidies. Thus policies that promote settlement and privatisation potentially increase risks for the individual household, reduce diversification strategies, and foster conflict within and among communities. If the concern among policy-makers is equitable

and sustainable distribution of benefits from the resource base, it is vital that communities maintain some degree of access to commons to support livestock, especially for small landholders and nomadic groups.

Policies that Enable Grazing Commons' Management

Considering that livestock and the commons they graze will remain vital components of farming systems in the HKH for some time to come, policies should be promoted that:

- 1) recognise grazing commons as a viable land use, rather than as land for future conversion to individual control;
- 2) provide user groups (either formal or informal) with the legal right to communally access and manage their

pasture lands, in partnership with governmental organizations and/or NGOs (see Box text);

- 3) maintain livestock mobility by promoting technologies that work in tandem with indigenous systems of management and the realities of the marginal environment;
- 4) help establish cooperatives within and among user groups to promote access to credit and technical inputs for livestock and pasture improvements, product processing, and markets, rather than only to individuals; and
- 5) enhance linkages between intensive agricultural areas and extensive rangeland areas for interchange of products such as fodder, manure, meat, milk, and food crops.

Extinguishing Grazing Rights in Protected Areas: The Case of the Great Himalayan National Park, India

For centuries, pastoral communities have been grazing their sheep and goat flocks in the vast alpine rangelands of the Great Himalayan National Park (GHNP) in Himachal Pradesh. Despite research that showed little evidence to substantiate excessive overgrazing, the Department of Forests recently extinguished all use rights within the park, under pressure from a Supreme Court decision to settle rights in protected areas of India. This was done without providing monetary compensation to the 10,000 grazing rights' holders. Instead, alternative forest land was offered, but this can not replace the alpine forage resource that is so vital for sheep wool production and health. Thus a vital livelihood has effectively been eliminated with these decisions. This raises questions about the effectiveness of such strict delineation for protected areas in heavily populated regions of the world such as India. Perhaps the case of the GHNP can serve as a lesson for policy-makers in the process of designing new and innovative approaches to community-based conservation.

Grazing User Groups in Makalu Barun National Park, Nepal

Concern was expressed among MBNP managers that rampant grazing in some areas of the park was leading to degradation of biodiversity. Upon closer inspection, it turned out that much of the problem was not one of necessarily open access and overgrazing, but rather conflicts over pasture access among grazing groups and local concern over loss of access rights with establishment of the park. Thus MBNP, in collaboration with The Mountain Institute (TMI), helped implement the formation of formal grazing user groups. In one such case, through a series of negotiations between user groups and park/NGO staff, misunderstandings and conflicts over resource tenure were effectively settled and groups were given legal rights. In addition, participatory data collection and monitoring contributed substantially to improving management of the pasture resource and conservation awareness among herders.

Strategies for Participatory Forest Management in the Hindu Kush-Himalayas

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The last decade of this millennium is testimony to changing times for the people and forests of the Hindu Kush-Himalayas, as people-centred forest policies have emerged in almost all countries of the region. Different benefit-sharing systems and tenure arrangements are bringing increasing areas under community management, often building on or adding to traditional forest management practices, auguring well for the sustainable development of these mountain areas.

ICIMOD's Participatory Natural Resources' Management Programme has contributed to these exciting changes by documenting these processes and by providing regional and national forums for the exchange of learning and experience. A regional workshop entitled,

'Participatory Forest Management: Implications for Policy and Human Resources' Development,' held in Kunming, Yunnan, China, in May 1998,

brought together senior policy-makers from the seven HKH countries.

The representatives of all countries endorsed the idea of HIFCOM -- the Hindu Kush-Himalayan Forum for Forest Conservation and Management -- as a regional forum for promoting participatory forest management. HIFCOM evolved from an earlier ICIMOD workshop held in India in 1995. The stakeholders themselves have now taken over leadership and have drawn up plans for the future. During the meetings, representatives identified strategic issues for participatory forest management (PFM) in the Hindu Kush-Himalayas, particularly those with implications for policies, programmes, and human resource development.

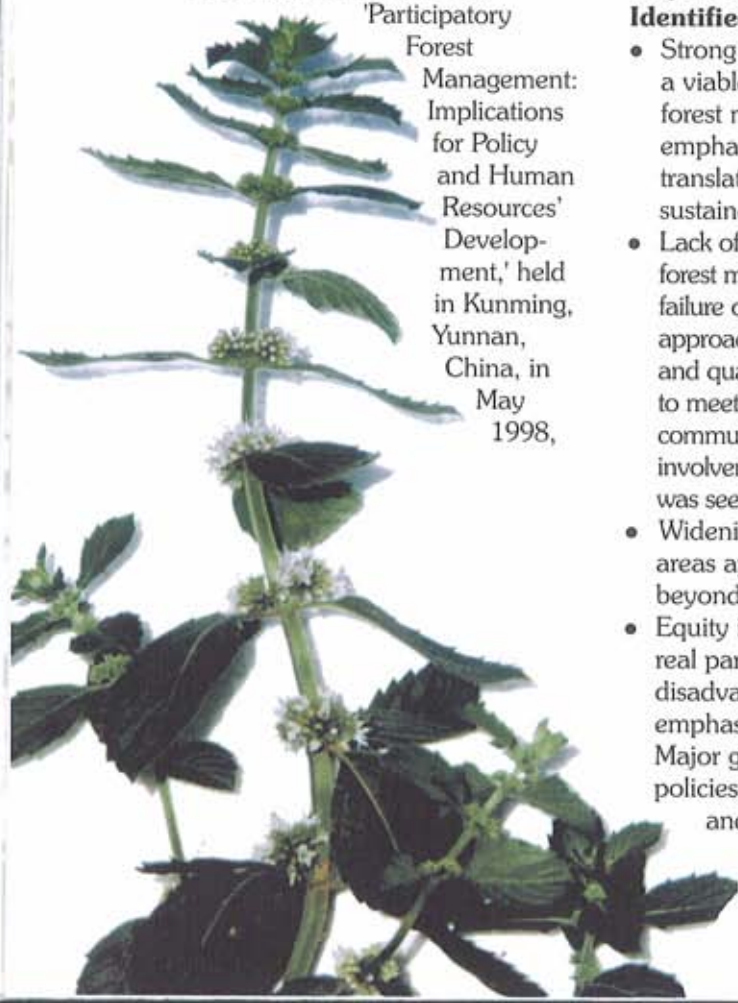
Major Strategic Issues Identified to Promote PFM

- Strong endorsement of PFM as a viable option for sustainable forest management and emphasis on the need to translate the policies into sustained implementation.
- Lack of alternative options for forest management, based on the failure of past custodial approaches to maintain the extent and quality of forest resources and to meet the needs of local communities and the country. The involvement of local communities was seen to be critical.
- Widening the forest types and areas appropriate for PFM beyond degraded forest areas.
- Equity in sharing benefits and real participation of women and disadvantaged groups were emphasised for PFM's success. Major gaps exist between policies and practices on equity and gender issues.

- Various arrangements are in place for sharing forest products and income from forests between the government and the local communities. Often there is inadequate clarity about whether gross or net benefits are to be shared. The need for clarity and involvement of all stakeholders, particularly local communities, in negotiations was voiced.
- Capacity building through effective training and other activities for different stakeholders was considered very important. Provision of motivation and incentives and upgrading of physical facilities of training institutions and improving the quality of trainers and materials need to be strengthened.
- The traditional top-down attitude of foresters, largely shaped by custodial approaches to forestry by forestry institutions must be changed to a catalytic role to suit the concepts and approaches of PFM.
- Mechanisms are required to sensitise policy-makers to current issues and concerns regarding forest management and the appropriateness of present policies, as well as to the advantages of PFM.

Factors for Successful PFM

Key factors identified for successful participatory forest management included appropriate policies, rules, and programmes; recognition of local communities' capacities; adoption of a participatory approach; appropriate institutional arrangements; human resource development; commitment to learning and sharing; and appropriate donor support. Strong



and stable policies with clear legal frameworks are of paramount importance. In addition, the presence of appropriate and timely rules is essential to ensure PFM policies are implemented as properly planned programmes.

Barriers and Obstacles to PFM

Various barriers to effective PFM were identified.

- Inappropriate legislation and inflexible rules that do not meet specific sociocultural conditions can hinder implementation. Other government acts and programmes may need to be considered or even changed so they do not contravene PFM policies and actions.
- Lack of priority for PFM in national programmes leads to under funding, with consequent, inadequate human resource development and inadequate extension services.
- Inadequate focus on changing the attitudes and behaviour of government staff has many negative impacts on PFM and community development as a whole.
- Failure to address complex social factors such as institutional and political realities, gender issues, caste systems, and economic disparities within the community often leads to inequitable benefit-sharing in PFM, and results in conflicts.
- Lack of transparency in decision-making by the government or by the local community level institutions

undermines a true spirit of trust and collaboration.

