

## Opportunities and challenges for mountain livelihoods

FOR MOUNTAINS AND PEOPLE

SUSTAINABLE MOUNTAIN DEVELOPMENT

No. 59 SUMMER 2011



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# Dear Friends of ICIMOD,

The present issue of ICIMOD's periodical focuses on some aspects of a complex topic: migration in the Himalayas.

After hosting the joint Foresight-ICIMOD Mountain Regions Workshop on Environmental Migration in Kathmandu (28 February to 1 March 2011; see p9), we have been encouraged to publish elements of ICIMOD's ongoing work and to devote an issue of *Sustainable Mountain Development* to this topic.

We concentrate in this issue on labour migration, and particularly on the economic aspects. ICIMOD considers labour migration basically as a livelihood strategy enabling mountain people to cope with the challenges of a rapidly changing world. Our assessment is that this type of migration is underestimated and the consequences undervalued in development strategies. We think that the leverage offered by labour migration could be used under certain circumstances as an important driver for sustainable mountain development.

It is not possible to treat the topic exhaustively here; rather, we see this publication as a beginning and hope it will encourage interested researchers, academics, non-governmental organisations, cooperation agencies, and governments to embark on a comprehensive effort to assess the potentials and challenges created by migration.

First of all, labour migration is only one of many phenomena in the region's complex population dynamics. It is also necessary to consider closely related and important aspects such as rural-to-urban migration and rural-urban linkages.

Some readers might be disturbed by the emphasis on economic aspects. This focus is not intended to downplay the importance of the social aspects – the disruption of traditional structures and of the social fabric of rural communities, and a strong tendency towards feminisation of the mountain economy – although these are touched on more briefly. Likewise, the importance of new attitudes and skills as building blocks for new livelihood strategies should not be underestimated.


The effect of labour migration on poverty reduction, which has been observed in various parts of the Hindu Kush-Himalayan region, has to be viewed together with its impact on values, norms, practices, and behaviour of migrants and their societies. The exposure of migrants to the values of the host countries can have divergent consequences: While migrants from the central Himalayas working in the Middle East or Malaysia may find themselves in a completely strange cultural environment and feel isolated and marginalised, their colleagues from the western Himalayas may find themselves in an environment that is culturally familiar, enticing, and mobilising. The growing conservative and Islamist trend observed in the rural areas of Pakistan and Afghanistan has largely been underestimated as a factor in social change. For the rural labour migrant in Saudi Arabia, for example, Wahhabi Islam transmits values and behaviour that are deemed appropriate for the family back home. Conservative values are an instrument for preserving social coherence in an environment of change. This touches a sensitive point which requires further knowledge and analysis.

Finally, we should not misjudge or overvalue the economic potential of labour migration and related remittance flows. In Nepal, for example, the imbalance in infrastructure development, with a construction boom in Kathmandu and limited development impact in rural areas, is closely related to underdeveloped investment opportunities for substantial remittance flows. In Bangladesh, new imbalances are being created in rural areas, with far-reaching consequences for land and housing prices.

Perhaps one of the most impressive eye openers for me was the example of a rural labourer from Kohistan who purchased an electric refrigerator and an electric pump to provide his family with prestigious 'modern' assets of development – but the equipment lies idle because his village has no electricity and does not expect to receive it in the near future.

This brings us to the conclusion that it will not be possible to harvest the fruits of migration, to use remittances for sustainable mountain and rural development, without conducive government policies to create effective incentives. Building up the financial services infrastructure and access to information are important prerequisites. Perhaps the international donor community should concentrate on such aspects in order to realise the potential of migration – new attitudes, improved skills, and flow of remittances.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andreas Schild', written in a cursive style.

Andreas Schild,  
September 2011

# Labour Migration in the Himalayas

## Opportunities and challenges

**Michael Kollmair**, Programme Manager, Sustainable Livelihoods and Poverty Reduction (SLPR), ICIMOD, [mkollmair@icimod.org](mailto:mkollmair@icimod.org)

**Brigitte Hoermann**, Action Area Team Leader, Innovative Livelihood Options, ICIMOD, [bhoermann@icimod.org](mailto:bhoermann@icimod.org)

Recent years have seen an enormous growth of interest in exploring the links between migration and development. At the international level, migration is no longer seen only from the risk perspective (e.g., security and human rights), but is increasingly recognised for its potential to deliver significant benefits for the development of sending and receiving countries and their inhabitants (UNDP 2009). Despite such attention, migration is still only negligibly integrated in development policy debate and day-to-day decision making in the Hindu Kush-Himalayan (HKH) region.

In recent decades rapid socioeconomic and environmental changes have been taking place across the HKH region. Many of the more than 200 million inhabitants of the region still suffer from low incomes, lack of employment opportunities, lack of infrastructure, and lack of access to basic amenities. The specific characteristics of mountains – poor accessibility, fragility, and marginality – have contributed to the impact of the changes. At the same time, rapid economic development in the surrounding lowlands and economic centres of South and Southeast Asia and the Gulf countries has increased the demand for cheap and flexible labour.



Labour migration is now a core livelihood strategy of many rural households in the mountains of the HKH. As in other mountain areas of the world, it is not a new phenomenon. People have always been on the move to improve their lives and the lives of their families, to learn new skills, to gain new experiences, to find better jobs, and to flee insecurity, disaster, and famine (see articles by Seddon and Altamirano, this journal). But the increased awareness of opportunities elsewhere, better communication technologies, and falling transportation costs have enabled previously immobile mountain people to migrate at unprecedented rates.

Of the more than 200 million migrants worldwide, 15 per cent (30 million) are from the Hindu Kush-Himalayan countries. Bangladesh, China, India, and Pakistan, all of which have areas in the Hindu Kush-Himalayas, are among the largest sending countries in the world, and many of these migrants are from the mountain regions of these countries, although the exact number is not known.

*"We are dependent on agriculture, which is totally dependent on good weather conditions. The biggest problem we face is food insecurity. If the weather was good, with timely rain and better food security, we would never opt to migrate. Why would we want to leave our families and travel to another place and work like animals?"*  
Village Development Committee (VDC) Secretary, Dailekh district, Nepal (ICIMOD, unpublished)

Labour migration is one of the major livelihood strategies of mountain people. Growth rates of migration in the countries of the HKH are striking.

Case studies in the mountain areas of the Himalayas (e.g., Hoermann et al. 2010) show that labour migration has a significant impact on reducing poverty in the region. Internal, South-South, and male migration are particularly predominant in the region. Although the remittances by individual migrants are low in volume, they nevertheless make a significant contribution to household income in many areas.

The countries of the HKH region have the highest inflow of remittances of any region in the world. For many mountain families, remittances are the major or only source of income.

A significant determinant for migration is the influence of social networks such as migrant friends and relatives, closely followed by low agricultural productivity and a lack of interest in working in agriculture (see also Sharma, this issue). Lack of basic facilities in villages and better prospects (sometimes only anticipated) in cities are other reasons for migrating. Education has emerged as an important

*"What is there in our village? There is not even proper medical care for the ill."*  
Villager from Tehri Garhwal district, Uttarakhand  
(ICIMOD, unpublished)

push factor among those disillusioned with rural life and agricultural work. Even young people with only an intermediate education feel that there are better livelihood opportunities for them outside their villages and are reluctant to take up agricultural work.

*"I'm glad I went to India and earned money, as well as learning skills. But there are plenty of opportunities here as well, although we do not see them. We think there is no other way besides migration."* Ratan Bahadur Rawal (age 32) from Talhyum VDC in Jumla, Nepal, who went to work on an apple farm in Kinor, Himachal Pradesh, India when he was 13 years old. He soon learned different skills such as stem grafting and fruit grading and packing, and earned close to NPR 50,000 in six months. With the savings he bought land in his village and started planting apples on a small plot. Today, his farm has 28,000 plant seedlings of apples, walnuts, peaches, pomegranates, and lemons, which he sells to the Agriculture Office. He makes around NPR 200,000 a year, and is optimistic that he can make NPR 500,000 a year in the future. He has not gone to India since he started his own farm.  
(ICIMOD, unpublished)



## Migration for development: social and financial remittances

Migration generates financial and human capital (skills

and knowledge) which, if leveraged for development, can reduce poverty. Results from macro-economic studies suggest that, on average, a 10 per cent increase in per capita official international remittances leads to a 3.5 per cent decline in the proportion of people living in poverty (Adams and Page 2005).

Remittances are increasingly becoming the most direct, immediate, and significant contribution to the livelihoods of the mountain poor in the western HKH. They provide a safety net for the large number of dependents left behind. Almost 35 per cent of households in the mountains and hills of Nepal receive remittances (HMGN 2004). Migration has become an effective strategy for livelihood adaptation in the HKH region.

Remittances are increasingly the most direct, immediate, and significant contribution to the livelihoods of the mountain poor (see for example Figure 4 in Hoermann et al., this issue). In Nepal, almost half of all hill households receive remittances, and the average contribution of remittances to these households' income is close to 35 per cent. Almost 70 per cent of wages earned by Afghans in Iran are sent back home. During the frequent natural, economic, or political crises in the HKH, remittances are a lifeline to the poor (see articles by Suleri and by Banerjee et al., this issue, and Banerjee et al. 2011). At a macro-economic level, remittances are a major source of external financing for most HKH countries. Even during the economic crisis in 2009, they continued to grow robustly and were much less volatile than other external financing flows (Hoermann et al., this issue).

*"After studying for so many years it is pointless to go back to agriculture. If I had to be a farmer there was no need to study so much."*  
Migrant from Bageshwar district, Uttarakhand  
(ICIMOD, unpublished)

The benefits of remittances are not limited to recipient households, but have a wider impact on the receiving society as remittances are spent, generating consumer demand and jobs for local workers. Remittances improve living conditions, education, and health in the communities of origin and provide insurance against income shocks.

Migrants acquire new ideas, skills, perceptions, and technologies from the host communities, which they carry back to their place of origin. In this way migrants act as powerful agents for transformation and social change.

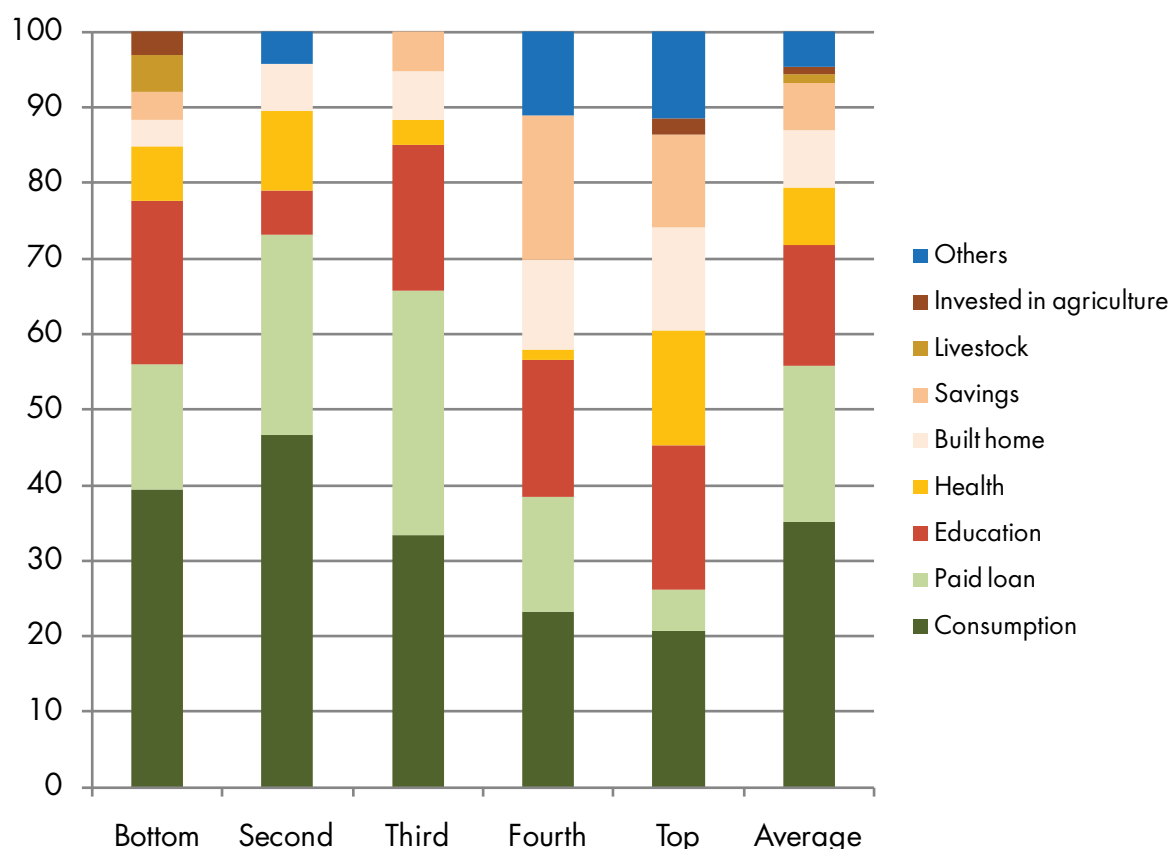
Empirical analysis in Pakistan proved a changed perception of households of migrants towards education. Enrolment rates for girls increased by 54 per cent and their dropout rate decreased by 55 per cent; the number of years of schooling increased by 1.5 years for girls and 1 year for boys (Mansuri 2007). A recent World Bank study in Nepal showed that among remittance-receiving households, the poorest households spent the highest proportion of their remittances on education (Ferrari 2007) (Figure 1). Health standards have also been observed to rise significantly among households of migrants. Children of Pakistani migrants have higher



Households of migrants set a priority on education. Particularly girls' enrolment rates increase substantially.

weight-for-age and higher height-for-age scores than children of non-migrants, and they sustain these gains as they grow older (Mansuri 2007).

Figure 1: **Proportion of most recent remittances used on average by households in each spending quintile\* for different purposes in Nepal in 2006**



\* Households divided into five quintiles according to total amount spent

Source: Ferrari et al. 2007



## Risks of Labour Migration

Many risks are linked to labour migration. Migrants and their families and communities back home have high and not always realistic expectations of returning with 'a fortune'. Many migrants suffer from harsh physical working environments and unfamiliar and isolated living conditions, along with high peer pressure. Every year thousands of migrants from the HKH die abroad prematurely.

This poem on a chautara (roadside resting place) in Nepal, erected by the family of a deceased labour migrant, illustrates the sufferings in a poignant way.

### Poem on a Chautara from the Kanchenjunga Region

Dreaming of a better life, you went to a foreign country  
Thinking that with bags of money you would return

You went with the power and courage of youth to the foreign land  
Your dreams vanished into the air and you even lost your life

Young life came to an end, after leaving to the foreign country  
Friends returned back alone with your ashes

Oh my brother, you left this land of Earth  
Leaving alone your sister, sister-in-law, and relatives

Don't go to foreign countries, oh young stars!  
I call all to come back to their homeland!

We place this chautara on your ashes for remembrance

Documented by Michael Kollmair, 2003



## Challenges and risks of migration

Migration entails high social and financial costs (see Box above). Migration requires substantial initial funding which has to be covered by large loans that must be paid back. Formal financial services are rarely available in the Himalayan mountains, and if aspirant migrants

need to borrow funds they generally take credit from money lenders which charge exorbitant rates of interest. Sending the remittances can also be expensive and inconvenient. For the recipients, microfinance products such as savings, investment, and insurance packages are rarely offered. However, a great part of remittances is used to repay loans (Figure 1).

Ultimately, the investment opportunities in rural areas are sparse, and funds are mostly diverted to the already crowded urban

centres. Lack of investment ideas, entrepreneurship, infrastructure, and access to markets all contribute to the lack of motivation of mountain communities to save, which in turn leads to lack of availability of financial capital once investment opportunities arise. International development organisations such as the International Fund for Agricultural Development (IFAD) have recognised these challenges and are trying to create opportunities using different approaches (see Rahman, this issue).

As throughout the world, migration in the Himalayas is a highly gendered process (Sharma, this issue). For the most part men leave

*"While working in Hong Kong I experienced many things – the way people treat a dependent or independent woman. I have gained much experience and my confidence has grown. Now, I have a say in decision-making at home. My husband does not shout at me. I have bought a piece of land and four rickshaws and I am creating a means of livelihood for four other families..."*  
Sushila Rai, a Nepalese migrant domestic worker, describes her experience (Jolly and Reeves 2005)

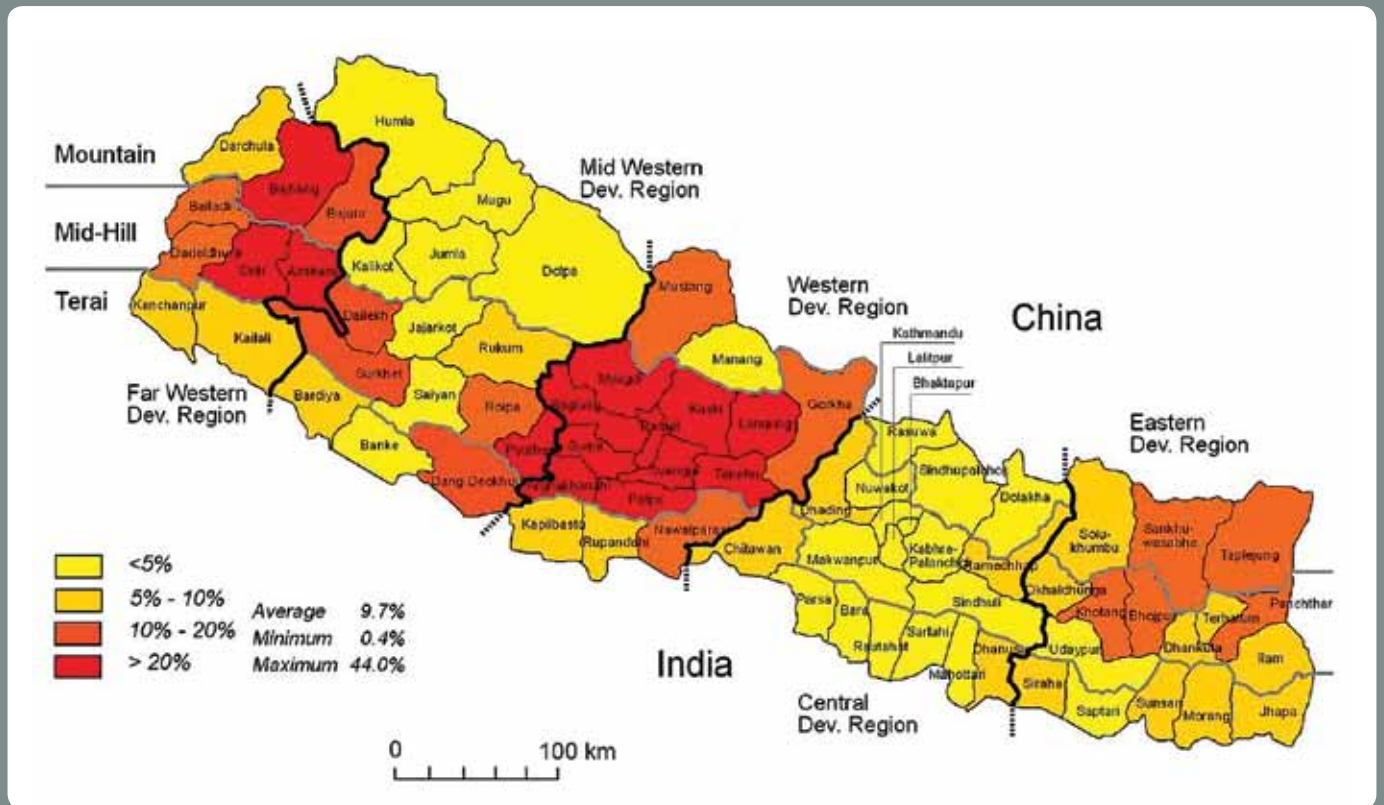
*"Since my husband has gone, I have to work in the field every day. I have no choice, I have to."*  
Gurung woman from Nepal (Kaspar 2005)

*"We do not have a habit of saving and we have no awareness of the importance of saving".*

34-year-old migrant from Bajhang, Nepal, who claimed to have worked 13 years in a hotel in India, earning a total of NPR 750,000, without saving anything.



