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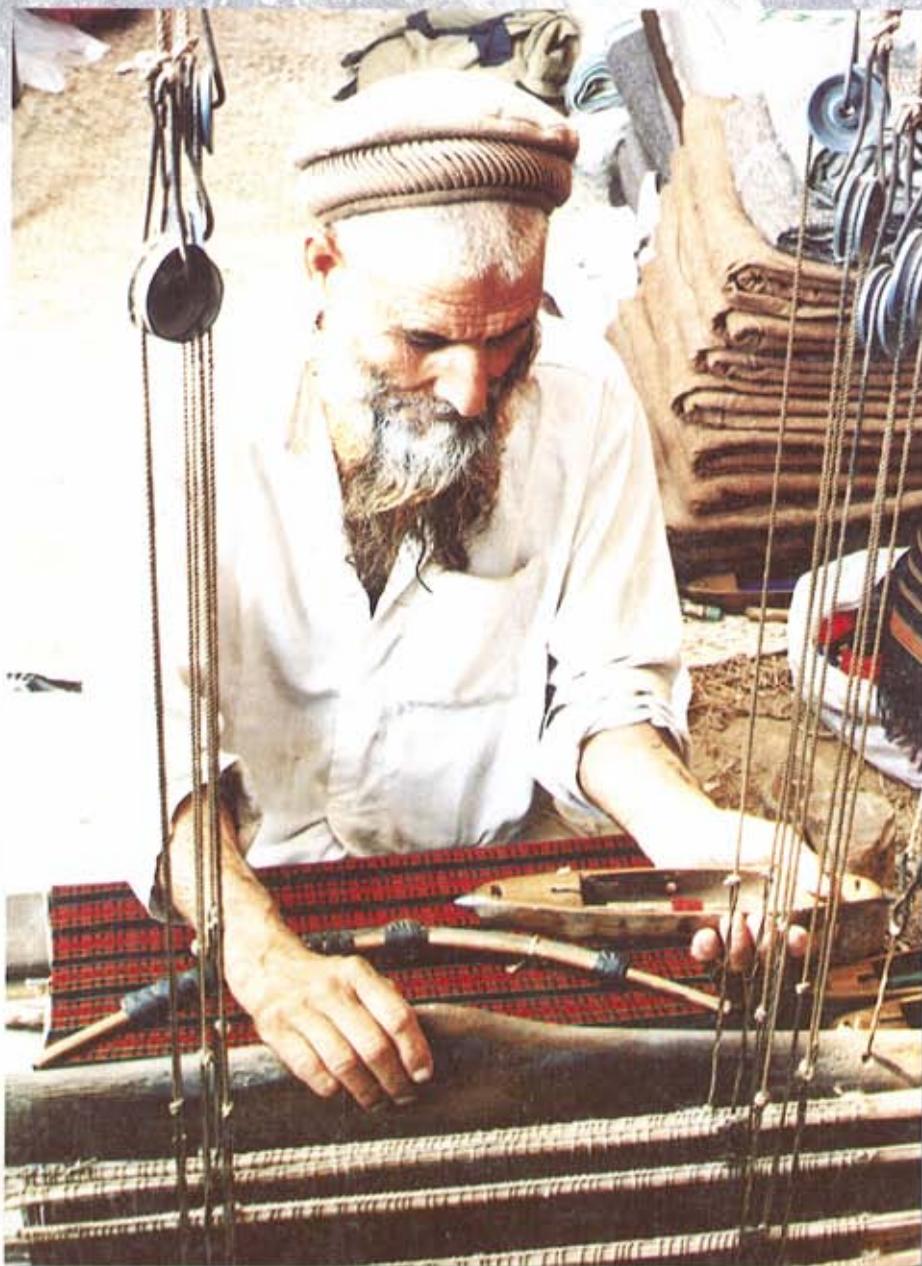
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Mountain Enterprises for Sustainable Livelihoods

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Mountain Enterprises for Sustainable Livelihoods

Mountain communities and households in the Hindu Kush-Himalayan region traditionally practised food crop-based subsistence agriculture. Other items for daily use were collected and made from local, natural resources. Limited needs for such items, that could not be met locally, were met by barter and, more recently, by remittances from out-migrants.

Mountain economies thus remained at a low level of equilibrium between needs and supplies. Over the years, this equilibrium has been seriously disrupted and the virtually self-sufficient system has broken down.

There are mainly two reasons for the breakdown mentioned in the previous paragraph. First, the

limited arable land is insufficient to produce enough food for the increasing population. This has led to cultivation of marginal and forest lands, making food crop-based farming unsustainable, both economically and ecologically. Second, development of transport and communications has brought awareness of vastly different and improved lifestyles in other areas; aspirations have

risen. Diversification of economic activities is essential in order to open up those options that will lead to an increase in incomes and improvement in living standards in the mountains.

Trends and patterns in diversification into enterprises in mountain areas and the contributions of various interventions are, no doubt, promising; yet success stories are limited and confined only to a few areas of the Hindu Kush-Himalayas. The main reason there has been no widespread, large-scale introduction of enterprises is because governments and non-government agencies have no policy framework that recognises the special characteristics and environment of the mountains. The comparative advantages that mountain areas offer are not exploited. It is important that factors and circumstances identified in success stories and products that have demonstrated sustainable growth patterns are consciously incorporated into the policy and programme interventions framed for mountain areas.

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Pradeep Shukya

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Front: SAARC Headquarters
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Scope for Economic Diversification

In mountain areas, the scope for economic diversification is based on more productive and sustainable use of the limited arable land and other natural resources to produce high-value cash crops and commodities. This involves a move away from subsistence to market-oriented production and from a subsistence-based to an enterprise-based production pattern. This is not an easy process. Producers have to take market-related risks - the essential enterprise function - in addition to other natural and man-made risks and uncertainties involved in any kind of production.

The risks referred to above are greater in the case of producers in mountain areas because of inaccessibility in terms of markets and information. While accessibility could be improved by expanding transport and communication networks, mountain areas will continue to be disadvantaged in this respect because of the limitations imposed by the terrain and environmental considerations concerning expansion of such networks.

The most effective way for mountain enterprises to minimise market-related risks is to

focus on non-competitive markets by producing commodities and services that cannot be produced, or are rarely produced, or could only be produced at high cost elsewhere. Luckily, the natural resource base provides several opportunities with comparative, if not unique, advantages over the plains.

Product lines with comparative advantages for enterprise development in the mountains can be grouped into the following categories.

- Diversified farm products: fruit, off-season vegetables, tea, honey, milk, meat, wool, and woollen products
- Nature and natural resource-based products: tourism and adventure sports; herbs and medicines; furniture and wood products; products from minor forest produce, such as bamboo and rattan; natural fibre-based products; hydropower



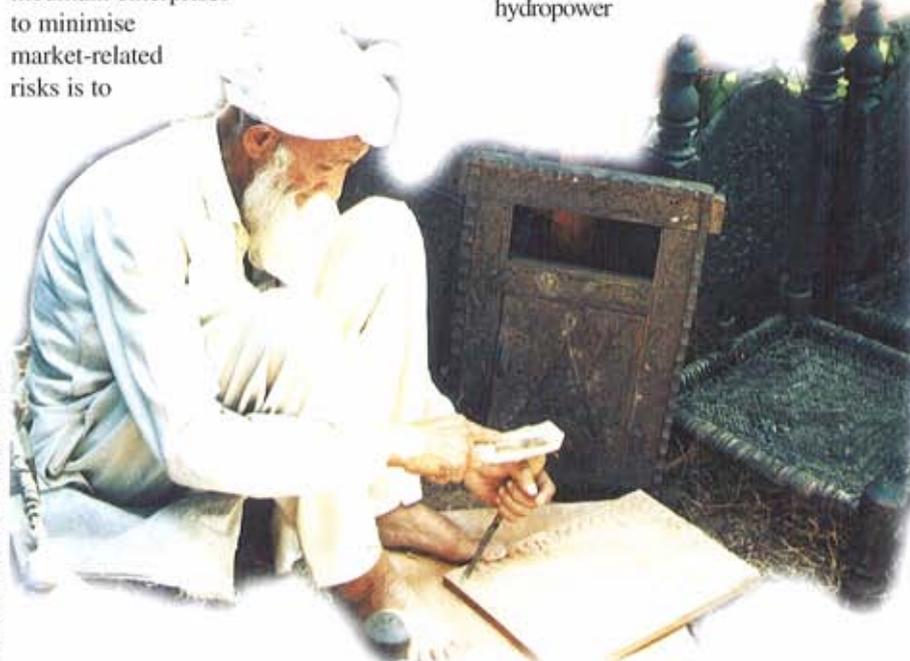
Camille Richard

The most effective way for mountain enterprises to minimise risks is to focus on producing commodities that cannot be produced or only produced at higher costs elsewhere.

- Handicrafts and skill-based products using the traditional skills of mountain women and men often use unique, locally-available materials.

Enterprise development, even in products with comparative advantages and unique opportunities, is severely constrained by certain unfavourable conditions pertaining in mountain areas. Access to markets is, of course, the main problem and niche-based products are often new and markets have to be developed for them.

On the production front, the supply of natural resources for different products is spread thinly, making it difficult to realise the 'economies of scale' in terms of production. Such resources, too, are often environmentally sensitive, and their use on a large scale and in an indiscriminate manner endangers the ecological balance of mountain areas. Technology, access to energy, and modern inputs and services are limited in supply. Above all, a shift from food production to commercial products is discouraged in the absence of alternatives for food security, as food from outside may not always be available and affordable.



Patterns and Trends in Enterprise-based Diversification

In most areas of the Hindu Kush-Himalayan (HKH) region subsistence agriculture prevails. Enterprises already established are neither necessarily in product lines with comparative advantages nor oriented towards outside/wider markets. Goods and services primarily cater to local subsistence needs. Most of them are small in size and that household based, and they are carried out as secondary undertakings to subsistence farming; and that too only as a means for earning small amounts of cash to buy basic necessities. As a result, the product structure of mountain enterprises is dominated by activities such as

small-scale processing of agricultural and forest produce, trade, and repair services.

For example, in Nepal, where over 80% of the area and about 50% of the population are in hilly and mountainous regions, the product structure of enterprises is not very different from that of any poor area in the plains. Over 95% of enterprises are in the small and cottage sector. Processing grain, oilseeds, and other agricultural produce is the biggest category (30%) among 90,000 registered enterprises, followed by construction (8%). Metal products, textile weaving, furniture, garments, hotels and restaurants,

and repair workshops are the other significant categories, each accounting for over 2%. About one-fourth of all enterprises are in other services, e.g., travel and transport.

In the Chittagong Hill Tracts (CHT) in Bangladesh, 97% of non-farm enterprises are in the micro-enterprise sector. Trading enterprises, including hotels and restaurants, account for 50%, followed by community and personal services (29%).

Manufacturing enterprises account for 9% and are dominated by forest-based products (22%), tailoring (23%), and food processing (20%). Handloom

products are the other significant enterprise.

In the Uttar Pradesh Hills in the Central Himalayan region of India, small-scale enterprises constitute 99% of all registered enterprises. Foremost amongst them are handspun, hand-woven (*Khadi*) woollen products (45%), followed by handicrafts (18%) and food processing (10%).

With improvements in transport and communication services and access to markets elsewhere, significant changes are observed in the product structures and relative growth and performance of different commodities. In general, products with comparative advantages using unique natural resources that are locally available have grown faster. Thus mountain tourism has made significant progress in several areas in Nepal, the hill state of Himachal Pradesh (HP) in India, and in the Northern Areas in Pakistan; and sometimes this encourages other enterprises. Products based on minor forest produce, particularly medicinal herbs and plants, have made progress and brought a reasonable degree of prosperity to rural mountain communities in Western Sichuan, China. On a smaller scale, use of *lokta* (*Daphne*) to make handmade paper and *allo* (*Giardinia diversifolia*) fibre to make cloth in Nepal holds out prospects for future expansion. Diversification of farming into commercial crops and products has transformed the regional and local economies in certain mountain areas. Apple farming in Himachal Pradesh (India), vegetable growing in areas with proximity to road networks and markets (e.g., Garampani area in Nainital district in the UP Hills, India), and tea plantation and processing in Ilam in



File Photo

Most mountain enterprises are small sized and household based, and are carried out as secondary to the main household vocation, namely, subsistence farming, and as a means for earning small amounts of cash to purchase basic necessities.

Eastern Nepal are among the notable examples. Livestock rearing and dairy farming enterprises are becoming more and more popular, again mostly in areas accessible by road and closer to city markets (e.g., Kabhre district in Nepal).

Availability of resources and comparative advantages has not by itself led to such promising developments everywhere. Limitations in terms of access to transport and markets and, often, lack of an appropriate policy focus have prevented productive and gainful use of resources and potential. Tourism must be promoted in such a way that benefits accrue to the local people (e.g., in the Central Himalayan region in India, as in Nepal, particularly in areas such as the Annapurna region), because, in many areas, there has been no appropriate focus on mountain tourism for local and regional development. Widespread, gainful use of forest vegetation, such as medicinal herbs and plants, with adequate safeguards for regeneration (as has taken place in Western Sichuan) has not taken place in Nepal and in the Indian Himalayas. Again this is due to the lack of an appropriate policy framework, failure to promote products, and absence of processing facilities. The same gaps have hampered the development of value-added processing of spices and fruit (e.g., ginger and pineapple in Meghalaya in North Eastern India) and natural fibre-based products (e.g., in the Central Himalayan region in India).