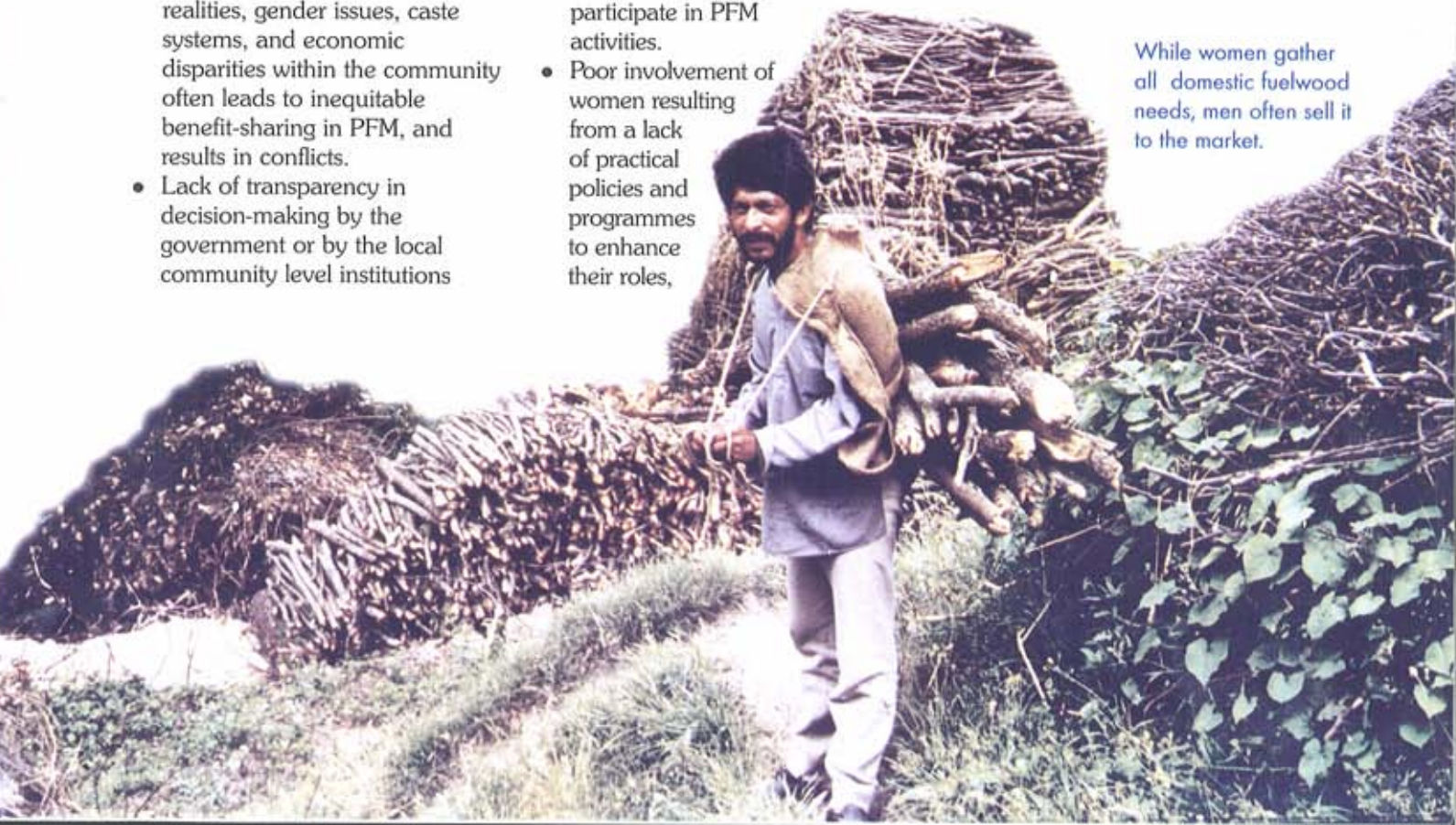
- Lack of conflict resolution mechanisms will seriously undermine programmes when conflicts arise. Conflict resolution mechanisms should be easily accessible, cost effective, timely, and consultative.
- Lack of site-specific planning and inflexible rules, regulations, and programmes can often mean that an unsuitable programme may be forcibly implemented. Insensitivity to site specificity cause a programme to fail, particularly in a very diverse mountain region like the HKH.
- Lack of recognition of local usufructory rights leads to conflict between the local communities and the government and undermines the good working relationship between the stakeholders without which PFM cannot flourish.
- Lack of clearly articulated security of tenure over land and products being managed by local communities under PFM can be a disincentive for the local communities to fully participate in PFM activities.
- Poor involvement of women resulting from a lack of practical policies and programmes to enhance their roles,

particularly in decision-making.

- Inequitable benefits for the poor and disadvantaged undermines the success of PFM. Many studies have shown that the poor and the disadvantaged do not necessarily benefit from overtly protection-oriented PFM. PFM programmes need to be sensitive to the needs of the poor and the disadvantaged.

The region is now moving from a decade of policies and experiments to a future of practice and implementation that will test these policies on the ground and lead to further reflection, learning, and change. This can happen successfully only if policies are backed by appropriate, timely, and clear laws and rules which enshrine their spirit. A high level of commitment is required to ensure that policies do not remain merely statements of intent. For this, human resource development must be addressed with a greater sense of urgency than in the past. In addition to development of skills, the workshop participants identified further reorientation and changes of attitude as major future challenges.

While women gather all domestic fuelwood needs, men often sell it to the market.



Governance and Management of Community Forestry

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There is increasing recognition that forest resources in mountain areas cannot be sustainably managed in isolation of issues related to governance, decentralization, and democratisation. While informal village-level institutions have demonstrated their ability to manage forest

resources, engagement with elected village and district level institutions is increasing, having accelerated with the emergence of new laws and rules and regulations related to decentralization and devolution of powers and responsibilities to elected institutions.

It was to gain a better understanding of these issues that ICIMOD organized a Workshop entitled 'Widening Horizons'.

The workshop was successful in developing a 'Common Statement on Governance and Community Forestry Management in the Hindu Kush-Himalayas.' The Statement clearly recognises that "Local community participation, involving the delegation of power and responsibilities, is emerging as an effective way to promote sustainable development." This trend towards informal village-level institutions managing forest resources has led to increasing engagement with elected village and district-level institutions, a process that is accelerated by new laws, rules, and regulations related to decentralization and devolution of powers and responsibilities to elected institutions.

Decentralization is frequently initiated as a precondition to participatory development. However, such participation will be merely passive if the decentralization process fails to consider the ecological, social, and cultural specificities of the mountain areas, particularly when inadequate attention is paid to gender and equity concerns in articulating local development and environmental management aspirations. Lack of trust and faith between local elected institutions and community forest management user groups results in conflicts, duplication of efforts, and wastage of resources.

Envisioning the desired situation, workshop participants advocated changes stemming from the recognition that local people are the best managers of natural resources, because their lives depend on them. Thus, throughout the Hindu Kush-Himalayan (HKH) region, local communities, should, through community institutions, be given ownership and control over local natural resources. Forest resources, as a matter of right and not as a government-granted concession, should be first used to meet the needs of local people. If forest products are to be commercialised, the terms and conditions should be decided upon locally. A number of specific strategies were designed to meet this goal.

Achieving the desired objectives requires political will and individual and institutional commitment. Research, education, and advocacy campaigns are important to inform and influence the emergence of appropriate legislation. The participants at the workshop called on all individuals and institutions in the Hindu Kush-Himalayas to take



Framework on Governance and Community Forestry Management in the HKH

Present	Desired	Strategies
<ul style="list-style-type: none"> • Lack of complementarity between policy, law, rules and regulations 	<ul style="list-style-type: none"> • Evolution of laws and policies that are complementary and assist in the creation of an enabling environment which allows constructive engagement between local, elected institutions and community forestry management groups 	<ul style="list-style-type: none"> • Campaigning, lobbying, mobilising at all levels, from the local to the regional for changes in legal framework • Drafting alternative laws and regulations based on research into both traditional and modern laws and on people's opinions • Influencing legislators through popular pressure to change the present regimes
<ul style="list-style-type: none"> • Gender and Social Inequity 	<ul style="list-style-type: none"> • Emergence of legislation that grants reservations and guarantees to enhance equal participation of women in politics and in community forestry management groups at all levels of decision-making. • Introduction of laws that ensure the representation and participation of marginalised socioeconomic groups in institutions at all levels. 	<ul style="list-style-type: none"> • Insistence on legislative reservations for women and marginalised socioeconomic groups in all institutions at all levels • Educating communities on gender and socio-economic issues in preparation for a campaign to assert the principle of equality • Compulsory education for all, with a focus on the girl child
<ul style="list-style-type: none"> • Inadequate empowerment of community institutions, especially informal ones 	<ul style="list-style-type: none"> • Creation of community institutions, based on principles of equity, which are formed by the people themselves and not imposed from above • Self-reliance as the ideal form of governance in mountain areas 	<ul style="list-style-type: none"> • Work with legislators and other sections of civil society to enhance their work with the people • Capacity building and local institutional development
<ul style="list-style-type: none"> • Lack of accountability and transparency 	<ul style="list-style-type: none"> • Presence of mechanisms at all levels which ensure transparency amongst all individuals, local elected institutions and community forestry management groups • Transparency to become a part of day to day life 	<ul style="list-style-type: none"> • Educate people to insist on transparency in all institutions in which they work • Highlight that all elected/selected representative institutions are accountable to the people
<ul style="list-style-type: none"> • Inequity in property rights 	<ul style="list-style-type: none"> • Change in property and inheritance laws to treat women and men equally 	<ul style="list-style-type: none"> • Advocacy at different levels • Information and awareness campaigns
<ul style="list-style-type: none"> • Non-involvement of CFM groups in development activities 	<ul style="list-style-type: none"> • Forest and natural resource management and all development activities to be entrusted to the village assembly or any other body the village assembly may choose 	<ul style="list-style-type: none"> • Form robust village assemblies, able to carry out necessary work related to local level natural resource management and development
<ul style="list-style-type: none"> • Conflicts between CFM groups and elected representative bodies on development issues 	<ul style="list-style-type: none"> • Presence of direct democracy at the village level, including the right to recall elected and/or selected representatives at all levels • The village assembly be entrusted with natural resource management and development • The elected representatives act on behalf of the groups and not a political party 	<ul style="list-style-type: none"> • Campaign for direct democracy at the village level, including the right to recall elected and/or selected representatives at all levels • Begin informing representatives they will not be voted back unless they honestly represent the people and their rights
<ul style="list-style-type: none"> • Neglect of tenure and ownership issues 	<ul style="list-style-type: none"> • Policies which guarantee clear rights to benefits 	<ul style="list-style-type: none"> • Campaign for changes in laws and rules at all levels

steps towards transparent governance and sustainable mountain development on the principles of 'Some, for all, forever'.

Reflecting the common statement endorsed at the workshop, a Framework on Governance and Community

Forestry Management in the HKH was prepared (see above).

Empowering Grass Roots' Women in Natural Resource Management

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Women in the mountain and hill areas of the Hindu Kush-Himalayas (HKH) are the pivot of the family unit, bearing a major responsibility for agriculture, forest, and other natural resource management as well as for their family's well-being. They are also the primary managers of agricultural and forest lands. Although local mountain women have the sophisticated knowledge to manage a multiplicity of roles and small production systems to adapt and survive in a fragile environment, their opinions and suggestions remain

unheard, undermining the development and implementation of appropriate management strategies. Limiting sociocultural factors include most obviously workload as well as barriers against land ownership, cultural roles, secondary status, and division of labour. Women are rarely encouraged to attend meetings or to speak out when formal decisions about resource management are made.

Traditional cooperative groups of women have understood the benefits of collective action within their households and farms.

Increasingly, women's organizations have been emerging in the region, enabling women to raise their voices on crucial issues such as saving and conserving existing forest resources. As they develop institutional networks, women gain self-confidence and a sense of empowerment. In women's organizations, all have the opportunity to arise as leaders. Group meetings are usually informal and are arranged around women's work schedules, encouraging wide participation. Common struggles and constraints bring group solidarity, increasing the members' enthusiasm to become involved in activities that

improve women's status and living conditions.

Emergence of HIMAWANTI - the Himalayan Grass Roots' Women's Natural Resources' Management Network

In May 1995, ICIMOD's Participatory Natural Resources' Management Programme organized the First Regional Community Forestry Users' Group Workshop. An important issue that emerged was the vital role of women's empowerment in contributing to integrated mountain development in the HKH, and that processes are required to increase women's genuine participation in decision-making relating to natural resource management. Women participants at the Workshop felt the need for a separate institutional mechanism to address particular problems and constraints faced by women forest users. A Regional Women's Community Forestry Users' Group Network was established, composed of women from Nepal, India, and Pakistan, and an informal working group was elected to carry this process forward.

