

# Annual Report 2011

ICIMOD

## **2011 – Local People, Regional Efforts, Global Reach**

The year 2011 brought  
opportunities and...

## **Strategic Programmes**

ICIMOD works on strategic  
responses to the complex  
issues facing the Hindu...

FOR MOUNTAINS AND PEOPLE



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# Contents

Message from the Director General	3
2011 – Local People, Regional Efforts, Global Reach	5
Changes in ICIMOD Management	10
A Regional Exploration of Women and Climate Change Adaptation	12
Strategic Programmes	15
Water and Vulnerability	17
Linking and Valuing Ecosystems	21
Adaptation for Sustainable Livelihoods	27
Sharing Knowledge for the Region and the World	31
Country Offices and Committees	37
CNICIMOD Secretariat	39
Afghanistan Office	41
Pakistan Office	43
Also at ICIMOD... South Asian Network for Development and Environmental Economics (SANDEE)	45
Partnership Development, Publications, People, and Finances	47
Partnership Development	48
Publications	51
Board of Governors	57
Staff	58
Financial Report	60
ICIMOD Members, Sponsors, and Funding Partners	66





# Message from the Director General

Dear Readers, Friends, and Supporters of ICIMOD,

I am pleased to present the ICIMOD Annual Report for 2011. As the title indicates, ICIMOD is working at several levels. First and foremost, our efforts are for the local people of the Hindu Kush Himalayan region. Second, ICIMOD has found a niche as a regional organization, addressing issues of regional significance. Third, ICIMOD is taking the message of the mountains to the global community, promoting recognition of the goods and services that mountains provide.

The challenges in the region are growing with climate change and numerous other drivers of change. It is critical to bring knowledge and evidence to bear on these issues in order to develop solutions. This can only be done by working with the women, men, and communities who face these challenges, by working in partnership with scientists, policy makers, and implementing organizations, and by working in ways that build capacity. ICIMOD is addressing many of the challenges, such as how to adapt to improve livelihoods, how to reduce vulnerabilities to floods, and how to put ecosystem management concepts into practice in transboundary landscapes.

This was a year of considerable progress for the organization in many ways. ICIMOD expanded the number of activities in a variety of areas, intensifying its engagement with numerous stakeholders. Importantly, ICIMOD has made a difference where it works. I was pleased to read the many comments by ICIMOD stakeholders who have positively commented on ICIMOD's work.

ICIMOD is indeed on the right trajectory, addressing relevant issues through partnership and making efforts to ensure that its work has impact. I am very excited to have started my term as Director General in 2011, and will strive to keep ICIMOD on this path. I would like to pay tribute to my predecessor Dr Andreas Schild who played a key role in ICIMOD's success of 2011. I would also like to thank ICIMOD staff, partners, and supporters for all you do for ICIMOD.



A handwritten signature in black ink, appearing to read 'David Molden'.

David Molden









# 2011 Local People, Regional Efforts, Global Reach

The year 2011 brought opportunities and endeavours to link global technologies and resources with the village or on-the-ground realities of the Hindu Kush Himalayas (HKH). It was also a year of consolidating linkages and knowledge within river basins and landscape corridors, across borders, from space to villages, from east to west, and among researchers and centres of expertise in the HKH region.

ICIMOD monitors ecological and socioeconomic changes, analyses the consequences for the livelihoods of mountain people and of downstream inhabitants, and facilitates the development of appropriate policies and innovative and equitable compensation mechanisms for ecosystem services, including freshwater, biodiversity, and carbon sequestration.

Through its projects and programmes, ICIMOD develops linkages to enhance science and technology in the HKH region, test new approaches in local settings, promote regional collaboration and cooperation, share research findings, and thus advocate for mountain issues.

In 2011, ICIMOD's work saw a greater consolidation of this linking role, for instance in the testing of approaches for implementing REDD+ (Reducing Emissions from Deforestation and Forest Degradation) – a global mechanism – and offering feedback to international environment and development related negotiations. To build regional capacity and exchange knowledge, this year ICIMOD organized 50 main events in which 1,274 people participated.