Enterprises based on the skills available in mountain areas experience stagnation and decline because of the high costs of material and competition from similar products in the plains. One example is that of metal crafts from Bhojpur district in Eastern Nepal. A recent survey found that 90% of the metal craft enterprises suffered a decline in their businesses. No-one wanted to expand because of

Performance of Enterprises in Different Products

Experiences in development of rural enterprises in Western Sichuan, China, have shown that products must be unique, of good quality, and low in price to compete. For example, Songrong, Phyllanthus, 3 Chinese prickly ash, bamboo shoots, off-season vegetables, flowers, and most wild medicinal plants are unique, and they are found or produced only in the region. This means they have almost no competition in the market. Silk, tobacco, sugar, oranges, mangoes, pomegranates, eucalyptus oil, certain flowers, and off-season vegetables are not unique, but they are of good quality and prices are competitive, so they have their own market. Common products, such as leather, woollen products, and certain mineral products from mountaineas are generally not able to compete with similar products from other areas.

Source: Lu Rongsen (1998). *Enterprises in Mountain Specific Products in Western Sichuan, China*, Discussion Paper Series No. MEI 98/7, ICIMOD

competition from India; the source of raw materials for Bhojpur units. Woollen products, which provide important supplementary incomes for many high altitude communities, are suffering from a lack of raw materials, as rearing sheep has become difficult as a result of the decline in pastures. Products made out of imported wool cannot compete with products from large mills in the plains. In some areas (e.g., the Central Himalayan region of India) woollen products still have a market mainly because of support from government agencies like the *Khadi* and Village Industries' Commission (KVIC). In fact, even with rapid development of infrastructure and access to markets in a region like Western Sichuan, enterprises in common products, such as leather and woollen items, cannot compete with those produced on a large scale in other areas (see Box).

Experiences in enterprise-based economic diversification suggest that even product lines with mountain-specific comparative advantages require interventions to support and sustain the process; the most important being improvements in physical access through transport infrastructure. Development of extensive road networks was a key factor in the 'apple revolution' in HP, India. Introduction of the Arniko Highway and construction of roads linking villages to it were instrumental in developing the livestock sector in Kabhre district in Nepal. Kabhre provides 100,000

litres of milk to the Kathmandu Valley; 30 years back the amount was less than 2,000 litres. Improved road access within the district and to markets elsewhere led to the expansion (19%) of commercial crop cultivation in Ilam district, which was not the case in the less accessible neighbouring district of Bhojpur (4%). Trunk roads to major markets and construction of link roads to villages have led to the transformation of an exclusively subsistence economy into a predominantly vegetable growing economy in the Garampani area of Nainital district, India, resulting in a three-fold increase in average incomes. Large-scale production of medicines and other natural resource-based products in Western Sichuan, resulting in an appreciable increase in the incomes of those engaged in collecting, planting, and processing plant resources, has been possible because of, *inter alia*, the expansion of the transport network.

Although generally necessary, access by road is not always a sufficient condition for enterprise-based commercial production of agricultural and other products. Most producers have small/tiny enterprises that are often scattered over the hills and mountains; thus they find it difficult to locate markets and to market their products individually. In conclusion, interventions by government, government-sponsored agencies, and non-government organizations in market promotion and marketing are necessary for producers in mountain areas.

Programmes and Inputs for Enterprise Promotion

Programmes that focus on assisting the rural poor to establish and run small household-based, income-generating activities are found in most countries and regions. In most of them, credit has been the central element, because lack of capital funds and limited access to institutional credit are basic constraints to establishment of productive ventures by the rural poor. These programmes have been in operation in mountain areas of different countries, although not exclusively. In Nepal, over half a dozen micro-credit programmes serve over 100,000 individuals and households, with a total of approximately two billion rupees; but the coverage in the hills, especially in mountain districts, is not extensive. In fact, barring government-run programmes, such as the Small Farmers' Development Programme (SFDP) and Production Credit for Rural Women (PCRW), which have nationwide coverage, other programmes operate in the plains. To some extent services extend into the hills but rarely into mountain districts.

In India, a nationwide, government-sponsored loan-cum-subsidy programme, known as the Integrated Rural

Development Programme (IRDP), has been in operation for over two decades. During this time it has assisted about 40 million poor households; and its coverage in mountain areas has been proportional to the estimated number of poor rural households in these areas. Another programme meant for the educated unemployed has assisted about 65,000 potential entrepreneurs in hilly and mountain areas, 8% of the national total, over the past 5 years. In the Northern Areas of Pakistan, the Aga Khan Rural Support Programme (AKRSP) provides loans for income-generating activities through its Micro-enterprise Credit Programme (MECP).

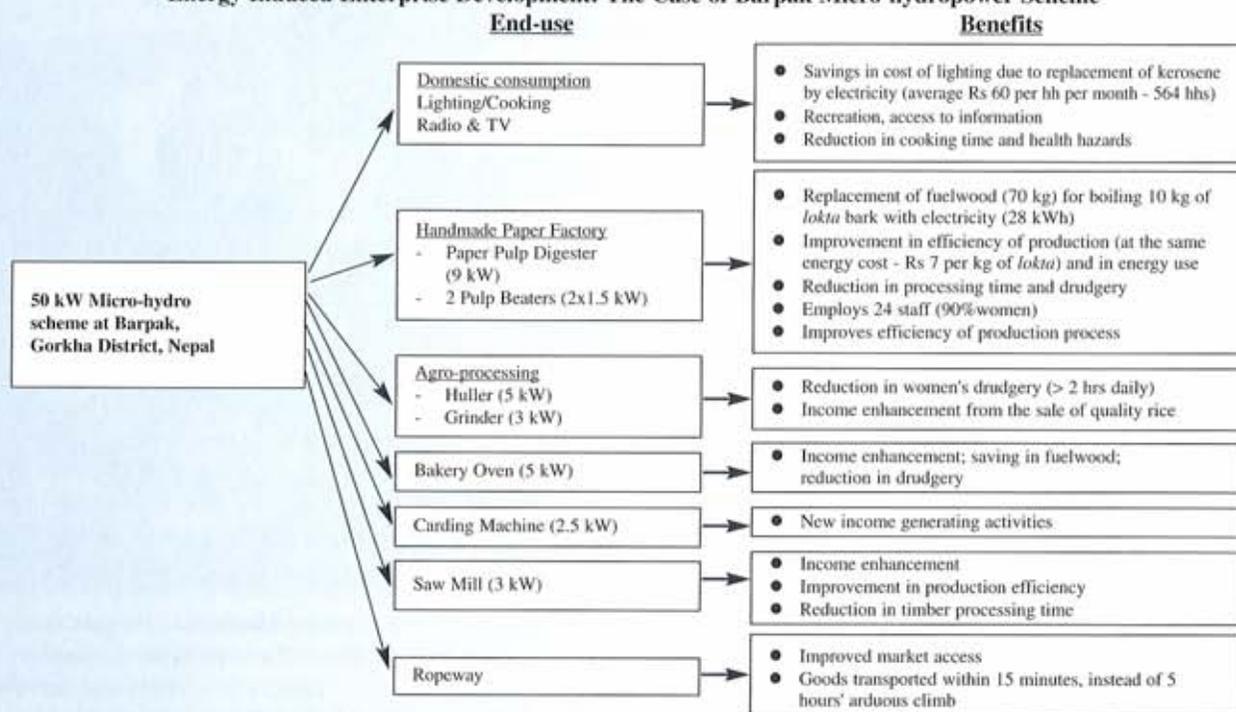
These programmes have improved access to credit for potential enterprises and households. Nevertheless, availability and use of institutional commercial credit to establish productive enterprises are still limited in mountain regions. In Nepal, for example, in spite of several programmes and general commercial lending by the banks, only 8% of the households are estimated to have access to formal sources of credit. The percentage is much lower in hilly and mountain

areas. Since most of these programmes are poverty-alleviation schemes, the amount of credit is too small to establish and run an enterprise on a commercial scale. The average loan per borrower ranged between NR 6,000, in the case of the Centre for Self-help Development, and NR 12,000 in the case of NIRDHAN-Nepal. In India, the total amount of assistance, loan plus subsidy, under the IRDP, was an average of IR 8,000. In the MECP of the AKRSP, the average loan amounted to PR 7,300. Although enterprises in mountain areas are generally small in size, these amounts fall far short of the average capital needed to establish an enterprise (e.g., NR 50,000 in the case of enterprises in Eastern Nepal and IR 12,000, even for household enterprises, in the UP Hills, India). The provision of credit by itself does not ensure its effective use in mountain areas. Other essential conditions, such as entrepreneurial skills, market access, and technological inputs, are not easily available. Most credit-based programmes neither provide nor are linked with the provision of these inputs. As a result, most micro-credit



Linkages with a supply of inputs, such as credit and continued support and follow-up (e.g., in SBPP in Nepal), have resulted in a greater success rate and sustainability of enterprises.

Energy Induced Enterprise Development: The Case of Barpak Micro-hydropower Scheme



Adapted by K. Rijal from: *Energizing Nepali Villages: The Barpak Experience*, IT Nepal, 1998

programmes have limited impact on the development of enterprises in mountain areas.

The limited numbers of commercial enterprises have resulted in a general lack of entrepreneurial skills and market-led changes in mountain areas.

Training for entrepreneurship development, therefore, has a special role in enterprise development. In recent years, government-sponsored and non-government organizations have been running entrepreneurship development programmes (EDPs), some of which are either located in, or include, potential entrepreneurs from, mountain areas. For example, in Nepal, organizations such as the Cottage and Small Industries' Development Board, the Industrial Enterprise Development Institute (especially its precursor the GTZ-sponsored Small Business Promotion Programme [SBPP]), the Women's Development Division of the Ministry of Local Development, the Women Entrepreneurs' Association of Nepal, and the Federation of Nepal Cottage and Small Industries together train about 1,500 persons per year in different EDPs. Many of them are held in the mountain and

hill regions and others include a reasonable number of participants from these areas.

The Entrepreneurship Development Institute (EDI) of India and other state-level institutions have been conducting and helping local government and non-government organizations to carry out EDPs in hilly and mountainous areas.

Overall, training has been as effective in the case of trainees from hilly and mountainous regions as in the case of those from other areas. About 30% of trainees have started businesses in Nepal. The performance in specific hill districts (e.g., Kaski and Tanahu) was somewhat better than the average. In India, the overall start-up ratio was 32%; it was better in hilly regions such as Himachal and Jammu and Kashmir State (39%), the North Eastern States (38%), and the UP Hills (35%). Most programmes are, however, general and do not incorporate the specific requirements of mountain enterprises. It is seen that a group approach covering potential entrepreneurs in the same product line (e.g., the EDI programme for handicraft producers in Nagaland, India) and demand-

induced programmes (e.g., the AKRSP-run training in the Northern Areas, Pakistan) have proved to be more effective. Linkages with a supply of inputs, such as credit and continued support and follow-up (e.g., in SBPP in Nepal), have resulted in a greater success rate and sustainability of enterprises.

Scientific and technical inputs are a *sine qua non* in the development of enterprises in new and improved products from mountain areas for wider markets. The difference that research in new product development can make is amply demonstrated by the success of scores of new products in Western Sichuan, China. These products are based on natural resources that are also available, but not recognised and used, in other parts of the HKH. Technological improvements in product lines and improvement in productivity by using suitable forms of re-usable energy can play a significant role in sustaining enterprises. Examples of how electricity supplies can help diversity and improve productivity can easily be seen in some areas in this region (see Box).

Improving Market Access for Mountain Products

Inaccessibility is one of the basic characteristics of mountain areas. For entrepreneurs, it implies lack of physical access to markets, high transport costs, and limited information about markets. In addition, small sized and dispersed production units hinder realisation of the economies of scale in marketing and result in high transaction costs per unit of output. Niche-based products have no local market. Products in local use are also not marketed horizontally; they often first travel down to market towns in the plains and then up to more difficult locations in the mountains. In the process, the people in mountain areas suffer from both low prices as producers and high prices as consumers.

Inaccessibility and Exploitative Market Channels

The situation described above compels individual producers in mountain areas to sell their products to local middlemen who often are the last link in a long chain of intermediaries. Nepalese handicraft products, such as *dhaka* and *allo*

shawls and medicinal herbs, pass through 5 to 6 intermediaries. The collectors, processors, and producers of mountain goods only realise a fraction of the consumer's price (see Box). Besides, lack of direct access to markets and non-exploitative marketing channels also results in non-development of local resource-based enterprises and products with good market potential. Comparative experiences across the region suggest that, in a number of instances, products have not been developed (e.g., natural fibre-based products in the Indian Himalayas; non-timber forest products, especially medicinal herbs and plant-based products, in Nepal, India, and Pakistan; horticulture and spice-based products in NE India; and diversified handicraft products in Nepal and India) because of marketing constraints.

Improved accessibility through development of transport and communication facilities is the surest way to establish direct product-market linkages. This leads to rapid transformation of subsistence-based

rural economies into enterprise-based commercial economies, as is seen in this region. Vegetable production in the Central Indian Himalayas, medicinal products in Western Sichuan, and milk and milk products in some districts of Central Nepal are notable examples. In these cases, not only has the volume of production and sales increased substantially, but price realisation has also increased significantly.