Further workshops and meetings decided that the network would function for the protection and development of all natural resources, including forests, water, and land and was therefore renamed: 'HIMAWANTI', short for 'Himalayan Grass roots' Women's Natural Resources' Management Network.' Subsequently, new country and regional level committees were established to work on drafting a constitution, formulating policy, devising a networking strategy, and to establish the form and structure of the grass roots' level network. Country working plans for establishing the network were

Participants pour water brought from their home towns into the same vessel in conformity with the spirit of sharing similar experiences



BHUTAN

In Bhutan, the Ministry of Agriculture held the first ever workshop organized for women farmers in February 1999 at Bajo. Although women own 70% of the land in Bhutan, and over 60% of Bhutanese women work in agriculture, the women farmers at the meeting commented that women are always in the minority in any public meetings, and they have a hard time expressing their feelings. When they do speak their opinions are not taken seriously. The women recommended that future workshops be held regionally within the country to provide a firm basis for institutionalising locally relevant natural resource management activities.

UTTAR PRADESH, INDIA

The Uttar Pradesh HIMAWANTI Workshop was held in March 1999 in Kausani, Almora, Uttar Pradesh, India. Over 80 women from most Uttarakhand districts attended. In reviewing the history of women's movements in the area, stories were shared of women's successes in banning sales of alcohol and closing environmentally-damaging quarries. A Strategy for Women's Empowerment was presented that includes the following points.

- Work through local NGOs to increase the work being done by women to protect and manage natural resources
- Direct efforts to increase women's participation in *Van Panchayats*. Make efforts so that women can assume responsibility for running the *Van Panchayats*.
- Although women are participating in *Panchayati Raj* institutions, they need to be empowered. NGOs working with HIMAWANTI can conduct training programmes to this end.

NORTHERN AREAS OF PAKISTAN

The Aga Khan Rural Support Programme in Gilgit, Northern Areas of Pakistan, facilitated the Workshop on Strategies for Empowerment of Women in Natural Resource Management in March 1999. Close to 80 women from six valleys of the Northern Areas attended this Workshop; the first ever organized for grass roots' women in the area. After two days of group work exercises, a series of recommended Strategies for Empowerment of Grass Roots' Women was developed. These include the following.

- Large-scale awareness raising campaigns by NGOs and the government for both men and women
- Encouragement of women's participation in marketing
- Increase in women's representation at the Northern Area Council level
- Encouragement of women's representation in politics, through reserved seats
- Legalising the status of local community institutions
- Inclusion of women in Natural Resource Management committees
- Reservations for women for higher education in NRM in universities
- Provision of opportunities for networking with women of other areas
- At least 50% women's participation in local institutions such as natural conservation committees
- Inclusion of women in policy-level positions
- Gender training for village men and local male representatives
- Clear government policy on the role of women in forest conservation

developed and work began on establishing HIMAWANTI on a self-sustaining basis.

The decision to organize a large regional meeting to promote wide-scale networking of grass roots' women engaged in natural resource management was made early in 1997. As a prelude to the regional workshop, national or sub-national consultations were organized in Bhutan, Nepal, Uttar Pradesh and

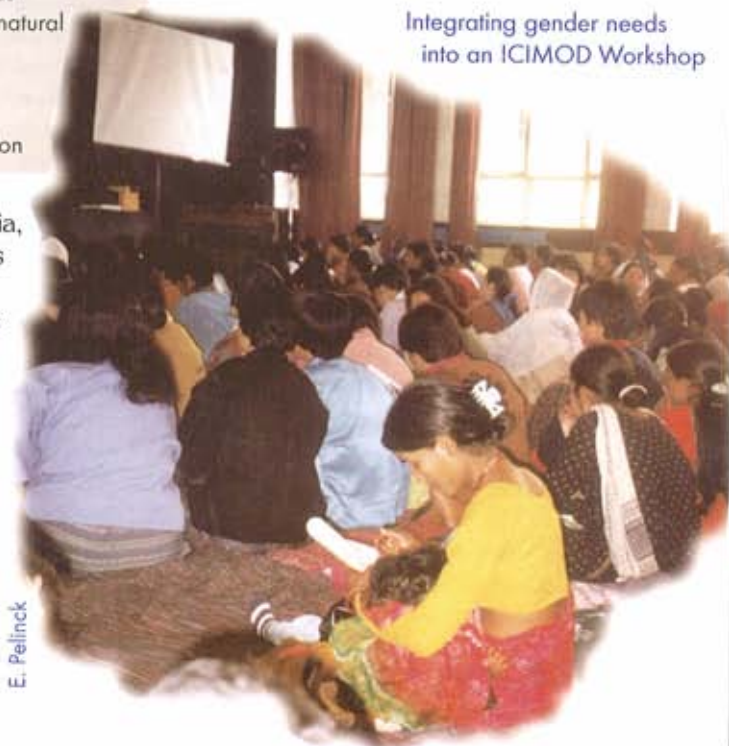
Himachal Pradesh, India, and the Northern Areas of Pakistan to discuss relevant issues. In these consultations, at least half of the participants were truly representative of the 'grass roots' and socially and economically disadvantaged women.

Participation of women from women-headed households was given special emphasis.

The Regional Workshop on Strategies for Grass Roots' Women's Empowerment in Natural Resources' Management in the HKH, held in October 1999, brought together over 200 grass roots' women from the mountain areas of Bangladesh, Bhutan, India, Nepal, and Pakistan. ICIMOD organized the workshop in close collaboration with HIMAWANTI and the *Dasholi Gram Swarajya Mandal*. Major outputs from the workshop were: expansion in membership to include women from other countries of the HKH; development of a specific strategy and action plan for organizing local-level branches of HIMAWANTI in order to institutionalize HIMAWANTI throughout the Hindu Kush-Himalayas; and enhanced understanding of national and regional perspectives and the role of women in sustainable natural resource management in mountain areas.

This Workshop was an important milestone and evolved specific strategies, which will empower grass roots' women to make a significant contribution to sustainable mountain development in the HKH (see Centre News).

Integrating gender needs
into an ICIMOD Workshop



E. Pelinck

Scarcity Amidst Plenty

The Looming Water Crisis in the Mountains

SURESH RAJ CHALISE
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Construction of an underground water harvesting tank in the Jhikhu Khola watershed in Nepal

Rapid population growth, changing climates and their uncertain impacts, and inadequate understanding of the hydrology of the Hindu Kush-Himalayas (HKH) are contributing silently but surely to create a crisis in water and food for the mountain people of this region. The mountain people themselves are largely ignorant of this looming crisis. It is ironic that the people in these mountains which, in fact, are among the richest in water resources, are going to face a water crisis in the not too distant future. The problem is too great for the people who for centuries were compelled to remain away from the mainstream of development and were not only marginalised and pauperised for centuries but are also living in a marginal and fragile environment.

The people desperately need external support to face this looming crisis, and this will be

possible only by developing their capacities; both technical and institutional, and raising their awareness about the impending crisis. Building the capacities of mountain people will be best done by providing knowledge and institutions based on indigenous local knowledge and traditional institutions and not by undermining such local traditions, knowledge, culture, and management systems.

As water is available only during the few months of the rainy season, probably the most important step towards developing local capacities to cope with the impending and uncertain crisis over water will be to enable people to harvest locally-available water to meet their present and future needs. This could be carried out by enabling people to plan, construct, and manage water collection and storage systems (also for rainwater) in accordance with their immediate and future needs. Small and simple systems for the

collection and storage of rainwater for use during the dry period, if developed on a mass scale, will have a tremendous impact on the life of the mountain people, not only by ensuring year-round for domestic supplies but also supplies for irrigation during the critical dry periods for food production.

Raising the awareness of mountain people about the pollution of local water sources through indiscriminate disposal of human and animal waste as well as indiscriminate

use of chemical fertilizers and pesticides will also help to increase the availability of fresh and safe water for local consumption.

Local Water Harvesting

In the last decade, countries in the region have launched programmes to provide drinking water and irrigation to rural mountain people. Such programmes are normally conceived, planned, implemented, and managed by governmental sectoral agencies. There is very little involvement of local people in the design of local storage or conveyance systems and practically no accompanying programme to develop local capacity to operate and subsequently maintain such systems. More recently, transfer of management of irrigation or drinking water schemes to local communities has been encouraged in some countries of the HKH. However, success of such management transfer is difficult to assess at this stage as has been seen in Nepal.

So far local water supply schemes, for domestic use or irrigation, are based on harvesting water from local streams, rivers, springs, and groundwater. Rainwater harvesting has not been practiced in the region to any significant extent except in China. Programmes have been launched successfully on a mass scale in Yunnan, Sichuan, and Gansu Provinces in China to harvest rainwater for both drinking and irrigation as part of the poverty reduction programme, and the results have been dramatic in terms of increasing local food production, leading to an increase in the cash incomes of the local people.

Many cultivated areas in the HKH countries are rainfed as irrigation is available only for a tiny fraction of cultivated land. Thus harvesting of rainwater and using it to irrigate rainfed areas during the dry period could make a big difference in food production and also in the production of high-value crops - raising the income of the local people, as already seen in China. A recent study demonstrates that food production has remained either stagnant or has actually decreased in most of the HKH countries. Year-round water supplies, through such programmes, for domestic use will help reduce the drudgery of women and children who, otherwise, have to walk long distances up and down the mountain tracks to fetch water for household consumption. Sufficient local water supplies will not only improve local sanitation and health but will also give a big boost to dairy and livestock farming.

Recent studies undertaken by ICIMOD in Bhutan, China, India, Nepal, and Pakistan have shown that, except for China, there are no policy incentives and programmes specifically for local water harvesting. It was also seen that local people's participation was almost absent from government programmes for local drinking water and irrigation. Similarly, there

Scarcity of Water and Women's Drudgery: An Example

In Garhkot Watershed of the U.P. Hills of India, a family woman was using her 115 workdays to fetch water for domestic use requirement by carrying water from springs located at about one km away, considering a minimum consumption of 15 litres only per capita per day in view of the scarcity of water in the area. The distance travelled varied from 0.5km to 3.5km and the waiting time ranged from 0.3 to 4 hours. Tap water supplies were available once a week during winter with a waiting time of from 4-8 hours depending upon the location; and this was mostly not available in summer. Animals had to travel 4 to 8km for water particularly from high and mid-altitudes. Some villagers had to travel 4 to 6km away to do the laundry.

Collapse of Traditional Institutions due to Government Intervention: An Example from Bhutan

With the onset of planned development programmes, the Government of Bhutan took up new construction work as well as rehabilitation of farmer-built irrigation channels. As the number of these schemes climbed steadily, the farmers began to see it as an easy way out of a demanding task. Routine operation and maintenance were neglected till the channel finally collapsed. Then they turned to the government for assistance, and this was readily available. In this manner, many farmer-managed irrigation channels fell into disrepair and the government had to provide assistance for their repair. Thus, it was no surprise that some channels began to appear regularly on the list of rehabilitation programmes, indicating a collapse of the traditional institutions responsible for their upkeep.

seemed to be very little coordination among various agencies and programmes at the local level. It was also found that, in remote areas, particularly in the rainshadow areas of Nepal and India, and in Balochistan in Pakistan, local water harvesting and management systems and traditional institutions were still very important, active, and effective in providing water to local people. Another important finding was the growing pollution of both surface waters and local springs, particularly as a result of using chemical fertilizers and pesticides.