Figure 2: Male population over 14 years of age absent abroad



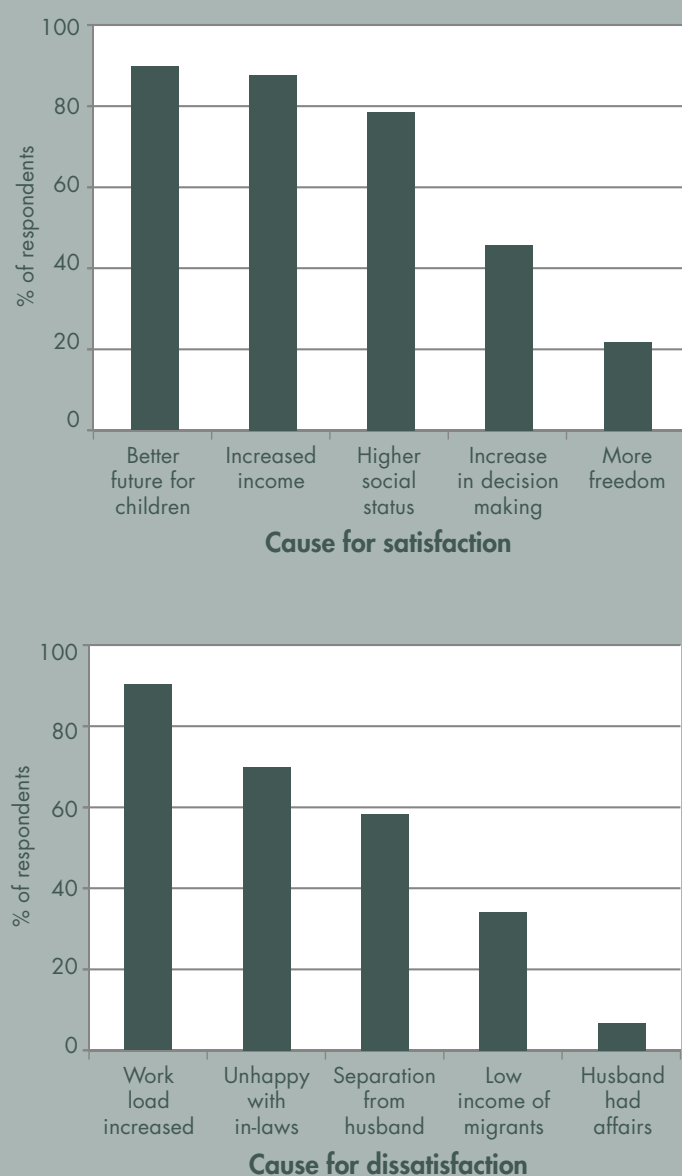
their villages and families, and women stay behind. In some areas up to 40 per cent of the men are absent (Figure 2). The absence of men leads to a feminisation of mountain economies, with women responsible for most economic activities as well as for their households. This trend poses both challenges and opportunities. The main problems for women are the substantially increased workload in a new social setting and power relations with their relatives (see Song and Vernooy, this issue). On the positive side are improved socioeconomic status and better outlook for their children (Figure 3).

"Many women and old people do not understand the policies and cannot sign, so they prefer not to use the banks to receive remittances. Women say that bank staff give them a lot of problems." Dechen Sherpa (ICIMOD, unpublished)

"I like to be the household head. I like to take my decisions on my own. When my husband was still in the village, I did not think about that." 29-year-old Dalit women from Nepal (Kaspar 2005)

Extensive male migration leads to a feminisation of mountain economies

Figure 3: **Reasons for satisfaction and dissatisfaction of migrants' wives in Uttarakhand**



Source: Hoermann et al. 2010

## Conclusions

Labour migration entails both challenges and opportunities for the people, societies, and development of the HKH region. There is no doubt that in the coming decades, migration will persist in the region and in other mountain areas of the world, driven by globalisation, food insecurity, climate change, and escalating income disparities. The sheer magnitude of labour migration and remittance flows in the Himalayas currently represents a largely untapped development potential. Awareness of this potential and possible actions to exploit it remain weak, in large part because of the lack of information

and knowledge on migrants, their aims, and desires, and on ways to use and invest the financial and social remittances. As for many development questions, most of the relevant statistics are available only at the country level; this information is insufficient for understanding and addressing the specific dimensions of migration in the mountains of the HKH region.

Strategies to help people suffer less and benefit more from migration should be based on a better understanding of migration-related processes, from social networks and remittance flows and uses, to policy hurdles in the sending and receiving countries. This compilation of articles from regional and international migration scholars represents a first step in exploring aspects of migration in the mountains of the HKH, and advocates for integrating migration better into the mountain development agenda.

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# The Foresight Global Environmental Migration Project

## Examining the impact of environmental change on human migration

### Foresight Staff

**H**ow can we best understand global migration arising from environmental change to help those who move, those in host areas and those who stay behind, and what are the policy implications? The Foresight Global Environmental Migration Project is working with leading experts and organisations from around the world to address this question.

The Global Environmental Migration Project is part of the Foresight Programme (see Box) and was commissioned by the United Kingdom's Government Chief Scientific Adviser. It is assessing how a broad range of environmental factors could, in interaction with other socio-economic drivers of change, influence the world's patterns of migration by 2060, and the policy implications. The project looks at both international migration and internal migration and the relationship of these with global systemic changes in the environment – including climate change, land degradation, and deforestation. The project also explores temporal features of environmentally driven migration. For example, how much change will take place in the nearer term, say by 2030?

The project focuses on three broad ecological regions where the interplay of environmental and non-environmental drivers of migration is likely to be most pronounced and uncertain in the next 20 to 50 years:

### Foresight Programme

Foresight is part of the United Kingdom's Government Office for Science. It advises government about how to ensure that today's discussions are robust in view of an uncertain future. It draws on valid, well-tested, peer-reviewed scientific knowledge to inform those responsible for developing policy and strategy in government, thus helping to improve how science and technology benefit governments and society.

mountains, dryland margins, and low-elevation coastal zones (including small islands). These are also regions that support human populations that may be particularly vulnerable to climate change. The project also has a focus on the Mediterranean region, a single geo-political region combining the above three ecosystems.

For each region the project has commissioned evidence reviews that quantify changes in ecosystem services and exposure to hazards that will be relevant to migration over the next 50 years. These regional reviews will be an essential base for the project's final report analysing future environment-related migration and the policy challenges and opportunities it may present. ICIMOD is leading the review of environmental and non-environmental drivers of migration in mountain regions.



## The mountain case

Both migration and environmental change are high-profile and controversial issues of significant importance in mountains. Mountain regions present a set of specific circumstances which include:

- communities relying heavily on ecosystem services and natural resources to provide livelihoods;
- substantial seasonal climatic variability, making seasonal migration a traditional way of life;
- inaccessibility, fragility, diversity, and marginality;
- frequently a geo-political location crossing State borders.

Mountain regions face policy challenges in terms of attaining a form of sustainable development that takes the fragility of mountains into account and conserves biodiversity, maintains mountain ecosystem services (in the interest of downstream ecosystems), and supports employment. Understanding how migration, and especially environmental migration, is linked with these existing policy challenges is complex yet crucial for global policy makers; it will require cooperation across a wide range of sectors, between science and policy, and between mountain and lowland communities. Cooperation will also be required between scientists and researchers across the globe to identify gaps in the current research base and to fill these collaboratively.

## Joint Foresight-ICIMOD workshop

As part of the Global Environmental Migration Project, the Foresight Programme and ICIMOD jointly held an international workshop to consider the future impact of environmental change on human migration within, out of, and into mountain regions. The Mountain Regions Workshop, held from 28 February to 1 March 2011 at ICIMOD Headquarters in Nepal, brought together leading academics and policy makers from mountain regions to look at the project's global analysis and emerging findings.

## Expected outcome

The final report and the evidence base underpinning it (including the report of the above workshop and the peer-reviewed regional reports) are to be published in autumn 2011. They will be presented to the project's international stakeholder community which includes United Nations agencies, regional bodies in Europe, Africa, and Asia, and other international organisations. The project's ambition is to catalyse action for reducing risk and vulnerability and enhancing choice, providing more options to vulnerable populations. The work done in conjunction with ICIMOD will ensure that the final report represents the state of the art in research on environmental change and migration in mountain regions and highlights the most important issues for global stakeholders.



# Agrarian Change and the Long-Term Transformation of Rural Livelihoods in Nepal

**David Seddon**, Director, Critical Faculty, an independent international consultancy group, [criticalfaculty@hotmail.com](mailto:criticalfaculty@hotmail.com)

Mountain livelihood systems have long been perceived as traditional, 'stable', 'backward', and subsistence driven. However, research shows that mountain livelihood systems in Nepal change at considerable speed and have not and do not depend on farming alone. Migration has also long been a component of mountain livelihood strategies.

Studies of agrarian change in Nepal's hill regions from the 1950s and 1960s showed that rural livelihoods depended on grain production, with some cultivation of other crops and widespread raising of livestock. Villagers also obtained some income from off-farm activities and from outside the village, and various forms of migration were already an important feature of village life (Pignède 1966; MacFarlane 1976; Caplan 1970).

Seasonal migration and transhumance involved individuals and families spending some time away from their homes, yet maintaining contact and contributing to the overall household income and subsistence. Longer-term migration to work in small towns within the district or in neighbouring districts of Nepal (including the Terai) was also documented, although this involved only a small minority of individuals and households. A more

significant minority was employed abroad, in India, in both the private and public sectors – in agriculture, construction, and to a lesser extent manufacturing; in the service industries; and in the civil service, notably the police and the army.

At that time most researchers perceived labour migration as a supplement to the local economy, and agriculture as the core of rural life.

## Changing livelihoods: a comparison between the 1970s and 1990s

### The 1970s

A set of studies carried out in western Nepal from 1973 to 1975 examined features of agrarian change and evolving livelihoods (Blaikie et al. 1973, 1977; Feldman and Fournier 1976; Seddon et al. 1979). This research showed that in the hills, population pressure combined with the introduction of new farming techniques provided a major impetus to change. Traces of the earlier pastoral economy and system of shifting cultivation remained, but settlement had increasingly become the norm. Flocks of sheep and goats had been progressively reduced because lands close to the village could not support them in winter between their annual summer migrations to the high hill pastures. Hence a profound systemic change had been forced on the agriculture of the hills over several decades. Farmers had introduced intercropping, planting of winter wheat on rice lands in winter, and minor improvements to irrigation, field preparation, and terrace construction. Even with these innovations, however, production barely kept pace with population growth (Seddon et al. 1979).

In both the hills and the Terai, grain yields generally declined between 1967 and 1972, despite a slight increase in the areas cultivated (particularly under



wheat). Overall average annual agricultural output increased only minimally. Cash crop production increased at a slightly higher rate, largely as the result of an expansion in cultivation; yields here also tended to decline. At the same time, even in the remotest Nepalese villages, mass-manufactured commodities from India had by the mid-1970s largely replaced locally produced goods, undermining the ability of 'occupational' castes to exchange their artisanal goods for grain. Similarly, the hill towns, now connected to the Nepalese and Indian Terai by road, were now consuming vegetables, potatoes, and onions imported from these regions rather than produce from the surrounding hill economy (Blaikie et al. 1977).

The largest livelihood categories in the 1970s were small and medium peasant producers with minimal farm sales (less than 250 Nepali rupees [NPR]), followed by agricultural labourers; some of these producers and labourers had some additional non-farm income.

Imported goods began to replace local goods in rural Nepali villages, reducing opportunities for local producers

Medium and large-scale producers with farm sales of NPR 1,000–4,999 or over NPR 5,000 were fewer in number. Producers in these categories were reliant on sales of farm produce and tended to have no non-agricultural income.

The marginal peasants and agricultural labourers without supplementary income from outside farming were usually the least well off. The greatest number of households, however, consisted of peasant smallholders involved in production for direct consumption using their own labour, reciprocal labour exchange, or occasional wage labour; they secured the bulk of their non-farm necessities from local artisans (occupational castes) through exchange arrangements, supplemented by small purchases from the market. Households with some income from non-farm sources tended to be better off. They had only limited involvement in the market for labour and for the sale of farm produce, but they were not entirely self-sufficient.

As regards the development of the market since the 1950s and 1960s, there had been a significant increase in 'off-farm' sources of income involving labour migration, mainly to the towns of Nepal and India, but also often to work in agriculture on a seasonal basis, to fit in with the domestic agricultural cycle. (Migration from the hills to the Terai had already begun to increase following the elimination of malaria in the 1950s and early 1960s.) The 'traditional' arrangements with occupational castes for provision of non-agricultural necessities had begun to break down, as cash became more common than kind as a means of payment.

### The 1990s

A follow-up study carried out in 1996/97 in the same areas that were surveyed in the mid-1970s provided a solid quantitative basis to interpret change (Blaikie et al. 1998, 2002). It indicated that population growth, limited new agricultural opportunities in the hills, the availability of land for settlement in the Nepalese Terai, and new opportunities for non-agricultural employment in India and further afield were the major factors of change that had influenced the adaptive choices made by individuals and households over the intervening 20 years. Three groups of strategies were identified: in situ agricultural strategies; securing off-farm income; and emigration (including from the hills to the Terai). Some households, because of advantages in access to resources and skills, had been able to pursue all three.

In situ agricultural strategies to cope with an overall reduction in land holdings proved, in a sense, the starting point for all households. In both the hills and the







The proportion of small-scale peasant producers involved in non-agricultural economic activities increased

Terai (particularly the latter), average land holdings had continued to decline. Livestock numbers had generally declined per household, accelerated by the sharp reduction of forest forage and grazing, but livestock sales in a few hill locations with good access to fodder and forest still provided substantial cash incomes. In the Terai, more farmers were using improved seeds, chemical fertilisers, and canal irrigation than before, although the levels of investment and commercialisation remained low. In the hills, however, agricultural strategies had altered little over the 20 years. Hill farmers appeared generally conservative about further investment in agriculture, but had intensified production, particularly of staple subsistence crops. Small- and medium-scale peasant commodity production remained prevalent.

As regards non-agricultural (off-farm) activities, about 50 individuals of the 153 households surveyed were involved in running non-farm businesses, as compared with about 80 people from 667 households in 1974/75. These results suggest entrepreneurship in non-agricultural activities had increased. However it did not seem to have developed as a widely available option for rural households, as compared with other forms of non-farm income generation.

Local and more distant wage employment had become an increasingly important source of income for rural households as a whole. Temporary out-migration from the hills, which had been occurring for at least 100 years and had already become prevalent by the 1970s, continued to increase during the 1980s and 1990s. New opportunities for contract labour in the Middle East began to provide new cash earning opportunities overseas. The local agricultural labour market continued

to provide some opportunities, but they appeared to be shrinking because of the reduction in the number of farms with insufficient family labour – although population growth and economic growth in the Terai had increased the size of the agricultural labour market there (even if partly offset by the reduction in farm size and rapid growth in the number and proportion of small farmers). The fairly constant level of agricultural wages suggests that demand and supply, in aggregate increasing in size, remained balanced.

## Conclusion

Examining the changes over time, the most striking finding in the later years is the increased proportion of small-scale peasant producers in the hills who had some form of non-agricultural income. The share of agriculture in household cash incomes continued to fall, and many workers had migrated permanently to the towns. Furthermore, the most vulnerable households still resident in both the hills and the Terai managed to survive in a deprived condition through charity, unreturned loans, living off communal resources, and small amounts of (usually local) off-farm work. A significant landless labouring class had not evolved.

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# From Internal to International Migration in the Peruvian Andes

**Teófilo Altamirano**, Professor of Anthropology, Pontificia Universidad Católica del Perú, [taltami@pucp.edu.pe](mailto:taltami@pucp.edu.pe)

Internal migration is widely regarded as the major economic, social, cultural, and demographic transformational force of the past 60 years in the Andean countries (Peru, Colombia, Ecuador, and Bolivia).

Internal migration generally precedes international migration. The nation State, to become consolidated, needs linkages among its regions, states, departments or provinces. This interlinking is not only political and administrative, but also social and cultural. In the economic sphere, however, such interlinking has not always been possible. In this context, internal migration has a decisive role by connecting the rural and marginal sectors with the cities, which in general are the political and administrative centres.

Historically, small farmers, villagers, and ambitious small-city dwellers have migrated to larger urban communities in search of educational and economic opportunities. In Peru, the urbanisation of rural communities is transforming the countryside and accelerating rural-to-urban migration. Peruvians are now migrating to mid-sized cities, not just to the capital (Lima), as well as abroad. More women than ever are flocking to the cities

in order to improve their lives. Local organisations in support of internal immigrants have flourished, building bridges to their communities of origin.

Historically, small farmers have migrated to larger urban communities in search of economic opportunities

A social and cultural effect of internal and international migration is the rise of translocal and transnational households, in which one or more members of the nuclear family live away, either in the country or abroad. This change in the family composition has advantages and disadvantages, but most people perceive the advantages to outweigh the disadvantages; hence migration has become synonymous with wellbeing and human development.

## The first stage: migration to cities

Internal migration already existed in Peru before the Second World War but increased in the following decades as the cities began to grow economically and demographically and the need for labour increased. The scant presence of the State in the poorest areas encouraged internal migration to the big cities, mining enclaves, and high jungle settlements, all linked to the international market. The 1980s and 1990s saw internal migration intensified. Rural households commonly included migration in their plans; leaving and returning to the community increasingly became a part of rural culture. Depending on their farming activities, communities were temporarily, seasonally, or constantly on the move. The peasant farmer community – defined in territorial terms as a stable population with a definite role and functions and an ethnic or linguistic identity – became obsolete. Development programmes



run by government, international cooperation, and non-governmental organisations directly or indirectly encouraged migration by improving health and education and thus 'readying' the human capital for migration, with adverse effects for local and regional development. Land reform also encouraged the urban shift in Peru. Rather than strengthening rural areas, it depleted them of human and financial capital by freeing indigenous people and peasant farmers from the colonial legacy of haciendas and plantations.

The shift towards urbanisation began before the increase in migration. Educational programmes based on urban models, designed to transform students into Spanish speakers, also foster urban values such as individualism, competitiveness, and reward for academic excellence. Parents encourage children to buy into the values of the school and to become professionals and not mere 'campesinos'. Most rural areas now have primary schools, but to continue their education students must travel to a nearby city or to Lima. Many of them remain in the city forever, only occasionally returning home to visit. Leaving the village is the first step of moving into the world, a stage in the process leading to international migration.

Internal migration has been predominantly unidirectional, i.e., from the country to the city and not vice versa. In this sense it was the most important socio-demographic and cultural component of the urbanisation process. In the past 20 years, medium-sized cities have exploded in population. Abancay, Ayacucho, Cuzco, Huancayo, and Juliaca have all grown between 4 and 7 per cent annually, although Lima continues to receive more migrants in absolute terms. The advantage for the



migrants who move to the smaller cities is that they can keep in touch with their communities of origin and are able to return frequently.