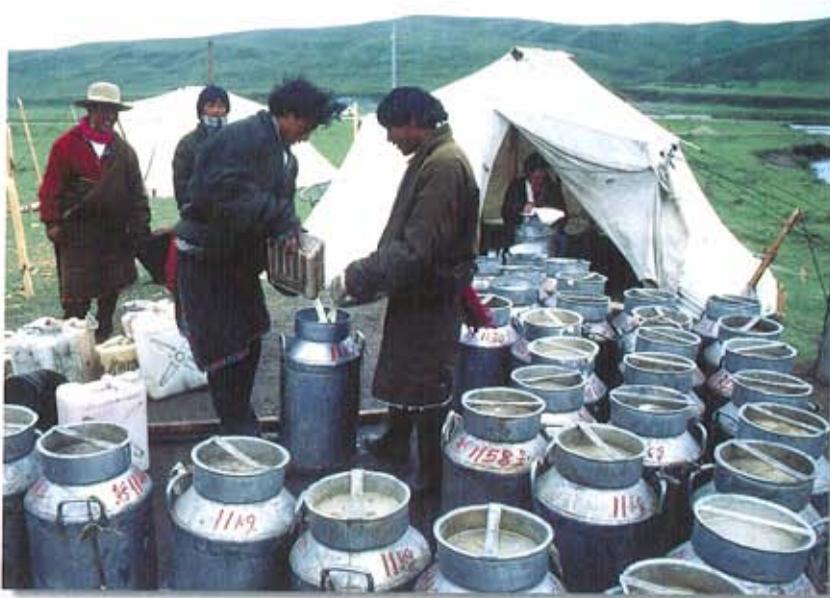
Linking Mountain Products to Wider Markets: Some Examples

Direct efforts to promote markets and marketing have taken place in several areas and for many products. Such efforts have been on the part of GOs and NGOs, with varying success. Development of markets for and large-scale marketing of Himachal apples would not have been possible without the government establishing a special corporation for this purpose. It was the government emporia that organized the marketing of handicrafts in India and Nepal. Subsequently private traders and NGOs stepped in to use the base created by them. Government agencies have run into problems because of high costs and inefficiency, a consequence of bureaucratic functioning and lack of dynamic marketing. Nonetheless, their initial role in introducing the products from small mountain entrepreneurs has been and will continue to be important. Purchase of products in bulk by governments and their agencies have also helped producers of several items. Handmade paper in Nepal and several products marketed by the Cottage and Village Industries in India are examples. Recently, a number of government and semi-government organizations in the UP Hills began to patronise natural fibre-based products from local producers. This helped their direct sale as well as promoting them in the market.

**Prices of Mountain Products at
Different Sales' Points (in local currencies)**

Product	Price Realised by Producer/ Collector	Price Paid by Final User/Consumer	
		Domestic	International
Dhaka Full Pattern Shawl (32" x 80" (Nepal))	450	750	5250 (USA)
Allo Place Mat (13" x 18" (Nepal))	28	49	300 (USA)
Chiraita * (1 kg) (Nepal)	48	64	93 (Delhi)
Jatamashi* (1 kg) (Nepal)	46	56	92 (Delhi)
Natural Fibre Made Ropes (1 Meter) (India)	2	6 (local town)	-

Source: Oslen, Carsten Smith and Finn Helles (1997) 'Medicinal Plants, Markets and Margins in the Nepal Himalayas: Trouble in Paradise' Mountain Research and Development, Vol. 17, No. 4.
Shahi, Surendra and C.P. Kochhipati (1998): Collective Efforts and Strategy in Handicrafts Marketing, Report prepared for ICIMOD
Palni L.M.S. et.al. (1999): Enterprise Development in Natural Fibre-based Products: A Study in Central Region of India, ICIMOD.
* Medicinal Herbs



Collection of yak milk in Sichuan: scattered location of small-scale production units prevents realisation of scale economies in marketing and result in high transaction costs per unit.

Market promotion through the joint efforts of producers, transporters, and trade organizations and direct linkages between producers and users or large marketing organizations have been attempted successfully and sustainably in the case of several farm and forest products in Western Sichuan, China. Farmers, truckers, and tradespeople, consisting mostly of retired government officials, have come together to market vegetables. They have done away with underpricing by intermediary traders. In the case of medicinal and herbal plants and materials, farmers have established direct linkages with companies manufacturing drugs and pharmaceuticals for the sale of unprocessed or semi-processed material. Small factories have further established linkages with large marketing companies for sale in China and abroad. Farmers are able to realise around 50% of the value of the final products through this system.

There are also successful attempts by NGOs and international organizations and projects to promote mountain-specific products. A most notable example is that of *lokta* hand-made paper in Nepal, promoted through a joint project of UNICEF and HMG Nepal. UNICEF uses the paper to produce greeting cards and continues to be the main buyer of the

product of Bhaktapur Art Printers; the organization executing the project. Another example is that of textile products made of *allo*, promoted by the British-funded Koshi Hill Area Rural Development Project (KHARDEP) in Eastern Nepal. Production of *allo* items has now spread to other districts in Nepal and good markets among tourists, as well as among connoisseurs of eco-products in Europe and America, have been found. KHARDEP also made a significant contribution to the promotion of *dhaka* cloth items, based on the unique traditional skills in inlay weaving, through developing the product and finding marketing outlets. Recent efforts have been made in the Central Indian Himalayas in India, by certain NGOs (e.g., *Grih Udyog and Resha Utpadan Samiti*), to promote natural fibre-based products in outside markets.

Collective Marketing Efforts

Market development and marketing in distantly located markets are tasks that small producers of different commodities in mountain areas cannot undertake individually. The prevalent market channels are exploitative and yield far below the 'fair prices'. Continued reliance on government agencies, NGOs, or international organizations and projects for sales also leads to dependency. Attempts have been made by

producers to organize themselves and engage in marketing collectively. The Association of Craft Producers, *Mahaguthi*, *Sana Hastakala*, and other organizations market handicraft products of their member groups in Nepal and abroad. They also have a confederation called the Fair Trade Group, Nepal. The AKRSP helps producers of different agricultural and horticultural products, mostly women, in the Northern Areas, Pakistan, to organize themselves into Marketing Associations, e.g., the Gilgit Agricultural Marketing Association and the Baltistan Apricot Marketing Association. A new organization has been formed in the UP hills - Support for Himalayan Handicraft and Local Produce through Exhibition and Emporia - it is comprised of GOs and NGOs - including banks, local craftsmen, and producers.

Initial results of these experiments have been encouraging insofar as they have improved sales and price realisation. In the long run, their effectiveness and sustainability will depend on whether they are capable of finding larger markets, saving themselves from big overheads and transaction costs, and of passing on a fair share of the trade margins to the producers.



Making *lokta* paper: small producers like this one cannot undertake market development and marketing in distant locations.

Women in Enterprises

Women Workers and Entrepreneurs

Women are the main producers in mountain households. In situations in which men out-migrate, women also manage the household. They have, however, rarely been entrepreneurs with the capability and authority to make decisions on investments, production, and marketing. In a subsistence economy, the enterprise function is very limited and revolves around subsistence farming. With the emergence of market-oriented production in farm and non-farm enterprises, women have begun to carry out tasks that were once only men's. The results and impacts have been mixed. New activities and enterprises, such as vegetable farming, horticulture, sericulture, and processing of farm and forest produce, have increased household incomes, but women's workloads have often increased. There is no relief from the burden of household activities such as collecting fuelwood, fodder, and water. The positive aspect of these developments for women is a more purposeful and productive outcome of their participation in new enterprises and increased incomes.

Women participate significantly, as both workers and

entrepreneurs, in enterprises. For example, in a study in Eastern Nepal, it was observed that 38% of enterprises were run by women; and a similar percentage of workers in enterprises were women. In Chittagong Hill Tracts (CHT) in Bangladesh, women constituted only about 6% of all workers in small establishments (employing up to 10 workers each); but in handloom enterprises, which far exceeded the total number of the above establishments in various sectors, women constituted 97% of the workers; and many of them doubled as entrepreneurs as well. In a location studied in the hills of North India, where a transformation from subsistence agriculture to commercial vegetable farming had taken place, women not only participated in the on-farm activities that were their responsibilities in subsistence farming, but also were engaged in transporting produce to market and marketing it. In the Northern Areas of Pakistan, women have acquired entrepreneurial skills in producing and marketing vegetables and fruit. An NGO engaged in rural development activities in the region helped them establish their own organizations. In Western Sichuan, China, women farmers participate actively and in large numbers in collecting and processing non-timber forest products such as medicinal

plants and herbs. Many of them also work as employees and executives in processing plants. Some have become entrepreneurs in units engaged in primary production and processing of agro- and

forest-based products; particularly in areas from which men have to move to the cities for better jobs.

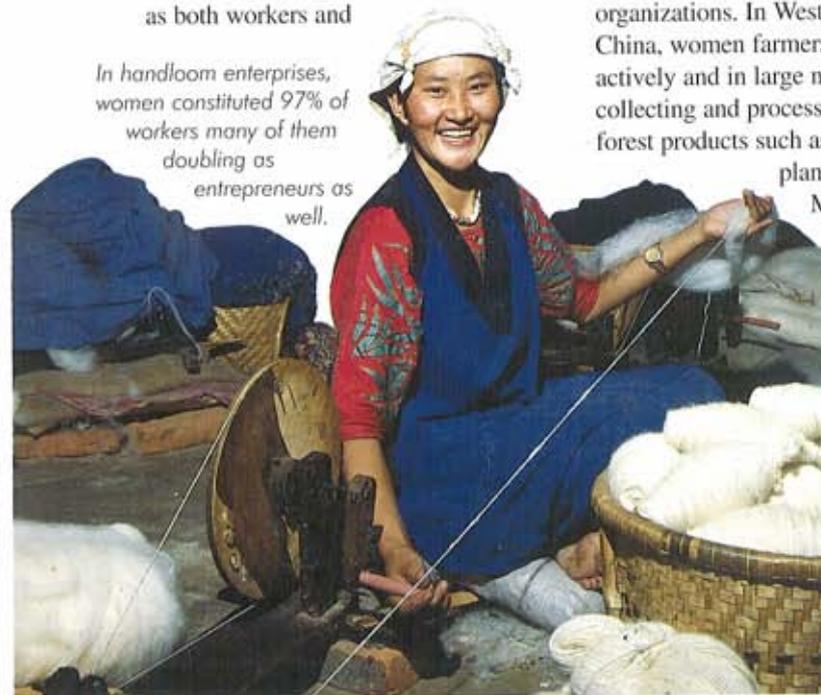
Women enterprise workers, however, are mostly engaged as unpaid family labour and only rarely work as paid employees. For example, in a 100 family-owned and -run, sample enterprises studied in Ilam and Bhojpur districts in Nepal, 78% of male workers and only 50% of female workers were paid employees. Women who worked as entrepreneurs were mostly engaged in low-earning and slow-growing activities, while the more remunerative and dynamic enterprises were mostly run by men. Also, the enterprises run by women have relatively small capital bases [See Box].

The small investments required may appear to be an advantage, but they also imply low productivity and output. This could reflect the fact that women have little access to capital. Yet, the majority of enterprises in which women predominated have grown relatively quickly, at least as quickly as in those run mostly by men. Most women entrepreneurs engaged in garment, handloom hosiery, and sericulture industries want to expand their activities, but capital, followed by markets, are seen as the most important constraints in their plans for expansion.

Access to Credit

Recognising that lack of access to capital resources and credit poses a significant constraint for women in terms of starting an enterprise, most micro-credit programmes run by government and non-government agencies have focussed on women entrepreneurs. Some programmes, such as the Production Credit for Rural Women (PCRW) and the Micro-Credit Project for Women (MCPW) in Nepal, are meant exclusively for women. Others have stipulations for women's involvement. For example, the IRDP in India stipulates that 40% of those

In handloom enterprises, women constituted 97% of workers many of them doubling as entrepreneurs as well.



Pradeep Shakya

Product Lines of Women Entrepreneurs: Ilam and Bhojpur, Nepal

In activities with better income potential such as Nepali paper, furniture, tea packaging, and broom making, all with bigger and more dynamic markets, there were hardly any women entrepreneurs. On the other hand, garments, handloom products, hosiery, and rabbit farming were among the activities dominated by women entrepreneurs.

Nepali paper and furniture units, run by male entrepreneurs, had an average investment of NRs 100,000 to 150,000; tea-packaging and dairy products, the other mostly male-run enterprises, had invested capital of NRs 233,000 and 360,000 per unit, respectively. On the other hand, garments and handloom units had a capital of around NRs 30,000 each, while rabbit farming and sericulture, the other exclusively female-run enterprises, had as little a capital investment as NRs 1,700 and 3,000, respectively.

Source: Uday Sharma, (1998), Development of Micro-enterprises: Ilam and Bhojpur Districts, Discussion Paper Series, MEI 98/4, ICIMOD

receiving loan-cum-subsidy assistance for productive self-employment should be women. The AKRSP credit and enterprise development programme in Pakistan has a special focus on women and women's groups. Other programmes not specifically targeting women also provide credit to women, although to a lesser extent. On the whole, coverage of women has been substantial; for example, in the micro-credit programmes in Nepal, 48% of the customers are reported to be women.

These programmes have improved women's access to credit to a significant extent. Their focus, however, has been on poverty alleviation and development of women's organizations around credit and savings. Orientation towards enterprise development has generally been lacking. The amount of credit available to an individual has been too small to start and run even a minimum enterprise of a viable size on a sustainable basis. The lack of linkages of credit provision with the other inputs and support necessary to run an enterprise is another critical weakness. The services and support needed for technological improvement, product selection, activity-related infrastructure (e.g., veterinary services for animal husbandry), and marketing are badly needed, especially for women entrepreneurs in the mountains because of their lack of mobility and access to information on technology, services, and marketing.

Some activities in which significant enterprise development has taken place among women, as a result of credit availability, include livestock, dairy, and retail shops in Nepal.

Credit supply driven programmes, by themselves, cannot succeed in promoting income-generating enterprises, particularly among women in mountain areas, unless



File Photo

Most micro-credit programmes, run by government and non-government agencies, have focussed on women entrepreneurs.

location-specific activities with comparative advantages over other areas are identified before a credit programme is launched and arrangements for marketing are worked out before production in newly promoted activities begins. In many cases substantial amounts of funds deposited in group savings and credit schemes have remained idle, because identification of planning for development of productive investment opportunities has not taken place. Production and marketing of vegetables and fruit by women's marketing organizations, promoted by the AKRSP in the Northern Areas of Pakistan, and collective marketing of handicrafts, by members of the Fair Trade Group

(FTG), Nepal, are among the few experiments that could be studied and promoted in more areas and for more products.