Experience from China has shown that, with appropriate programmes and policy incentives, harvesting rainwater and local water sources through collection and storage systems at the household level and small community level will not only boost food production but will also help local people to increase their incomes within a very short time-frame.

Hence, to ensure availability of water for mountain people for domestic and agricultural use will

ensure sustainable improvement in their quality of life within a very short time-frame.

ICIMOD's Initiatives

ICIMOD's programme on water was launched in response to the issues discussed in the foregoing sections. Activities under this programme are expected to address the following two priorities.

- (i) Enabling local people to harvest and manage their local water resources, including rainwater, to meet their requirements for domestic use and critical irrigation needs through the promotion of sustainable water harvesting technologies and policy advocacy.
- (ii) Improved understanding of the hydrology of the HKH to develop practical methods and models to benefit the local people, as well as to develop the scientific capacity within the region to deal with uncertain impacts of changing climates on the hydrology and water resources of the region.

ICIMOD Resources on Mountain Commons

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Mountain Commons on the Web



- <http://www.waterweb.org/> - The Water Web Consortium To promote the sharing of information concerning water and the Earth's environment globally
- <http://www.cgiar.org/iwmi> - International Water Management Institute: Research and capacity building programme to improve water resources and irrigation management through better technologies, policies, institutions, and management
- <http://www.watervision.org> - World Water Vision: Planning for water management for the next century
- <http://www.worldwaterforum.org> - World Water Forum: Advocacy/awareness campaign for sustainable water uses
- <http://www.worldwaterforum.org> - Global Water Partnership Forum: An independent venue for international agencies, individuals, local communities, the private sector, academia, governments and non-government organizations wishing to exchange information and explore topical issues
- www.fao.org/ag/agl/iptid/ - Promoting technologies and research in irrigation and drainage in developing countries
- <http://www.metta.fi> - Forestry Information Resources on the Internet
- <http://www-trees.slu.se/welcome.html> - CFM-JFM: Community Forest Management and Joint Forest Management
- <http://www.nic.in/envfor/fsi/fsi.html> - Forest Survey of India (FSI) monitors periodically the changing situation of land and forest resources and presents the data for national planning; conservation and management of environmental preservation and implementation of social forestry projects in India.
- <http://www.cgiar.org> - CIFOR was established under the CGIAR system in response to global concerns about the social, environmental, and economic consequences of loss and degradation of forests.
- <http://www.biotrade.org> - The Biotrade Initiative: An integrated approach towards trade, biodiversity conservation, and sustainable development
- <http://www.traffic.org> - TRAFFIC is a joint programme of IUCN - World Conservation Union and World Wide Fund for Nature (WWF). An international network of 20 offices on five continents, TRAFFIC endeavours to ensure that the use and trade of wild plants and animals are maintained within sustainable levels and conducted in accordance with national laws and international treaties.
- <http://www.rbgekew.org.uk/peopleplants> - People and Plants' Initiative (ethnobotany, conservation and community development)
- <http://www.ibin.org/> - The Indigenous People Biodiversity Information Network (IBIN) is a mechanism to exchange information about experiences and projects and to increase collaboration among indigenous groups working on common causes related to biodiversity use and conservation.
- <http://www.massey.ac.nz/nrm/changelinks> - An on-line resource guide for those seeking to develop sustainable change in the way we manage our natural resources.
- <http://www.abdn.ac.uk/~agr726/pakrange.htm> - The site provides insights into rangeland resources, scale of enterprise, stocking rates, and degradation problems in Pakistan
- <http://www.geocities.com/RainForest/Canopy/3770/pakrange.htm> - This deals with 'Tropical Animal Production Systems' with special reference to arid land development, rangeland management, beef cattle husbandry, large (for dairy production) and small ruminant production
- <http://www.rangebiome.org> - RangeBiome, A Public Rangeland Almanac - Natural resource and environmental links, tools, news, and views for improving the ecological conditions of public rangeland ecosystems
- <http://www.geocities.com/RainForest/Canopy/3770/> Third World Sustainable Ag - Sustainable agriculture and rangeland issues are different where population growth is enormous and soils are poor.
- <http://www.connix.com/~mlfarm/rural/pasture.html> Pasture FAQ. Frequently asked questions (and answers) on establishing, maintaining, and utilizing livestock pastures
- <http://www.helsinki.fi/kmus/mirrors.html> - This gives information about the "Internet Directory for Botany" maintained by country in an alphabetical list with mirroring systems. A Botanist and an Ecologist dealing particularly with ethnobotany can use this as a reference.
- <http://www.usu.edu/~forage/pak-ne88.htm> - An observation report of an American Plant Physiologist who travelled in high altitude areas in Pakistan and Nepal. Gives some information about the geographical distribution of valuable forages; *Medicago falcata* and *M. sativa* with the different strains found in the Hindu-Kush Himalayan region.

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The Federation of Community Forestry Users in Nepal

Increasing Awareness & Strengthening Users' Groups

The Samudaik Ban Upabhokta Mahasangh, or Federation of Community Forestry Users' Nepal (FECOFUN), is a national association founded by and for community forest user groups. FECOFUN was founded in 1995 as a national-level networking organization following several district and national level meetings and workshops of community forest user groups. The first National Assembly was held in March 1996.

FECOFUN's objectives are primarily to assume responsibility for effectively realising the collective rights and responsibilities of legislatively endowed user groups through community forestry in Nepal, to recognise community forest user groups and develop a cooperative spirit among them, to collaborate with I/NGOs to support the Community Forestry Development Programme, and overall to inspire forest users to fulfill their basic requirements through the process of community forestry.

Over 2,700 user groups from at least 60 of Nepal's 75 districts are Federation members. Office holders are primarily from distant villages scattered throughout rural Nepal. While an Advisory committee composed of Nepalese community forestry professionals offers advice, FECOFUN has no development professionals on its staff. FECOFUN's mission is to support self-reliance and increase the independent decision-making capacity of forest user groups.

Participation through consensus in decision-making is incorporated into the principles, policies, rules, and regulations that encompass the concept of community forestry in



User Group Members pruning trees, Lalitpur District, Kathmandu

Nepal. The reality is somehow different, however, as marginalised groups are not always fully incorporated into the community forestry process. An important objective for FECOFUN is to develop institutional community systems encouraging user groups to apply in practice the rights of disadvantaged social groups, such as women and low caste artisan groups, which are recognised in Nepal's Forest Act.

To carry out its mandate, FECOFUN organizes training programmes, seminars, and other activities at central, district, and range post levels. It helps organize feasibility studies on subjects requested by member forest user groups and helps both government and NGOs directly contact user groups at district branches for programme operation. FECOFUN's activities fall into eight major categories: Training and Awareness Raising; Lobbying, Advocacy and Sensitisation; Mediation; Legal

Advice and Support; Support for New User Group Formation; Research; Information Flow; and Experience Exchanges.

FECOFUN is funded through membership fees, remuneration for consultancy services, and overhead costs covered by donor and partner organizations when joint programmes are launched. The Federation's sustainability can be ensured by the recognition of the need for a national network by the 8,785 community forestry users groups scattered throughout Nepal. A trust fund for different purposes has been created to secure FECOFUN's self-reliance into the future.

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Centre News



Highlights of the Twenty-Eighth Board Meeting and Ninth Support Group

INAUGURATION

Chengdu, the Capital of Sichuan Province in China, was the venue for the 28th Meeting of the Board of Governors of ICIMOD and the 9th Meeting of the ICIMOD Support Group. Welcoming all the participants to the different meetings on Centre's Day, Prof. Sun Honglie, the Board Member representing the People's Republic of China, mentioned that China was very honoured to host the various ICIMOD Meetings in Chengdu and this reflected the importance that China attached to the scientific and development cooperation among mountain areas that ICIMOD provided as well as facilitated. Madame Li Jin, Vice Governor, Sichuan, extended her warmest welcome to the ICIMOD Board and Support Group Members. She said that Sichuan Province had benefitted immensely from its collaboration with ICIMOD in the past and it would continue to play an active role in ICIMOD's Mountain Programmes. The Chairman of the Board, Mr. S. Hussain, and Chairman of the Support Group, Dr. H. P. Maag, also extended a hearty welcome to the participants. The Director General, Mr. Egbert Pelinck thanked the Vice Governor and all the speakers for their encouraging remarks about ICIMOD and its activities so far, and said he hoped that ICIMOD would continue to benefit from their guidance and support in the future. Prof. Sun Honglie was presented with the first copy of the booklet 'China and ICIMOD.'

SPECIAL PRESENTATION

Special Presentations on ICIMOD Activities in China were made by Dr. Tang Ya, Dr. Nyima Tashi, and Prof. Li Tianchi. Dr. Tang Ya spoke about the activities of ICIMOD in Ningnan County which had focussed on the use of hedgerows in managing sloping agricultural lands over the past 6-7 years. He pointed out how encouraging the participation and support received from the county government and the farmers in the area had been. Dr. Zhao, an ICIMOD Board Member who had recently visited Ningnan County, said that the local people had found the activities very beneficial and looked for their expansion in the future. There was a need for closer monitoring and collection of scientific and economic data on different aspects of the project.

Dr. Nyima Tashi elaborated on the capacity building work of ICIMOD in the Tibetan Autonomous Region. He pointed out the support provided by ICIMOD to Tibetan professionals for post graduate studies, training in the application of mountain development concepts, exchange visits, and overall capacity building in the Tibet Academy of Agriculture and Animal Sciences and other institutions in the TAR. Dr. Tej Partap made additional observations about this activity.

Prof. Li Tianchi gave an account of the hands-on risk engineering training programme carried out by ICIMOD in Sichuan Province. Prof. Zhong, Director, Chengdu Institute of Mountain Development, gave his assessment of the activities by pointing out that many of the trainees were presently being entrusted with different risk engineering related projects, and this clearly indicated the high quality of the work that had been undertaken.

PROGRAMME DISCUSSIONS

The Director General and the Senior Staff made presentations on the Progress Report 1999 and the Proposed Programme and Budget for 2000. In the first year of RCP-II, i.e., 1999, the Centre had managed to start most of the activities identified in

RCP-II, although at different levels of intensity. During 1999 additional support had been mobilised for a number of key activities such as the study of marginal farms and glacial lakes. In 2000 the emphasis would be on further implementation of the activities already started, mobilising partners ensure that different findings of research and new skills under training would be used for the benefit of mountain areas.

ICIMOD SUPPORT GROUP MEETING

The main highlight of the 9th ISG Meeting was the strong commitment made by both Regional and Non-regional Members to continue supporting ICIMOD. The Governments of Bangladesh, Bhutan, China, India, Nepal, and Myanmar expressed their continuing support to ICIMOD as well as representatives from the Netherlands, Germany, Austria, Switzerland, IDRC, and FAO.

The ISG considered nominations received for the vacant position of Independent Board Member and prepared a shortlist of candidates for a decision by the Board (see below).

