



Bio-briquette production, Lalitpur, Nepal

Adaptation for Sustainable Livelihoods

Socioeconomic and environmental change is exposing people in the mountains to growing physical, social, and economic risks and vulnerabilities but also to opportunities to improve their lives and livelihoods.

The highlights of ICIMOD's work in this area in 2011 were the development and use of qualitative and quantitative methodologies to assess mountain poverty and vulnerability, further progress on mountain-specific pro-poor value chains, and innovative work on labour migration.

The research on mountain poverty in the HKH region has shown that poverty is usually more extensive and can be attributed to different causes in the mountains compared with the plains. A critical finding is that communities with diversified resources and livelihood strategies have less need for support to build their adaptive capacity. The qualitative tools are allowing us to understand the perceptions and responses of mountain people in the Himalayas to climate change.

In 2011, ICIMOD and its partners focused on applying the pro-poor mountain-specific value chain framework developed in the previous year. The value chain work continued on Malta oranges in India, medicinal aromatic plants (MAPs) in western Nepal, and tourism in Mustang, Nepal. Knowledge sharing was a priority, with the publication of fact sheets on cultivation and harvesting practices for five high-value products, the development of curricula on sustainable agriculture for university and farmer levels, and the preparation of documents on quality standards for honey.

ICIMOD also supported the development of cooperatives and five collection centres for MAPs linked with local traders, wholesalers, and processors in Bhutan and Nepal. During 2011, the Himalaya Heritage Routes programme was further developed and ICIMOD supported partners in Bhutan in the development of an eco-tourism master plan and guidelines for a protected area.

The Centre's work on labour migration and environmental change has been recognized regionally and internationally for drawing attention to the role of migration in mountain areas. Collaborating with the Foresight Programme of the Government of the United Kingdom, ICIMOD contributed to a review on global environmental migration and hosted an international workshop on the causes of migration in March 2011. The results of the review and workshop culminated in the Foresight publication *Migration and Global Environmental Change – Future Challenges and Opportunities*, launched in October 2011. The United Nations University, United Nations Population Fund, University of Sussex, Indian Himalayan Initiative, Asian Development Bank, and the Swiss Agency for Development and Cooperation (SDC) have also requested contributions to their work – indications that ICIMOD is regarded as a knowledge centre for research on migration in the region. The summer 2011 issue of ICIMOD's periodical *Sustainable Mountain Development* focused on this theme.



Drying medicinal plants, Bhutan

“ICIMOD research has provided a robust empirical basis to understand the role of migration in adaptation to environmental change in mountain areas. It played an important role in the recent UK Foresight report on migration and global environmental change.”

– Richard Black, School of Global Studies, University of Sussex, UK

Mountain Poverty is Different – and Requires Specific Strategies

“[Poverty measures] still do not take into account the geographic implications of different indicators and specific factors that contribute to mountain poverty... Thus the existing indicators do not fully reflect the realities within the mountain systems.”

– Dr R.S. Tolia, former Chief Secretary of State, Uttarakhand, India

In 2011, ICIMOD published the results of a three-year study on mountain poverty. Nationally representative livelihood data for Afghanistan, Bangladesh, Bhutan, India, Nepal, and Pakistan were used to identify differences in poverty between different regions of each country and within the country's mountain regions. Existing secondary data for China and Myanmar were used to make the overview comprehensive for the HKH region.

Tibet Autonomous Region, China



The report confirms that, in all of the HKH countries except India, poverty in the mountains is higher than the national average. Further, it finds that the factors contributing to poverty are different in the mountains. The report provides empirical evidence confirming that physical remoteness and the fragility of the natural resource base are main causes of mountain poverty. This research substantiates an urgent call for mountain-specific policies and development planning to address poverty in the mountain areas of the HKH countries.

In order to target poverty alleviation strategies to mountain areas, it is necessary to consider the disparities in poverty rates among different areas and the differing causes of poverty. The study verifies that lower access to basic facilities is a common determinant of poverty in all of the study areas except Pakistan. Remoteness and low levels of public and private investment are other factors in a high incidence of poverty. In many remote areas, low population densities escalate the costs of providing physical infrastructure and basic services, such as electricity and drinking water.

Mountain people of the HKH often have limited socioeconomic opportunities and little political influence, given that mountain people account for a small part of national populations and governments face increasing and competing demands on limited resources. The higher rates of poverty and lower rates of poverty reduction in the mountains are a serious concern in terms of inequalities within nations and in the region as a whole. The study suggests that if poverty in the mountains is not addressed, increased outmigration will put additional pressure on already overburdened urban centres in the plains. A challenge will be to ensure much needed investments in productive and social infrastructure in mountain areas to fill widening service gaps.

In India, the Working Group on Mountain Ecosystems and Challenges Faced by the People living in the Hilly Areas has already included findings from the report in documents prepared towards development of the 12th Five-year Plan by the national Planning Commission.

Comparing People's Perceptions and Scientific Data for Adaptation

“Sometimes it is difficult to distinguish between the various seasons. Even October is as warm as June.”

– A resident of Almora, northwest India

“These days when it rains it rains heavily and uncontrollably and even the earth cannot hold the water, but sometimes it doesn't rain at all.”

– A resident of Terhathum, eastern Nepal

In 2011, ICIMOD completed a study to identify people's perceptions of climate variability and change, the underlying causes of vulnerability, and the ways people cope with and adapt to change. The study focused on four areas: Uttarakhand in northwestern India, Nepal, eastern Bhutan, and northeast India.

The assessment developed a Framework for Community-Based Climate Vulnerability and Capacity Assessment in Mountain Areas, which uses participatory rural appraisal (PRA) exercises, community focus group discussions, and in-depth household interviews. This approach quantifies the PRA data, backing perceptions with concrete data. The perceptions were also compared with the available scientific weather data. The qualitative aspect of this research explores people's issues and the impacts they are experiencing.

The findings show that climate and socioeconomic change are already affecting the livelihoods of mountain communities. People are coping with or adapting to these changes, but not always in ways that will keep up with the rate of change or be sustainable. The communities are looking at all options for their livelihoods but often do not know where to go for services. The study noted the potential differences in the vulnerability and adaptive capacity of women and men and of different social groups.

To address the inadequacy of extension services and technical support, ICIMOD is developing an Adaptation Learning Highway for information and knowledge exchange to improve local governance responses. It will help improve two-way information flow between villages and district administrators. The initiative has prepared documentary videos in Dailekh and Terhathum districts of Nepal for use in workshops bringing together communities, service providers, and scientists to share information and contribute recommendations for future programme development.

“The work compelled us, as a line agency service provider, to listen to the communities' demands to make better district policies for livestock and agriculture that are more location specific. Through this process, we received so much information about the communities – their needs, interests, and demands.”

– Durga Nath Dhungana, Senior Livestock Development Officer, Dailekh, Nepal

Women at focus group discussion, Uttarakhand, India



“I received the Framework for Community-Based Climate Vulnerability and Capacity Assessment in Mountain Areas and Climate Variability and Change in the Himalayas: Community Perceptions and Responses. They are a credit to ICIMOD. I have studied these with interest and appreciation. Very useful.”

– Robert Chambers, Institute of Development Studies, University of Sussex, UK