Entrepreneurship Development Programmes (EDPs) and Women

Training is needed to impart entrepreneurial and managerial skills to entrepreneurs operating or intending to operate in mountain areas; this is especially true for women. Their special requirements arising out of the specific environment need to be internalised by EDPs in general. Yet, trainee entrepreneurs from mountain areas participate in significant numbers in these programmes run by different organizations. Some organizations, e.g., the Women Entrepreneurs Association of Nepal (WEAN) and the Women's Development Division of the Ministry of Local Development, HMG Nepal, organize EDPs for women only. Others organize programmes exclusively for women and also have a significant proportion of women participants in their general programmes. In training programmes run by the Cottage and Small Industries' Development Board (CSIDB) and the IEDI in Kaski and Tanahu districts in 1994-95 and in 1995-96, 63% of the trainees were women. This was mainly because three out of the six programmes were exclusively for women. In the training programmes studied in three hill areas in India, carried out by local government agencies and NGOs with the support of EDI, women made up 38% of the trainees.

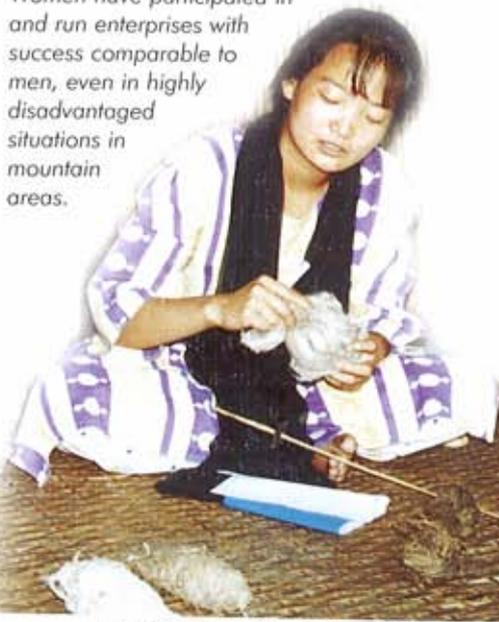
Women trainees, however, seem to have lower success rates in terms of starting business enterprises after



Programmes for promotion of enterprises in mountain areas, particularly those meant for women, should not merely provide a single input or service, but should provide inclusive support through a single window.

training. Thirty-three per cent of women trainees compared to 47% of men were able to start an enterprise in the case of the New Business Creation (NBC) Programme under the SBPP in Nepal; respective percentages were 31 and 33 in the case of the CSIDB and IEDI programmes in Kaski and Tanahu during 1995-97. In India, 29% of female, compared to 38% of male, trainees from EDPs in hill areas were successful in starting enterprises. In the UP Hills, women did better (50%) than men (33%) and the same was the case in Assam (28% against

Women have participated in and run enterprises with success comparable to men, even in highly disadvantaged situations in mountain areas.



Fair Trade Group, Nepal (top and bottom)

20%), but they fared worse in Himachal Pradesh where only 30% of women compared to 50% of men could start a business. In another programme, the Nagaland Group Enterprise Development Project, in Nagaland State in India, the success rate of women trainees was high at 58%. This was primarily because,

from the 19 societies trained, about half were women's, or women dominated, common-product based societies. The performance of demand-induced training programmes, as for example in the case of those run by the AKRSP in the Northern Areas of Pakistan, has been distinctly better than others.

Conclusions

Women's potential could be used to better advantage. They could sustain their enterprises with increasingly better returns if the following considerations are kept in mind by potential entrepreneurs and those engaged in the promotion of enterprises.

Firstly, mountain enterprises have the best chance of surviving and competing in product lines with a comparative advantage in these areas. Within the given range of products, the most suitable for women would be products with which they are familiar and for which they possess skills, even though traditional. Diversified use of limited arable land for high-value items, such as vegetables; fruit and flowers; animal husbandry for production of milk and milk products for the market; and primary processing of medicinal herbs and plants, which women have collected traditionally;

has provided more successful examples than soyabean cultivation, rabbit farming, or even sericulture.

Secondly, while production can be undertaken economically at small, micro, and household levels, marketing needs to be carried out on a larger, collective scale. Various types of marketing such as retail sale directly to consumers, sale to traders, and linkages with large companies, are possible. In the long run marketing organizations of producers themselves have the best chance of realising remunerative prices, as well as getting useful feedback from the market on demand in terms of quantity, quality, and variety of products. Direct participation by women entrepreneurs in marketing gives them the added advantage of exposure to wider markets, as well as realisation of the value of their efforts.

Thirdly, programmes for promotion of enterprises in mountain areas, particularly those meant for women entrepreneurs, should not be minimalist, providing a single input or service, but integrated, providing inclusive support from a single window. Women are less able than men to run to different sources to acquire inputs and services, because of their household responsibilities and general lack of mobility. Therefore, each facility provided under the programme should also be available in one place. These requirements warrant having separate programmes for women entrepreneurs.

Finally, social, institutional, and legal mechanisms need to be evolved and strengthened to improve women's access to and control over resources needed to start enterprises as well as the benefits resulting from their efforts in running enterprises. This alone will lead to emergence of women as entrepreneurs in the real sense of the term.

All articles in this thematic section, apart from the one that follows, have been written by:

Dr. T.S. Papola

Head, Mountain Enterprises and Infrastructure Division
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Tourism, Employment, and Enterprises in the Mountains

Pitamber Sharma

One of the principal justifications for promoting tourism in the mountains has been the overall effect tourism-related activities can have on the economy. The tourism-economy linkage can be in terms of direct employment and income-earning opportunities in the hospitality and travel trade and, indirectly, in those sectors of the economy that cater to tourists' demands. In the mountains, where income and employment opportunities are scarce, tourism can create a favourable context for economic diversification.

Studies carried out by ICIMOD on mountain tourism, and other research in the field, show that the income and employment opportunities arising from tourism are often in the following areas.

- Porterage, individually or in groups, carrying loads for trekkers and mountaineers.
- High altitude porters command a better price than other porters.
- Cooks for trekking and mountaineering expeditions
- Guides and high altitude climbers. With experience and connections these can graduate as Sirdars.
- Sirdars, who are relatively highly paid experienced guides, act as managers of trekking and mountaineering expeditions
- Mule and Yak/Zopkio drivers
- Lodge-keeping and related employment (This involves a range of employment from managing lodges to cooks and other domestic help.)
- Shopkeepers, ranging from tea shops along treks to shops that supply provisions to tourists
- Handicraft workers producing souvenirs and woollen knitwear for tourists
- Carpenters, builders, and masons working in the construction sector, mainly building lodges, etc

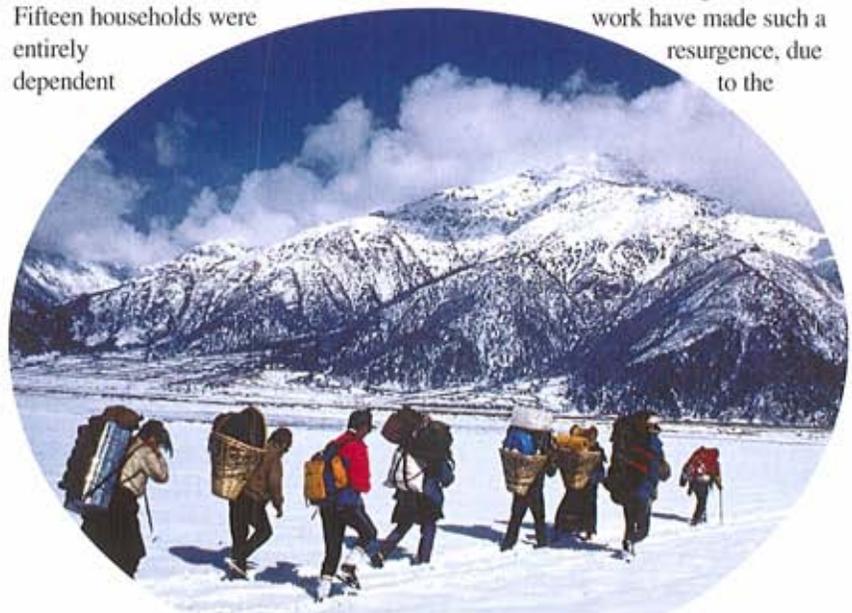
- Gatherers and carriers of wood fuel
- Informal and independent tour operators
- Registered trekking and travel agents
- NGO staff, working in various environment- and tourism-related projects.

Among these employment avenues, managing and running lodges and hotels [see Box], shopkeeping, mule and yak transportation, confectionery and bakery, carpet weaving, production, and processing and drying apples and apricots for sale to tourists have emerged as important enterprise opportunities along major trails and tourist destinations in Nepal. A study carried out by ICIMOD in 1992 in the Marpha-Jomsom area in the Annapurna circuit showed that there were 27 hotels and lodges operating in the area and 20 provision shops catering for tourist needs. The area had over 800 mules for transporting goods from the nearest road-head. Fifteen households were entirely dependent

on the sale of forest products for their livelihoods. There were two wood-based enterprises. Two bakeries/confectioneries were operating in the area. About 40-50 households in the two village development committees were engaged in the production, processing, or drying of apples and apricots. Production of vegetables had also emerged as an income-earning activity. Four registered distilleries were also operating in the area.

The level of education and skill, access to informal credit, language skills, and experience and knowhow of the tourist trade were important factors contributing to the success of particular types of enterprises such as lodge-keeping, trekking, and travel management enterprises. In areas with pilgrimage tourism, such as the Badrinath circuit in the UP hills, the management and performance of religious rites have become an enterprise.

Tradition has also served as the source of an enterprise in some tourist areas. Traditional wood carving and bronze work have made such a resurgence, due to the



Daniel Miller

In the mountains, where income and employment opportunities are scarce, tourism can create a favourable context for economic diversification.

Tourist Lodges in Khumbu

Tourist lodges are a key element in the tourism business in mountain areas. Khumbu is an example of the 'lodge boom' that the area has experienced in the last three decades. The first shop to cater to tourists was opened in Namche Bazaar in 1967. The first Sherpa lodge was opened here in 1971. By 1978 there were 17 lodges operating in the region. Lodge development boomed in the 1980s, and the Khumbu region had 83 operating lodges in 1991. The area covered by the Sagarmatha National Park was reported to have 143 lodges in 1996. In Namche alone, 26 lodges were operating in 1996. Lodges have now become an important part of the regional economy and, in spite of the rising costs of constructing one, are considered lucrative business. Investment in lodges is made from savings from tourism work and low interest loans from friends and families. Women play a key role in the operation of lodges and may employ one to four non-family members as helpers. Most lodge workers are non-local Sherpas or Tamang or Rai men and women who hail from areas to the south. A popular lodge can gross more than \$10,000 a year in spite of the need to buy supplies in the local market or import most of the food supplies from outside. Wages for hired help tend to be low. Since 1992 the competition to lower prices has been regulated through the organization of the committee of local lodge owners and the establishment of fixed prices. In 1991, 92% of all Khumbu lodges were operated by households from within the region.

Source: Stanley F. Stevens (1993). 'Tourism, Change, and Continuity in the Mount Everest Region, Nepal'. In *The Geographical Review*, Vol 83,4, pp.410-427.
Paul Rogers and John Aitchison (1998). *Towards Sustainable Tourism in the Everest Region of Nepal*. Kathmandu: IUCN.

demand from tourists in Kathmandu, that there are literally hundreds of such enterprises, both family-based as well as modern, in the valley. The emergence of traditional Tibetan carpet weaving and revival of religious *Thangka* painting in Nepal and the trends towards the revival of traditional architecture in the Ladakh region of India are examples of the positive impact of tourism in providing avenues for new employment opportunities.

The emergence of traditional Tibetan carpet weaving: an example of the positive impact of tourism in providing avenues for new employment opportunities.



Pradeep Shakya

Selected Regional Institutions in Small-& Micro-Enterprise Development



Shaheena Hafeez

- **Department of Cottage and Small Industries, HMG/Nepal**
Tripureshwor, Kathmandu, Nepal
Tel: 259875/261469,
Fax: 259747
- **Industrial Enterprise Development Institute (IEDI)**
P. O. Box 3676, Kathmandu, Nepal
Tel: 261469/261260/261339
Fax: 261241
- **Federation of Nepal Cottage and Small Industries (FNCSI), Bijuli Bazar,**
P.O. Box 6530
Kathmandu, Nepal
Tel: 490154, Fax: 490154
- **Entrepreneurship Development Institute of India**
Ahmedabad, P.O. Box 382428
India
Tel: (079) 7864331, 7869068
Fax: (91) 79 - 7864367
E-mail: ediindia@ad1.vsnl.net.in
- **Uttarakhand Development Commission on Rural & Small Industries**
Srikot, Srinagar 246174, India
Tel: 01388-28880, 2696
Fax: 91-1388-2279
- **Aga Khan Rural Support Programme**
P.O. Box 506, Babar Road
Gilgit, Pakistan
Tel: 0572 2580/2679/2910
Fax: 00-92-572-2779

Sarhad Rural Support Corporation (SRSC)

Sarhad Rural Support Corporation (SRSC) was established as a Non-government Organization in 1989 with the overall objective of poverty alleviation in the North-west Frontier Province (NWFP), Pakistan. SRSC programmes include Social Organization, Women's Development and Gender Issues, Productive Investment, Natural Resource Management, Credit and Enterprise Development, Social Sector Development, and Human Resource Development. SRSC's programme areas include seven districts - Abbottabad, Battagram, Charsadda, Haripur, Karak, Kohat, and Manshera - in the NWFP, having a combined population of 4.2 million in 575,354 households, scattered over 17,530sq.km. The Corporation implements its programmes in close cooperation with line departments and agencies of the Government of the NWFP, which is also its main source of funding. Other donors/collaborators include IFAD, ADB, NOVIB, and WFP. SRSC's Credit and Enterprise

Development Programme supports rural people in increasing their incomes by providing credit, assistance in developing business plans, link-ups with support agencies, and training in enterprise development through Community Organizations (COs) and Women's Organizations (WOs). The programme has been in operation mainly in Charsadda, Kohat, and Manshera (Abbottabad Region and Lachi Projects added in January 1997) and has provided credit to 12,666 clients amounting to PRs 104 million (25% to women) in aggregate, up to February 1999. As of February 1999, 2,653 C/WOs were established with a total

membership of 86,041 and savings of Rs 31.49 million. The percentage of WOs stands at 34% of the total. SRSC has trained 24,212 persons (50% women) in different skills as social and technical activists. Under its Productive Investment Programme, 1,057 projects have been launched and completed. Moreover, 12,434 (42% Women) Research and Development activities have been carried out so far.