The ISG expressed its appreciation of the new format for presentation of progress reports and programmes of work and budget. They believed it would facilitate monitoring the implementation and eventually the impact of the various activities undertaken.

After six years as Chairman of the Support Group, Dr. H. P. Maag announced that he would no longer be able to undertake this task. The ISG elected Dr. Ingrid Dekron of the Austrian Cooperation Bureau in Bhutan as its next Chairperson.

The Support Group unanimously thanked the outgoing Director General, Mr. Egbert Pelinck, and Deputy Director General, Dr. Mahesh Banskota, for their significant contribution over the years in the development of the Centre. The Board also formally welcomed the Director General designate, Dr. Gabriel Campbell, who was attending as an observer.

BOARD MEETING

ICIMOD's 28th Board Meeting was successfully conducted. The meeting endorsed the 1999 Progress Report and Finances and approved the proposed Annual Activity Plan and Finances for 2000 based on the separate reports of recommendations submitted by the Programme Advisory Committee and the Finance Committee - two non-statutory committees established by the Board and the Chairman of the ISG.

At the recommendation of the Support Group, the Board appointed Dr. Anne Whyte of Canada as its new Independent Member.

The Board called on the Centre to focus on implementing activities in such a manner that they would have a more positive impact at the grass roots, although ICIMOD's role is more indirect. It also noted that several activities were severely under funded and needed funding urgently in order to carry out activities on a meaningful scale. The Board called on the Centre to start preparing for 2002, the Year of the Mountains. It also called on the Centre to begin thinking about a New Vision for the Future. The Board decided to hold the Quinquennial Review in 2001.

The Board unanimously thanked the outgoing DG, Mr. Egbert Pelinck, and DDG, Dr. Mahesh Banskota, for their significant contribution over the years in the development of the Centre.

FIELD EXCURSIONS

Following the meetings, participants went on an excursion to see the 2000-year old irrigation scheme in Dujiangyan, visit the Wolong Nature Reserve and Maoshan County, and the Field Station of the Chengdu Institute of Biology. A smaller group continued to Jiuzhaigou World Heritage Site on the Eastern fringes of the Tibetan Plateau.

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Institute of Soil Sciences,
Chinese Academy of Sciences
Nanjing, China

Mr. R. Rajamani
Hyderabad, India

Dr. Anne Whyte
Mestor Associates
Ontario, Canada

Mr. Egbert Pelinck
(Ex-officio Member)
Director General
ICIMOD

New Support to the Centre!

CORE PROGRAMME (RCP-II)

Country	Amount	Period
Sweden	US\$ 480,000	2000 - 2002/ 3 yrs.
Austria	US\$ 330,000	2000 - 2002/ 3 yrs.

PROJECT

Country/Donor	Project Title	Amount	Period
The Mountain Institute	Mainstreaming of Gender	US\$ 45,000	3 yrs.
Swedish International Dev. Cooperation Agency	Asia-Pacific Mountain Network - II	US\$ 132,000	3 yrs.
International Dev. Research Centre	People and Resource Dynamics - II	US\$ 260,755	3 yrs.
Swiss Dev. & Cooperation Agency	People and Resource Dynamics - II	US\$ 930,000	3 yrs.

Workshops, Seminars, and Training Programmes

The international symposium on **"Remote Sensing and GIS for Monitoring Soils and Geomorphic Processes to Assist Integrated Development of Mountainous Land"** was held in Kathmandu from 22 to 27 August. In addition to ICIMOD, the International Union of Soil Science (IUSS), the International Association of Geomorphologists (IAG), and the International Institute for Aerospace Survey and Earth Sciences (ITC-Enschede, The Netherlands) were the organizers of this International symposium.

This symposium brought over 40 international experts from different disciplines (soils, geomorphology, vegetation, agriculture, and land-use planning). The experts considered Remote Sensing (RS) and Geographic Information Systems (GIS) factors facilitating integrated development of mountainous land and agreed that the optimal use of these study domains and techniques is one of the challenges of the coming decade in terms of achieving sustainable mountain land use. The symposium also agreed on:

- the effective use of databases, GIS, and RS to study the mountainous environment;
- the application of these modern techniques to study dynamic geomorphic processes and land degradation caused by intensive or marginal land use;

- the application of improved knowledge of environmental processes in land evaluation and in development schemes of mountainous land; The experts made deliberations on a number of topics including:
- correlation of terrain properties with RS data;
- techniques for extracting information on soil, vegetation, dynamic processes, and land use from RS data;
- multitemporal RS for study of land degradation and dynamic processes in mountainous land; and
- combination of multitemporal RS, terrain databases, and GIS to provide relevant data for development of mountainous land.

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

The Second **Hands-on Training on Application of GIS and Remote Sensing to Mountain Natural Resources' Assessment, Monitoring and Management** was held from 6 Sep. to 1 Oct. in Kathmandu. Altogether 14 professionals from Bangladesh, Bhutan, China, India, Nepal, and Pakistan participated in the training to ascertain the potential viability of GIS application methods for a wide range of mountain natural resource management problems. During the course, both the resource persons and participants emphasised the use of GIS and Remote Sensing tools for integrating bio-physical

and socioeconomic information on a spatial basis for mountain natural resource management, planning, and decision-making.

The course focussed on RS/GIS applications for land-use assessment and included land-use changes over time, land-use dynamics in relation to slope and elevation, dynamics in relation to land-use type (forest, agriculture, grazing land) and condition, and forest improvement. At the end of the course the participants, using the newly-learned skills, presented four different case studies which reflected their ability to extract analytical requirements and information needs of models and methods used in mountain natural resource assessment and monitoring; explain and execute basic principles of RS/GIS data input, manipulation, and analysis; and apply RS/GIS knowledge and skills to methods and models in mountain natural resource assessment and monitoring.

(Contact person: Moe Myint
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ICIMOD sponsored a meeting on **Regional Collaboration on Conservation of the Hkakabo Razi Mountain Ecosystem** in October in Putao, Myanmar, under its programme on Biodiversity Conservation in the Eastern Himalayas. Twenty-nine participants attended: five came from India, the USA, China, and ICIMOD and 24 participants from different levels and backgrounds from Myanmar. The workshop was organized jointly by the Forest Department of the Government of the Union of Myanmar and ICIMOD at the headquarters of Hka Kaborazi National Park in Putao. The deliberations and presentations on the Hkakabo Razi Mountain Ecosystem encompassed scientific, managerial, and socioeconomic aspects.

The main issues of the workshop can be summarised as follow.

- Hkakaborazi is a hot spot for biodiversity conservation. The region is a transboundary area of China, India, and Myanmar. The area is still densely forested with tropical and subtropical monsoon forests in which many endangered species are found. The people living here are minorities and their standard of living is very low. In Hkakaborazi National Park, only 860 people live in more than 2,300 km².
- Problems of institutional development and education
- Transboundary trade of wild animals

ANNOUNCEMENT

THIRD INTERNATIONAL CONGRESS ON YAK (ICY)

September 4-9, 2000, P.R. China

CALL FOR PAPERS

The Third International Yak Congress will be held in September 4-9, 2000 in Lhasa, Tibet Autonomous Region of China. The aim of the meeting is to provide a forum for delegates from yak-raising and non-yak-raising countries to discuss sustainable yak production, to exchange scientific information, to deepen mutual friendship, and to strengthen cooperation.

Papers are invited along the following themes: A) Genetics and Breeding, B) Nutrition and Feeding, C) Reproduction, D) Environmental Physiology, E) Diseases and Health Services, and F) Yak Products and Their Processing and Marketing. In addition, two special sessions will be held: 1) Pastoral Production Systems in Yak-raising Areas (Hosted by ICIMOD); and 2) Molecule Markers and Their Use in Conservation and Management of Yak Genetic Diversity (Hosted by FAO-ROAP and ILRI).

For more information, please contact:

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- Transboundary cooperation in research and activity
- Some difficulties in communicating with Myanmar's institutions/areas
(Contact person: Chen Guangwei
E-mail: Chen@icimod.org.np)

The **National Workshop on Local Water Harvesting Systems for Mountain Households** in Nepal was organized jointly by the Centre for Rural Technology and the Sustainable Water Harvesting Project of ICIMOD on October 6, 1999, in Kathmandu. The purpose of the workshop was to provide an opportunity for individuals and institutions actively engaged in water harvesting to share their knowledge and experience and promote free and open interaction amongst them. The workshop was attended by 50 participants, and they included policy-makers, professionals, community representatives, and development workers. Mr. Biswa Nath Sapkota, Secretary, Ministry of Water Resources, His Majesty's Government of Nepal, was the chief guest and chaired the opening session of the workshop. A background paper on the prevailing status of water harvesting policies, programmes, technologies, and management systems in Nepal was presented at the workshop. Group discussions were held on various aspects of water harvesting. Summary recommendations are given in the box.

The workshop constituted an *Ad hoc* Steering Committee of the National Working Group on Local Water Harvesting comprising 13 members from Government Departments, NGOs, INGOs, and ICIMOD. The Centre for Rural Technology was agreed upon as the coordinating institution.
(Contact person: Suresh Raj Chalise
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Regional Training on Landslide Hazard Management and Control in the Hindu Kush-Himalayan Region was organized by ICIMOD in Kathmandu, from 12 September to 2 October. A total of 16 participants from 7 regional countries - Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan attended this training.

The main objective of this regional training was to assist the participants by imparting practical knowledge and skills with illustrations from real life of landslide-related problems encountered

in this region. The following five modules were designed and developed. I. Introduction to the HKH region from the perspective of landslides; II. Principles and assessment of landslides; III. Landslide investigation; IV. Landslide hazard mitigation and management; and V. Field study and project work.

Lectures were designed systematically covering the five modules with an emphasis on low technology assessment, practical stability analysis, and achievable mitigation methods (e.g., drainage system and bioengineering). Before carrying out the training course, the following three volumes of training materials were prepared: Principles and Investigation of Landslides; Mitigation and Management of Landslides; Lecture Notes.

The lectures were delivered by ICIMOD professional staff and the best specialists available from organizations in Nepal and India. In addition, three well-known experts from outside the region were invited to deliver four special lectures to the participants.