## Advocating mountain issues in global forums

ICIMOD capitalized on opportunities to build greater international awareness of mountain issues in several global forums, from the 17th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP 17) in Durban, South Africa, to World Water Week in Stockholm, Sweden, where ICIMOD was invited to present on upstream-downstream linkages as a complement to the week's focus on urban areas.

*“Dr Sharma made an insightful, rigorous, and enjoyable presentation about the importance of mountain regions to urban areas. His presentation was in the wider context of climate change, water responses, governance, and approaches to development. Lively and enthusiastic discussion followed his talk, which really fired people up and generated a lot of good ideas.”*

– Professor Xiaoliu Yang of Peking University, China, on World Water Week

In close collaboration with global and regional partners, ICIMOD organized the first Mountain Day event on the sidelines of COP 17 in December 2011. More than 100 participants from all regions of the globe attended. The event's two high-level panels called on COP 17 delegates and global development partners to protect mountain ecosystems from the threats presented by climate change, to support adaptation programmes in mountains for improved livelihoods and sustainability, and to create incentives to enhance the benefits mountain people derive from conserving their ecosystems. The event emphasized

Mountain Day at Durban, South Africa







Dr Ram Baran Yadav, President of the Republic of Nepal, inaugurating the Green Economy Conference, Kathmandu, Nepal

that mountain regions are different from lowlands and require specific measures for adaptation to climate change. In the climate change discourse, ICIMOD is finding a particular niche in adaptation (more than mitigation), drawing attention to the importance of assisting local communities to adapt.

ICIMOD also made a number of contributions to the preparatory process for the United Nations Conference on Sustainable Development – more commonly known as Rio+20 – with an aim to raising the profile of mountain issues at this landmark conference in June 2012. ICIMOD prepared the Asia-Pacific Mountain Assessment Report, a synthesis of the case studies from the Asia-Pacific region, as a review for the Lucerne World Mountain Conference in October 2011 and the Rio+20 process. The report documents lessons learned in sustainable mountain development since 1992.

## Sharing mountain information and knowledge for global policies

To shed light on what the Rio+20 theme of green economy means for mountain regions and people, in September 2011 ICIMOD, in collaboration with the United Nations Environment Programme (UNEP), organized the International Conference on Green Economy and Sustainable Mountain Development which brought together about 150 participants from around the world. They included international and regional scientists, policy makers, development practitioners, and representatives of civil society and the private sector. The participants included several senior policy makers from the HKH region involved in national policy planning and international negotiations, including for Rio+20.

The conference examined the contribution of mountains to national, regional, and global economies and strategies for sustaining ecosystem services, strengthening resilience, and promoting low-carbon economic growth to reduce poverty. National, regional, and international media coverage of the conference helped enhance ICIMOD's role in promoting the mountain agenda. The outcome of the conference included a global-scale report on the green economy and the Kathmandu Declaration on Green Economy and Sustainable Mountain Development, which supported subsequent major global policy initiatives including the Lucerne World Mountain Conference, Mountain Day at UNFCCC COP 17, and the Rio+20 process.





## Filling the gaps in information on the HKH region

In 2011, ICIMOD published (among others) four reports offering essential information to bridge knowledge gaps in the HKH region. Two reports deal with snow and glaciers, a third examines the effect of climate change on ecosystem services and biodiversity, and a fourth presents new findings on mountain poverty.

The Intergovernmental Panel on Climate Change (IPCC) identified a serious data gap relating to the region's cryosphere, especially snow and ice, in 2007. The ICIMOD publications *The Status of Glaciers in the Hindu Kush-Himalayan Region* and *Snow-Cover Mapping and Monitoring in the Hindu Kush-Himalayas* provide notable contributions to filling that gap, presenting the first authoritative data on the number and extent of glaciers and the patterns of snowfall in the world's most mountainous region. Although the reports point out the limitations of current data and climate-related studies in the HKH, they provide a snapshot of changes occurring in the region. The findings highlight the region's extreme vulnerability to climate change, as rising temperatures disturb the balance of snow, ice, and water, threatening millions of mountain people and 1.3 billion people living downstream in Asia's major river basins.