SRSC has its headquarters in Peshawar and Regional Offices in Charsadda, Kohat, Manshera, and Abbottabad and its Project Office in Lachi. As of February 1999, it had a total staff of 252 persons (21% women), of which 157 are professionals and 95 support staff.

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ICIMOD Publications on Enterprise Development

Many research studies have been undertaken over the past few decades on enterprise development in rural and backward areas, but very few have dealt specifically with enterprise development in mountain areas. Recognising that enterprise-based diversification is essential for ensuring sustainable livelihoods for mountain people, and that enterprise development in mountain areas requires a somewhat different approach, ICIMOD has tried to document the problems and experiences of enterprises through meetings, discussions, and studies in HKH areas over the past few years. Results of these exercises, which have been used in preparing the articles in the preceding pages, are contained in the following documents.

Awasthi, D. Promoting Small and Micro-enterprises through Training Interventions in the Himalayan Region: The Indian Experience (forthcoming)

Badhani, K. N. 1998. Enterprise-based Transformation of Hill Agriculture: A Case Study of Vegetable Growing Farmers in Garampani Area, Nainital District, India. Discussion Paper Series No. MEI 98/5

Dhungana, S. P. and Thapa, B. 1999. Credit-based Micro-enterprise Development Programmes in Nepal. Discussion Paper Series No. MEI 99/1

Gurung, M. M. 1999. Training Programmes for Development of Micro-enterprises in the Cottage and Small Sectors in Nepal. Discussion Paper Series No. 99/2.

Hazarika, N. and Bhatia, A.M. A Study on Development of Micro-enterprises in Garo Hill District (Meghalaya).

Mehta, G. S., 1997. Development Experiences and Options in a Hill Region: The Case of Uttarakhand, U.P., India. Discussion Paper Series No. MEI 97/4.

Mohmand, A. G. Micro-enterprise Development in Mountain Areas: A Review of NGO Initiatives in Pakistan (forthcoming).

Mondal, A. H., 1998. Development of Micro-enterprises in the CHT, Bangladesh (mimeo).

Palni, L. M. S.; Rikhari, H. C.,

Issues in Mountain Development Series, 96/2

Papola, T. S. (Editor), 1997. Regional Experts' Meeting on the Development of Micro-enterprises in Mountain Areas (Summary of Proceedings)

Paudyal, D. P., 1998. Access Improvement and Sustainable Development: Rural Road Development in Nepal. Discussion Paper Series No. MEI 98/6.

Rongsen, Lu, 1998. Enterprises in Mountain-specific Products in Western Sichuan, China. Discussion Paper Series No. MEI 98/7

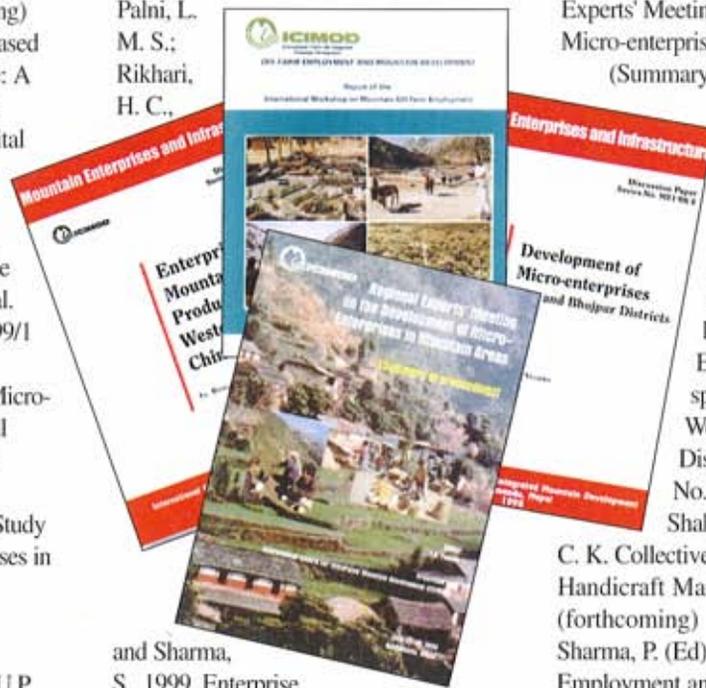
Shahi, S. K. and Kacchipati, C. K. Collective Efforts and Strategy in Handicraft Marketing in Nepal (forthcoming)

Sharma, P. (Ed), 1992. Off-farm Employment and Mountain Development. Report of the International Workshop on Off-farm Employment in Mountain Areas

Sharma, U., 1998. Development of Micro-Enterprises: Ilam and Bhojpur Districts

and Sharma, S., 1999. Enterprise Development in Natural Fibre-based Products: A Study of Status and Potential in the Central Himalayan Region of India.

Papola, T. S., 1996. Development of Micro-enterprises in Mountain Areas.



Badhani, K. N. 1998. Enterprise-Based Transformation of Hill Agriculture: A Case Study of Vegetable Growing Farmers in Garampani Area, Nainital District, India. Mountain Enterprises and Infrastructure (MEI) Discussion Paper, 98/5. 79pp. ISSN 1024-7564, Price: US\$ 15.00, 10.00, & 7.50

The farmers of Garampani area of Nainital District in the Central Indian Himalayas have developed specialised skills in cultivating off-season vegetable crops. The present study was carried out to identify the factors and circumstances leading to the switch over by farmers from subsistence to commercial crops, the process of change and adoption, the economic impact of change, and its replicability factor. The study suggests that the existence of a primary market at Nainital was the main factor that induced farmers from the proximate villages to adopt vegetable farming, and gradually this process of transformation diffused to other villages. Experiences from the Garampani area suggest that the sustainability of mountain agriculture can be ensured by adopting off-season vegetable crops. However, this would need a scientific plan of action in order to maintain a balance between farming, animal husbandry, and natural resources.

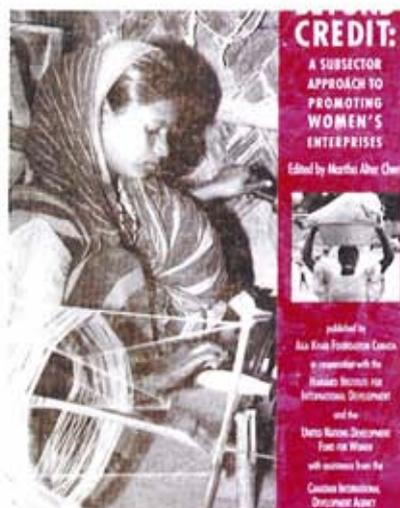


Beyond Credit

A SUBSECTOR APPROACH TO PROMOTING WOMEN'S ENTERPRISES

Editor: **Martha Alter Chen**

Publishers: Aga Khan Foundation, Canada, Harvard Institute for International Development and UNIFEM, 1996, 156pp.



This publication is the result of ongoing efforts by the Aga Khan Foundation and the Canadian International Development Agency to promote the exchange of ideas and useful project experiences among policy-makers, researchers, practitioners, and educators.

The book begins by outlining conceptual frameworks and guidelines for understanding and applying incremental and participatory subsector analysis. This book also contains cases drawn from a variety of organizations in Africa, Asia, Latin America, and North America. The ways in which the approach has been used differ significantly and offer interesting case studies for increasing our understanding of how to support and promote the work of low-income women.

Unlike mainstream subsector analysis, as it is currently used, this approach stresses gender analysis, both participatory and incremental: it involves the women themselves as 'experts' and starts where they want to begin.

Contributing to a better understanding of how economies

function and an awareness of the significant economic contribution that poor people make, the participatory subsector approach has the potential to identify and develop new sectors of economic activity that will benefit the poor and contribute to overall economic growth. It can also identify growth sectors and help ensure that poor women are trained appropriately and have access to tomorrow's markets.

In the Appendices can be found practical, concise step-by-step tools for beginners in subsector analysis and a better understanding of the steps is given.

Appendix V contains the script of a 30-minute video that can be used in conjunction with the book. The video describes two examples of incremental participatory subsector analysis. Both are discussed in detail in Part I of the book. They are also subjects of case studies in Part II.

Enterprise Development on the Web



ENTERweb

<http://www.enterweb.org/>

About the closest to a single source on enterprise development with lots of on-line documents rated for content

Sites with free, accessible online reports/discussion papers about small/micro-enterprises and development are listed below.

Virtual Library on Micro-credit
<http://www.soc.titech.ac.jp/icm/icm.html>

A 'single source' site with links to sites on enterprises, with an emphasis on credit institutions

The Micro-enterprise Innovation Project

<http://www.mip.org/>

A lot of clear, analytical documents with straightforward recommendations from USAID practice in the field with best practices in micro-enterprise development and finance.

Consultative Group to Assist the Poorest

<http://www.mip.org/component/mbp.html>

Useful short notes and papers related to Enterprise

<http://www.worldbank.org/html/cgap/cgap.html>

Intermediate Technology

<http://www.oneworld.org/itdg>

Contains brief descriptions of current research projects of Intermediate Technology, information on current best practice in participatory monitoring and evaluation, and an on-line publications' catalogue containing over 600 titles.

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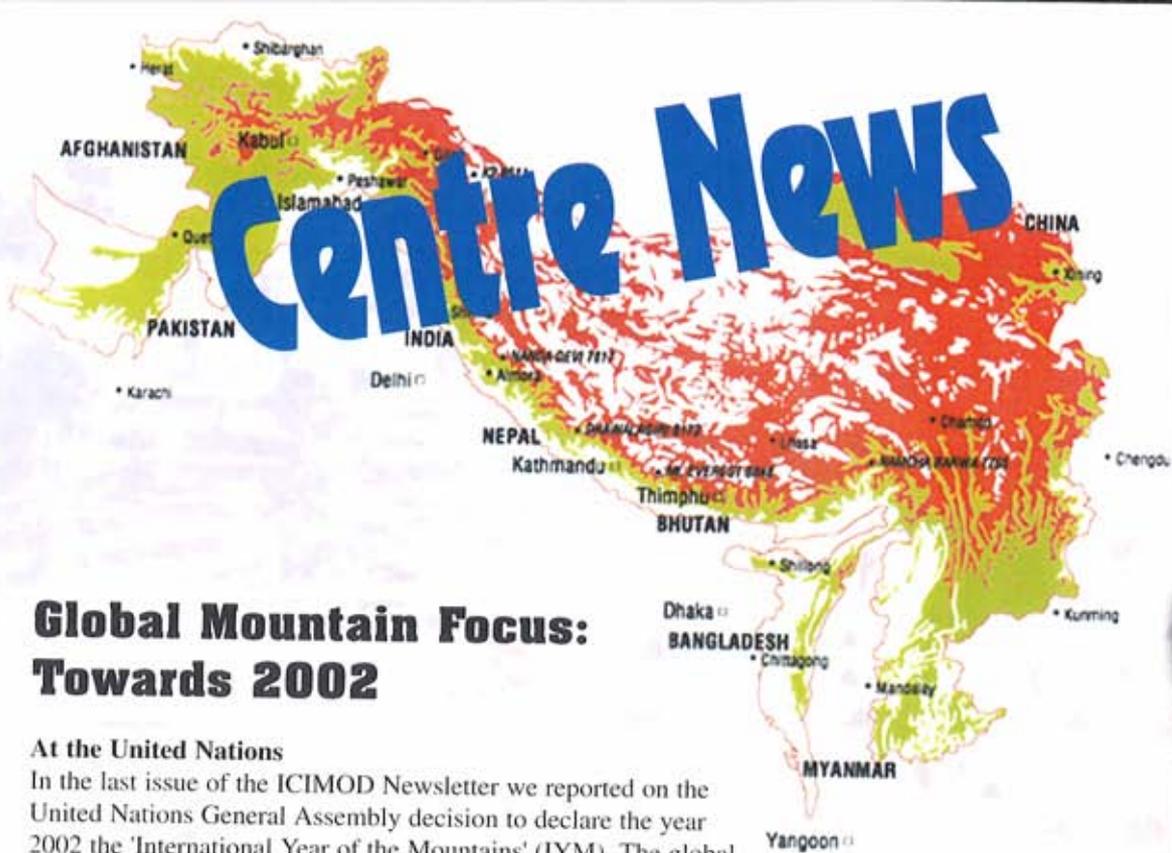
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**Global Mountain Focus:
 Towards 2002**

At the United Nations

In the last issue of the ICIMOD Newsletter we reported on the United Nations General Assembly decision to declare the year 2002 the 'International Year of the Mountains' (IYM). The global mountain community very much welcomes this decision, as it will provide an opportunity to draw the attention of a wide audience to the specific wealth, beauty, and problems of all mountains in the world. Special congratulations are due to President Askar Akaev of the Kyrgyz Republic and Ambassador of the Kyrgyz Republic to the United Nations, Mnzamira Eshmambetova, for their successful campaign.

At FAO

As a first step towards promoting cooperation between all the major stakeholders to plan mountain-related events within the framework of IYM, the Food and Agriculture Organization of the United Nations (FAO) organized the Fifth Ad Hoc Meeting on the follow-up to Chapter 13 of Agenda 21- 'Fragile Ecosystems: Sustainable Mountain Development' in Rome from 10-12 March 1999. Twenty-one organizations were represented. There was overall agreement that a comprehensive package of activities would have to be developed, covering not only the year 2002 but also the two preceding years - 2000 and 2001 - and the following year of 2003 in order to build up and maintain the momentum generated. Seven key topics were discussed at this meeting, and briefs on them are given in the following passages.