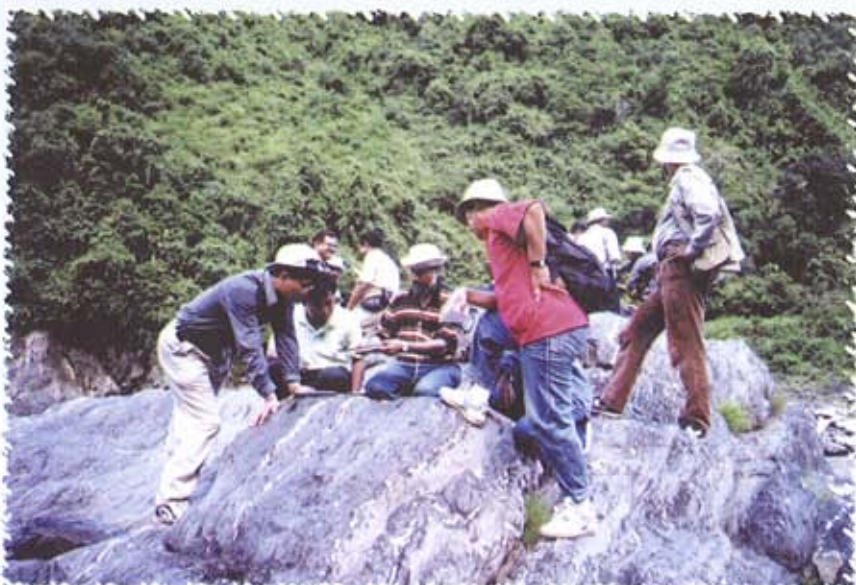
During the training programme, three laboratory exercises and four field visits were also organized to study rock/soil, slope instability mapping, and control measures along the roads

Recommendations of the National Workshop on Water Harvesting

- A national policy/strategy is needed to promote water harvesting as part of an integrated development programme.
- His Majesty's Government should constitute a National Task Force to review existing programmes on LWH and recommend practical steps and measures to promote LWH programmes in rain-fed regions, integrating such programmes with poverty reduction and income generating programmes.
- The water rights' policy should be reviewed to avoid legal inconsistencies.
- Women's groups can be entry points to implement community-based programmes. Gender issues should be specifically addressed in water resource development programmes in order to reduce drudgery on women and children.
- Maximising water use and development of suitable collection and storage systems should be given priority.
- Research and demonstration of appropriate technologies in LWHS.
- Local sociocultural beliefs, practices, and wisdom should be respected and followed to avoid mismatching of borrowed technologies and local indigenous skills. Traditional institutions should be revived and encouraged to participate.
- A coordination mechanism should be established among support agencies for an integrated approach to avoid duplication of resources and ensure consolidated approach.
- Programmes and activities should be started to enable the users to mobilise funds and manage them.



Over 250 students from various schools in Kathmandu engaged in a tree plantation programme organized by BUD-Nepal - School Health and Parasite Control Programme. The plantation programme was sponsored by ICIMOD.



Field study of rock slope by the trainees guided by trainer

in Nepal. A workshop on policies, institutions, and procedures for landslide hazard mitigation was also organized. The participants presented country papers on the various issues of landslide management and control at the workshop.

Field Project Work along the Banepa-Sindhuli-Bardibas road was organized at the end of the training course. The participants were divided into four groups with different backgrounds and from different countries, and each group worked at one landslide to study the mechanism and causes of the landslide and recommend appropriate measures to stabilise it. Each group presented their findings after completing the project work.

Evaluation with the help of questionnaires showed that all the participants felt that what they had learned from the training course would be very useful for their work. They indicated both short-term and long-term specific actions that they could take. These included plans ranging from applying techniques they had learned to integrate hazard mitigation in project planning and university curricula.

(Contact person: Li Tianchi
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A national-level training course on 'The Application of Geo-Information Systems and Remote Sensing to Planning for Mountain Agriculture and Land-use Management' was conducted at the Ministry of Agriculture, Thimphu, Bhutan, from 5 Nov. to 10 Dec. The training was organized by the

project on "Strengthening of Training Capabilities for GIS Applications in Integrated Development in the HKH Region" funded by the government of the Netherlands. The course was coordinated by Mr. Peter Bitter from MENRIS and Mr. Birendra Bajracharya participated as a resource person. Ten professionals from five different organizations in Bhutan participated in the training. The course consisted of theoretical and practical training sessions with independent project work at the end of the training. The training imparted knowledge on the fundamentals of GIS/RS techniques and exposed the participants to new developments in the field and the various considerations involved in integrating bio-physical and socioeconomic information in the above application area.

(Contact person: Peter Bitter
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Through its Electronic Networking Project, ICIMOD recently provided technical assistance and training input for a series of three **Internet Training of**

Trainers' courses held at the Royal Institute of Management, Thimphu, Bhutan. The six-week courses took place between September and November 1999, and the programme was funded by the Austrian Coordination Bureau.

This programme was the first of its kind in Bhutan where Internet had been launched in June 1999. There was a total of fourteen participants who took part throughout the series of courses. The participants came from several training institutions in Thimphu, Paro, and Eastern Bhutan. Now that these participants have received training, it is envisaged that their institutions will have a greater capacity to share information via web-sites, and that they will also be running Internet-related courses for other individuals and organizations in the country.

The programme generated a lot of interest and commitment among participants. In addition, during each course an 'Internet awareness raising workshop' was conducted for half a day, to which large numbers of guests from other organizations were invited. These events helped to increase interest in the Internet, and it is envisaged that, in the future, the Royal Institute of Management will play a key role in developing skills for effective use of Internet-related technology in Bhutan by incorporating this new topic as a regular training course.

(Contact person: Shahid Akhtar
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ICIMOD supported a one-day **Workshop on Encouraging Teachers towards Mountain Perspective in Their Teaching** on 20 November. The Workshop was organized by Green Camp Nepal.

A total of 40 teachers from various schools in Nepal participated in the workshop. Resource persons from WWF, IUCN, the Ministry of Forests of HMG/Nepal, and ICIMOD presented papers at the workshop. Archana Karki, ICIMOD's Communication Officer, presented a paper on "Issues in Mountain

ICIMOD JOINS THE PAN ASIA E-COMMERCE MALL

We are happy to announce that effective from December 1999, ICIMOD has joined The Pan Asia E-Commerce Mall. The E-Commerce Mall is run by the Pan Asia Networking (PAN)/IDRC, Singapore, and is a pioneering effort of PAN to help development organizations in Asia take advantage of the latest technology. ICIMOD hopes to benefit from its support for research and development of electronic commerce applications. The Pan Asia E-commerce mall enables members to sell digitized goods such as texts and video tapes as well as physical goods such as publications and handicrafts. ICIMOD will be selling on-line its publications, videos, cd-rom, and posters at <http://www.panasia.org.sg>

ICIMOD and Nepal's National Planning Commission Join Hands

Under a grant provided by the Pan Asia Research & Development Programme of the International Development Research Centre (IDRC) of Canada, ICIMOD and the National Planning Commission of Nepal are working together to formulate a national information, communication, and technology policy and strategy. The specific objectives of the project are:

- to formulate an information, communication, and technology policy for Nepal,
- to formulate an information, communication, and technology strategy for Nepal,
- to involve key national players and stakeholders in the policy-cum-strategy formulation process,
- to involve the perspective of select international experts on information and communication technologies in the policy-cum-strategy formulation process, and
- to familiarise Nepali government officials and policy-makers with the development of communication technology infrastructure.

ICIMOD will provide technical back-up and support to the project.

For further information contact: Shahid Akhtar (shahid@icimod.org.np)

Perspective". The presentation was well received and there was a recommendation from the teachers for ICIMOD to facilitate the inclusion of a chapter on the 'Mountain Perspective' in the Grade 10 'Environment and Population' book..

A regional workshop on **Strategies for Grass Roots' Women's Empowerment in Natural Resources' Management** in the Hindu Kush-Himalayas was organized from 26 Oct. to 1 Nov. at Budhanilkanta School, Kathmandu. The workshop was organized by ICIMOD in collaboration with Himalayan Grass roots' Women's Natural Resources' Management Network (HIMAWANTI), a regional non-government organization initiated in 1995 by a group of grass roots' women from India, Nepal, and Pakistan.

Ms. Chitralekha Yadav, Deputy Speaker of the House of Representatives, inaugurated the workshop. Ms. Yadav appreciated the work of ICIMOD and HIMAWANTI and said that women played a crucial role in maintaining the well-being of the region. The main objectives of the workshop were to strengthen alliances among rural women of the Hindu

Kush-Himalayas who conserve and manage natural resources; to increase the leadership and decision-making capacities of rural women in natural resource management, protection, and utilisation; and to share the experience of establishing HIMAWANTI in Nepal and India and to develop a strategy to establish national level branches of HIMAWANTI in the countries of the Hindu Kush-Himalayas. Over 200 participants, primarily from the mountain areas of Bhutan, Bangladesh, Nepal, Pakistan, and India, were present during the workshop.

Some of the key issues that emerged from the workshop were the development of strategies and action plans to organize local-level branches of HIMAWANTI in the Hindu Kush-Himalayas and increased understanding of national and regional perspectives and the role of women in sustainable mountain development. Major outputs of the workshop were the formation of HIMAWANTI committees in other countries of the Hindu Kush-Himalayas and the formation of regional strategies for grass roots' women's empowerment in natural resource management for 2000. Bhutan, Bangladesh, and

Pakistan are also joining HIMAWANTI at the national level.

(Contact person: Anupam Bhatia
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In September - October, 43 participants, including 22 council members, 10 donors, six node managers, consultants, and special invitees participated in the **First Meeting of the Mountain Forum Council** convened by the MF Secretariat and hosted by the International Potato Center (CIP), in Urubamba, Peru. It was decided that ICIMOD would host the Interim Secretariat for another year until a permanent host organization and a full-time Executive Secretary are appointed. This will give a legal entity to the Mountain Forum. The governance will, for the time being, be through an Interim Board, represented by all nodes, FAO, and SDC. ICIMOD's Director General has been elected as the Chair. The meeting identified more than 50 activities and events related to the International Year of the Mountains 2002.

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ICIMOD brings out a Special Issue on 'Internet in South Asia' in EPW

ECONOMIC AND POLITICAL WEEKLY

Vol XXXIV, Nos 46 & 47, 20th Nov. 1999

INTERNET IN SOUTH ASIA

Promoting the Internet in South Asia	
- Arun Mehta, Shahid Akhtar	3305
Telecommunications Infrastructure: A Long Way to Go	
- Vikram Krishna, Noor-ud-Din Baqai, Bhoop Raj Pandey, Fazlur Rahman	3309
Struggling with the Digital Divide: Internet Infrastructure, Policies and Regulations	
- Madanmohan Rao, Sanjib Raj Bhandari, S. M. Iqbal, Anjali Sinha, Wahaj us Siraj	3317
Online Content in South Asia	
- Madanmohan Rao, Imran Rashid, Hasan Rizvi, Rajib Subba	3321

The Internet offers some hope to the people of the region who live in widely disparate living environments and particularly in remote communities. But, in order to take full advantage of this new technology, regional and region-specific norms and practices need to evolve. A recent conference on the subject has brought out several relevant issues.

3305 A review of telecommunication networks in India, Pakistan, Bangladesh, and Nepal reveals that they are in poor shape. There is an emerging scope for rationalising telecom policies with a view to convergence of communication technologies across the region. **3309** The regulatory climate in South Asia has only recently welcomed private Internet service providers. The challenge lies in creating a level playing field so that the digital divide between rural and urban, non-English and English-speaking South Asia can be minimised and eliminated. **3317** A review of online content in South Asian countries with a special focus on the number of websites, local relevance, community involvement, directories, search engines, advertisement revenue and third party audits, and policy suggestions for content development. **3321**

Recent ICIMOD Publications

Documents that were published from August to December 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.