The third report, *Climate Change in the Hindu Kush-Himalayas: The State of Current Knowledge*, gives state of the art information on climate change and its impacts on biodiversity and ecosystem services. The report suggests responses and a way forward for filling data gaps and linking knowledge to policy at the national, regional, and global levels. ICIMOD released the three reports during Mountain Day, on the sidelines of the UN climate talks in Durban.



Dr Rajendra Pachauri, Chair, IPCC at ICIMOD

“These reports provide a new baseline and location-specific information for understanding climate change in one of the most vulnerable ecosystems in the world. They substantially deepen our understanding of this region – and of all mountain systems – while also pointing to the knowledge gaps yet to be filled and actions that must be taken to deal with the challenge of climate change globally and to minimize the risks from impacts locally.”

– Dr Rajendra Pachauri, Chair, IPCC

ICIMOD conducted a three-year study to fill the information gaps regarding mountain poverty in the HKH region. It produced evidence showing that poverty in the mountains is usually greater than in the plains and also has different causes, underlining a need for specialized policies and interventions to address poverty in mountain areas. India's Working Group on Mountain Eco-systems and Challenges Faced by the People Living in the Hilly Areas used results from the study as inputs to India's 12th Five-Year Plan (2012–2017).

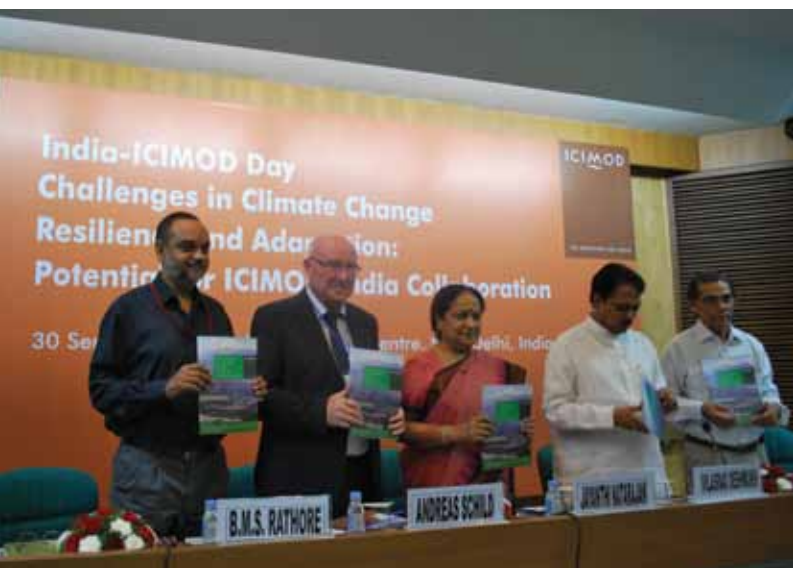
## Contributions to regional cooperation and understanding

With growing interest in regional cooperation, several agencies and governments regard ICIMOD as a valuable partner and facilitator of exchanges and dialogue. In 2011, ICIMOD intensified its engagement with its regional member countries (RMCs) and partners through consultations and the organization of 'country days'. The overall feedback from these interactions was positive, and the resulting follow-up action plans in each country are expected to improve the Centre's communication with the regional countries and partners.



The India-ICIMOD Day, held for the first time in September 2011, had two ministers in attendance and they reiterated their commitment to ICIMOD's efforts. Country days were also held in China, Myanmar, Nepal, and Pakistan. These interactions helped to link country priorities with the regional agenda and increase country ownership in ICIMOD's programmes.

ICIMOD-India Day, New Delhi, India



“Indian assistance to ICIMOD should be increased corresponding to deeper engagement with this regional organization.”