**Prof. Chen Guongwei appointed as
 Head, Mountain Natural Resources' Division**



On 1st June 1999, Prof. Chen Guongwei will commence work as the new Head of Mountain Natural Resources' Division. He will bring to ICIMOD a wide experience of integrated research on natural resource management; and, in particular, experience of the marginal areas of the Tibetan-Qinghai Plateau and the Loess Plateau of China.

Prof. Chen has a Master's Degree in Earth Sciences (Land Resources) from the Graduate School of the Chinese Academy of Sciences and a Post-graduate Diploma in Land Evaluation from the International Institute of Aerospace Survey and Earth Sciences (ITC), the Netherlands. From February-December 1994, he was a visiting scientist on Geo-Information Systems (GIS) at the University of New South Wales, Australia. Presently Prof. Chen is a Senior Scientist at the Commission for Integrated Survey of Natural Resources, Chinese Academy of Sciences, where he is engaged in a number of research and development programmes in the field of sustainable development. With his specific expertise in the application of GIS and Remote Sensing, Prof. Chen is looking forward to using these technologies in future to integrate the different activities of the Mountain Natural Resources' Division.

Events

Organization of conferences, workshops, and other meetings on specific themes, mountain ranges or otherwise; and the incorporation of a mountain focus in meetings already scheduled for this period, e.g., the World Conference on Protected Areas to be held in South Africa in 2002.

Awareness raising, communications and publications

Many suggestions were made, including various audio visual productions, CD-ROMS, mountain art festivals, goodwill ambassadors (celebrities), etc.

Capacity building, training, and education

The IYM was considered an excellent opportunity to introduce mountain modules into academic and other educational institutions

Research

Some specific research ideas were presented, and the need for a cohesive effort to identify key research themes of global interest was recognised.

Policy issues

Within the overall context of globalisation, policy influence in international conventions and agreements was considered important.

Project implementation

Both the generation and dissemination of information on successful mountain programmes were discussed and the use of Web sites to provide information on best practices was suggested.

Funding

Various options for mobilising funds in support of IYM-related activities were discussed. There was a general consensus that a certain level of coordination was needed, but that, at the same time, individual organizations should be responsible for raising funds for the activities undertaken by them.

AT ICIMOD

ICIMOD is very much committed to making IYM a success, and will be active on different levels: some of these are as follow.

- Support initiatives of its Regional Member Countries in the Hindu Kush-Himalayas in organizing various events.
- Use the Mountain Forum - Asia Pacific Mountain Network to create awareness and contribute to activities in the region.
- Take the lead in organizing two major global thematic events, i.e., on mountain women and mountain tourism
 - As a member of the Mountain Forum Secretariat, play an active role in harnessing the capacities and commitment of its 1,000 members towards making the IYM a success.

New Support to ICIMOD

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

The **Austrian Government** will support the regional project on Rangeland Management in the Hindu Kush-Himalayas (HKH). This will give the Centre the opportunity, for the first time, to address critical issues affecting the management of more than 40% of the HKH area. The total budget of the project is \$350,000 and it will be implemented over a three-year period.

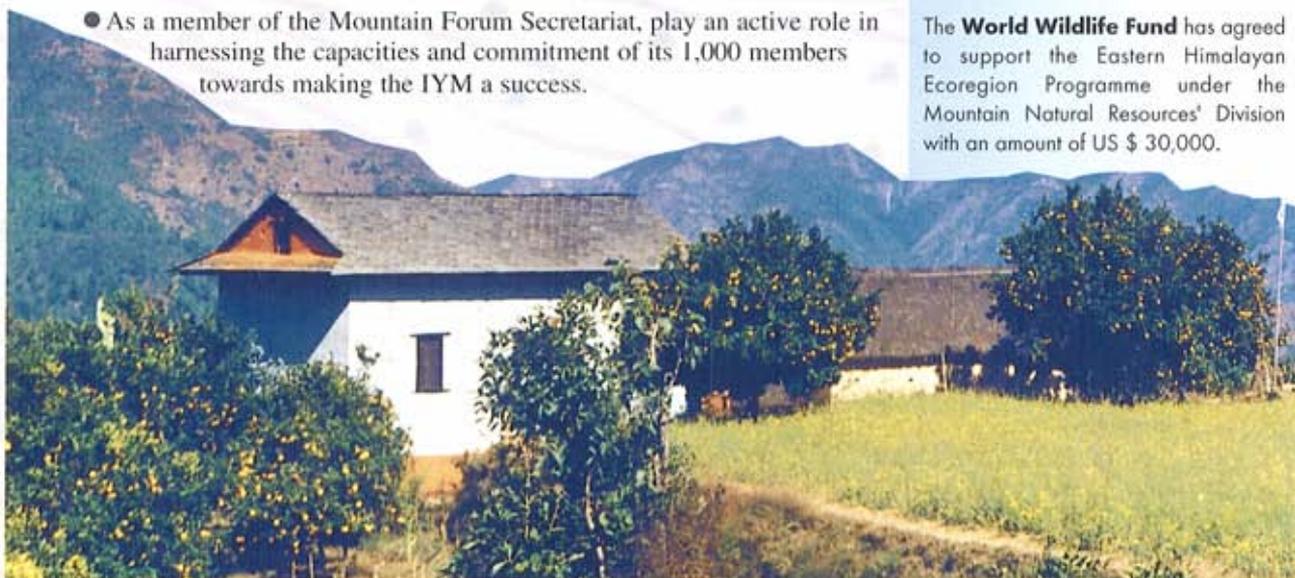
The **Austrian Government** has also agreed to support a one-year project on Capacity Building for Internet and Intranet in Bhutan with an amount of \$80,000.

The **International Development Research Centre (IDRC)** of Canada has agreed to support the establishment of Internet facilities in the Northern Areas of Pakistan with a grant of Canadian dollars (CAD) 232,027. The project will facilitate the access of institutions, organizations, and the private sector to the Internet.

IDRC has also provided a supplementary grant of \$60,000 to the Electronic Networking Project. This will allow ICIMOD to hand over the management of NepalNet to the Nepal Internet User Group and to carry out other activities in promoting Internet in the HKH.

The **World Wildlife Fund** has agreed to support the Eastern Himalayan Ecoregion Programme under the Mountain Natural Resources' Division with an amount of US \$ 30,000.

Suroj Thapa



Sweet oranges - junar, Ramechhap, Nepal

Workshops, Seminars, and Training Programmes

The Final Workshop of the People and Resource Dynamics' Project (PARDYP) - Phase 1 was held from March 1st to 5th in Baoshan, Yunnan Province, China. It was attended by senior representatives from three donor organizations (SDC, IDRC, and ICIMOD), by collaborators from the Institute of Resources and Environment of the University of British Columbia and the Hydrology Group of the University of Bern, by a representative of the FAO Forest Resources' Division, by all four PARDYP Country Coordinators (from the Kunming Institute of Botany, the GB Pant Institute of Himalayan Environment and Development, the Pakistan Forest Institute, and ICIMOD), and by senior members of the field teams from the five watersheds. Also represented were the HMG Departments of Forest and Soil Conservation and Watershed Management of Nepal, the Chengdu Institute of Biology, and various city and provincial bureaus of Baoshan and Yunnan.

In addition, a three-person Review Mission was also present. The mission had been evaluating progress on the PARDYP project since November 1998, with members visiting all five watersheds. The members of the mission were Mr. Brian Carson (Team Leader, representing IDRC), Mrs. Christine Grieder (representing SDC), and Dr. N.S. Jodha (representing ICIMOD).

The first two days were spent listening to and discussing the country reports from India, Pakistan, China, and Nepal. Significant progress towards meeting the objectives of the project was reported by most teams. The third day was spent in the Chinese Xi Zhuang watershed where the PARDYP project is operating. During days four and five, the 34 participants looked to the future with assistance from the Review Mission members and the IDRC and SDC teams. Meetings of the Technical Advisory Group and the Steering Committee were also successfully concluded in Baoshan. The Review Mission then spent three days in Kunming finalising their deliberations and report.
(Contact person: Richard Allen
email: rich@icimod.org.np)

A Workshop on Grassland Ecology and Management in Protected Areas of Nepal was organized jointly by HMG/Nepal's Department of National Parks and Wildlife Conservation

Outcomes of the PARDYP Workshop and the Review Mission

Prior to the formal submission of the review's report, the members shared the following observations with the Steering Committee.

- The project is going well in most watersheds, and a very good trans-HKH team spirit was noted.
- PARDYP is at present two projects, the research network component (e.g., the hydrology and meteorology stations and the erosion plots) and the participatory community component. In time, the former component will provide valuable information at both regional and watershed levels. The project remains a 'research for development' project.
- More efforts and emphasis need to be placed on: on-farm participatory research, the agenda for which will be derived from the communities through PRA activities; training of the teams in India and Pakistan in the hydromet and erosion plot aspects; completion of the baseline surveys, especially those concerned with water harvesting, management, and irrigation systems; on-farm soil and agronomy work; natural resource policy reviews, participatory monitoring and evaluation, farm economy, and grass roots' community activities - all aspects of which may well need assistance from national specialists;



Bhuban Shrestha

documentation of findings by all the country teams - both for farmers and the development and scientific communities (and also in terms of a regional integration and synthesis of the results from the 5 watersheds); and joint investigation, joint analysis, joint planning, joint implementation, and joint evaluation - all teams were requested to give more serious attention to appropriate procedures and methods in their community-based natural resource management activities.

- The ethics of publication were discussed on several occasions, and a code of conduct is to be prepared for PARDYP and its many collaborators to ensure that unpublished data, results, and findings are not misused by persons and institutions not directly involved in the project.
- The Review Mission concluded that the project has recorded many successes and has much unrealised potential. It recommended that it should move forward to the second phase, during which work with community groups and carrying out on-farm or farmer-led research should be further promoted. Assistance in the fields of social science, agronomy, livestock/pasture management, and community-based participatory development were deemed essential
- A key outcome from the Steering Committee discussions was that the SDC and IDRC representatives committed their respective organizations to fund the project into Phase 2 for a further three years from October 1999 onwards.

(DNPWC), the ICIMOD, and WWF Nepal, from March 15-19, at the Royal Bardia National Park. The goal of the workshop was to summarise the principal grassland, ecological research work carried out to date and devise effective research and management strategies for grasslands in protected areas in the mountains and *terai* of Nepal. Participants included Ministry representatives, protected area managers from Nepal, independent researchers from Nepal and abroad, and guest scientists from India who have worked in similar environments in their own country.

Technical papers were presented summarising research for both *terai* and

Himalayan ecosystems. Working groups were then formed to prioritise issues, to identify research and management gaps, and to devise research and management guidelines for both *terai* and Himalayan grassland ecosystems. The *terai* working group sessions revealed that, while much research on grasslands had been carried out to date, the results had not been incorporated into grassland management practice. Therefore, the participants in the *terai* working group outlined a number of management strategies to address these gaps, primarily focussing on maintenance of grassland habitats for key wildlife species. The mountain group sessions indicated a significant absence

of research related to high elevation rangelands. Thus, the participants focussed on developing research strategies to address the priority issues of wildlife-livestock competition, crop and livestock depredation, medicinal plant extraction, stakeholder involvement, and transboundary protection. Establishment of research and management committees have been recommended to follow-up and refine these guidelines.

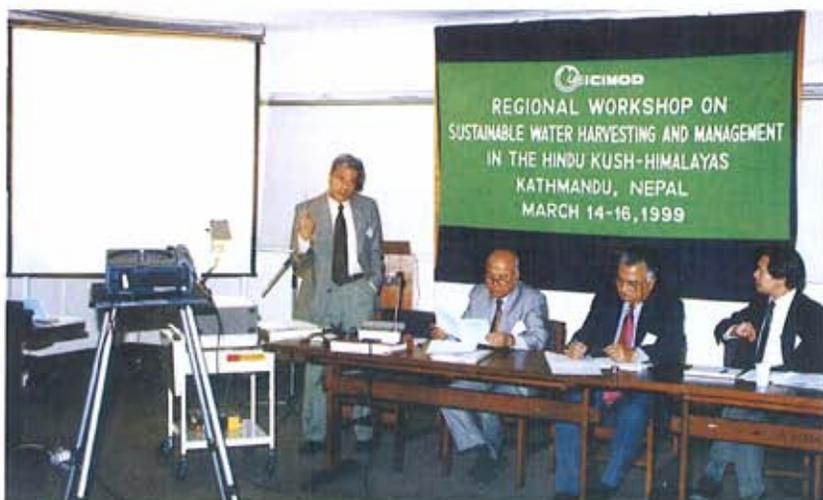
(Contact person: Camille Richard
email: camille@icimod.org.np)

The Annual Meeting of the National Coordinators of the Project on Appropriate Technologies for Soil Conserving Farming Systems (ATSCFS) took place from 5 to 7 April 1999 in Rangamati, the Chittagong Hill Tracts, Bangladesh. Sixteen participants attended the meeting: national coordinators from Bangladesh, China, India, and Nepal, 7 participants from local institutions, and 5 participants from ICIMOD.

The main objectives of this meeting were to review the progress made during the last 12 months and to prepare the workplan for the next 12 months. The progress at each project site was carefully assessed. In general, the progress is satisfactory in terms of on-farm demonstration, research, and training programmes. The results of demonstration and on-farm research have provided different options for increasing crop yields and incomes for local people and at the same time minimising soil erosion and maintaining soil fertility. It was reported that many farmers have begun to adopt the contour hedgerow technology and more than 1,300 ha of land in Ningnan, China, has been planted with nitrogen-fixing hedgerows. Many of the settled upland farmers in two districts of the Chittagong Hill Tracts are also applying this technology.