## Changing demographics

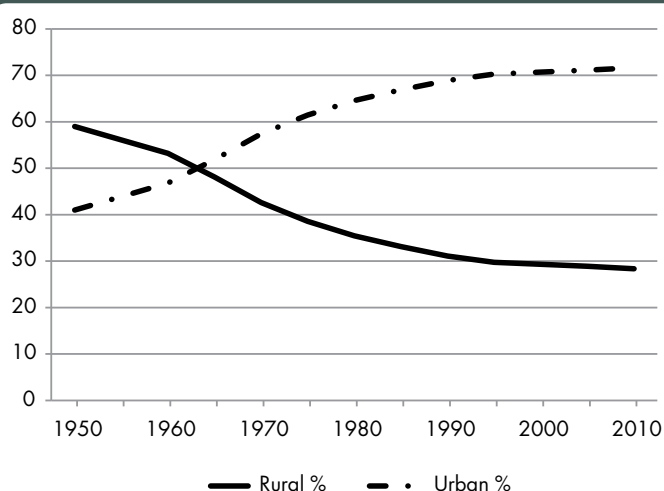
Internal migration in Peru has changed the distribution and character of rural and urban populations. In 1950, the rural and urban populations in Peru were 59 and 41 per cent respectively. By 2010, this breakdown had shifted to 28 and 72 per cent (Figure). The major driving force for this change has been internal migration from the Andes and the Amazon rain forest to the coast; 56 per cent of the total Peruvian population now lives on the coast, while only 30 per cent lives in the Andes and 14 per cent in the Amazon rain forest.

Internal migration has also widened rural-urban inequalities and allowed new social and cultural groups to emerge. Rural populations have become poorer and urban ones richer as the human and financial capital has moved from rural to urban areas. In the cities, the first and second generation of migrants have become the great urban middle class; they are the 'cholos', a racial and cultural mixture between the indigenous and white populations.

### Mountain poverty: Internal migration in Peru has widened rural-urban inequalities

The distinction between rural and urban and between traditional and modern is no longer as clear as before. Socio-demographic and cultural evidence in the past few decades has shown intense interactions between the city and the countryside, and neither can be analysed independently of the other. Better highways and administrative links between country and city are contributing to greater mobility of the population. The small towns and capital cities of the provinces constantly

Change in rural and urban population in Peru, 1950–2010



Source: UN (2011) Population Statistics. Department of Social and Economic Affairs, Population Division ([http://esa.un.org/unpd/wpp/unpp/panel\\_population.htm](http://esa.un.org/unpd/wpp/unpp/panel_population.htm))



receive people from outside their communities. Visits to family members who have relocated to towns, trips for agricultural supplies, and exploration of new markets for rural zones entail movement between the countryside and the cities. Many migrants to the cities return periodically to their home towns because they maintain small businesses or farms there.

## Growth of international migration

While the cities are growing, the globalisation of the economy, the media, and education, and the demographic transitions in the rich countries where there are progressively fewer young people, produce a demand for labour that cannot be covered internally. The scarcity of skilled and unskilled workers leads countries to open their borders to foreigners.

Economic and political instability in the poor countries triggers emigration. Demographic growth, still high, outpaces economic growth. This produces an oversupply of labour that these nations cannot handle, leading workers to emigrate. International migration has not replaced internal migration, but has become an extension of it.

In Peru, emigration in the 1960s was mainly instigated by accelerated economic growth following the Second World War, and was primarily towards the United States (Table). Emigration within Latin America was primarily

towards Argentina, which had achieved economic growth almost comparable to that of the United States, and towards Venezuela, which was experiencing an oil 'boom'. To emigrate from Peru was synonymous with prestige and power, more so when the destination was the United States or Europe (which mainly attracted professionals, intellectuals, and students at that time). A relatively stable government from 1963 to 1968 facilitated emigrants' return.

In the 1970s, economic and political conditions changed substantially in the country. The nationalisation of foreign corporations, the Agrarian Reform Law, and migration policy restrictions discouraged immigration, foreign investment, and the return of Peruvians from abroad but encouraged emigration, especially of the few elites controlling industry, mining, fishing, and landownership. At that time emigration was selective, coming mainly from the liberal professions and the upper and upper middle classes of Peru's large cities. A small number of emigrants, however, came from the urban middle classes. The United States continued to be the country of preference, followed by Venezuela, as well as Ecuador and Europe, mainly Spain. Further, at the beginning of the decade, shepherds began to emigrate from Peru's central highlands to the North American west (see Altamirano 1992, pp 136–153). University and graduate students preferred to go to Europe, Argentina, and Brazil, in part because Peru's new University Law (1971) cancelled doctorate study at the universities.

### Evolution of Peruvian Immigration

Destination countries	United States	Western Europe	Eastern Europe	Latin America	Canada	Australia	Japan	Others
Phases								
1920–1950	New Jersey, New York	England, France, Italy, Spain						
1950–1960	California, Florida, Illinois	Belgium, Germany		Argentina, Venezuela				
1970	Connecticut, District of Columbia	Netherlands, Switzerland	Bulgaria, Czechoslovakia, Hungary, Yugoslavia, USSR	Costa Rica, Mexico, Venezuela	Eastern Canada	North and southeast		
1980–1992	All 50 states	Scandinavian countries	Bulgaria, Czechoslovakia, Hungary, Yugoslavia, USSR	Central American countries	Western Canada	North and southeast	Whole country	Caribbean, Israel, Republic of Korea, Arab countries, Asian subcontinent
1992–2010	All 50 states	All countries		All Latin American countries	All provinces	North and southeast	Whole country	Africa

The emigrant population in 1980 was only 500,000 (Altamirano 1992). In the 1980s, with the restitution of democracy, internal conditions in the country became relatively attractive. Nevertheless, most emigrants did not immediately return, and political conditions in the country remained unstable. The economy began to deteriorate, and political violence arose in the highlands. These two phenomena – violence and economic crisis – lasted throughout the decade, preventing tourism, investment, immigration, and the return of emigrants.

In the past 30 years, international migration has increased in an unprecedented fashion, more than in most other countries of the Southern hemisphere. Today, approximately 3 million Peruvians are living abroad – equivalent to 11 per cent of the total population. To put this figure in context, the world average recognised by the United Nations Population Fund in 2010 was 3 per cent.

Peruvians are now living in practically all countries of the world. About 40 per cent of Peruvians abroad are in the United States, 30 per cent in Latin America, 20 per cent in Europe, and 10 per cent in the rest of the world. However the data are imprecise, both because the high number of illegal or 'invisible' emigrants makes the



The distinction between rural and urban is less clear than before

statistics incomplete, and because migrant populations are mobile and constantly travel in and out of the country.

The revolution in communications enables potential emigrants to have more information about foreign work opportunities. The social and family networks established by households give potential emigrants more confidence, including those who decide to emigrate without papers (which explains the growing population of illegal immigrants). The fact is that with or without regulations and anti-immigration measures, emigration will continue.

**This article is based on the following publications:**

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Altamirano, T (2003): From country to city: internal migration. ReVista, Harvard Review of Latin America, Winter. Available at: [www.drclas.harvard.edu/revista/articles/view/206](http://www.drclas.harvard.edu/revista/articles/view/206)

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# Culture of Migration in the Middle Hills in Nepal

**Jeevan Raj Sharma**, Senior Researcher and Assistant Professor at Feinstein International Center, Tufts University, [jeevan.sharma@tufts.edu](mailto:jeevan.sharma@tufts.edu)

Migration has historically been a significant feature of livelihoods in the fragile socioeconomic and environmental context of the Himalayan middle hills (Hitchcock 1961; MacFarlane 1976; Whelpton 2005). Hardly any area in the hills of Nepal remains unaffected by the exodus of young men, and increasingly young women, to other parts of the region, across the border to India, and more recently to various global destinations. These migrations have created and sustained trans-regional and trans-national links, connecting distant cultures, countries, and economies.

In villages and towns throughout the middle hills of Nepal, labour migration features as a regular theme of conversation among the people, with a particular focus on aspirations, planning, organisation, benefits, and costs. People often tell visitors that there is no one left in the villages but the old people, women, and little children. While this is certainly not true, the historical practice of out-migration, combined with a high aspiration among the younger generation to leave rural villages in search of employment and associated

consumption opportunities in cities and towns, often means that even those who stay back are affected by the 'culture of migration' (Cohen 2004). In other words, decisions about migration have become a pervasive part of everyday experience. Households consider migration one of the key strategies for managing their livelihoods in a socioeconomically, environmentally, and politically fragile context.

This paper gives an overview of socio-cultural meanings attached to male labour migration, drawing on my fieldwork in Nepal's western hills (in Palpa district from 2004 to 2010) and far-western hills (in Doti from 2001 to 2008), in which I followed migrants from these areas to Uttaranchal, Delhi and Mumbai in India. It analyses how hill men interpret the migration experience and how their strategic responses to livelihood insecurities are shaped not just by economic calculation but also by a complex set of gendered socio-cultural considerations, particularly relating to ideas of consumption, modernity, and masculinity. The paper argues that migrating is a social requirement for achieving a desired form of manhood – for being a man – among the marginal households in the western hills of Nepal; that migration does not just allow these households to 'save there and eat here' (Watkins 2005), but also involves cultural processes that engage ideas of gender roles and modernity.

The 'culture of migration' affects even those who stay back, often old people, women, and small children

Migration is a key strategy for managing livelihoods in a socioeconomically, environmentally, and politically fragile context

## Cultural context

As in other parts of the world, the context in which young men in the middle hills struggle to achieve their personal goals is not of their own making, and it has changed over the past decades. Over the years, the incorporation of the middle hills into the market





economy, as indicated by the commodification of land, labour, and money and associated ideas of 'bikas' (development) and modernity, has had important impacts on men's lives.

Subsistence mountain agriculture combined with male labour migration has remained the key livelihood strategy in the middle hills. Migration and associated remittances have sustained hill agriculture for decades. 'An important aspect of the relationship between India and Central Nepal is the close connection arising from the stringencies of hill agriculture on the one hand and the cash value of Indian employment on the other' (Hitchcock 1961: 15).

However, farming is no longer an aspiration among the young men in rural Nepal, not only because it is not profitable but more importantly because farming is seen as a traditional occupation. As a consequence, young migrants, unlike the previous generation, see the value of migration and associated remittances no longer as a means of supporting subsistence hill agriculture, but rather as a means of moving away from it (although it is possible to spot a few young men attempting cash crops or small-scale livestock enterprises). This shift can be explained by looking at the effect of development discourse on men growing up in the middle hills. This discourse has encouraged a view of rural villages as traditional places to be left in the past and of urban areas as modern places to be desired (Pigg 1992), influencing the meaning of agrarian livelihoods and out-migration to cities and towns. Thus movement of people out of agriculture signifies not only physical movement, but movement in the ideological space of development and modernity.

Young men in Nepal no longer aspire to farming as an occupation, partly because it is unprofitable, but especially because it is seen as traditional



Migration to cities in search of education or salaried work is seen by young men as a route to individual and social transformation

In the context of development discourse that has created rural and urban areas as differentiated social categories, the significance of migration lies in the opportunities it offers to the individual men who migrate and to their households, and also in its relation to the experience of other men in the community (Pigg 1992).

## Migration and male success

Commonly known as 'lāhur jāne', migration of male family members to join the British and Indian armies has long been a practice among the hill ethnic groups such as the Magars and Gurungs in the west. The ability to join a foreign army has long been a measure of a man's success among certain hill ethnic groups. In recent years, the number of men going to work in foreign armies has decreased owing to increased competition in recruitment, greater emphasis on the importance of education for social mobility, and growing aspiration for salaried employment ('jāgir') within and outside Nepal.

In the past two to three decades, one of the ways through which young men have attempted to improve their lives is through schooling; enthusiasm for formal education has increased dramatically among young men and women across different caste and ethnic backgrounds. Migration to Kathmandu and other major cities in Nepal in search of education or salaried employment is a possibility for youth from high-caste and well-off households that have access to finances and social networks to facilitate study and/or job seeking in the cities. Those from poorer and marginalised groups with few social networks and little cultural capital find it difficult to turn their aspirations into reality. Although





Young migrant working in a brick factory in Kathmandu – hoping to participate in the otherwise inaccessible world of consumption and modernity

education is increasingly seen by young men as a route to individual and social transformation and employment, political agency, and dignity, not all young men can afford to go to school, nor can most men with some educational credentials turn their education into secure employment. Only a few young men with access to finances, social networks, political patronage, and cultural capital manage to continue education and find salaried employment.

## India as the main destination

Of late, the Gulf and Malaysia have emerged as desired destinations of migration among hill men with some educational credentials but no employment prospects within Nepal. However, organising migration to these destinations requires a high level of investment (brokering fees and air travel) and social networks; this aspiration is within reach only for households that can manage to earn or borrow the large sum (around US\$ 1,000) needed to finance it.

Migration to work in Indian cities (Delhi, Mumbai, Bangalore, Punjab) has always been a popular practice among men in these hill villages and remains pervasive among the poorer households in the region. Going to India to do manual labour is more common, although less desired, than going to the Gulf or Malaysia or finding employment within Nepal. People often refer to work in India as 'phāltu kām' (useless work or work that does not earn much respect or money) or 'sāno tino kām' (menial work or work that has low status or value). Nevertheless, men generally prefer to go to India in search of work rather than to stay in the village to manage their farms and/or work on others' land; going to work in India provides an escape from traditional

categories of 'halo jotne' (ploughing the field) or 'bhāri bokne' (carrying weight). If such migrants are lucky they may find contractual employment with a regular salary and some level of job security in an Indian city.

## Conclusion

Life in the hills of Nepal severely constrains the ability of many young men to achieve their ideal model of masculinity. They neither wish to work in agriculture and be seen as 'halo jotne' or 'bhāri bokne', nor do they want to go to India to work as menial labourers. They cannot easily find salaried work or afford to migrate to the Gulf or Malaysia. Those who are unable to migrate and/or get salaried employment risk being labelled idle or 'phāltu', a category that young men are desperate to avoid.

Migration offers young men an opportunity not only to earn money to look after their families, but also to participate in the world of consumption and modernity that is otherwise not accessible to them. The choices they make are shaped not only by the socioeconomic and environmental fragility in the middle hills, but also by the cultural resources that are available to them. It appears that the ideas and experiences associated with migration and modernity and their role in reconstructing gender identities help to sustain conditions that encourage a steady flow of hill men to work in Indian cities.

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# Feminisation and Ageing of Agriculture and Changes in Farmers' Livelihood Strategies in the mountains of southwestern China

**Yiching Song**, Senior Research Fellow, Centre for Chinese Agricultural Policy, Chinese Academy of Science, yiching2002ch@gmail.com

**Ronnie Vernooy**, Senior Programme Specialists Rural Poverty and Environment, IDRC

**P**redominantly male migration to cities in search of non-farming income and other opportunities has been one of the biggest changes in rural China in the past few decades (Song and Vernooy 2010a). This migration is affecting most farm households, especially the poorer ones in remote mountain villages.

This paper, based on field research carried out jointly in 2007 and 2008 in Guangxi, Guizhou, and Yunnan provinces (Map below), shows how migration over the preceding two decades resulted in the increasing feminisation and ageing of agriculture, and examines the related changes in farmers' livelihood strategies. Women and old people have become the main agricultural labour force in most if not all households and communities, playing key roles in local farming and livelihood systems; yet they continue to have limited

control over necessary resources (i.e., land) and poor access to supporting services such as credit, extension, and education (Song and Vernooy 2010b).

The findings in this paper are based on household and village level surveys carried out in 27 villages, complemented by qualitative methods (informant interviews, individual and group discussions, participant observation, and in-depth case studies). The research was carried out by four research teams from the Guizhou Academy of Agricultural Sciences, Yunnan University, the Center for Biodiversity and Indigenous Knowledge, and the Center for Chinese Agricultural Policy.

## Changes in population trends and farmers' income sources

Examination of population trends indicated that from 1995 to 2007 the study area had hardly any increase in total population and labour force; some remote villages even experienced a decrease in population. One remote mountain village in Guangxi ceased to exist because of the migration of young people and the death of old people. The trend in the six researched villages in Guizhou is illustrative: The average household size decreased from 4.92 persons in 1995 to 4.36 persons in 2007.

Per capita annual income increased in all 27 studied villages in the three provinces. In most cases income doubled, and in some it even tripled between 1995

Guizhou, Yunnan and Guangxi provinces

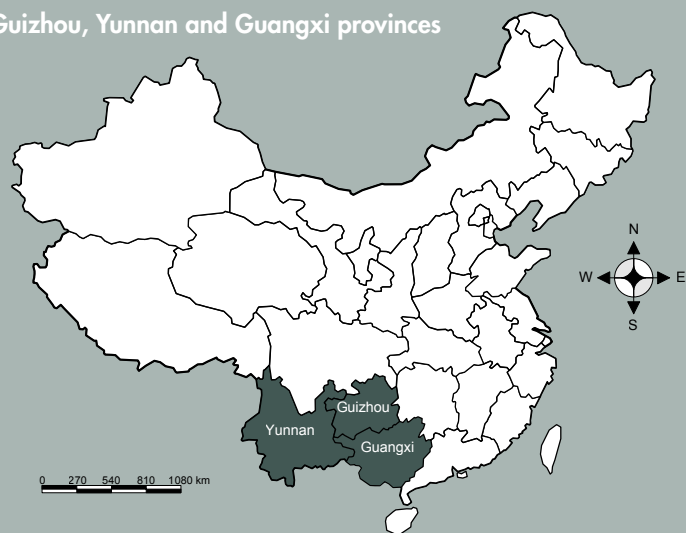




Table 1: **Per capita income increase at the research sites (RMB)<sup>a</sup>**

Research sites	1995	2000	2007
Guizhou	550	1,083	1,708
Western Yunnan	592	723	1,025
Northeastern Yunnan			1,365
Guangxi	822	1,083	1,552
<b>National average</b>	<b>1,578</b>	<b>2,253</b>	<b>4,140</b>

<sup>a</sup> 100 RMB = US\$ 13.4 in 2007

and 2007. At the same time, nationwide farmers' average per capita income increased about three times (Table 1). This means that although progress has been made in the southwest, the region still lags behind.

About 23 per cent of households surveyed were engaging only in agricultural production, while about 60 per cent of the households were investing at least half of their labour in non-agricultural activities.

In all 27 villages, the income structure changed significantly during the study period. The proportion of income from migration (remittances) increased more than two times, while the share of both crop and livestock income decreased. The average area under production was very small. In 2007 remittances accounted for 40 to 45 per cent of household incomes. Crop income, which represented around 50 per cent of total income in 1995, accounted for about one-third in 2007.

Parallel to the trends described above, the income gap among households became larger within and across villages (in the same area), among counties (in the same province), and among the three provinces. At the county level in Guangxi, for example (in a comparison of four counties), the highest incomes in 2007 were 6 to 1.5 times as high as the lowest incomes, while in the past differences were more moderate. The variation among counties in terms of highest and lowest total income had also greatly increased; in some cases the total in one county was double that of the total in another in 2007. The income sources that contribute to these gaps are remittances, work in local industries, and other non-farming income generation activities. Some households and communities are better able to make use of these opportunities than others, and this may lead to more pronounced income differentiation.

## Out-migration and the feminisation and ageing of agriculture

Between 1995 and 2007, in the 27 villages the total number of migrants doubled. However, fewer women

than men migrated, and migration of women is also more recent than that of men. One of the main reasons for out-migration was limitations in land tenure and related income generating opportunities.

The data indicate that at the end of the study period, on average about 76 per cent of all people who were actively engaged in agriculture throughout the year were women. Observations in the villages supported these data; men were virtually absent from the fields, forests, paths, and streets. In 2007 the average age of the farming population (women and men combined) ranged from 45 to 50 years. The average age of the migrants was around 20 years younger than the farming population. Thus, married women and older people had become the main agricultural labourers throughout the year. In some cases, male migrants returned home for short periods to help out at harvesting time.