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

## A window to public-private partnerships

The ICIMOD Foundation was established as a not-for-profit organization to support the efforts of ICIMOD in public-private partnerships. The foundation explores joint projects between the private sector and ICIMOD and mobilizes funds from non-traditional sources. This enables private parties to contribute to upscaling and supporting the activities of ICIMOD. In November 2011, the Government of India, through the Ministry of Environment and Forests, pledged a US\$1 million contribution to the foundation. This contribution suggests that ICIMOD's new strategy to involve private companies to meet its overall objectives has been well received and is encouraged.

## Strategic partnerships with global, national, and local partners

In 2011, ICIMOD engaged with numerous partners at different levels from local and national to global. Collaborative agreements were signed with 60 partners in the HKH region (32 government agencies and 28 non-governmental institutions) and 27 beyond the region.

“For WMO, ICIMOD has been a highly competent and reliable regional partner with strategic value in the implementation of programmes that are of high importance to WMO. With its good relations and connections with its member countries, ICIMOD has been valuable in widening the scope of cooperative activities of WMO in the region.”

– Dr Wolfgang Eric Grabs, Chief, Hydrological Forecasting and Water Resources Division, World Meteorological Organization (WMO), Geneva, Switzerland

“As a regional platform, ICIMOD can bring together partners from different countries, which have quite different political, economic, and social dimensions. From the point of view of the outcomes of biodiversity conservation, there always exists a governance gap among those trans-country areas, whether in the HKH or other regions in the world.”

– Professor Yang Yongping, Institute of Tibetan Plateau Research, Chinese Academy of Sciences (CAS), Beijing

“It has been a good partnership because ICIMOD brought technical skills and a global perspective, while ANSAB brought the experience of working in communities. We were able to learn and use the knowledge in our other programmes while ICIMOD will share our experience and knowledge with other countries of the region.”

– Shiva Shankar Pandey, former staff member of Asia Network for Sustainable Agriculture and Bioresources (ANSAB), Kathmandu

“It is time that the expertise and linkages available with and through ICIMOD are made available to various ministries dealing with mountain and mountain related issues. Institutions like ICIMOD could play a vital role in activating mountain related initiatives and accessing the expertise which may be available with them or through their vast network of institutions and experts.”

– Dr R.S. Tolia, former Chief Secretary of State, Uttarakhand, India, in the report of India's Working Group on Mountain Eco-systems and Challenges Faced by the People living in the Hilly Areas

# Changes in ICIMOD Management



Dr David Molden

## New Director General

In December 2011, Dr David James Molden succeeded Dr Andreas Schild as Director General of ICIMOD. A period of overlap and a harmony in the approaches of the outgoing and incoming Director Generals helped make for a smooth transition. At the handover ceremony, Dr Molden expressed his appreciation of the opportunity for overlap with Dr Schild, admiring his passion and noting that he left a positive and big footprint – “or heart-print is a better word”.

Dr Molden 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. Prior to joining ICIMOD, he was the Deputy Director General for Research at the International Water Management Institute (IWMI) based in Sri Lanka; under his leadership, IWMI won the prestigious Stockholm Water Prize and the International Water Resources Association (IWRA) Crystal Drop award for its research. He has worked in several Hindu Kush Himalayan countries, including China, India, Nepal, and Pakistan, and in projects in the Indus, Ganges, Yellow, Mekong, Yangtze, and Amu Darya river basins. He has considerable management experience, including as Chief of Party for the Irrigation Management Project in Nepal, Chief of Party for a water resources strategic research programme in Egypt, and Leader of the multi-institute Comprehensive Assessment of Water Management in Agriculture programme.

Dr Molden was awarded a Ph.D. in Civil Engineering from Colorado State University in 1987, specializing in water resources, and has since developed broader interests in integrating social, technical, and environmental aspects of natural resources management. He has published nearly 200 works in books, refereed journals, research and project report series, the media, and educational materials. He has received many awards including the Outstanding Scientist Award of the Consultative Group on International Agricultural Research (CGIAR) in 2009.