Apart from the progress made by the national collaborating institutions at the project sites, other institutions in Bangladesh, Nepal, and China are very interested in this technology, and demonstration sites were established by these institutions in three districts of the Chitagon Hill Tracts and in the Gulmi region of Nepal.) (Contact person: Tang ya
email: tangya@icimod.org.np)

The Regional Workshop on Sustainable Water Harvesting and Management in the Hindu Kush-Himalayas was organized under the Project 'Analysis and Promotion of Sustainable Water Harvesting Technologies and Management Systems



File Photo

in the Hindu Kush-Himalayas', March 14 to 16, at ICIMOD headquarters. The purpose of the workshop was to discuss and disseminate the findings of six Case Studies carried out in the rainshadow and midhill areas of India, Nepal, and Pakistan and five Country Reviews on policies/programmes and institutions in Bhutan, China, India, Nepal, and Pakistan. The workshop was attended by 42 participants; and they included official representatives and/or experts from six ICIMOD member countries (Bangladesh, Bhutan, China, India, Nepal, and Pakistan) and ICIMOD staff.

The workshop expressed concern about the decreasing supply of water for mountain households close to the point of use. The sustainable development of local water-harvesting systems was considered a promising option to meet the future needs of mountain households. The workshop also evaluated the existing water-harvesting structures and social organizations in mountain areas. (See box for the main recommendations from this workshop.)

(Contact Person: S. R. Chalise/Saleem Sial; email: chalise@icimod.org.np
sial@icimod.org.np)

Water Harvesting and Management Workshop: Recommendations

Traditional Indigenous Knowledge

Primary emphasis was on the need to study indigenous technologies with a view to their practical application for sustainable water harvesting planning and management. However, there was wide recognition that such technologies often need to be combined with more modern technologies to achieve the desired goals, and that this often requires specialised training.

Research and Information

It was recommended that research be interdisciplinary, integrating bio-physical and socioeconomic concerns. The need for interaction among scientists, local people, and policy-makers in all phases of research and application was stressed.

It was also recommended that women be trained and made responsible for operation and maintenance of water harvesting systems for domestic use, as fetching water for this purpose is usually considered the responsibility of women.

Empowerment and Cooperation

Increased autonomy of local communities and their involvement at all levels of decision-making is widely recognised as part of sustainable mountain development. It will enhance community responsibility for and control of local water resources and their development. There was general support for the concept of institutional arrangements for national or local/subnational coordination of water-harvesting plans and policies, e.g., through national water harvesting focal points and working groups.

Regional Institutions and Cooperation

It was agreed that international and regional cooperation is an important component of sustainable water resource development. The level of cooperation includes research, development, and/or training institutions, information, experiences, technologies, and methodologies.

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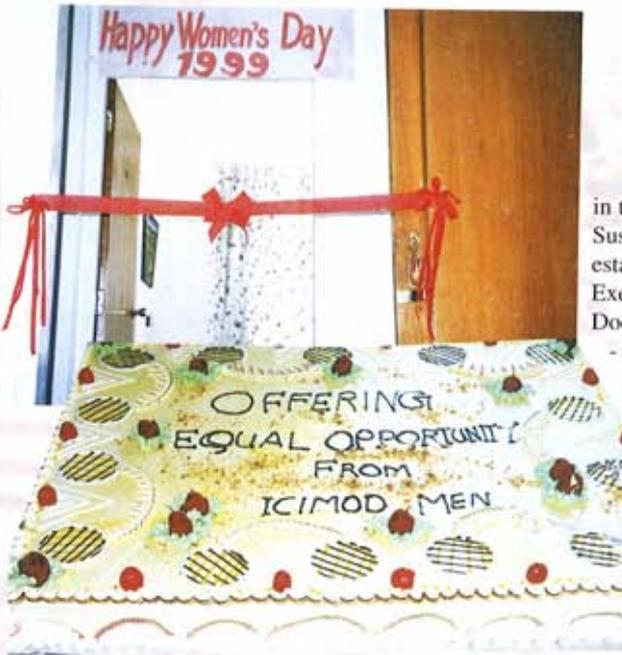
His Royal Highness, Crown Prince Dipendra Bir Bikram Shah Dev, inspecting the exhibition after inaugurating the GIS Forum South Asia '99.

In April, ICIMOD and the Centre of Spatial Database and Solutions of India were successful in bringing together for the first time the South Asian Mapping Community under the banner 'GIS South Asia Forum '99' in Kathmandu. The

programme was supported by Tata Infotech Ltd of India and the United Nations Environment Programme of Asia and the Pacific. The Forum was inaugurated by His Royal Highness the Crown Prince of the Kingdom of Nepal. The Minister for Environment and population, Mr. Ramesh Nath Pant, as well as other dignitaries, also addressed the gathering.

There were more than 200 enthusiastic participants and the sessions continued for more than the anticipated time. Another highlight of the Forum was the exhibition set up by more than 20 organizations and was open to all. The major outcome of the Forum was the decision to establish a GIS Forum South Asia to give continuity to what had been started. ICIMOD has the privilege of hosting the Secretariat of this Forum. It has also been agreed that the Forum will take place on a biannual basis; initially in Kathmandu and later on a rotational basis in other South Asian countries.

File Photo



Balancing Act! Gender Activities at ICIMOD

Following the participation of the second batch of ICIMOD Staff in the Regional Course on Gender and Organizational Development for Sustainable Mountain Land Use, a Gender Working Group was established at ICIMOD. The group comprised of Tika Gurung - Executive Secretary, Anita Pandey - Editor, Sangeeta Pandey - Documentation Officer, Kamal Rijal - Energy Specialist, Zahir Sadeque - Social Scientist, and Pradeep Tulachan - Farm Economist. The group went to work straight away.

On 8th of March - the International Women's Day - the Director General inaugurated a Gender Resource Centre established at ICIMOD. The centre will primarily provide a venue for resource and information exchange. It will be used for activities that facilitate interaction amongst staff. Interesting book discussions, presentations, and exercise and meditation sessions are planned. Presentations do not necessarily have to relate to gender. Anything that is of importance and helps develop disadvantaged groups, whether male or female, will be welcome.

As part of the action plan, a brief Orientation on Gender Mainstreaming for all ICIMOD staff was carried out on March 25. Three sessions were held for different groups of staff. The orientation was well received, as was evident from the responses to the feedback questionnaire distributed subsequently.

In addition, an informal email discussion group, 'HKH-GENDER', was initiated by ICIMOD to share information and hold discussions on topics related to gender concerns, particularly in sustainable mountain development. Currently there are about 30 members in the group. The discussion group is unmoderated, and membership is restricted to trainees, trainers, and resource persons from the Centre's training programme, selected staff members from ICIMOD, and other individual and institutional partners of the Centre interested or involved in activities related to gender and development.

The Gender Working Group regularly meets with the management to further ensure a gender-balanced approach in its administration and management.

Mountain Watersheds in South East Asia

What is Happening?

This was the subject of a talk programme recently held at ICIMOD by Prof. E. Walter Coward Jr. Prof. Coward is currently Senior Director of the newly-created Asset Building and Community Development Programme, a worldwide programme of Ford Foundation concerned with a spectrum of activities which includes human development and reproductive health, economic development, and community and resource development. Assets are considered by the Ford Foundation as natural resources, infrastructure, and skills that can contribute to development. Prof. Coward began by emphasising the role of assets in reducing poverty. Assets are critical so that households can generate income and employment opportunities. The ability of the households to build assets depends on the nature and type of public policies. Asset-building policies and asset-building organizations are therefore critical for reducing poverty. The Ford Foundation has been increasing its attention to this issue.

Prof. Coward narrated his recent experience with three watersheds in South East Asian countries. The first watershed was near Hanoi in Vietnam. The government was involved in developing community assets (such as roads, irrigation, electricity), investing in education and skill development, supporting small business activities in tourism and orchard development, and encouraging forestry development through households. The population of the watershed was growing rapidly and there was a clear need for greater intensification of land use based on high-value crops. He noted that, in order to leave the watershed with some dignity for new opportunities elsewhere, providing education and new skills was very essential. Adequate job creation in urban areas was therefore necessary to cope with the increasing out-migration of young people from rural mountain areas. Poverty in mountain watersheds could not be seen in isolation and needed to be integrated with development of high-value activities and better linkages with growing urban centres

where new economic opportunities should be generated.

The next watershed was in Northern Thailand near Chiangmai. This area presented a transformed picture where drug substitution programmes consisting of various high-value activities had successfully replaced narcotics and integrated hill agriculture with the market economy. Farmers were mainly producing high-value crops for the market. There had been significant changes in the economic conditions of the people. The intensification of natural resource use, however, had resulted in new types of resource conflicts, particularly over water. Environmental pollution had been another problem. There was a clear stratification of ethnic groups by different geographical belts, and this resulted in increased conflicts in resource use. Finding appropriate institutional arrangements to deal with some of these issues was an important challenge for the future of this area.

The third watershed visited was five hours outside of Manila. Its unique feature was that, whereas the valley was intensively cultivated with irrigated paddy, the surrounding hill sides were completely denuded of all vegetation. There was not a single

tree in sight. A recent typhoon had resulted in heavy flooding of the plains, destroying roads and other infrastructure. The history of the area revealed that public policies had encouraged deforestation through cattle raising and large-scale timber concessions. Recently the governor was considering allowing mining concessions in the area. The experience shows that policies particularly had played an important role in determining the present condition. It is also clear that one could not expect the local community to deal with economic and environmental problems on this scale. If national policies were responsible for bringing the area to its present condition, national policy should also play a major role in improving the condition of the watershed and the plight of its people.

In his closing remarks, Prof. Coward emphasised the importance of understanding the location and the history of a place and the need to complement natural resource management with town-based jobs for mountain people. Prof. Coward's presentation was followed by extensive discussion on experiences from different parts of the Hindu Kush-Himalayas.

Great Himalayan National Park Eco-development Study Tour - February 24-25, 1999

A group of 33 villagers from the Eco-Development Zone of the Great Himalayan National Park, HP, India, travelled to Nepal for a study tour of conservation-related projects. They were accompanied by the Director of the Park, Shri Sanjeeva Pandey, and five park staff. While in Kathmandu, the Director General, Director of Programmes and other staff members gave the group a briefing on ongoing activities at ICIMOD. The group then toured the Shivapuri watershed area and met with local villagers involved in community forestry activities. They then journeyed to Gandruk in the Annapurna Conservation Area to learn of the conservation and development initiatives of the project.

The group was very responsive to new ideas and shared their own experiences with villagers in the Shivapuri and Gandruk areas. Overall, the participants felt that they had gained a better understanding of community-based conservation, and that this had inspired them to develop their own Eco-Development Committees back in Himachal Pradesh.

This tour was in part sponsored by ICIMOD's Eastern Himalayan Biodiversity Programme funded by the MacArthur Foundation.

Recent ICIMOD Publications

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

Partap, T.; Sthapit, B. (eds), 1998. *Managing Agrobiodiversity: Farmers' Changing Perspectives and Institutional Responses in the Hindu Kush-Himalayan Region*. 439pp

ISBN 92 9115 841 0 Price:US\$ 20.00, 15, & 10.00

Agriculture in the Hindu Kush-Himalayan region is in transition. People and institutions are faced with a predominant situation of deteriorating conditions in subsistence farming in which the farm economy, ecological environment, and agrobiodiversity - all the three components - are adversely affected. Agrobiodiversity,

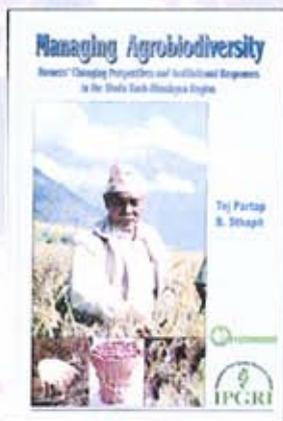
particularly, faces threats from habitat destruction and replacement through changing land use. Another trend is the adoption of new cash crops by farmers. The authors imply that the HKH region may be experiencing all of the processes described above, but on different scales and in different areas. Due to the lack of adequate knowledge and information, it is difficult to indicate the extent of loss, replacement, or replenishment of agrobiodiversity in this region. The implication also is that, unless we acquire this information, it is all the more difficult to proceed to discuss approaches to conserve and manage agrobiodiversity in the region.

Paudyal, D. P., 1998. *Access Improvement and Sustainable Development: Rural Road Development in Nepal*. MEI

Discussion Paper, 98/6. 95pp
ISSN 1024-7564, Price: US\$ 15.00, 10.00, & 7.50

This study is undertaken on the premise that improvements in access to rural areas are essential for sustainable development. It has attempted to examine the existing policies for rural roads, institutional arrangements, and their linkages with production processes. The study was carried out on three levels; the policy, programme, and project levels. It found that

the existing policy framework and the institutional arrangements for rural roads are not used effectively and, in some cases, the policy has not been properly implemented. On the technical side, there is shortage of project manpower with the District Development Committees (DDCS), but those available at the district level are not used effectively. Roads have had a positive impact on sectors such as education and health. Based on its findings, the study makes a number of recommendations to improve the planning and execution of road projects and the delivery of socioeconomic benefits.