While the majority of rural migrant women were young and unmarried, the feminisation of agriculture concerned above all married rural women who stayed behind in agriculture while their husbands went away to work. It also concerned young migrant women who often, after some years of work in a factory, returned home to marry and then stayed in the village.

Labour investment and decision making are two different dimensions of agricultural production that can be used to measure an individual's control over production. Generally, women were investing more labour in agricultural production than other household members. This was evident in production of grain crops, poultry, pigs and cattle, in which women were the principle labourers in more than 60 per cent of the households. For the grain crops, in nearly 70 per cent of the households women played key roles, and often more important roles than men. Men engaged more in cash crop production and goat raising. In both crop and livestock farming, women's labour investment and decision-making in agricultural production had a positive



correlation. This means that women had control over their labour and the resources they used. Men tended to participate in agricultural production seasonally (e.g., around plowing or harvesting time) and to engage more in production activities directly connected with marketing, such as cassava growing and pig raising. They tended to work in 'bursts', while women were busy every day from dawn to dusk. Despite women's increasingly dominant roles in the division of labour and decision making in agriculture, they still faced difficulties in access to technology, credit, and market information owing to gender-biased policies and operations on the one hand, and enduring patriarchal attitudes and behaviour on the other (which persisted even when men were absent).

## Farmers' livelihood patterns

Based on the survey data and qualitative studies (and also drawing on the in-depth field research of Wang [2007] in Guangxi), we identified four main livelihood patterns emerging in the villages. Based on our knowledge of the province at large, we believe these four patterns are more broadly representative of rural areas in Guangxi.

- **Subsistence farming in transition** is the dominant pattern, applying to 70–75 per cent of the households in the research area. In these households, men are engaged in non-farming activities (actively searching for new income opportunities), while women undertake most of the farming, maintaining a diversified subsistence agriculture. Some of these household members (both men and women) are planning to migrate to the city; some are just waiting to see.
- **Traditional subsistence farming** is the livelihood pattern of 10–15 per cent of the households. They stay on their land and depend primarily on farming. Most are extremely poor. These households include those who are ill and older people with little non-farming income. The gender division of labour and decision-making remains traditional. Men do the farm work while women do the domestic and reproductive work.
- **Professional farming** is a pattern that has emerged in the past decade, referring to household specialisation in certain agricultural commodities (crops and livestock) on a relatively large scale, with land often rented from relatives and other villagers. These specialized households represent about 5–10 per cent of the total, depending on the economic situation in their communities. The better-off areas

tend to be more specialised. During the past decade more and more women heads of household have been actively pursuing this new kind of agriculture.

- **Non-farm livelihood** applies to 5–10 per cent of all households. Most of these households consist of young couples who have migrated to urban areas and taken up non-farming professions, leaving their land in the care of relatives. However, they are still considered rural households and hold a land title and a residency permit ('hukou') in their village of origin. They maintain ties to the land and to the village, perhaps as a sort of 'insurance', given that the life of migrants is highly uncertain. The economic slowdown of 2008–2009 forced many migrants to return home, at least temporarily, and the future prospects for regular off-farm employment are not clear.

## Summary and key findings

The three key findings of the research can be summarised as follows.

- Subsistence farming in China is experiencing transformation. Agricultural income is generally declining and represents a lower percentage of rural household income. Farmers are losing interest in farming. Agricultural labour is ageing and becoming increasingly feminised; women and old people have become the main agriculturists.
- Under these changes, gender inequalities are deepening in terms of access to resources and opportunities, reinforced by existing conservative cultural norms and institutional systems, and intensified by the impact of external forces that include globalisation and commercialisation.
- Gender-neutral policies (e.g., for land tenure) and lack of gender-sensitive support services (e.g., extension and credit) have undermined women's opportunities for equal employment and benefits from economic growth.

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# Remittances as a Key to Adaptation

## Perspectives on remittances from communities exposed to water hazards in the Hindu Kush-Himalayan region

**Soumyadeep Banerjee**, Migration Specialist, ICIMOD, [sbanerjee@icimod.org](mailto:sbanerjee@icimod.org)

**Jean Yuves-Gerlitz**, Consultant, ICIMOD, [jgerlitz@icimod.org](mailto:jgerlitz@icimod.org)

**Dominic Kniveton**, Reader in Geography, Sussex Centre for Migration Research, [d.r.kniveton@sussex.ac.uk](mailto:d.r.kniveton@sussex.ac.uk)

Livelihoods are susceptible to numerous economic, social, political, and environmental stresses and shocks, some of which are induced by globally transforming processes such as globalisation, climate change, and demographic processes.

The ability of a household to adapt is based on several factors including financial resources, access to information, social resources, human capital, and infrastructure (Barnett and Webber 2009). Labour migration and remittances can contribute to all of these to moderate the harm caused by water hazards.

Over the past decade, the role that migration can play in adaptation has gradually been recognised within the climate change discourse (Martin 2010). The Intergovernmental Panel on Climate Change (IPCC 2001) defines adaptation as 'adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities'.

Environmental and climatic variability and change can influence the decision to migrate, either directly through rapid-onset events (e.g., floods) or more gradual phenomena (e.g., soil degradation, drought, and dry spells), or indirectly by affecting economic drivers (McLeman and Smit 2006; Perch-Nielsen et al. 2008; Jäger et al. 2009). A growing consensus suggests

that labour migration can be an important strategy for reducing vulnerability to different sources of stress, as it helps families diversify their livelihoods. In many cases, labour migration not only increases resilience but also enables individuals and households to accumulate savings and create assets that help them to deal with both known and unexpected challenges (Adger et al. 2002; de Haas 2007; Barnett and Webber 2009; Tacoli 2009). Both diversification of livelihoods and income from remittances provide a safety net for households under stress.

Remittances are the most tangible link between migration for work and the capacity of households to adapt to stress. National figures on international remittances for some of the Hindu Kush-Himalayan countries indicate the potential of this source of capital (Table). In Nepal, for instance, international remittances are a major pillar of

**International remittances in some Hindu Kush-Himalayan countries**

Country	Remittances received in 2010 (billion US\$)	Remittances as % of GDP in 2009
India	55.0	3.9
China	51.0	1.0
Pakistan	9.4	6.0
Nepal	3.5	22.9

Source: World Bank 2011



the national economy; they contributed 22.9 per cent of GDP in 2010 (World Bank 2011). Little information is available on the volume of remittances sent by internal migrants, either for mountainous regions in general or for the Hindu Kush-Himalayan region in particular.

This article summarises the results of a recent ICIMOD study (Banerjee et al. 2011) which assessed the patterns of labour migration in mountain and foothill communities exposed to too much water (flash and other floods) and too little water (drought and water shortage) in China, India, Nepal, and Pakistan, and the impact of remittances on the ability of households to respond to and adapt to water stress.

### Impact of remittances for households affected by water hazards

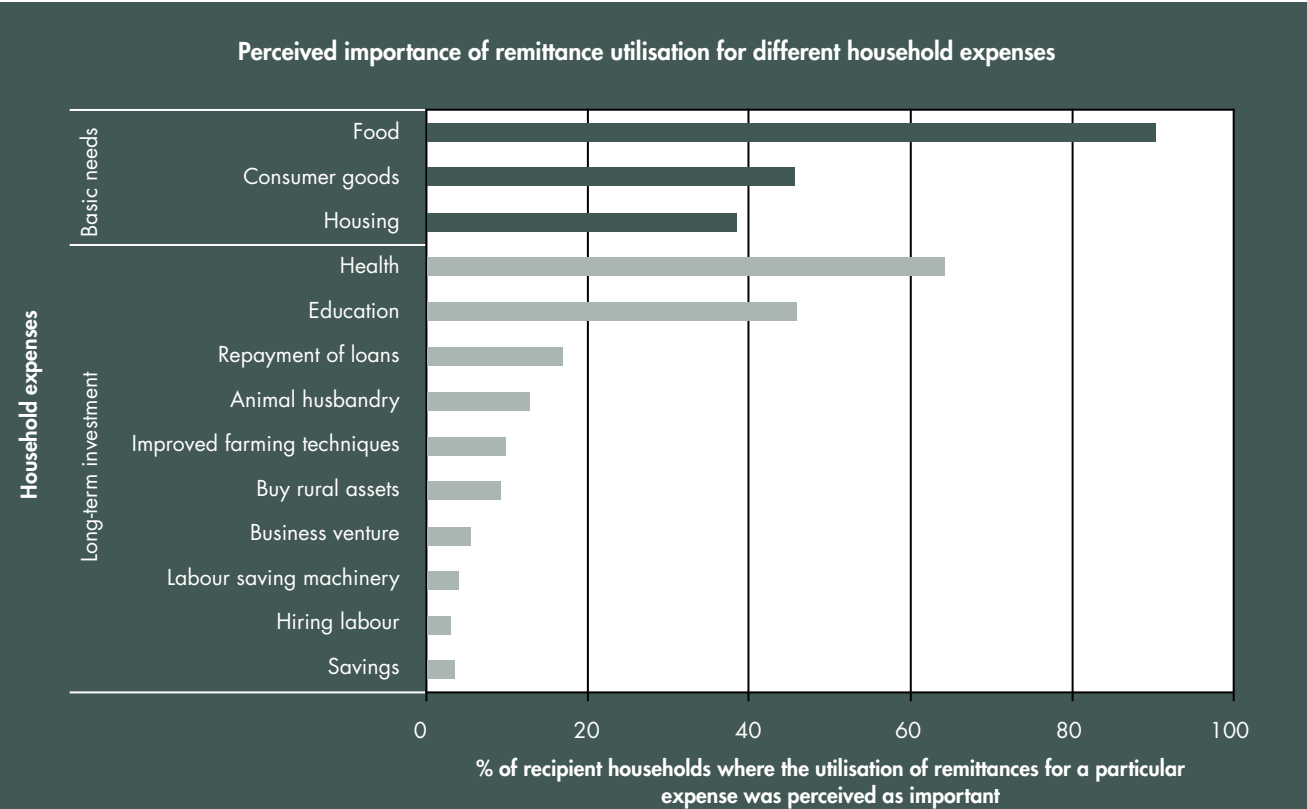
Since the overall income of recipient households was low, the contribution of financial remittances was significant. Even small amounts made a big difference to the households and their ability to deal with the impacts of water hazards. Remittances helped families in many ways, including the following (Figure).

- Contributing to recipient households' income.** On average, remittances contributed 62 per cent of recipient households' income, supplementing income from agriculture, animal husbandry, and daily wage employment. For some households, remittances were the only source of income.



Resettlement after flooding in the Koshi Basin, Nepal – remittances from family abroad can provide immediate relief

- Funding basic needs.** Remittances supported household welfare by improving purchasing power for food, housing, and consumer goods. The major share of the remittances was spent on basic needs, particularly food. Especially in poor households, remittances can make a marked impact on nutrition and health.
- Investment in health and education.** Spending remittances on health and education improved the quality of life and future potential of the recipient households.
- Providing an income stream that is not disrupted by natural disasters.** The means of earning income in the destination and origin communities are not generally affected by natural disasters at the same



Note: Percentages are combined figures for 'very important' and 'fairly important'

time. For example, labour migrants from 78 per cent of the migrant households surveyed were not affected by water hazards during their period of stay in the destination community. Thus migration reduced the risk to livelihoods posed by water hazards through the geographical diversification of the income sources.

- **Providing immediate relief for households during floods and droughts.** In emergencies, remittances were used to buy food and to cover other basic needs.
- **Helping families to recover after disasters.** After a disaster, money sent home by family members abroad was used to rebuild livelihoods, reconstruct houses, pay for health care, and buy household goods to replace those lost.
- **Contributing to disaster preparedness.** Remittances were used to procure irrigation facilities in drought-affected households, and to improve or strengthen houses and buy boats in households affected by flash and other floods. However, remittances were less widely used for disaster preparedness than for disaster relief or recovery, probably because the volume of remittance was low in most cases.

## Impact of financial remittances on the community

Remittances not only helped the families who received them; they also benefited others in the community. Most recipient households (72 per cent) spent the major share of the remittances to procure goods and services from local providers, to the providers' benefit. Remittances could also potentially be used for investment in local businesses and infrastructure, although this was not often the case in the study area because of the low volume of the remittances and the lack of supporting infrastructure or long-term perspective.

## Challenges of labour migration

The effects of labour migration and remittances on social, economic, and gender inequality and community cohesion are still unclear but appear to be mixed. The extent to which remittances can be and are used to improve the conditions of the family back home and the community as a whole depends on many factors. The amount remitted clearly plays a role, but so does the existing level of development in the community. Only a limited part of remittance flows can be directed to





community welfare, and they are not a substitute for public funds. Many poor households, often the poorest, do not have access to income from remittances, and public funding is needed to address both their needs and the needs of the community as a whole (de Haas 2007; Ratha 2007).

## Way forward

Labour migration is one of the strategies chosen by households to diversify income, to increase overall opportunities, or to create new possibilities for earning a living by using the available assets. Thus, labour migration can be a strategy for adapting to the impacts of water hazards for many households in the Hindu Kush-Himalayas.

Remittances provide an important source of income helping households to adapt to current water hazards. With climate change likely to cause changes in precipitation patterns (intensification of rainfall or lengthy dry spells), water hazards are likely to increase in the future. A number of interventions could encourage the further investment of remittances in building resilience against future water hazards, both at the household and community levels. These include increasing levels of remittances through reduced transmission costs, skill development for better pay in destination locations, and instruments for leveraging remittances.

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Remittances support household welfare by improving purchasing power, especially for food



# The Use of Remittances in Natural or Political Crisis:

## The case of Pakistan

**Abid Qaiyum Suleri**, Executive Director, Sustainable Development Policy Institute, Pakistan, [suleri@sdpi.org](mailto:suleri@sdpi.org)

**T**he birth of Pakistan as a nation is profoundly linked to migration. In the past 63 years millions of people have migrated to and from Pakistan, creating a vast network of migrant connections around the world. High levels of emigration in recent decades have not only resulted in strengthening a visible Pakistani diaspora in Western countries – where immigrants can influence the policies of host countries towards Pakistan – but also in a steady flow of remittances to Pakistan.

The Government of Pakistan estimates that around 10 million people of Pakistani origin are living overseas today. Many of them are residing in much richer countries in the West and in the Gulf region; as a result Pakistan is one of the developing countries receiving the highest remittances. The United Arab Emirates, Saudi Arabia, and the United States are the favoured destinations for Pakistani migrants and the top three sources of workers' remittances to Pakistan.

Worker's remittances have historically been a silent lifeline of the Pakistani economy. According to the State Bank of Pakistan (2011), the country received US\$ 11.2 billion in workers' remittances for the fiscal year 2010/11. This is a 26 per cent increase over the previous fiscal year. It exceeds the assistance that Pakistan is promised to receive from the United States Government through the Kerry Lugar Bill over the next five years (US\$ 7.5 billion) and is four times higher than the annual amount being lent by the IMF since 2008 through its bailout package. For many years, official remittances have far exceeded foreign direct investment or official development assistance to Pakistan. Since the 1980s, remittances have been linked to a rapid decline in poverty levels.

Most emigrants from Pakistan are economic emigrants (or second, third, and fourth generations of economic

emigrants) who had to leave the country either because of lack of effective social safety nets or in search of better livelihood options. These workers abroad not only send precious foreign exchange to Pakistan, but also try to compensate for visibly absent social safety nets in their homeland – thus in a way taking on some of the government's responsibilities. Indeed for many Pakistanis migration has become a coping strategy to secure their livelihoods during troubled times.

### Characteristics of Pakistani emigrants

Pakistanis migrate to obtain better opportunities for livelihood; for higher studies; to join their family members abroad; to save their lives from natural or human-caused disaster; or out of fear of coercion. Since 11 September 2001, it has become very difficult for Pakistani citizens to secure foreign visas owing to the perceived role of some non-State actors in Pakistan in supporting militancy and extremism. Host countries have also tightened their visa policies because of the fiscal crisis which has caused the international job market to shrink. In addition, during the past decade, heightened security and more vigilant law enforcement at both sending and receiving airports have reduced the previously rather high number of illegal emigrants from Pakistan.





Most of the Pakistanis who emigrate to the European Union, North America, Australia, and the Middle East are educated and skilled and may be eligible for naturalisation in their host countries provided they meet the legal requirements. Most of these emigrants tend to settle abroad and gradually become eligible to sponsor their immediate family members. In general such emigrants are not a consistent source of remittances as they have to take care of their day-to-day family expenses in their host countries.

The other type of Pakistani emigrant is the illiterate or semi-literate worker in the Middle East and Gulf region. Owing to the tough naturalisation policies in the Middle East and the strict control of proprietary rights for foreigners in many Gulf countries, most Pakistani emigrants in these countries cannot sponsor their immediate families. They become a consistent source of remittances, regularly sending money for expenses to their family members in Pakistan.

Both types of Pakistani migrants abroad provide crucial support to the Pakistani economy.

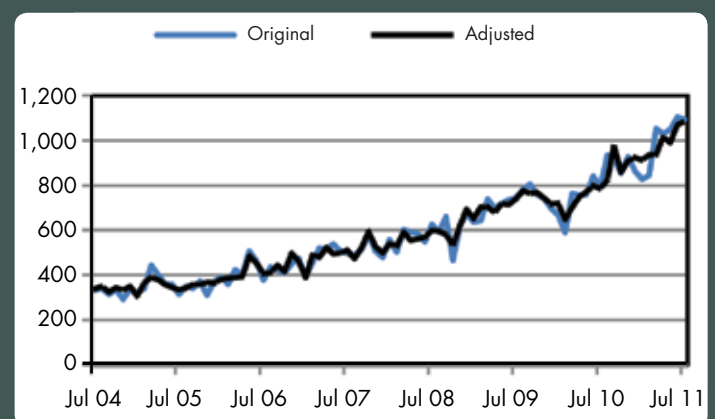
## Magnitude of remittances

Estimating remittance flows is fraught with difficulties such as differences in their definition, recording, and reporting. People can move money or goods around the world in many ways, and thus a huge number of remittance mechanisms are in use. A common, but problematic, distinction in common use is the dichotomy between formal and informal mechanisms. Informal

remittances are estimated to be equivalent to 50 per cent of registered flows in Pakistan (Suleri and Savage 2006). Informal remittances are cost effective and quick, and they can be sent to those areas where people have no or little access to formal channels.

A significant increase in registered remittance flows since September 2001 has been explained in two ways: first, by remitters moving away from informal mechanisms; second, by their desire to repatriate savings held in the host country, as future policies towards such funds were not clear with increased suspicions regarding informal mechanisms and the funding of terrorism. Remittances also increased notably after the earthquake of 2005 (see Figure) (Suleri and Savage 2006). The State Bank of Pakistan's (2011) temporal analysis of worker's remittances supports the conclusion that remittances also increased after the earthquakes and floods of 2010.

Workers' remittances to Pakistan, 2004–2011



Source: State Bank of Pakistan (2011)

## A lifeline in times of crisis

Research suggests that remittances are often spent on day-to-day household expenditures, rather than on investment and/or saving (Suleri and Savage 2006). Although the former use is often termed as 'non-productive', it is recognised that such direct inflow of cash at the household level may be extremely vital as a coping mechanism during times of emergency and crisis (Mohapatra et al. 2009). In other words, while other forms of income may be variable and unpredictable, remittance income is constant and allows the household to absorb unforeseen shocks. Thus migrant workers' remittances can be a form of insurance for use at times of urgent need.