ICIMOD. Widening Horizons: Regional Workshop on the Role of Local, Elected Institutions in Community Forestry Management in the HKH. 16-21 March 1998. 1999. 124p. ISBN 92 91115 967 0. Price: US\$ 15.00; 10.00; 7.50

The text covers the issues of decentralization and participatory and local self governance. The Workshop represents one of a series of concerted efforts to bring

together the voices of people from across the Hindu Kush-Himalayan Region and give them a forum in which to address questions of governance and rights over the use of local natural resources in a climate in which the natural environment is undergoing serious degradation.



Bhatia, A.; Karki, S. eds. **Participatory Forest Management: Implications for Policy and Human Resources' Development in the Hindu Kush-Himalayas.** (Vol. I - Workshop Proceedings). 1999. 83p. ISBN 92 9115 970 0/92 9115 984 0 Price: US\$ 20.00 ; 15.00; 10.00

Bhatia, A.; Tang Ya eds. **Participatory Forest Management: Implications for Policy and Human Resources' Development in the Hindu Kush-Himalayas** (Vol II - China). 1999. 65p. ISBN 92 9115 9700/92 9115 998 0. Price:US\$ 20.00; 15.00; 10.00

The Workshop on the above topic brought together forest management personnel from various parts of the HKH. The basis of their discussions was the people-centred forest policies that have emerged in many countries of the region and their objectives of supporting and strengthening participatory forest management to ensure that the needs of mountain people receive the priority they deserve. The policies along with their constraints and opportunities were discussed in depth, guided by papers provided by the participants themselves. Vol. 1 is the Workshop Document and Vol. 2 deals with China.

Shahi, S.; Kachhapati, C. P. **Collective Marketing: The Case of Handicrafts in Nepal.** (MEI [Mountain Enterprises and Infrastructure] 99/3). 1999. 103p. ISSN 1561-8692. Price:US\$ 15.00; 10.00; 7.50

The present study describes and assesses the collective marketing efforts initiated in the case of Nepalese handicraft products over the last decade. Detailed analyses of the functioning of various producers and marketing organizations



reveal that these efforts have helped large numbers of small producers scattered throughout different parts of the country by ensuring markets and fair prices and, as a result, increasing their production and income. The study also reveals that there are some basic problems, relating to raw materials, technology, and competition, in the case of several handicraft products, and that the collective marketing organizations can help to resolve them only to a limited extent.



Mohammad, A. G. **Micro-enterprise Development in Mountain Areas: A Review of NGO Initiatives in Pakistan.** (MEI 99/4). 1999. 60p. ISSN 1561-8692 Price: US\$ 15.00; 10.00; 7.50

This study evaluates the impact of the development programmes undertaken by three rural support NGOs in Pakistan, i.e., the Aga Khan Rural Support Programme, Sarhad Rural Support Corporation,

and Balochistan Rural Support Programme. Special focus has been given to the nature and thrust of these programmes in the context of enterprise development. All three NGOs have a common approach and programme structure. They all emphasise formation of community-based organizations and establishment of a participatory approach.



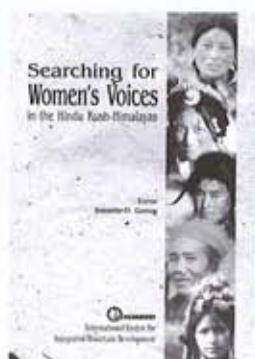
Awasthi, D.; Singh, N.; Srivastava, P. **Promoting Small and Micro-enterprises through Training Interventions: The Indian Experience.** (MEI 99/5). 1999. 82p. ISSN 1561-8692. Price: US\$ 15.00; 10.00; 7.50

The study analyses training interventions for the promotion of small and micro-enterprises in the Himalayan region of India and assesses the scope for their replicability elsewhere. The study

finds that EDPs following the EDI approach have as much chance of succeeding in hill regions as elsewhere, but the Group Entrepreneurship Development approach is found to have much better potential in terms of sustaining successful entrepreneurial activities in these regions.

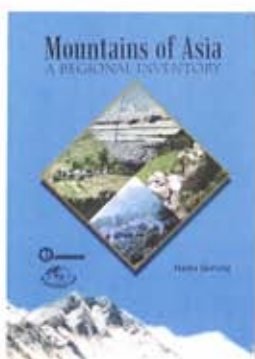
Gurung, J. D. ed. **Searching for Women's Voices in the Hindu Kush-Himalayas.** 1999. 407p. Price:US\$ 20.00; 15.00; 10.00

This is a collection of eleven case studies carried out by women who shared a cultural background with the places they



studied. Desk research on policies and plans for women in the countries chosen for the study was also carried out. An editorial preface points out some of the lacunae in the information. Studies were carried out in eleven places; two of the studies, those from Bhutan and Tibet, are on a country and regional basis. The other studies were carried out in villages in the mountains and hills of Afghanistan, Bangladesh, China,

India, Myanmar, and Nepal. Although this does not provide an in-depth comparative analysis of the status of women throughout the HKH it lays valuable groundwork for the future of gender studies in this region.



Gurung, H. **Mountains of Asia: A Regional Inventory.** 1999. 86p. Price: US\$ 20.00; 15.00; 10.00

This book provides a description of Asian mountain and hill ranges according to geographic grouping. There is a heavy emphasis on the Himalayas since the text is based on documentation available in the Himalayan region. Nevertheless, the author has supplemented the information on other ranges from

many sources, including internet. He describes 110 mountain and hill ranges in 37 countries. A qualitative account of salient features is given. The mountains of Asia have been divided into six regions; each region with a map of its own. This book will be of great interest to those who are unfamiliar with the mountain areas of Asia and to those who are familiar but need ready reference to them. It has a valuable, comprehensive bibliography and a mountain glossary of indigenous terms for physical features and land use in 35 languages.



Rastogi A. **Methods in Applied Ethnobotany: Lessons from the Field.** (MNR 99/1 Mountain Natural Resources) 72p. ISSN 1024 - 7556. Price: US\$ 15, 10, 7.50.

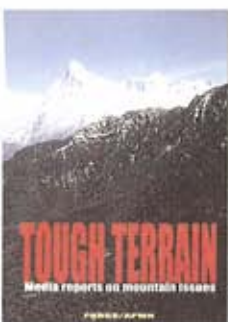
Various research was carried out under the UNESCO and ICIMOD applied ethnobotany project. The diversity of themes and subjects; academic backgrounds and capabilities of the researchers; and the biologically, culturally, and geographically varied sites for

research resulted in the use of a variety of methods. This experience has been summarised in one section of this paper. There is an overall gradual convergence in the approach to community-based research and, therefore, another section briefly describes some of the most frequently used methods in order to share information on methods of applied ethnobotany. The last section contains information on recent developments in ethical guidelines for ethnobotanical research and information on the important issue of the protection of intellectual property rights of local communities.



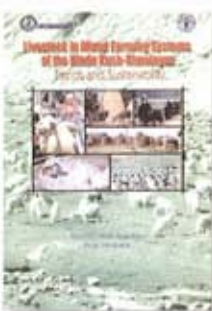
Tang Ya. **Manual on Contour Hedgerow Inter-cropping Technology.** 1999. 31p. Price: US\$ 15.00, 10.00; 7.50

Sadeque, S. Z. **Guidelines for Incorporating Social and Institutional Dimensions in Programme Planning and Project Formulation for Mountain Areas.** 1999. 33p.



PANOS/APMN **Tough Terrain.** Price: US\$ 20.00, 15.00, and 10.00.

The book is a compilation of media reports on mountain issues that have appeared in various newspapers and journals. It brings a fresh perspective to the complex mountain problems, innovative solutions, and the remarkable ability of mountain peoples to adapt to changing circumstances.



Tulachan, P.M.; Neupane, A. **Livestock in Mixed Farming Systems of the Hindu Kush-Himalayas: Trends and Sustainability.** ICIMOD and FAO. 1999. 116p. ISBN 92 9115 071 1. Price: US\$ 15.00; 10.00; 7.50

This state of the art review paper analyses the changes taking place in livestock production management in mixed crop-livestock farming systems. Its focus is on the areas of the Hindu-

Kush Himalayas that are under pressure. The paper describes the changes taking place in livestock population and composition in the hills and mountains of Nepal and in the Central and Western Indian Himalayas. It examines the increasing trend of smallholder dairy farming in mountain areas and discusses various issues related to it. The changing linkages to the environment are assessed and gender aspects are also explored.

A collection of various brochures, news briefs, bulletins, etc published from August to December, 1999.



Staff on the Move

ICIMOD International Professional Staff

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Ms. C. P. Jayalakshmi
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 a detailed account of every visit and therefore we have tabulated the travel information to each country.

BANGLADESH

S. Z. Sadeque/Oct. To attend a workshop on Environment Management in the CHT (Tribal Cultural Institute, CHTDB), Dhaka & Rangamati
To attend HIMAWANTI National Consultation Meeting, Chittagong

A. Bhatia

BHUTAN

P. Pradhan,
P. Mool/Aug.
P. Tshering/Aug.
A. Shrestha, and
D. Poudel/ Sep.
T. S. Papola/Oct.
To discuss/establish collaboration for Glacial Lake Outburst Floods (GLOF) Study (DGM, MoA, MoC), Thimphu
Follow-up visit on gender training; identification of participants (DGM, MoA, MoC), Thimphu
To conduct a Training of Trainers in Internet Technologies (Royal Institute of Management) Thimphu & Simtokha
Programme development (Ministry of Agriculture, Tang Community Dairy Farm Enterprise-preneurship Development Programme, Ministry of Trade & Industry) Thimphu & Bumthang
To participate as a Trainer in ICIMOD's programme on 'Training of Trainers in Internet Technology' (Royal Institute of Management), Thimphu
To attend National Training, Thimphu
To organize Internet Training of Trainers programme (Royal Institute of Mngmnt), Thimphu

S. Pandey, and

D. Poudel/Oct.

P. Pradhan/Nov.

J. Gregson/Nov.

CHINA

J. Govinda/July
T. Partap/Aug.
P. Sharma/Sep.
M. Banskota/Oct.
B. Shrestha/Oct.
12 Staff members/
Nov.
To build a database for a Phase II training course in Lhasa (TAAAS), Lhasa
Prog. Dev. (TAAAS, ERS-CAS, Tibet College of Agriculture), Lhasa, Bye, Xining & Beijing
To supervise and provide inputs to the study on Mountain Tourism in Tibet (TAAAS & Tourism Bureau of Tibet), Lhasa
Expert Group Meeting on Yangtze River Basin (UNEP/Beijing)
To attend an International Conference on Biodiversity Conservation & Sustainable Development and visit KIB (Kunming Institute of Botany), Kunming
To attend the 28th Board Meeting and 9th ICIMOD Support Group Meeting (Institute of Mountain Hazards & Environment), Chengdu