Lu Rongsen, 1998. *Enterprises in Mountain-Specific Products in Western Sichuan, China*. MEI Discussion Paper, 98/7). 51pp

ISSN1024-7564, Price: US\$15.00, 10.00, 7.50

This paper, based on a study in Western Sichuan, China, documents experiences in the development of enterprises in mountain-specific products. Besides preparing an inventory of the main products in the region, the study highlights the important factors responsible for the rapid development of enterprises in some product lines over the past 20 years. Some of the leading factors identified by the study

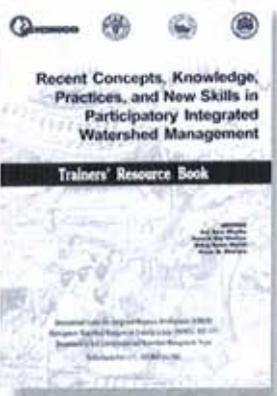


include: uniqueness of the products insofar as they are based on mountain-specific, local natural resources; development of infrastructure; strong and integrated policy support from the government for promotion of enterprises and development of the region; and a well-planned marketing strategy and link-up with larger companies and organizations for marketing nationwide and abroad.

Bhatta, B. R.; Chalise, S. R.; Myint, A. K. eds. 1999. *Recent Concepts, Knowledge, Practices, and New Skills in Participatory Integrated Watershed Management*.

ICIMOD and the Participatory Watershed Management Training in Asia. 1999. 168p Price: US\$ 20.00, 15.00, 10.00

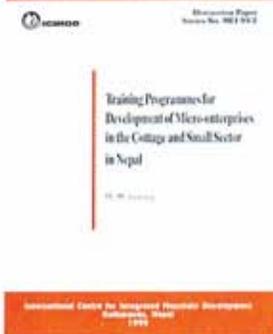
This trainers' resources book presents papers prepared for the training of trainers on recent concepts, knowledge, practices, and new skills in Participatory Integrated Watershed Management (PIWM) with the aim of human resource development. The book has three modules, namely, i) recent



concepts in and approaches to PIWM; ii) appropriate technologies and practices in PIWM; and iii) new methods, skills, and tools in PIWM. There are twenty-one sub-modules. The study also discusses resource and population dynamics and the three 'S' technologies, i.e., GPS, GIS, and RS, for watershed management. All of the above papers have been prepared within a common framework covering background and relevance of the subject to PIWM, objectives of the paper, and scope of coverage. In trends and approaches, the main lessons learned have been emphasised. Future directions in regard to research, training, policy, and capacity building have been explored.

Gurung, M. M., 1999. *Training Programmes for Development of Micro-enterprises in the Cottage and Small Sector in*

Mountain Enterprises & Infrastructure



Nepal. MEI Discussion Paper, 99/2. 69pp ISSN 1024-7564, Price: US\$ 15.00, 10.00, & 7.50
The present study examines various aspects of the training programmes carried out by different organizations and attempts an evaluation of their effectiveness, particularly on the basis of a sample survey carried out among recent trainees in Kaski and Tanahu districts. While most organizations follow a more or less similar format for the selection of trainees and

contents and the delivery of training, post-training back-up and support provided by these organizations vary. The study also identifies training-related and post-training factors that lead to a relatively low success rate. It suggests a more specific group approach for training rather than the general one being followed by most organizations. It also stresses the need to coordinate the training with other inputs and services such as credit, consultancy, and marketing information. The study recommends that the various organizations should also coordinate their programmes with each other in order to maximise benefits from the available training resources.

Mountain Enterprises & Infrastructure

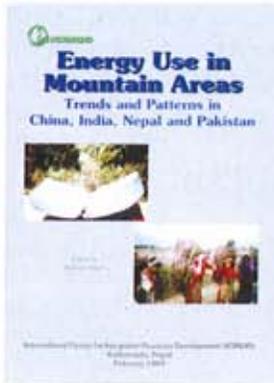


Dhungana, S. P.; Thapa, B., 1999. *Credit-Based Micro-Enterprise Development Programmes in Nepal*. MEI Discussion Paper, 99/1. 1999. 65pp ISSN 1024-7564

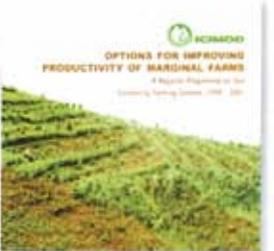
Price: US\$ 15.00, 10.00, & 7.50
This study presents a review of credit-based micro-enterprise development programmes in Nepal and discusses the important issues related to credit, micro-enterprises, and

development. It provides a comparative perspective on the coverage, methodologies, implementation process, and sustainability aspects of seven important micro-credit programmes in Nepal, and it also attempts to identify the impact and factors of their relative performance and effectiveness, particularly their contribution to the promotion of micro-enterprises in mountain areas. It concludes that, even though the total coverage of all the programmes together has been small, they have nevertheless led to improvement in the access of the rural people, particularly women, to credit. The study finally makes some suggestions and recommendations on ways to make the credit programmes more effective in promotion of micro-enterprises, particularly in mountain areas.

Rijal K. 1999. *Energy Use in Mountain Areas: Trends and Patterns in China, India, Nepal and Pakistan*.



282 pp ISSN 92 9115 872 0, Price: US\$ 20
This publication summarises the main findings of a set of studies on energy use patterns in the HKH region carried out in four countries separately, namely, China, India, Nepal, and Pakistan. The results of the studies were used to prepare energy balance tables for the HKH Region of each country and to identify issues emerging concerning energy use. The publication also proposes a four-pronged strategy for sustainable energy development in the mountains. It also describes the various policy and institutional measures that need to be taken so that sustainable development of the energy sector in the region can become a feasible proposition.



Options for Improving Productivity of Marginal Farms - A Regional Programme on Soil Conserving Farming Systems, 1998 - 2001. This brochure describes the Appropriate Technologies for Soil Conserving Farming Systems' Project, MPS, 16pp

ICIMOD Briefs

Sadeque, Z. 1999. *Social Institutions, Local Governance, and Social Capital: Foundations of Sustainable Development and Poverty Reduction*. Issues in Mountain Development 99/1.

Tulachan, P. *Trends and Prospects of Sustainable Mountain Agriculture in the Hindu Kush-Himalayan Region: A Comparative Analysis*. Issues in Mountain Development 99/2.

Installation and Commissioning Manual for Private Micro-hydropower Plants. 67 pp
ISBN 92-115-919-0

Operation and Management Manual for Private Micro-hydropower Plants 47 pp
ISBN 92-9115-886-0

Maintenance and Repair Manual for Private Micro-hydropower Plants 73 pp
ISBN 92-9115-922-0

Manual for Survey and Layout design of Private Micro-hydropower Plants 105 pp
ISBN 92-9115-905-0

Price: US\$ 20 each

All prepared by DCS Technology Development, Butwal, with revisions by Junejo, A. et al.

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

BANGLADESH

Tang Ya/Jan. i. To review and assess the ATSCPS project progress
ii. To organize project training for farmers
T. Partap, Tang ya, Annual Meeting of Project Coordinators of ATSCFS in Rangamati,
N. Ghaley/Feb. (Chittagong Hill Tracts)
E. Pelinck/Apr. Meeting - Internet in South Asia, Dhaka, ATSCFS workshop in Chittagong Hill
Tracts
Z. Sadeque/Apr. To attend various meetings and visit institutions
(Dhaka, Rangamati, Khagrachari & Chittagong)
S. Sharma/Apr. Study visit (Dhaka)

CHINA

Tang Ya/Mar. To review progress of the ATSCFS project and to visit related agroforestry, soil
conservation institutions (Ningnan, Chengdu)
P. Pradhan, P. Bitter/Apr. For the preparation of National Course I (Lhasa)
P. B. Shah, N. S. Jodha To attend PARDYP Workshop
R. Allen, P. Tulachan, (Kunming & Baoshan)
B. Shrestha, J. Merz
G. Nakarmi,
P. R. Neupane
E. Pelinck/Mar. Attend PARDYP Workshop (Baoshan) and PARDYP Review (Kunming)

INDIA

B. Shrestha/Jan. Preparation for GIS Forum
M. Myint/Feb. Organization of national level GIS training (Almora, Delhi)
S. Thapa/Feb. Field study and collection of planting materials (kiwi cherry)
(Kullu, Shimla hills and Solan)
Z. S. Sadeque/Feb. To attend seminar
(Delhi, Dehradun Mussoorie, Srinagar, Garur, Almora, Nainital)
P. Pradhan, B. Shrestha To attend International Conference on Geo-Informatics: Beyond 2000
I. Sikder/Mar. (Delhi & Dehradun)
T. Partap/Mar. Workshop, programme-related discussions, planning (Delhi, Solan & Shimla)
P. Mool, S. Pradhan/ Mar. To participate in the 9th User Interaction Workshop of the NRSA Data Centre
(Hyderabad & Dehradun)
T. S. Papola/Mar. To deliver a lecture and attend meetings (Lucknow)
A. Bhatia/Mar. Programme Development (New Delhi)
S. Pandey/Apr. To install/upgrade GIS system in Almora, Solan
J. Merz/April To visit project sites of PARDYP (Almora, Kausani)

MYANMAR

M. Myint/I. Sikder To conduct RS & GIS workshop (Yezin)
P. Pradhan/Mar. To close the RS & GIS workshop (Yezin)
M. Banskota/Mar. Follow-up visit for Gender Course participants (Yezin, Mt. Popa, Yangon)
J. Gurung/Apr.

NEPAL

S. R. Chalise/Feb. To identify site for excursion for Regional Workshop on Water Harvesting
(Palpa, Tansen)
P. Tulachan/Feb. To acquaint FAO team with mid-hills' food & livestock systems
To interact with Lumle Agricultural Station professional and field-based HMG
officials (Pokhara & Lumle)
Tej Partap/Feb. Seminar and MFS programme related meeting in Pokhara with LIBIRD (Pokhara)
A. N. Shukla/Feb. As a trainer for beekeeping training (Bharatpur & Devighat)

- C. Richard/Mar.* Workshop on Grasslands' Ecology and Management in the Protected Areas of Nepal (Royal Bardia National Park)
- K. Rijal/Mar.* To select a site in Nepal for Community - level Energy Planning Activity Implementation (Syabru Besi)

PAKISTAN

- R. Allen/Feb.* To assist Mrs. Christina Grieder (SDC) in reviewing PARDYP (Islamabad, Peshawar and Hilkot) Networking (Peshawar, Lahore)
- P. Pradhan/Mar.* To discuss the National Training Course IV - to assist PFI in National GIS Training (Peshawar, Islamabad, Lahore)
- P. Mool/Mar.* To review progress of the ATSCFS Project and to visit agroforestry/soil conservation institutions (Islamabad)
- Tang Ya/Mar.* To visit project site of PARDYP (Peshawar, Hilkot)
- J. Merz/Apr.* To promote progress in PARDYP Watershed (Hilkot & Peshawar)
- R. Allen/April*

GLOBAL LINKAGES

- T. Partap/Jan.* To attend Hillside Farming Conference (Silsoe, Bedford, England)
- R. Allen/Jan.* To attend 2nd Land Degradation Conference IBSRAM (Khon Kaen City, Thailand)
- K. Rijal/Feb.* To participate in the World Renewable Energy Congress (Perth, Australia)
- E. Pelinck/Feb.* To meet with Donors (Denmark, Norway, Sweden, The Netherlands, Italy & Austria)
- B. Shrestha/Mar.* Meetings to finalise A13 Project (Bangkok, Thailand)
- E. Pelinck/Mar.* Italy : Chapter 13 Meeting, FAO, Meeting with donors (The Netherlands, Denmark & Austria)
- P. Bitter/Mar.* Participation in Conference on Interoperation of GIS (Interop '99) (Switzerland)
- N. S. Jodha/Mar.* To participate in poverty development workshop at the World Bank (as part of the preparation for WDR-2000)

Visitors to the Centre

- Bina Agarwal, Institute of Economic Growth, University of Delhi, India
- Rashmi Bajaj, Traffic - India, WWF - India, Lodi Estate, New Delhi - India
- Brigitte Jansky, Dr. Nikolaus Schall, Evaluation Team for BMZ/DSE, Germany
- Chandi Prasad Bhatt, Dasholi Gram, Swarajya Mandal, Gopeshwor, Chamoli, Uttar Pradesh, India
- Emelie Johansson, Fathoping Sweden
- Maria Gustavsson, Kalloy, Sweden
- Evelina Nilsson, Hognas, Sweden
- Farooq Ahmad Khan Leghari, Choti, Distt. Dera Ghazi Khan, Pakistan
- Javed Jabbar, PECHS, Karachi, Pakistan
- Hiroshi Kudo, Animal Production Officer, FAO of the UN Rome, Italy
- Ram Babu, CSWCRTI Dehra Dun, India
- E.H. Hoogland, NEDA Liaison Office, Thimphu, Bhutan
- Rekha Dayal, UNDP/ World Bank Water and Sanitation Programme
- D. J. Merrey - Deputy DG; D.J. Molden - Research Leader; and
- K.C. Prasad - Nepal Research Coordinator, International Water Management Institute, Colombo, Sri Lanka
- Joanne T. Hale Director, USAID/ Nepal
- Tim Boyle GEF/ UNDP New York
- E. Walter Coward Senior Director The Ford Foundation New York, USA

MR. FAROOQ LEGHARI AT ICIMOD

On February 2nd, ICIMOD was honoured to receive the former President of Pakistan, Mr. Farooq Leghari, and Former Minister of Science and Technology, Mr. Javed Jabbar. An extensive exchange of views on mountain development problems and challenges in the Hindu Kush-Himalayan region took place with ICIMOD professionals from various disciplines. The topics discussed ranged from mountain road construction to livestock and rangelands and community development and from high-value micro-enterprise to research and capacity building. Mr. Leghari expressed appreciation of the work being carried out by ICIMOD in Pakistan and emphasised the need to identify and promote high-value activities that are economically attractive and environmentally friendly. The Director General of ICIMOD, Mr. Egbert Pelinck, welcomed the distinguished visitors and showed them the Centre's GIS and Remote Sensing facilities and the work being carried out on Electronic Networking. At the institutional level, prospects for partnership and information sharing were discussed.

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MAIN TOPICS

Rural development, environment, energy, applied technology, natural resources, watershed management, socioeconomics, agriculture, forestry, water resources, geology, and hydrology.

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