After the 2005 earthquake in Pakistan, remittances were the major source of livelihood in the affected districts. People living near fault lines were forced to leave their houses and live in tents and camps irrespective of whether their houses were completely or partially destroyed (Suleri and Savage 2006). During that time even those who had stored food did not have access to it. Thus immediately after the earthquake both those who did and did not receive remittances were equally dependent on external food aid. However, after the first few months when the flow of remittances resumed, this external source of consistent income helped many receivers remain relatively unaffected by the earthquake.

It was also observed that remittances played an important part in facilitating access to relief goods, giving receivers the means to reach the major distribution points (using their own or hired transport). In Batagram District of Pakhtoonkhwa, for example, 51 per cent of respondents noted that remittances had enabled them to reach the nearest distribution points for humanitarian aid and collection of relief goods. Non-receivers complained that because of inaccessible terrain and lack of road links they were not able to get the relief assistance in a timely way and in sufficient quantity (Suleri and Savage 2006).

Although remittances were not the major source of livelihood for people affected by the floods of 2010 in Pakistan, remittance-receiving households were more resilient and recovered more quickly from flood impacts than non-receivers (Suleri and Ali, forthcoming).

## Conclusion: building on remittances as a source of livelihood

The importance to Pakistan of migrants and the remittances they send, both during emergency or crisis and at normal times, cannot be denied. Governments and international development agencies need to acknowledge migration as one of the major sources of livelihood for countries where this is the case, and to give it more attention. To build an economically resilient society, governments in developing countries should formalise and strengthen this economic lifeline by exploring bilateral agreements to provide opportunities for skilled and unskilled labour in developed countries. Once those opportunities are identified, the government could facilitate securing of visas and travel to host countries, and sponsor labour counsellors in the host countries to take care of the welfare of its nationals working there. The sending government should institutionalise the mechanisms for looking after the dependent families of emigrants so that the latter may concentrate on their work without worrying about their family members. Last but not least, the sending government should devise a resettlement strategy for emigrants who return to their homelands so that they may transfer the knowledge and experience that they bring from their stay abroad to local society.

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# Impact of the Economic Crisis on Remittances in Nepal

**Brigitte Hoermann**, Action Area Team Leader Innovative Livelihood Options, ICIMOD, [bhoermann@icimod.org](mailto:bhoermann@icimod.org)

**Michael Kollmair**, Programme Manager, Sustainable Livelihoods and Poverty Reduction (SLPR), ICIMOD, [mikollmair@icimod.org](mailto:mikollmair@icimod.org)

**Soumyadeep Banerjee**, Migration Specialist, ICIMOD, [sbanerjee@icimod.org](mailto:sbanerjee@icimod.org)

Remittances from labour migration have a central and rapidly rising role for Nepal's economy and its development opportunities.

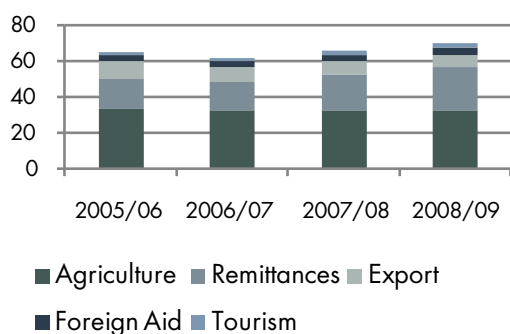
The risks of so-called 'remittance economies', with their low diversification and high dependency on the economies of the migrant-receiving countries, are debated widely (Seddon et al. 2002). Fears that the global economic crisis of 2008/09 could have serious long-term impacts on remittances and subsequently on development in Nepal have been widespread. Indeed, the worldwide remittance flows declined by 6 per cent from 2008 to 2009. This article explores the effects of the economic crisis of 2008/09 on Nepal's migration and remittance flows.

Over the past decade, the overall development environment in Nepal was characterised by many opportunities, but also by political instability and unrest coupled with slow economic growth and diminishing export values. Nevertheless, poverty rates have been decreasing in Nepal, and remittances are an important variable to explain this positive trend. Lokshin et al. (2007) found that remittances could explain almost 20

per cent of the poverty decrease in Nepal since 1995. In 2009, remittances already represented 23 per cent of Nepal's gross domestic product (GDP). The share of remittances in GDP grew substantially from 2006/07 to 2008/09, while agriculture, exports, and foreign aid showed no development or even a declining trend (Figure 1).

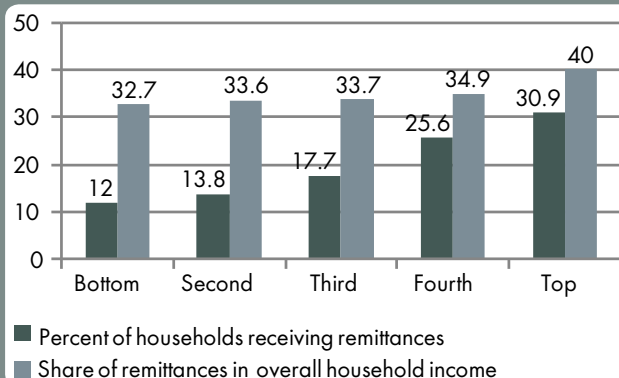
At the household level, remittances increasingly make the most direct, immediate, and significant contribution to maintaining and improving livelihoods. Labour migration has helped Nepalese migrants to increase income, acquire and improve skills, build assets, and improve their social status. In Nepal, remittances are primarily used for consumption to fulfil basic needs for food, water, shelter, and clothing. A significant portion, however, is also invested in education, health, or repayment of loans, or kept as savings for later investment capital (Hoermann and Kollmair 2009). As shown in Figure 2, remittances represent between 30 and 40 per cent of the overall household income, and this proportion is more or less balanced among the income quintiles. However, the number of households receiving remittances grows with household wealth.

Figure 1: Major sector contributions to Nepal's GDP (%)



Source: Ministry of Finance, Government of Nepal (2009)

Figure 2: Nepalese households receiving remittances and share of remittances of income, 2003/04 (consumption quintiles, %)



Source: Central Bureau of Statistics, HMGN (2004)

## Flow of remittances to Nepal

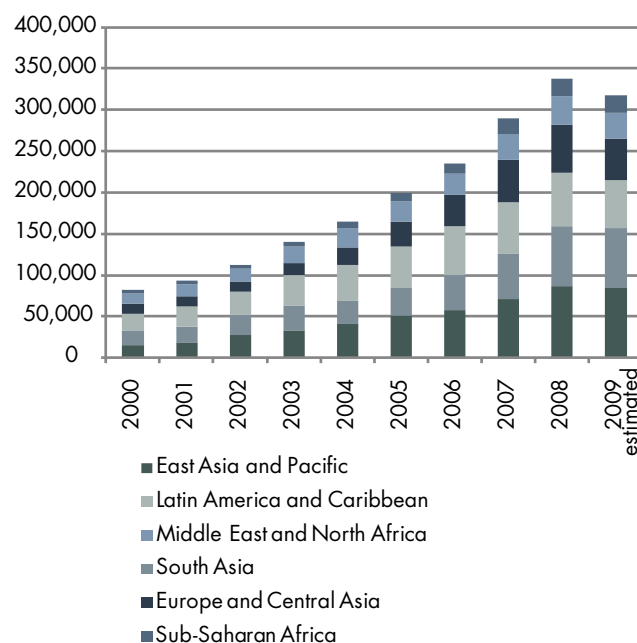
The global economic crisis and its impacts led to a worldwide decline in remittance flows by 6 per cent from 2008 to 2009. However, the remittances for the Asia-Pacific region were hit the least, declining only 2 per cent as compared with the declines in Europe and Central Asia (15 per cent), Latin America and the Caribbean (10 per cent), the Middle East and North Africa (7 per cent), and sub-Saharan Africa (3 per cent) (Figure 3).

The case in Nepal was unusual, however. Remittance flows did not decrease during the financial crisis, nor in the following years. In 2009, South Asia was expected to experience a sharp slowdown (Ratha and Mohapatra 2009). However, remittance flows to Nepal grew robustly in 2008 and – exceptionally for South Asia – continued to grow in the subsequent years; there was not even a lagged response to the crisis and the weakened global economy.

Indeed, from 1998 to 2010 remittance inflows to Nepal never declined. During the time of the global financial crisis, remittances grew by 9.5 per cent from 2008 to 2009, and by 18 per cent from 2009 to 2010 (Figure 4). In 2009, Nepal was the fifth highest recipient of remittances in terms of share of GDP worldwide. Of the 10 countries receiving the highest remittances as a share of GDP, Nepal had the highest growth rates, which were sustained to 2010.

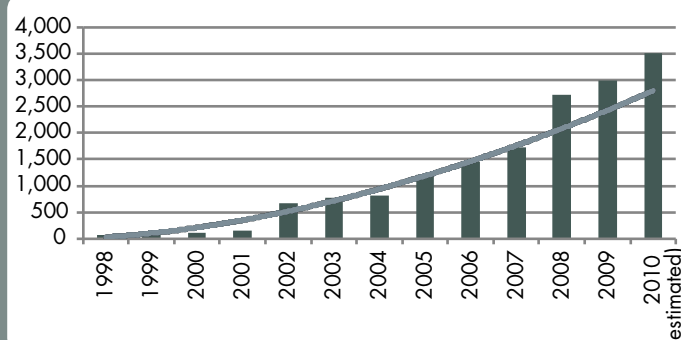
The financial crisis did, however, cause a decline in the growth rate of the remittance inflows to Nepal (Figure 5). From 2007 to 2008 remittances to Nepal grew by about 40 per cent, from US\$ 1.7 billion to 2.7 billion, but from 2008 to 2009 the growth rate declined to 9 per cent. Nevertheless, Nepal is among only 20 countries worldwide that had positive remittance growth rates between 2008 and 2009.

Figure 3: Development of global remittance inflows, 2000–2009 (US\$ million)



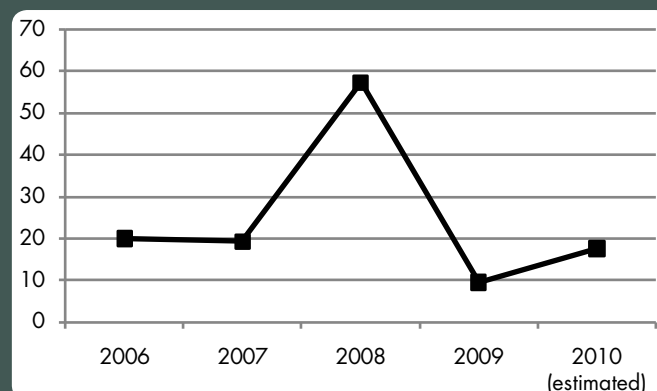
Source: World Bank 2010

Figure 4: Annual inflow of remittances to Nepal, 1998–2010 (US\$ millions)



Source: World Bank 2010

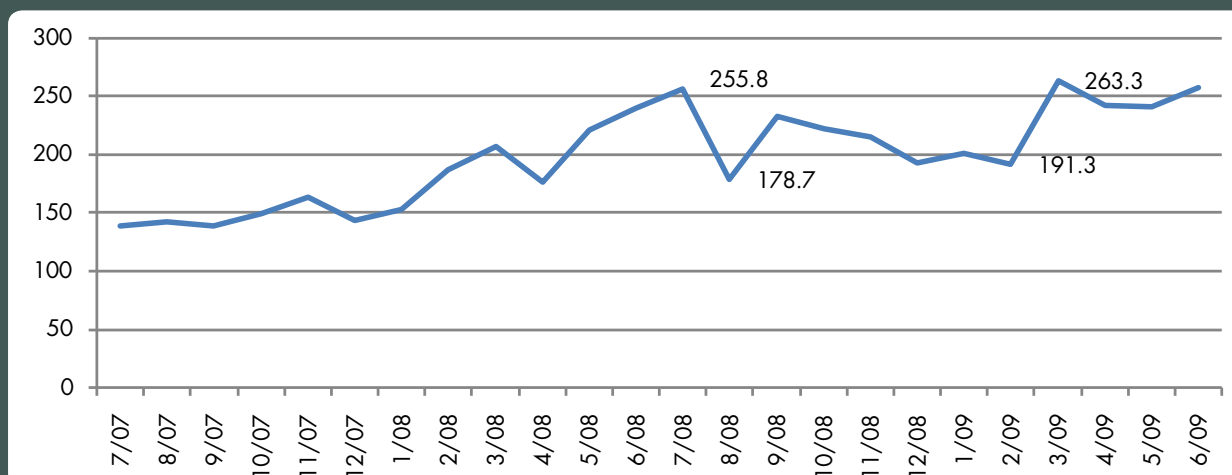
Figure 5: Growth rate of remittances to Nepal, 2006–2010 (%)



Source: World Bank 2010



Figure 6: Monthly remittance inflows to Nepal, 2007–2009 (US\$ million)



Source: World Bank 2010

A closer look at the monthly remittance flows from 2007 to 2009 (Figure 6) shows overall fluctuations but a distinctive fall of remittances from July to August 2008. However, the flows recovered in the subsequent months and grew substantially from February to March 2009, becoming even higher than they were in July 2008.

## Flow of migrants from Nepal

While remittances to Nepal continued to grow during and after the financial crisis, the flow of outgoing migrants declined significantly (12 per cent) in 2007/08 – for the first time since 1994 – after having increased steadily from about 10,000 to more than 240,000 over the preceding decade (Figure 7).

The stock of Nepalese labourers in the receiving countries appears to remain stable. Despite declining numbers of outgoing migrants from Nepal, no mass return of migrant workers has been observed to date. Most workers opt to remain in the destination country and cope with the effects of the financial crisis. Migrants may accept reductions in wages, poorer working conditions, or temporary unemployment with the hope of timely financial recovery with new jobs and improved employment conditions. Furthermore, pressing loans and lack of alternative earning opportunities back in Nepal discourage many to return home.

India is the largest market for Nepalese migration to foreign countries. Nepalese migrants do not require visa permits to work in India and are hence not registered as other migrants are. Data on remittances and migration flows are only available from the Census 2001 or the Nepal Living Standard Survey 2003/04. Thus, the

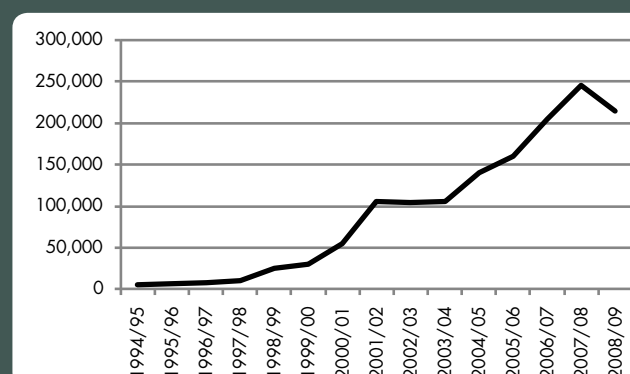
effects of the global financial crisis on the Indian-Nepal corridor cannot be observed here.

After India, the main destinations for Nepalese migrant workers are the Gulf countries and Malaysia (Figure 8). Malaysia was a major destination for Nepali migrants in 2005/06 but its importance decreased in the years immediately following. In 2009, citing the global financial crisis as the reason, Malaysia adopted more restrictive immigration policies to protect the local labour market and stopped recruitment of foreign workers. Here is one worker's experience:

*"I migrated to Malaysia and paid about US\$1,400 to the employment agency in Kathmandu to get a job. My contract was for three years in a manufacturing factory but I was only paid for three months. Once the bad economy hit my employer, I was only provided food and accommodation. After a few months the factory started to lay off workers and I returned to Nepal"*

– Kabi Raj Bista, age 20, Nepalese migrant to Malaysia (ICIMOD, unpublished)

Figure 7: Flow of registered foreign labour migrants from Nepal, 1994–2009



Source: Department of Foreign Employment, Govt. of Nepal (2011)



At present the situation is improving, and Malaysia has increased its quotas for Nepalese workers again (Ghimire, 2010).

The flow to the Gulf countries, specifically to Qatar and the United Arab Emirates, grew from 2005/06 to 2006/07. Subsequently, Qatar experienced a notable (about 10 per cent) decline of immigration flows from Nepal from 2006/07 to 2007/08, but the decline was reversed in the following year as the number of incoming Nepalese migrants almost doubled. The United Arab Emirates did not experience a notable decline of migrant inflows from Nepal. However, from 2006/07 to 2008/09 the growth rate of inflows was almost zero, while it recovered to almost 20 per cent from 2008/09 to 2009/10. A probable explanation for the comparatively robust migration flows from Nepal to the Gulf countries is that many of these destinations follow long-term infrastructure strategies with large funding reserves accumulated over the years (Ratha and Mohapatra 2009).

## Conclusion

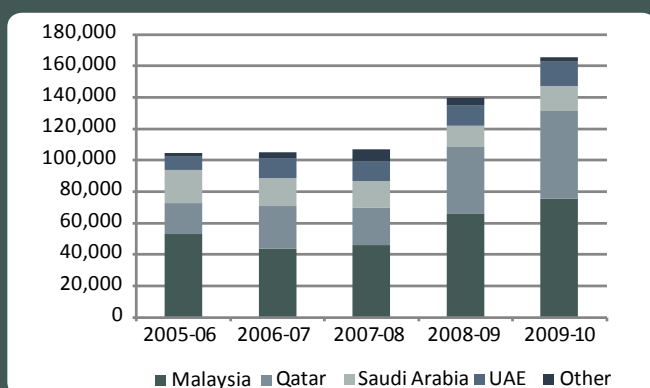
The economic crisis slowed down the remittance growth rate and temporarily caused a decline in the migration outflows in Nepal. The impact has not been as sharp as predicted and feared, and Nepal is among the few countries worldwide that did not face negative remittance growth rates in 2008/09 or very sharp and long-lasting declines in migrant outflows. One explanation for why the effects of the global economic crisis in South Asia, and specifically Nepal, differed so pronouncedly from the more severe effects in Latin America and other strongly affected regions is the comparatively swift recovery of the main destination countries of Nepalese migrants. As recent figures show, Nepal's remittances and migration flows are already substantially growing again. The global economic crisis is likely to have only temporarily weakened the role of remittances and labour migration in Nepal.



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Figure 8: Flow of labour migrants with work permits from Nepal to major destinations, 2005–2010



# Potential of Remittances for Rural Development

## IFAD's approaches and experiences

**Atiqur Rahman**, Senior Policy Coordinator, Strategy and Knowledge Management Department, International Fund for Agricultural Development (IFAD), [at.rahman@ifad.org](mailto:at.rahman@ifad.org)

Of the world's total remittances of approximately US\$ 350 billion a year, nearly one-third finds its way to the rural areas of the developing world (based on IFAD 2010). This figure is small in percentage terms (considering that nearly 80 per cent of all migrants originate from rural areas), but the magnitude is hugely significant for rural economies, which have traditionally been squeezed out of resources allocated for urban and industrial development. Rising emigration and remittance flows are rapidly redefining the rural landscape in many ways, for example through changes in the composition of the labour force, expansion of economic activities, and larger private investment in development of the rural sector. With significant numbers of people from developing countries migrating every year to other countries and regions, development practitioners need to consider the impact and potential of remittances for overall rural poverty reduction in poor countries.

### Impact of remittances on rural economies

Remittances are private funds; as such, they are not readily available for financing development activities. However, in recent years, liberalisation of financial and currency markets have created conditions for the formal financial sector to mobilise remittances and bring them into the realm of development finance.

Over 500 million people (nearly 8 per cent of the global population) depend on remittance income for their livelihood (IFAD 2008). For 30 countries or more, remittances account for about 10 per cent of gross domestic product (GDP). Inflows to Africa in 2010 were

reported as US\$ 40 billion – almost double the inflows for 2005 (IFAD 2003b). Nevertheless, views on the importance of remittances (and of migration, which is the other side of the story) differ.