INDIA

B. Bidya/Aug.
T. S. Papola/Aug.
A. Bhatia/Aug.
C. Richard/Aug.
N. S. Jodha/Oct.
T. Partap/Oct.
U. Partap/Oct.
To attend a seminar on Air Pollution and Health Issues in South Asia [The Environmental Protection & Research Institute (EPTRI)], Gangtok, Siliguri, Nainital, Almora & Dehradun
To participate in meetings in Gangtok and Nainital and consult with partner institutions (Dept. of Planning, Education and Small Industries; GBPIHED, UPAA, and AME) Gangtok, Siliguri, Nainital, Almora & Dehradun
Navrachna GC Workshop, Programme Development, HIMAWANTI arrangements (Navrachna - Ford, DFFC, DFID, NEI) Palampur, Shimla, & Delhi
To hold meetings and visit PARDYP watershed sites (GB Pant, Wildlife Institute of India, Great Himalaya National Park) Almora, Dehradun & Kullu
For discussions and information collection regarding repercussion of rapid globalisation on mountain areas/community (Centre for Science and Environment, Research Foundation for Science, Technology and Ecology, Centre for Policy Research) Delhi
ATSCFS project progress monitoring (GBPIHED), Itanagar, Arunachal Pradesh
Discussions on AAA Book/technical queries (Oxford and IBH Publishing Co. Pvt. Ltd), Delhi

MYANMAR

A. Bhatia/Sep.-Nov.
M. Myint/Oct.
G. Chen,
A. Rastogi/Oct.
Programme development (Dept. of Forests), Yangon
Paper presentation at the 8th Regional Seminar on Earth Observation for Tropical Eco-system Mngmnt. (Forest Dept, Yangon University, Yangon Institute for Technology) Yangon
Workshop on Regional Consultation on Conservation of Hkakabo Razi Mountain Ecosystem (Forest Department, Hkakabo Razi Mountain, Putao
Many staff travelled to various parts of Nepal in order to attend workshops/meetings, to organize/implement training programmes, supervise research work, to carry out studies, and in relation to field activities.

NEPAL

PAKISTAN

M. Pandey &
S. B. Dongol/July
S. Allen/July
P. Pradhan,
P. K. Mool/Sep.
C. Richard/Sep.
Tang Ya/Oct.
S. Z. Sadeque/Nov.
Support of PARDYP in community forestry and for monsoon data collection (Pakistan Forest Institute) Peshawar & Hilkot,
To review PARDYP's Progress (PFI and associates), Peshawar & Manshera district
To discuss case studies and finalise training logistics (Pakistan Forest Institute & Peshawar University), Peshawar
Planning meeting and field site visit to Balochistan (NADRI, PARC), Quetta, Islamabad, & Balochistan
Project progress review (PARC, NARC, RRI), Islamabad
To deliver a keynote address (Pakistan Forestry Institute), Peshawar

GLOBAL LINKAGES

- C. Richard/July
S. R. Chalise/July
E. Pelinck/July
S. Pradhan/Aug.
N. Gurung/Aug.
T. Partap/Sep.
P. Pradhan/Sep.
J. Merz/Sep.
- International Rangeland Congress, Townsville, Australia
To participate in the IUGG '99 General Assembly and IAHS Symposium/Workshop in Birmingham (IAHS) & London
Consultation with SDC and Mountain Research and Development (SDC, Univ. of Berne), Switzerland & The Netherlands
To collect information & discussion on landsat data at UNEP-ENP and the Thai Satellite Station in Bangkok, Thailand
To participate in the PanAsia E-Commerce Training Workshop (International Development Research Centre), Singapore
WOCAT Workshop (IBSRAM/DLD), Bangkok, Thailand
To attend JIRCAS and NASDA meetings in Tsukuba and to discuss UNEP Projects in Bangkok, Japan, & Thailand
Participation in a workshop, meeting with officials of Swiss Hydrological Survey, preparation of Analysis Manual (University of Bern, EPFL, LHG) Bern, Lausanne & Felft, Switzerland
Agri-Karakoram Project Coordination meeting in Aberdeen, Scotland
Study Visit (AIT, UNEP, ESCAP, FAO), Bangkok Thailand
- C. Richard/Sep.
S. Thapa, J. Vaidya
R. K.C., CBS Kansakar
M.K. Shrestha/Sep.
E. Pelinck, S. Akhtar
C.P. Jayalakshmi
& K. Pradhan
M. Banskota/Oct.
M. Myint/Nov.
J. Gurung/Nov.
- To attend MF Council Meeting and Node Managers' Meeting [International Potato Centre (CIP)] Cuzco, Peru
To attend the International Meeting on River Basin Management, The Hague, Vienna & Amsterdam, The Netherlands
To attend a Seminar of the International Scientific Advisory Committee of the Eco-regional Fund, Lima, Peru
To make presentation at a Conference of the Association of Women in Development, Washington DC, USA

Visitors to the Centre

M. A. Jabbar
Agricultural Economist
ILRI, Addis Ababa, Ethiopia

Chet Man Shrestha
Chairman, and 5 members
of Gorkha District
Development Committee,
Gorkha

Mohan Pokharel
Advocate,
Member Gorkha District
Development Committee,
Gorkha

Chandra Gurung
Country Representative
WWF Nepal

Godent W. J. Van Lynden
ISRIC Wageningen, The Netherlands

Urs Schaffner & Ruth Schaffner-Galliker
U. Schaffner and Associates
Oberhofen, Switzerland

Amato Maglinao
Project Coordinator, IBSRAM

Jos Lubbers
Environment and Development Department
Ministry of Foreign Affairs
The Netherlands

Prof. Douglas S. Way
School of Architecture
Columbus, Ohio, USA

Dr. Crag E. Dorman
Pennsylvania State University

Gernot Fiebiger
Gernat Keyes Str. 32, Salzburg

Tashi Densapa
Sikkim

Deborah Seligsohn,
First Secretary,



Honourable Khandu Wangchuk, Minister for Trade and Industry of the Royal Government of Bhutan, during a visit to ICIMOD

Environmental Affairs
US Embassy, Kathmandu

Wazir Ghulam Mohdi
Secretary - Food, Agriculture, Forestry,
Wildlife, Livestock. NAS, Gilgit

Farman Ali
Aga Khan Rural Support Programme

Mohammad Irfan
J.D. Pide, Islamabad, Pakistan

Khandu Wangchuk
Minister for Trade and Industry, Bhutan

Prof. Wang Sijing
Institute of Geology and Geophysics,
Beijing, P.R. China

Arkher Ebregt
International Agriculture Centre
Wageningen, The Netherlands

Prof. Li Gulian, Prof. Chen Deshou,
Zhou Pidong, and Sun Qiu
Guizhou Academy of Agricultural
Sciences, Guiyang
Guizhou, P. R. China

Mary Lupul
Country Manager, South Asia,
ACIAR, Australian High
Commission, New Delhi, India

Joseph A. Weinstock
Senior Environment Specialist
Office of the Director,
Programmes' Department (West),
Asian Development Bank,
Manila, Philippines

Dr. Jit Pradhan Bhuktan
Community Development
Advisor, Wa Alternative
Development Project
UNDCP/UNOPS, Union of
Myanmar

Pirjo Virtanen
First Secretary (Development Cooperation)
Ministry of Foreign Affairs
Helsinki, Finland

Esa Hurtig
Grothudro
Charge d' Affairs a.i.
Embassy of Finland, Kathmandu

Michael Graham
Consultant to IDRC/PANASIA
Canada

Atsuko Toda, Dorothy Bellogini, & Mary
Clark
IFAD, Rome, Italy

Lobsang Denda, General President,
And 4 Senior Officials,
Tibet Academy of Agriculture and Animal
Husbandry Sciences
Lhasa, TAR - China

Beat Peter & John Mugwe
UIC/GRID,
Arendal, Norway

The pictures that you see below are copies of a series of 10 posters on the theme

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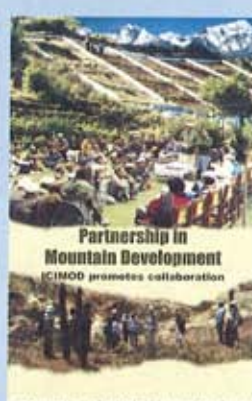
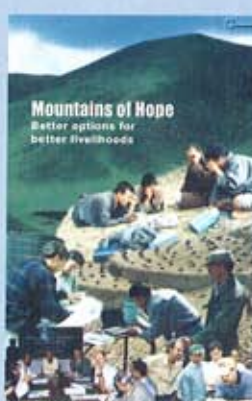
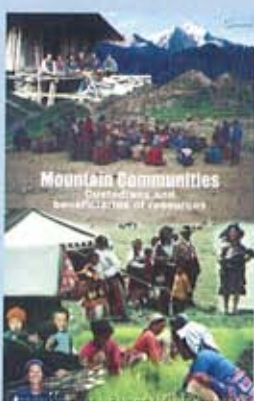
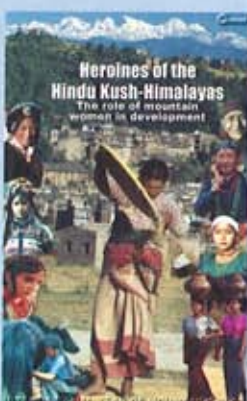
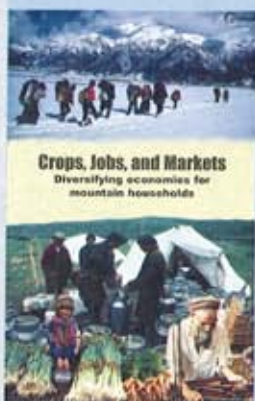
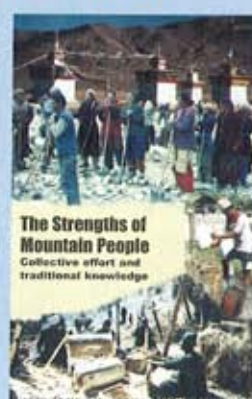
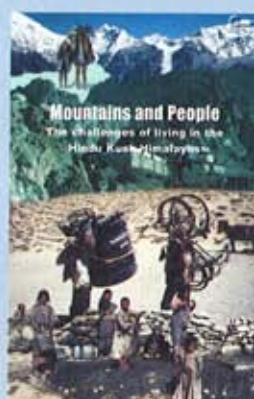
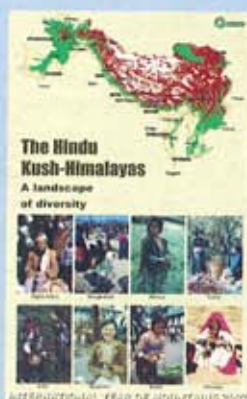
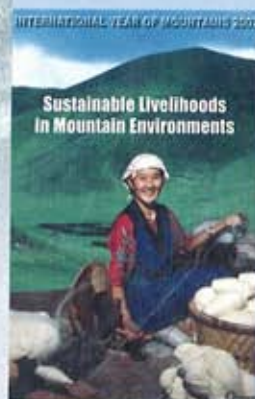
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