On the one hand, there is evidence of a positive impact of remittances on income and poverty for recipient households (Wodon et al. 2002; Huang and Zhan, 2005; Taylor et al. 2005; Adams 2006; Siddique et al. 2010). Migration and remittance earnings are seen as a part of household strategies to rise out of poverty and ensure a better livelihood; to overcome risks and adverse situations (Lucas 2005); to acquire skills; to promote education and health; and to build capital and diversify economic activities. Yang and Martinez (2005) show that in the Philippines, remittances not only reduced poverty in migrant families but also had spill-over positive effects on non-migrant families; and in Albania, remittances led to increased investment in the livestock and non-farm sectors.

The other view is that migration and remittances impede rural and agricultural development by creating critical labour shortages, shifting investment away from rural areas and from productive sectors (such as from



agriculture to housing), draining rural areas of skills, inducing excessive consumption relative to investment (Huang and Pieke 2003; Ananya 2006), creating inflationary pressures, and creating excessive income and asset inequality.

The reality is perhaps somewhere in between and depends on the context and policy environment. Furthermore, different types of remittances, for example, family, collective, and entrepreneurial remittances, have been seen to have different roles in development (Rahman 2006).

## A development approach to remittances

The International Fund for Agricultural Development (IFAD), as the poverty fighting fund of the United Nations, is of the opinion that used properly, remittances can become more important for rural development than official development assistance. IFAD's interventions towards harnessing and augmenting the positive impacts of remittances are directed towards four main areas.

### Advocacy and awareness building

To develop greater awareness on the implications of remittances for welfare and rural development, IFAD analysed remittances and rural development from a global perspective as well as at the regional and country levels. Working together with the World Bank and other institutions, the Fund has conducted research on how the positive impacts of remittances could be amplified (IFAD 2003a,b). In 2004, a round table on remittances and rural development was held during IFAD's Governing Council, with the participation of migrant representatives, international experts, non-governmental organisations, and government representatives (IFAD 2004).

To sensitise a wider audience, videos on the potential of remittances in reducing poverty (also taking negative impacts of remittances into account) have been broadcast through global media (BBC).

IFAD's advocacy approach has emphasised the need to strengthen efforts in the lagging regions, with special attention directed towards Africa, where institutions for promoting productive use of remittances are less established than in other regions.

### Building institutions for harnessing the potential of remittances – working with communities

During the past five years, IFAD has been engaged in a process to formally incorporate migrant associations

in the design frameworks and financing of some of its projects and programmes.

Recently, with the support of IFAD, representatives of Salvadoran women migrants working in different European countries have established direct links with groups of poor rural women in communities targeted by ongoing IFAD-financed projects in El Salvador. The aim is to identify productive activities to be co-financed with remittances.

IFAD is developing a partnership to support rural poverty reduction in Somalia, establishing a dialogue with migrant communities to assess their interest in investing in productive and job-creating activities in their communities of origin so that their financial and technical support can have greater and longer-term returns.

IFAD also carries out knowledge development projects to help Home Town Associations and other community-based migrant organisations manage, promote, and implement rural development projects in their home countries.

### Linking remittance-related activities with other development and poverty reduction activities

Twelve projects currently being implemented in eight Latin American countries (Bolivia, the Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Mexico, and Paraguay) are promoting efficient remittance transfer methods as well as financial products, such as loans for housing and health insurance. One of the projects involves a Paraguayan microfinance institution that offers remittance transfer services as one of the two authorised Western Union agents in the country. More than 20 IFAD projects in other regions (Africa, Asia Africa, eastern Europe, and the Near East) have included efforts to widen the benefits of remittances (Vargas-Lundius and Villarreal 2008).

### Developing innovative financial instruments

Recently IFAD has created a multi-donor financing facility of US\$ 18 million for financing remittance-related activities. It is designed to increase economic opportunities for the rural poor through the support and development of innovative, cost-effective, and easily accessible international and/or domestic remittance services. The facility's main objective is to support projects and activities that:

- reduce the transfer costs of remittances;
- develop institutional partnership;
- provide needed banking services for rural populations;
- promote innovative remittance and financial services;



- promote productive rural investment of migrants' capital in their countries of origin.

In April 2004, IFAD and the Multilateral Investment Fund (MIF) of the Inter-American Development Bank (IDB) launched a joint programme to help senders and recipients of remittances increase their access to financial services and invest in projects for generating employment and income (since less than 5 per cent of established small enterprises receive loans from commercial banks). This programme also supports rural development projects in remittance-receiving communities, supported both by the destination and origin countries, and fosters alliances among migrant associations, savings and credit institutions, and immigrant communities in countries of origin. It presents a series of microcredit options – ranging from microenterprise to credit cards and housing loans – as well as a range of savings accounts. IFAD/MIF technical assistance is also supporting the design of financial products that are attractive to remittance recipients in the communities of origin.

IFAD works with eligible financial institutions (e.g., microfinance institutions, credit cooperatives, and credit unions) to support the development of banking systems that provide an array of services to the population not currently covered by commercial financial institutions, thus paving the way for their access to the formal financial sector.

## Concluding remarks

Formal financial intermediaries and development practitioners face the same challenges:

- How to compete better with informal intermediaries (by developing new instruments, reducing costs, and developing incentive packages for mobilising remittances)?
- How to ensure the welfare of migrant families?
- How to tackle the adverse impacts of emigration on the labour market?
- How to use the mobilised funds for sustaining overall rural development?

Governments can fully exploit the enormous potential of remittances for rural development and rural poverty reduction by creating a facilitating environment, with support from Home Town Associations, other migrant groups, and agencies like IFAD. Activities that can help create this environment include facilitating the development of financial instruments and intermediation, financing projects and programmes to link up with other rural development activities, promoting policies, up-scaling innovative experiences, transferring experiences

across countries and regions, and supporting countries and regions that lag behind.

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Passport applicants at the Ministry of Foreign Affairs in Kathmandu, Nepal

# Labour Migration and ICIMOD

**Andreas Schild**, Director General, ICIMOD, [aschild@icimod.org](mailto:aschild@icimod.org)

Migration, whether it is domestic or international, has emerged as a major livelihood strategy in the Hindu Kush-Himalayan (HKH) region. Although mountain people have migrated for centuries to search for work, better livelihoods, or human security, the numbers have risen rapidly in the past two decades. Social and financial remittances from these migrants form a significant element in the development of the region's economies. Given the persistent disparities in income levels and the economic interdependence among countries, the mobility of people in the region is unlikely to decrease in the coming years. With its growing scale and complexity, labour migration is emerging as a priority issue for the HKH region and ICIMOD.

Large inflows of remittances and outflows of migrants present numerous opportunities to the governments and people of the region. However, the consequences of skilled migration, the social costs of family separation, and the impact of migration on gender roles are also of great concern to the region. In order to be able to address the challenges, it is necessary to have a good understanding of the economic and social implications of migration in the region. The initial costs of migration are often high, recruitment processes and loan packages are not transparent, and the transfer and investment

options for remittances to mountain areas are poor. The financial institutions which could offer saving, credit, and insurance services have little outreach to remote mountain communities.

The United Nations recommended in its Fifth Asian and Pacific Population Conference (2002) to promote research on the interrelationship between migration, development, and poverty reduction, as well as to build national capacity for relevant data collection, analysis, and research. ICIMOD is responding to this challenge by exploring the linkages between labour migration and development so that benefits can be maximised and negative impacts minimised.

As the first mountain learning and enabling centre, ICIMOD has a unique regional mandate for the eight countries in the Hindu Kush-Himalayan region: to enable and facilitate the equitable and sustainable wellbeing of the people of the region by supporting sustainable mountain development through active regional cooperation. ICIMOD is a regional platform where scientists, policy makers, development specialists, academics, and civil society meet and share knowledge, ideas, innovations, and perspectives. The objective in the field of migration and remittances is to provide a knowledge base and to offer country-specific, policy-relevant analysis to sustain an informed policy dialogue.

# Centre News

## Extraordinary Board of Governors meeting appoints David Molden as next ICIMOD Director General

An Extraordinary Board of Governors meeting was held at ICIMOD headquarters in Kathmandu from 23 to 28 May 2011 with the main purpose of selecting a new Director General to replace Dr Andreas Schild, who will complete his term at the end of 2011. Following presentations by the four candidates shortlisted by the selection committee, the Board appointed Dr David Molden as new Director General of ICIMOD. Dr Molden will assume duties from 1 December 2011.

Dr Molden, a national of the United States, is a development specialist with more than 30 years of experience in designing, planning, executing, and monitoring programmes on water management, livelihoods, environment, and ecosystem services. He has acquired considerable management experience in a number of positions, including Chief of Party for the USAID irrigation management project in Nepal, Chief of Party for a USAID strategic research project in Egypt, and Leader of the International Water Management Institute (IWMI) Comprehensive Assessment of Water Management in Agriculture programme. Currently he is the Deputy Director General Research of IWMI in Sri Lanka. Dr Molden has worked in several countries in the Hindu Kush-Himalayan region, including China, India, Nepal, and Pakistan, and has experience in projects in the Indus, Ganges, Yellow, Mekong, Yangtze, and Amu and Syr Darya river basins.



Dr David Molden

Dr Molden has a PhD in Civil Engineering from Colorado State University in the United States. He has received many awards including the CGIAR Outstanding Scientist award in 2009 and the Sri Lanka President's Award for Research in 2002 and 2005.

### Additional meeting highlights

New regional Board members from were introduced and welcomed. Dr Lars Erik Liljelund was appointed as the new Chairperson of the Programme Advisory Committee and Vice Chair of the Board of Governors. The Board reviewed the audit report, the progress of the ICIMOD Foundation, and the activities of the Finance Committee, and approved the draft Revised Guidelines for Selecting Strategic Partners.

The forty-second Board Meeting will be held in Bhutan in November 2011, hosted by the Government of Bhutan.

### Programme Advisory Committee meeting

The Board Meeting was preceded by meetings of the Programme Advisory Committee, Finance Committee, and ICIMOD Foundation.





After presentations of ICIMOD's recent work, the Programme Advisory Committee commended the Centre on achieving good results over a short period. Emerging regional programmes, their dynamics, and coverage were also presented for input. The Director General of ICIMOD, Andreas Schild, outlined the future outlook of the Centre, its priorities, and challenges, particularly in relation to strengthening ownership by the regional member countries. The committee noted several upcoming global and regional events that present outreach opportunities for ICIMOD to promote the sustainable mountain development agenda, including the seventeenth Conference of the Parties (COP 17)

of the United Nations Framework Convention on Climate Change (UNFCCC) in Durban, South Africa (28 November – 9 December 2011); the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil (4–6 June 2012), the Bhutan Climate Summit for a Living Himalayas in Thimpu, Bhutan (19 November 2011), and the International Conference on Sustainable Mountain Development in Lucerne, Switzerland (10–12 October 2011).

Anju Rana, arana@icimod.org

## New Regional Board Members



**Dr Tishya Chatterjee,**  
Secretary, Ministry of  
Environment and Forests,  
Government of India

Dr Tishya Chatterjee, Secretary of the Ministry of Environment and Forests, Government of India, was nominated to the

ICIMOD Board in January 2011 by the Government of India. Prior to his current position, he served as the Special Chief Secretary, Planning Department, Government of Andhra Pradesh. Dr Chatterjee is part of the Andhra Pradesh cadre of the Indian Administrative Service (IAS) and has served in different capacities at the district and state level. Some of his major postings include Member Secretary of the State Pollution Control Board of Andhra Pradesh, Principal Secretary of the Municipal Administration Department, Principal Secretary of Environment and Forests, Principal Secretary of Roads and Buildings Department, and Director for the Environment Protection Training and Research Institute (EPTRI) in Hyderabad.

His major achievements in the environment sector include setting up India's first four common bio-medical waste management facilities as a public-private partnership in 1999; setting up India's first industrial hazardous solid waste common management facility as a public-private partnership in 2001; and the creation of environmental zones using geographic information systems to plan industrial locations. He holds a PhD in Economics (Environment) from Hyderabad Central University, Hyderabad (2007); a Post Graduate Diploma in International Development and Cooperation from the University of Ottawa, Canada (1990); and a Master's in History (1975) and Bachelor's in History and

Economics (1973), both from the St Stephen's College, University of Delhi (1975). He has over 15 publications to his credit.



**Dr Dinesh Chandra Devkota,**  
Vice Chairman, National  
Planning Commission,  
Government of Nepal

Dr Dinesh Chandra Devkota represents Nepal on the Board of ICIMOD effective March 2011. Born in Gorkha, Nepal,

Dr Devkota joined the National Planning Commission in 2009, becoming Vice Chairman on 5 June 2011. Prior to this appointment he was Acting Vice Chairman of the National Planning Commission. In these positions, he has contributed to policy formulation in the fields of climate change, biodiversity, forest management, the Mountain Alliance initiative, green economy planning, and public-private partnerships. He was a climate change negotiator for Nepal at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 15 in Copenhagen, Denmark in 2009 and at UNFCCC COP 16 in Cancun, Mexico in 2010.

Dr Devkota has a PhD in Engineering Science (Environmental) from Saitama University, Japan; a Master of Science in Engineering from Southern Illinois University Carbondale (SIUC), United States of America; and a Bachelor of Engineering from Tribhuvan University, Nepal. Dr Devkota has more than 25 years experience in development dealing with infrastructure engineering, safeguard issues (mainly environment), community development, and sustainable development. From 1995 to 2007 he was involved in community-based infrastructure, mainly rural water supply and sanitation, engineering project, and research work for various

international non-governmental and intergovernmental organisations. He worked for the Asian Development Bank, Project Preparatory Technical Assistance (PPTA), as Environment Specialist and for the Ministry of Local Development of Nepal, Department of Local Infrastructure Development and Agricultural Roads, Rural Reconstruction and Rehabilitation Sector Development Program (DoLIDAR/RRRSDP) as Environmental Management Specialist.

Dr Devkota is also a visiting professor in the Central Department of Environmental Science at Tribhuvan University. As a part-time faculty member in the Institute of Engineering, Tribhuvan University, Kathmandu, he has guided several student projects and supervised several master's theses. He has also contributed towards course design, curriculum development, content preparation, writing of course manuals, seminars, and research/project work evaluation for various engineering education programmes in Nepal and the United States of America. He has received many awards, and his achievements and innovative results have been published in more than 30 reputable national and international journals.



**Dr Pal Prestrud, Director,  
Centre for International Climate  
and Environmental Research,  
Norway**

Dr Pal Prestrud, Director of the  
Centre for International Climate  
and Environmental Research

(CICERO) in Oslo, Norway, was nominated to the ICIMOD Board as Independent Board Member in November 2010. Dr Prestrud has vast practical field and research experience in national and international polar research and polar environmental management. He spent several years in the Arctic doing fieldwork and participated actively in developing the the Rovaniemi Process for intergovernmental cooperation and later the Arctic Council. He is well versed in different aspects of climate change such as physical climate change, impacts, mitigation, adaptation, policy development, and international climate negotiations.

Dr Prestrud began his career with the Norwegian Polar Research Institute as a scholar and scientific assistant in 1977, and has held a number of key positions over the years. He worked for the Governor of Svalbard from 1982 to 1985 and became the Head of the Unit on Environmental Impact Assessments at the Norwegian Polar Research Institute in 1985. From 1988 to 1994, he was the Advisor and Deputy Director General of the Section on Polar Affairs and Cooperation with Russia,

# ICIMOD Board of Governors 2011

## Regional Board Members

### **H.E. Raz Mohammad Raz**

Deputy Minister of Irrigation and Infrastructure  
Ministry of Agriculture, Irrigation & Livestock, Afghanistan

### **Mr Naba Bikram Kishore Tripura\***

Secretary, Ministry of Chittagong Hill Tract Affairs  
Bangladesh Secretariat, Bangladesh

### **Mr Sherub Gyaltsen**

Secretary, Ministry of Agriculture, Bhutan

### **Prof. Ding Zhongli**

Chairman of CN-ICIMOD  
Vice President, Chinese Academy of Sciences, PR China

### **Dr Tishya Chatterjee IAS**

Secretary, Ministry of Environment and Forests, India

### **Dr Nyi Nyi Kyaw**

Deputy Director General, Forest Department  
Ministry of Forestry, Myanmar

### **Dr Dinesh Chandra Devkota**

Vice Chairman, National Planning Commission, Nepal

### **Mr Shafqat Hussain Naghmi**

Secretary, Ministry of Food, Agriculture and Livestock, Pakistan

## Independent Board Members

### **Dr Lars-Erik Liljelund**

Chair, ICIMOD Programme Advisory Committee (PAC)  
Vice Chair, ICIMOD Board of Governors (BoG)  
Chief Executive, The Foundation for Strategic Environmental Research,  
Sweden

### **Dr Elke Förster**

Environment, Climate Change and Biodiversity (4701)  
Priority Area Manager  
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH  
Germany

### **Dr Amir Muhammed**

Rector, National University of Computer and Emerging Sciences, Pakistan

### **Dr Linxiu Zhang**

Professor and Deputy Director, Centre for Chinese Agricultural Policy  
Chinese Academy of Sciences (CAS), PR China

### **Professor Matthias Winiger**

Former Vice Chancellor, Department of Geography, University of Bonn,  
Germany

### **Dr Lars-Erik Liljelund**

Director General, Prime Minister's Office, Sweden

### **Dr Pal Prestrud, Director**

Director, CEO, CICERO, Norway

### **Dr Christoph Graf, Chair**

Chair, ICIMOD Support Group  
Head, South Asia Department, Federal Department of Foreign Affairs  
Swiss Agency for Development and Cooperation (SDC), Switzerland

### **Dr Andreas Schild, (Ex-officio) Director General, ICIMOD**

\* Profile will be provided in the next periodical

Department for International Affairs, Norwegian Ministry of Environment, and from 1994 to 2001, he was the Director of Research for the Norwegian Polar Research Institute. He was the Head of Department of the Division of Science and Technology at the Norwegian Research Council for a year before being appointed as Director of CICERO in 2002.

Dr Prestrud obtained his PhD from Oslo University in 1992 with his thesis on 'Arctic foxes in Svalbard: population, ecology and rabies'. He taught at the University of Oslo and the Norwegian University of Life Sciences, where he supervised master's and doctoral students. He has also written a number of peer-reviewed articles in international journals and newspaper articles.



**Mr Shafqat Hussain Naghmi,**  
Secretary, Ministry of Food  
and Agriculture, Pakistan

Mr Shafqat Hussain Naghmi, Secretary, Ministry of Food and Agriculture in Pakistan, is the new Regional Board

Member of ICIMOD for Pakistan. He took the position in March 2011. Mr Naghmi has 29 years of leadership experience in public sector planning, development, and policy formulation and implementation. In his current

capacity, he is responsible for the overall functioning of the Ministry, preparing the Yearly Trade Policy, and liaising with the Food and Agriculture Organization of the United Nations and other international organisations.

He started his career with the Civil Aviation Authority of Pakistan as a General Manager of the Finance Department and later headed the National Highway Authority. As Director General, he headed the Federal Government Employees Housing Foundation, the Immigration and Passport Authority, and the Industries and Mineral Development of the Government of Pakistan. He also served as the Joint Secretary of the Ministry of Food and Agriculture, Acting Secretary of the Ministry of Special Initiatives and the Ministry of Commerce, and Additional Secretary of the Ministry of Food and Agriculture.

Mr Naghmi graduated from Quaid-i-Azam University with a Master's in International Relations. He also holds a Master's Degree in Business Administration from the University of California, United States, and a Postgraduate Diploma in Executive Leadership Development from Harvard University, United States. Additionally, Mr Naghmi has undertaken specialised training in finance and accounting from Stanford University, United States.

## **Nepal-ICIMOD Day: Climate Change Adaptation and Resilience Building in Nepal**

The second Nepal-ICIMOD Day was held on 11 March 2011 at ICIMOD's Headquarters in Kathmandu to demonstrate programme results and to increase collaboration on the theme of 'Climate Change Adaptation and Resilience Building in Nepal'. ICIMOD and its Nepalese partners collaborate in designing and implementing programmes to deal with critical issues such as disaster risk reduction, livelihood diversification, biodiversity conservation, integrated watershed management, and reducing emissions from deforestation and forest degradation (REDD). The main objective of the event was to communicate the results and process of this collaborative work to policy makers and development partners in Nepal to obtain feedback, improve ICIMOD's work, and stimulate further collaboration.

Nepal-ICIMOD Day featured presentations on programmes followed by a lively discussion. The event was attended by representatives from the government, diplomatic missions, the donor community, and partner organisations. Dr Andreas Schild, Director General of

ICIMOD, stressed the need to maintain a long-term perspective while addressing climate change adaptation and resilience building, and the need to reduce scientific uncertainty regarding climate and global change in the Himalayan region.



Presenters included Dr Madhav Karki, Deputy Director General of ICIMOD, who highlighted the features and results of ICIMOD's work in climate change adaptation and community resilience; Mr Keshab Thapa from Li-Bird, who presented key results of the community-level adaptation project in agroforestry management and livelihood diversification in the middle hills of Nepal; Dr Narendra Khanal, Professor at Tribhuvan University, who shared his work on socioeconomic vulnerability from glacial lake outburst flood risk in the Koshi Basin; and Mr Resham Bahadur Dangi, Deputy Director General of the Department of Forests, Government of Nepal, who highlighted the issues and challenges his department is facing in enhancing climate resilience and the adaptive capacity of the forestry sector in Nepal.

Main outcomes of the event included:

- identification and recommendation of new approaches to multi-stakeholder coordination and collaboration – including the involvement of the private sector – to integrate climate change adaptation into the overall national development process;
- a recommendation to the Government of Nepal to consider the increased level of vulnerability and risks from climate change not only as threats, but also as opportunities to its development process;
- emphasis on the need to focus on income-enhancing and livelihood-diversifying activities to build community resilience; and
- a recommendation to the National Planning Commission and ICIMOD to jointly set up a national policy and programme coordination mechanism to make the Nepal-ICIMOD collaboration more coordinated, effective, result oriented, and above all relevant to the different stakeholders in Nepal.

Nepal-ICIMOD Day was followed by ICIMOD's annual Open House Day on 12 March 2011, which was attended by more than 2,500 visitors (see p51).



## Pakistan-ICIMOD Day, Islamabad

ICIMOD and its nodal agency in Pakistan, the Ministry of Food and Agriculture, organised Pakistan-ICIMOD Day in Islamabad on 18 April 2011. The aim of the event was to facilitate wider consultation with national partners to take stock of ongoing programmes and identify areas for future collaboration. The event coincided with the start of a one-week training course on cryosphere monitoring and assessment based on remote sensing in Pakistan within the framework of the SERVIR-Himalaya initiative.

Mr Shafqat Hussain Naghmi, Secretary of the Ministry of Food and Agriculture, was the guest of honour at the inaugural session. Major General (retired) Ahmad Bilal, Chairman of the National Space Agency of Pakistan (SUPARCO), and Dr Amir Muhammad, Rector of FAST University, were also present. Dr Andreas Schild, Director General of ICIMOD, welcomed the participants and outlined the future work of ICIMOD. In his inaugural address, Mr Naghmi highlighted the importance of mountain systems in Pakistan and future challenges. He pledged the support of the Government of Pakistan to ICIMOD and its partners in Pakistan.

Climate change and its impacts on Pakistan's glacial and water resources, specifically in the Indus Basin, were discussed in detail. All partners concurred that climate change is affecting water availability, agriculture, and biodiversity, and that rangelands and mountain areas are being most affected, with severe consequences for human life and wellbeing. There is a need to study the long-term effects of climate change, its impacts, and adaptation strategies. Partners expressed clear interest in cryospheric research and capacity building to help institutions in Pakistan undertake research on glacial melting, develop climate change



scenarios, and conduct hydrometeorological modelling to enable projects to address climate change on a decadal time scale.

It was also agreed that climate change has substantial negative impacts not only on the cryosphere, but also on watersheds and rangelands. These include negative impacts on biodiversity, medicinal and herbal plants, livestock, and grass species, which affect the livelihoods of poor mountain communities. Community-based ecosystem services, rangeland management, and the promotion of non-grazing natural products with value addition are key to sustainable ecosystem management. In the mountain areas, participatory water management, the borrowing of water, traditional water storage, and livestock diversification are some of the key coping mechanisms for 'too-much' and 'too-little' water events.

Farid Ahmad, faahmad@icimod.org





## Himalayan Climate Change Adaptation Programme

The Himalayan Climate Change Adaptation Programme (HICAP) is an ambitious five-year programme to contribute to enhanced resilience to change, particularly climate change, through improved understanding of vulnerabilities, opportunities, and potentials for adaptation, and the development of strategies and policies using scientific/evidence-based knowledge in the Hindu Kush-Himalayas.

During the sixteenth Conference of the Parties (COP 16) to the United Nations Framework Convention on Climate Change (UNFCCC) in Cancun, Mexico in 2010, the Ministry of Foreign Affairs Norway announced support of more than US\$ 12 million to this project. These funds are being used for activities that emerged from the initial programme concept in the pilot phase, namely, a feasibility study of the Himalayan Climate Change Impact and Adaptation Assessment (HICIA) and 'Too Much Too Little Water', both supported by the Ministry of Foreign Affairs Norway and the Swedish International Development Cooperation Agency (Sida).

memorandum of understanding for the implementation of the project on 26 March 2011.

Besides establishing a regional knowledge platform for data collection, analysis, and sharing, and for the monitoring of changes, HICAP's central concern is with adaptation and the identification of ways to increase the resilience of women and mountain communities. The project covers the impact of changes on the livelihoods of mountain communities in the Hindu Kush-Himalayas; the vulnerabilities and adaptive capacities of mountain communities, especially women; and the generation of evidence-based actionable knowledge in support of decision-making for community adaptation.

The project will focus on policy-relevant knowledge and outreach to feed into national, regional, and international policy processes and dialogues. Keeping a mountain focus, but highlighting the importance of upstream-downstream linkages as well as interactions across local, national, and regional levels, the project will be implemented in the Indus, Ganga, and Brahmaputra basins, providing a regional overview of the Hindu Kush-Himalayas. Work under this project will also strengthen knowledge of vulnerabilities and potentials, and of how planned adaptation can support autonomous adaptation towards creating resilient communities in the Hindu Kush-Himalayan mountains and downstream.

Neera Shrestha Pradhan, [nspradhan@icimod.org](mailto:nspradhan@icimod.org)



HICAP is the result of a participatory process comprising frequent exchanges and interactions between the promoters (United Nations Environment Programme/GRID-Arendal, the Centre for International Climate and Environmental Research (CICERO), and ICIMOD) and the involvement of strategic and operational partners during the Promoters' Meeting (25–26 March 2011), Inception Workshop (28–30 March 2011), and Operational Planning Workshop (16–17 May 2011) held in Kathmandu. The promoters signed a





## Workshops, meetings and training events (January – June 2011)

Event	Date	Place
HIMALA: Climate Impacts on Glaciers in the Himalayan Region, Working Meeting	10–12 January	Kathmandu, Nepal
IFAD Review and Planning Workshop	18–20 January	Kathmandu, Nepal
ICIMOD-USFS Eastern Himalayas Regional Workshop on Forests and Climate Change	24–28 January	Kathmandu, Nepal
Inception Workshop of Cryosphere Project	24–28 January	Kathmandu, Nepal
Brown Bag: SLPR development and climate change policy review by Ms Yukta Kumar	9 February	Kathmandu, Nepal
Regional Study on the Adequacy of National Policies and Institutions for Rangeland Management	10 February	Kathmandu, Nepal
Workshop on the Regional Study on the Valuation of Livestock Production in HKH	14–16 February	Kathmandu, Nepal
Case Study Writing Course for Pakistan FAO-SIDA Project Partners Training Modules and Sessions	21–23 February	Kathmandu, Nepal
Seventh Sentinel Asia System Operation Training	28 February – 4 March	Kathmandu, Nepal
Global Environmental Migration: Mountainous Regions Workshop	28 February – 1 March	Kathmandu, Nepal
Launch Workshop for the Abu Dhabi Dialogue Knowledge Forum Small Grants Program	2–3 March	Kathmandu, Nepal
Meeting on Developing Long Term Project Proposal for Kailash Sacred Landscape	3–4 March	Kathmandu, Nepal
Celebration of International Women's Day and 'Gender Impacts of Environmental and Socio- Political Change' Workshop	8–9 March	Kathmandu, Nepal
Nepal-ICIMOD Day	11 March	Kathmandu, Nepal
ICIMOD Open House	12 March	Kathmandu, Nepal
Workshop on Validating the New Generation of Watershed Management in Asia and the Pacific	15–17 March	Kathmandu, Nepal
Elaborated workshop with FAO on Future Generation Watersheds	15–16 March	Kathmandu, Nepal
Consultation on Soft Approaches for Achieving Co-benefits from Black Carbon Emissions Reductions	21–23 March	Kathmandu, Nepal
Knowledge Forum: Dr V Ramanathan, Distinguished Professor at the Scripps Institution of Oceanography, UCSD on Extreme Vulnerability of the Himalaya-Tibetan Region to Global Warming and Air Pollution	22 March	Kathmandu, Nepal
Café Climate: A Café Scientifique on 'Climate Change and Water' with Dr Garrett Kilroy, ICIMOD	25 March	Kathmandu, Nepal
HICIA Promoters' Meeting	25–26 March	Kathmandu, Nepal
Inception Workshop Himalayan Climate Change Impact and Adaptation Assessment (HICIA)	28–30 March	Kathmandu, Nepal
IFAD-FAO Knowledge Sharing Training Workshops	30 March – 9 April	Kathmandu, Nepal
IFAD-FAO KM Writing workshop: Writing to Share Knowledge Effectively	3–6 April	Kathmandu, Nepal
CSR and Climate Change Adaptation International Workshop	4 April	Kathmandu, Nepal
A Talk on Social Responsibility (CSR) & the Role for Business in Climate Change Adaptation	5 April	Kathmandu, Nepal
Writershop for finalizing the Trainers' Resource Manual for Farmers' Level Training in Beekeeping for Nepal	5–8 April	Kathmandu, Nepal
IFAD-FAO Knowledge Sharing Workshop: Knowledge Sharing for Your Work: Techniques and Tools	7–9 April	Kathmandu, Nepal
National Training for Spaced-based Information for Disaster Preparedness and Risk Assessment	9–13 April	Dhaka, Bangladesh
Handing over Ceremony for the Automatic Weather and Hydrometric Stations to the Department of Hydrology and Meteorology, Government of Nepal	11 April	Kathmandu, Nepal
ISRS International Workshop on Multinational Geomatics Capacity Building – Achievements and Challenges	11 April	Dehradun, India
Training on Participatory Integrated Watershed Management 2011	13–27 April	Kathmandu, Nepal
Training on Hydrological and Meteorological Real Time Data Acquisition	17–23 April	Kathmandu, Nepal
Pakistan ICIMOD Day	18 April	Islamabad, Pakistan
Assessment of Effects and Impact of Climate Change Training and field Assessment Programme	21–28 April	Chittagong, Bangladesh

Event	Date	Place
Building capacity of partners and honey producers of Alital VDC in Dadeldhura of Nepal in quality honey production	23–24 April	Dadeldhura, Nepal
Inception Workshop on Strengthening Honey Production Base and Market Linkages in Chittagong Hill Tracts of Bangladesh	29–30 April	Chittagong Hill Tracts, Bangladesh
National Training Course on Remote Sensing based Monitoring and Assessment of Cryosphere – Snow and Glaciers	28 April	Islamabad, Pakistan
Indus Training Workshop	2–6 May	Zurich, Switzerland
National Workshop on Development of Pro poor Value chains for Honey	3 –5 May	Kishoreganj, Bangladesh
Second Regional Steering Committee Meeting on Regional Flood Information System in the Hindu Kush-Himalayas Region (HKH-HYCOS)	4–6 May	Kathmandu, Nepal
National workshop on Development of Pro poor Value chains for Honey	11–13 May	Kullu, Himachal Pradesh, India
Himalayan Climate Change Adaptation Programme (HICAP), Operational Planning Workshop	16–17 May	Kathmandu, Nepal
Talk by Dr Young-Woo Park, UNEP Regional Director	20 May	Kathmandu, Nepal
National Workshop cum Advance Training on Use of Geo-informatics for Mapping and Modelling Forest Carbon Stocks in Nepal	16–20 May	Kathmandu, Nepal
South Asia Media Workshop on Adaptation to Climate Change	18–20 May	Dhulikhel & Kathmandu, Nepal
Knowledge Sharing Workshop on Satellite Rainfall Estimation (SRE)	19–21 May	Thimphu, Bhutan
International Day for Biological Diversity 2011: Talks by Dr Krishna Chandra Poudel, Ministry of Forests and Soil Conservation, Nepal, and Professor Dr Ram Prasad Chaudhary, Tribhuvan University, on sustainable management of forests for conserving biodiversity, developing the local economy, and adapting to climate change	23 May	Kathmandu, Nepal
Regional workshop on Kailash Sacred Landscape Conservation Initiative	30 May – 1 June	Pokhara, Nepal
Workshop to Develop Project Implementation Guidelines for the HKH Cryosphere Monitoring Project	30 May – 3 June	Kathmandu, Nepal
Capacity Building for Biotrade: Biotrade and Green Economy Week in Nepal	31 May – 3 June	Kathmandu, Nepal
World Environment Day 2011: Inter-school Essay Competition, 'Forest Conservation and its Challenges'	1 June	Kathmandu, Nepal
World Environment Day 2011: Promoting Herbal Gardens In Schools – Best Herbal Gardens Phase II Award Ceremony	5 June	Kathmandu, Nepal
World Environment Day 2011: Street Drama 'Gauma Badi Pashyo'	5 June	Kathmandu, Nepal
World Environment Day 2011: 'Voices of School Children - Children's Discussion and Expression Sessions' by the GB Pant Institute of Himalayan Environment and Development (GBPIHED)	5 June	Almora, India
National Workshop on Development of Pro poor Value chains for Honey in Chamoli District, Uttarakhand	6–7 June	Gopeshwor, Uttarakhand, India
Advance Training on Remote Sensing Tools and Methodology for Land Cover Mapping and Change Analysis	6–17 June	Kathmandu, Nepal
Regional Workshop on Kailash Sacred Landscape Conservation Initiative	13–15 June	Kathmandu, Nepal
Forest Carbon Trust Fund – REDD Payment Distribution Ceremony	15 June	Kathmandu, Nepal
Project Steering Committee Meeting of the HKH Cryosphere Monitoring	17 June	Kathmandu, Nepal
Regional Training and Knowledge Sharing Workshop on Improving Local Governance in the Hindu Kush Himalayas	17–25 June	Ilam, Nepal
Forest Carbon Trust Fund – REDD Payment Distribution Ceremony	19 June	Gorkha, Nepal
Brown Bag Seminar: The Economics of Ecosystems and Biodiversity by Dr Haripriya Gundimeda, Visiting Fellow, SANDEE	23 June	Kathmandu, Nepal
Regional Value Chain Sharing Workshop for High Value Products	27–28 June	Kathmandu, Nepal

## Hosted institution – South Asian Network for Development and Environmental Economics (SANDEE)

### Teaching and training through SANDEE for capacity building in South Asia

In the first half of 2011, the South Asian Network for Development and Environmental Economics (SANDEE) organised the following training programmes for South Asian researchers:

- **Introduction to Quantitative Environmental Economics, 24–28 January 2011, Guwahati, Assam.** The OKD Institute of Social Change and Development, Guwahati, hosted a practical six-day course for researchers from Northeast India on how to apply economic tools to valuing environmental goods and services. The course provided a general introduction to environmental economics and informed students of specific methods and strategies for valuation.
- **Research and Writing Workshop in Environmental Economics, 2–6 March 2011, Dhaka, Bangladesh.** SANDEE and the Economic Research Group (ERG) jointly organised this workshop for Bangladeshi researchers working in the field of environmental and natural resource economics. It provided a valuable opportunity for learning about the techniques of proposal writing.
- **Training Course in Environmental and Natural Resource Economics, 2–20 May 2011, Bangkok, Thailand.** This course was organised for practising South Asian economists interested in upgrading their research skills and knowledge related to environmental and natural resource economics. The course provided economists with the basic

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skills necessary to teach environmental and natural resource economics and to undertake research in this area.

- **Policy Analyses for Environmental Economics, 22–24 May 2011, Bangkok, Thailand.** Professor Nancy Olewiler, Director, School of Public Policy, Simon Fraser University, was the core instructor for this training programme held at the Asian Institute of Technology (AIT). The programme's goal was to help researchers think critically about policy analysis, develop analytical skills using topical issues as examples, and incorporate policy analysis in a systematic and rigorous way into environmental economics research.
- **Research and Writing Workshop, 30–31 May 2011, Bangalore, India.** The main objective of this workshop, held at the Ashoka Trust for Research in Ecology and the Environment (ATREE), was to discuss key policy concerns in environmental economics and to help participants sharpen their research focus and choose appropriate tools for their work.

Anuradha Kafle, [Anuradhak@sandeeonline.org](mailto:Anuradhak@sandeeonline.org)



Participants of the Environmental and Natural Resource Economics Course Planting Trees in Khao Yai National Park, Thailand\_Ghulam Samad, Pakistan-SANDEE



## Partnership development (January – June 2011)

ICIMOD establishes strategic partnerships with regional and international organisations to address mountain issues and to enhance the social and environmental security of mountain people. Some of the partnerships entered into from January to June 2011 are listed here.

### Strategic partnerships with international organisations

- A strategic agreement was signed with the Center for International Climate and Environment Research (CICERO), Oslo, and the United Nations Environment Programme (UNEP)/GRID-ARENDAL on cooperation under the Himalayan Climate Change Adaptation Programme (HICAP).
- A partnership was established with the Disaster Prevention Research Institute (DPRI), Japan, for academic exchange and cooperation in the area of water hazards, water resources, and disaster risk management.
- An agreement was signed for the provision of funds from the United States Forest Service to organise and host an Eastern Himalayas Regional Workshop on Forests and Climate Change.
- An agreement was signed with Le Miroir, France, to co-produce a film called 'A Cloud on the Roof of the World' to raise public awareness of advances in knowledge about climate change and Atmospheric Brown Cloud.
- A Letter of Agreement was signed for the provision of funds from the Food and Agriculture Organization of the United Nations (FAO) in support of the implementation of three regional knowledge sharing workshops.
- FAO signed an agreement with ICIMOD to support a workshop on the new generation of watershed management in Asia.
- For collaboration in the areas of water management, climate change, ecosystem services, and poverty reduction through knowledge sharing, memorandums of understanding were signed with:
  - EvK2-CNR (Mount Everest-Mount K2-Italian National Research Council), Italy
  - Global Observation Research Initiative in Alpine Environments (GLORIA)
- A broad framework memorandum of understanding was signed with the Institut de Recherche pour le Développement (IRD) for long-term collaboration on cryosphere and hydro climatology research and development.
- ICIMOD signed an agreement with the National Aeronautics and Space Administration (NASA) in support of the SERVIR-Himalaya initiative
- A contract was signed with the Institute for Global Environmental Strategies (IGES), Japan, for a study to identify win-win adaptation options through adaptation metrics and integrated adaptation decision-making frameworks.
- An agreement was signed with UNEP, Nairobi, to cooperate with ICIMOD on the project 'Assessment in Dryland Areas in the Hindu Kush-Himalaya'.

### Partnerships with regional institutions for programme implementation

- For cooperation on the use and development of remote sensing and geographic information systems, agreements were signed with:
  - Forest Resource Assessment (FRA), Nepal
  - Bangladesh Centre for Advanced Studies (BCAS), Bangladesh
  - Bangladesh Space Research and Remote Sensing Organization (SPARRSO), Bangladesh
  - Center for Environmental and Geographic Information Services (CEGIS), Bangladesh
  - WWF, Pakistan
- A letter of agreement was signed with the Royal Society for the Protection of Nature (RSPN), Bhutan, to support the project 'Biodiversity and Climate Change Adoption in the Eastern Himalayas – Phobjikha Wetland Ecosystem as Case Study'.
- A memorandum of understanding was signed with the Department of Hydrology and Meteorology, Nepal, to continue collaboration on climate impacts on the glaciers of the Himalayas.
- To support partners in the implementation of the second phase of 'Development of Sustainable Energy



for Rangelands (DESER-II)' activities, including the establishment of a knowledge base on energy uses in rangeland areas, testing new technologies through participatory process, building partners' capacities, and constructing a trombe wall in rangeland areas, letters of agreement were signed with:

- National Trust for Nature Conservation (NTNC), Nepal
- Wildlife Institute of India (WII), India
- Gross National Happiness Commission (GNHC), Royal Government of Bhutan
- Aga Khan Rural Support Programme (AKRSP), Chitral, Pakistan
- A letter of agreement was signed with Appropriate Technologies, India, in relation to the programme 'Improving Livelihoods through Developing Pro Poor Honey Value Chains'.
- For the adoption and up scaling of various rangeland technologies and options for livelihood diversification for better adaptation to climate change, and for the valuation of ecosystem services in the Hindu Kush-Himalayas, ICIMOD entered into partnership with:
  - Lanzhou University, China
  - People's Agriculture Research and Development Center (PARC), Nepal
  - Wildlife Institute of India (WII), India
  - CSK Himachal Pradesh Agricultural University, Palampur (India)
- To implement the 'Startup Phase – Kailash Sacred Landscape Conservation Initiative (KSLCI): Developing and Implementing a Transboundary Framework for Conservation and Sustainable Development in the Kailash Sacred Landscape Region of China, India and Nepal', an agreement was signed with the Institute of Geographical Sciences and Natural Resources Research (IGSNRR), China.
- To assess the potential to establish payment for ecosystems services, agreements were signed with:
  - Forest Action (FA), Nepal
  - Nepal Environment and Tourism Initiative Foundation (NETIF), Nepal
- A tripartite agreement was signed between the Asia Network for Sustainable Agriculture and Bioresources (ANSAB), Nepal, the Federation of Community Forestry Users' Nepal (FECOFUN), and ICIMOD to set up a Forest Carbon Trust Fund (FCTF) and regulate seed grants under the NORAD REDD+ Project.

Ayushma Basnyat, [ayrana@icimod.org](mailto:ayrana@icimod.org)  
Farid Ahmad, [faahmad@icimod.org](mailto:faahmad@icimod.org)



## Outreach activities

### ICIMOD observes third Open House Day

Against the backdrop of the celebrations for the United Nations International Year of Forests 2011, ICIMOD organised its third annual ICIMOD Open House Day at its premises in Khumaltar on Saturday, 12 March 2011. The knowledge-rich and fun-filled event attracted more than 2,500 visitors including partners, members of the development community, the private sector, and the general public. Various stalls, a photo exhibition, technology demonstrations, documentary shows, a street drama, a mountain quiz, and food created a festival-like atmosphere.

Visitors viewed ICIMOD's facilities and talked to programme staff in a series of guided tours. People were fascinated to learn about the different ways mountain people can make a living; about climate change and its effects on water, glaciers, and farming; gender and governance in the mountains; the importance of biodiversity in ecosystems and for livelihoods; and the use of remote sensing and geographic information systems. They also enjoyed seeing the many publications, slideshows, and demonstrations.

The photo exhibition drew attention to human activities threatening forest cover, depicted various forest goods and services, proposed sustainable forest management options, and identified institutional and governance mechanisms to ensure sustainable forest management. 'Tree of Hope' with messages, and some of them showed a high level of awareness. Messages included: 'If one baby born, plant two baby plants' and, 'Save the green. Save the energies. Then save yourself'. Over forty stalls by partners showcased knowledge and good practices and environmentally friendly and organic products, mountain resource-based products and services, simple technologies such as solar powered devices, and the Herbal Gardens in Schools initiative, among other things.

At the youth corner, the ten winners from an earlier 'Youth Corner on Climate Change Adaptation' competition presented their winning posters. This corner highlighted the critical role of youth in advocating for the mountain agenda and climate change adaptation. The youth corner also presented a drama, 'Bodh' ('Intuition'), on climate change awareness by Ram Babu Regmi, a British Council International Climate Champion. A demonstration by ICIMOD showed ice melting under direct sun, with and without debris cover, and under shade. Dr Arun Bhakta Shrestha of ICIMOD summarised, "The demonstration showed viewers how different conditions can make a difference in the melting process and how it contributes to meltwater generation". The documentary movie showings and the 'Know Your Mountain' quiz were also big hits among students.

Nira Gurung, [ngurung@icimod.org](mailto:ngurung@icimod.org)

### Corporate sector interest in ICIMOD

The results of the 'Corporate Social Responsibility (CSR) in 10' project undertaken by CSR Asia found that climate change, water, and biodiversity are among the top 10 issues for the private sector. Hence, there are clearly ample opportunities for private sector engagement with ICIMOD. The challenge is to identify key areas for collaboration and ways to tap into them.

ICIMOD is reaching out to the corporate sector with the message that climate change is a global phenomenon that touches all segments of society and needs the full commitment of the corporate sector. The response has been encouraging.

Laxmi Bank, a Nepal-based bank, has been actively involved in promoting green banking initiatives.



However, there is a need to make bank staff aware of issues surrounding climate change and why they are 'going green'. A group of 31 executives from Laxmi Bank came to ICIMOD to learn about the topic from our climate change specialist.

ICIMOD has also been discussing areas for collaboration with Ncell, a mobile network provider in Nepal whose slogan is 'Ncell – Here for Nepal'. Ncell is a part of TeliaSonera, a leading European telecommunication company. There is scope for mobile phones to provide business linkages and enable access to markets and critical market information on goods, services, and livelihood opportunities in rural Nepal.

The Choudhary Group, a leading corporate conglomerate in Nepal whose key message is 'Touching life every day', is seeking the expertise of ICIMOD in the area of medicinal and aromatic products. Discussions are under way to develop a partnership mechanism that is mutually beneficial.

Naina Shakya, [nshakya@icimod.org](mailto:nshakya@icimod.org)

### Celebrating World Environment Day with the theme: 'Forests: Nature at Your Service'

ICIMOD celebrated World Environment Day 2011 with several activities to raise awareness on sustainable forest management and forest conservation.

An Inter-school Essay Competition on 'Forest Conservation and its Challenges' was held on 1 June 2011 among 11 government schools in Lalitpur, Nepal. Twenty-three students (11 girls and 12 boys) took part in the competition. The level of awareness and knowledge about forest conservation issues and climate change was very high among the students. On 5 June 2011, the Right Honourable Prime Minister, Mr Jhala Nath Khanal, awarded the winners with certificates, cash prizes,



and books at the ceremony for World Environment Day organised by the Ministry of Environment, Government of Nepal, at the Nepal Academy Hall.

At the same ceremony, the Prime Minister awarded the winners for the Best Herbal Gardens, Phase II, among eight participating private schools in the Kathmandu Valley. The schools had developed and managed herbal gardens on their premises under the programme 'Promoting Herbal Gardens in Schools', which was initially launched to mark World Environment Day in 2010. The herbal garden programme is organised jointly by ICIMOD and the National Trust for Nature Conservation (NTNC) in collaboration with the Private and Boarding Schools' Organisation in Nepal (PABSON). The criteria for evaluation included the number of medicinal plants in the garden, health of the plants, information displayed for each plant, and involvement and motivation of students. Kanchan Secondary School, Chapagaon, came in first place; Arun Jyoti Vidhya Mandir, Jorpati, was first runner up; and Ananda Bhumi Boarding School, Maitidevi, was second runner up.

A 25-minute street drama, 'Gauma Baadi Pasyo' ('Flooding in My Village'), was performed in Ratna Park and Basantapur Durbar Square by Jagriti Samaj Nepal on 5 June. The play dramatised the consequences of deforestation, such as floods and landslides, for the lives and livelihoods of people in rural communities.



For the first time, ICIMOD conducted a regional event in celebration of World Environment Day. 'Voices of School Children – Children's Discussion and Expression Sessions' was organised in partnership with the GB Pant Institute of Himalayan Environment and Development (GBPIHED) in Almora, India. The event comprised video recordings of the views and voices of children from schools in the mountain areas, as well as an interactive session among the children.

More details about these and other events celebrating World Environment Day are available at [www.icimod.org/?q=3546](http://www.icimod.org/?q=3546).

Nira Gurung, [ngurung@icimod.org](mailto:ngurung@icimod.org)

### Results of the World Environment Day Inter-school Essay Competition

#### Winners: Girls

- First: Sasa Tamang, Adarsha Saula Higher Secondary School, Lalitpur
- Second: Bhawana Chappagain, Sisneri Higher Secondary School, Lamatar, Lalitpur
- Third: Kalpana Lamsal, Tika Vidyashram Higher Secondary School, Sanepa, Lalitpur

#### Winners: Boys

- First: Durga Basnet, Tika Vidyashram Higher Secondary School, Sanepa, Lalitpur
- Second: Kumar Hari Nepali, Kitini Higher Secondary School, Kitini, Lalitpur
- Third: Bijay Lamichhane, Patan Higher Secondary School, Lalitpur



## Extending the 'Herbal Gardens in Schools' initiative

'Promoting Herbal Gardens in Schools' is an initiative to familiarise students, teachers, and families with the conservation and sustainable use of medicinal and aromatic plants in Nepal. The idea is to involve children in making herbal gardens in their schools, so they can learn about the plants and their uses in a fun and innovative way. Fifteen private schools implemented the initiative in 2010; each established an herbal garden on their school premises, growing about 50 herbal plant species altogether. Students designed the gardens, planted herbs, collated information about the herbs, made profiles of each plant, and even wrote poems and stories. The initiative provided students with first-hand practical experience of having a garden, and through it, helped them realise the conservation significance of herbal plants.

In 2011, the herbal garden experience is being replicated in 21 new schools, which are being mentored by 7 schools from the first phase. Initially based in the Kathmandu Valley, the initiative is now involving schools in eight other districts, thus reaching out more widely in Nepal.

## Other outreach events

- World Wetlands Day, 2 February 2011
- International Women's Day 2011 – Celebrating 100 Years of International Women's Day, 8 March 2011  
[www.icimod.org/v2/bull3/index.php/cms2/magic/view?q=2907](http://www.icimod.org/v2/bull3/index.php/cms2/magic/view?q=2907)
- Celebrating International Biological Diversity Day: Marking the International Year of Forests, 2011  
[www.icimod.org/v2/bull3/index.php/cms2/magic/view?q=3600](http://www.icimod.org/v2/bull3/index.php/cms2/magic/view?q=3600)
- Exhibition at the British School's Eco Festival, 18 March 2011
- Celebrating World Water Day 2011, 'Water for Cities: Responding to the Urban Challenge', 22 March 2011  
[www.icimod.org/?q=3062](http://www.icimod.org/?q=3062)
- Exhibition at the National Plant Resource Day, 12 April 2011
- Montagnalibri – 25th International Exhibition of Mountain Publications at the Trento Film Festival 2011 (28 April – 8th May 2011)
- Students' Conservation Science Conference and Exhibition, 5–7 June 2011 [www.icimod.org/?q=3546](http://www.icimod.org/?q=3546)



Although the initiative is well received by participating schools, mobilising resources to ensure its continuity and sustainability is a challenge. The expansion of the initiative is a step towards exploring this possibility. ICIMOD urges private and corporate sector actors and national and international organisations to join hands to further this initiative and create ways to increase the involvement of schools. Several companies are now on board; they see the initiative as a child-centred, educational, and environment-focused programme. ICIMOD intends to upscale the concept to its other regional member countries in the Hindu Kush-Himalayas, while ensuring that the initiative is led by a national partner in Nepal. Identification of a national partner for the Herbal Gardens–Nepal Chapter is under way.

Bandana Shakya, [bshakya@icimod.org](mailto:bshakya@icimod.org)



## ICIMOD publications

The major documents published by ICIMOD between January – July 2011 are shown below. All publications can be downloaded free-of-charge from [www.icimod.org/publications](http://www.icimod.org/publications). Hard copy publications can be ordered from the Distribution Unit, [distri@icimod.org](mailto:distri@icimod.org). They can be provided free-of-charge to institutions actively involved in sustainable development of the greater Himalayan region.

### Books and booklets

#### Printed



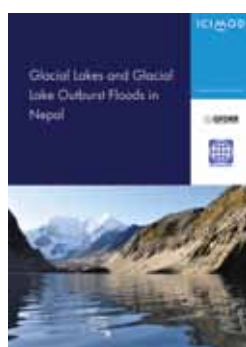
**Kailash Sacred Landscape Conservation Initiative: Feasibility Assessment Report**  
Zomer, R; Oli, KP (eds) 108p  
ISBN 978 92 9115 209 4;  
LCCN 2011-312010

**Implementation of the Convention on Biological Diversity: A retrospective analysis in the Hindu Kush-Himalayan countries** Desai, BH; Oli, KP; Yang Yongping; Chettri, N; Sharma, E 44p  
ISBN 978 92 9115 205 6;  
LCCN 2011-312009



**Benefiting from Earth Observation: Bridging the data gap for adaptation to climate change in the Hindu Kush-Himalayan region, proceedings of the international symposium, 4-6 October 2010, Kathmandu, Nepal** Shrestha, B; Bajracharya, B (eds) 54p  
ISBN 978 92 9115 200 1; LCCN 2011-312007

**Glacial Lakes and Glacial Lake Outburst Floods in Nepal** ICIMOD 96p  
ISBN 978 92 9115 193 6;  
LCCN 2011-312004



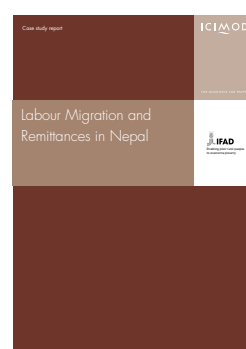
**Pro-Poor Value Chain Development for High Value Products in Mountain Regions: Indian Bay Leaf**  
Choudhary, D; Pandit, BH; Kinhal, GA; Kollmair, M 24p  
ISBN 978 92 9115 198 1;  
LCCN 2011-312006

**Framework for Valuing Ecosystem Services in the Himalayas** Rasul, G; Chettri, N; Sharma, E 19p; ISBN 978 92 9115 190 5; LCCN 2011-312003



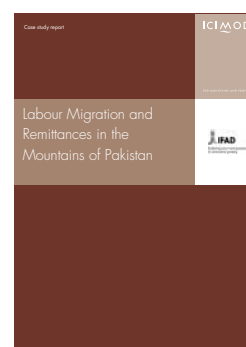
#### Electronic only (online, CD-ROM, DVD)

**Glacial Lakes and Glacial Lake Outburst Floods in Nepal, ICIMOD DVD (with full report and additional material-GIS database, maps, photos, video clips)**  
ISBN 978 92 9115 196 7; LCCN 2011-312005



**Labour Migration and Remittances in Nepal : Report of the Case Study 2010** Sherpa, D 20p  
ISBN 978 92 9115 187 5;  
LCCN 2010-34745

**Labour Migration and Remittances in the Mountains of Pakistan: Report of the Case Study 2010** Hunzai, K 16p; ISBN 978 92 9115 195 0; LCCN 2010-34745





## General Publications



ICIMOD Annual Report  
2010

## Newsletters

Knowledge Management  
for Mountain Development:  
Knowledge and technologies  
for mountain development,  
No. 58 Spring 2011

Asia Pacific Mountain Courier:  
Special issue on youth action  
for climate change through art: Newsletter of the Asia  
Pacific Mountain Network, Volume 12 No. 1, June  
2011

CNICIMOD Newsletter: Newsletter of the Chinese  
Committee on International Centre for Integrated  
Mountain Development, (published by CNICIMOD)  
Volume 5, No. 1, April 2011



## Information sheets/flyers



Value Chains for Mountain  
Products and Services, IS  
3/11

Black Carbon in the Hindu  
Kush-Himalayan Region, IS  
2/11

Remittances: A key to  
adaptation? : Perspectives  
from communities exposed to

water stress in the Himalayan  
Region, IS 1/11

Space-based information and  
rapid mapping for Emergency  
Response

Promoting Herbal Gardens in  
Schools : Revitalising traditions  
of herbs and their use

e-discussion summary: Improving Local Governance  
in the Hindu Kush-Himalayan Region: Challenges and  
Good Practices

Pilot Forest Carbon Trust Fund: Rewarding local  
communities for forest conservation

Remote sensing for REDD : Above-ground biomass  
estimation for carbon stock



## Other publications by ICIMOD authors

**Chettri, N; Sharma, E** (2011) 'Non-timber forest produce:  
Utilization, distribution and status in the Khangchendzonga  
Biosphere Reserve, Sikkim, India.' In Arrawatia, ML; Tambe,  
S (eds) *Biodiversity of Sikkim: Exploring and conserving  
a global hotspot*, pp165-180. Sikkim: Department of  
Information and Public Relations

**Chettri, N; Shaky, B; Sharma, E** (2011) 'Facilitating  
regional cooperation through development of conservation  
corridors in the Khangchendzonga landscape.' In  
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Gender Specialist,  
Sustainable Livelihoods  
and Poverty Reduction,  
April 2011



**Dr Shahriar M Wahid**  
Senior Hydrologist  
Integrated Water  
and Hazard  
Management,  
April 2011



**Ms Andrea Perlis**  
Head of Publishing  
Integrated Knowledge  
Management,  
May 2011



**Dr Dorothea Stumm**  
Glaciologist, Integrated  
Water and Hazards  
Management  
May 2011



**Ms Krisha Shrestha**  
Programme  
Support Officer,  
South Asia Water  
Initiative/Small  
Grants Programme,  
Integrated Water  
and Hazard  
Management, May  
2011



**Mr Yuvraj Sharma**  
Application  
Developer/  
Programmer,  
Integrated Knowledge  
Management,  
May 2011



**Ms Renate Fleiner**  
Watershed Management  
Specialist, Environment  
Change and Ecosystem  
Services  
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**Mr Sebastian Wesselman**  
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Building Lead,  
Integrated Knowledge  
Management/MENRIS,  
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**Mr Mostafa Ali**  
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Specialist  
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## **Sustainable Mountain Development**

Periodical publication from the International Centre for Integrated Mountain Development, Kathmandu

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**Printed by** Sewa Printing Press, Kathmandu, Nepal





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**International Centre for Integrated Mountain Development**

GPO Box 3226, Kathmandu, Nepal

**Tel** +977-1-5003222 **email** [info@icimod.org](mailto:info@icimod.org) **web** [www.icimod.org](http://www.icimod.org)