## New Director, Programme Operations

Dr Eklabya Sharma assumed a new position as Director, Programme Operations in 2011. He was previously Programme Manager for Environmental Change and Ecosystem Services.

Dr Sharma is an ecologist with over 25 years of experience in developing, managing, and implementing programmes, mainly in sustainable management of natural resources in the Hindu Kush Himalayan region. He has a Ph.D. in ecology from India. From 1989 to 2001, he led the establishment of the GB Pant Institute of Himalayan Environment and Development in Sikkim, as the Founder Scientist In-Charge. He joined ICIMOD in September 2001. Dr Sharma has received numerous national and international scientific awards and has more than 150 publications to his credit, mostly in peer-reviewed international journals and including seven books.

Dr Eklabya Sharma





## Andreas Schild leaves a heart-print of five years at ICIMOD

ICIMOD offers a sincere thank you to Dr Andreas Schild for his five years of enthusiastic commitment to the institution, its programmes, and its personnel. They were years of positive growth for ICIMOD.

Under Dr Schild's leadership, ICIMOD carried out a change management process which created the institutional infrastructure enabling it to become a truly modern and relevant organization. Those years saw notable development of staff capacity, personnel policy, employment package, IT infrastructure, financial

accounting, budget control, strategic monitoring, and internal audit functions. The ICIMOD Foundation was strengthened, facilitating ICIMOD's work with the private sector. ICIMOD got a new corporate look: a fresh logo, branding system, and website. The Centre expanded its pool of stakeholders through work with youth and with the media, sponsoring workshops and seminars to inform and connect them.

Under Dr Schild ICIMOD's programmes also developed. The emphasis began to shift from donor-driven projects to strong regional institutional programmes. He focused on developing relationships with strategic partners and regional networks. In addition to promoting the transect and landscape approaches, ICIMOD left off looking at the mountains as a closed system, and began to address the problems of downstream areas through the river basin approach. Increased attention was brought to poverty, vulnerability, and economic issues. Dr Schild devoted his boundless energy to shifting the mountain agenda away from predominantly geophysical concerns towards a comprehensive view of mountains as environmental, economic, social, and cultural systems. He brought his strong convictions and ICIMOD's outreach to a more prominent position on the international stage, raising the organization's presence in such global processes as the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), and the Intergovernmental Panel on Climate Change (IPCC).



Dr Andreas Schild

His achievements are perhaps most evident in the increase over the years in the regional member countries' sense of ownership and the commitment of international supporters to ICIMOD and its mission – not only from governments, but also from civil society and academic partners. ICIMOD's work has become highly appreciated, with expanding willingness to support its programmes. In the five years of Dr Schild's tenure, ICIMOD moved from the margins to the mainstream, with growing budget (predicted to be about \$20 million by 2013/2014), programmes, and expectations, and a stronger reputation in the international arena.

He leaves a big 'heart-print' indeed.

# A Regional Exploration of Women and Climate Change Adaptation

In 2011, ICIMOD completed the design of its first regional programme on climate change adaptation in transboundary river basins. The Himalayan Climate Change Adaptation Programme (HICAP) focuses on building knowledge from and for local communities to influence policy and have an on-the-ground impact, especially for women. It integrates cross-disciplinary research in the river basins and transboundary landscapes of the HKH to identify the upstream causes of change, the downstream impacts, and the opportunities and challenges for adaptation.

HICAP follows from two earlier projects – the Himalayan Climate Change Impact and Adaptation Assessment (HICIA) and the ‘Too Much, Too Little Water’ study. The results of these projects, with

additional scoping studies of the eastern Himalayas and consultations with strategic and operational partners, culminated in the creation of HICAP as a regional programme jointly implemented by ICIMOD, the Center for International Climate and Environment Research – Oslo (CICERO), and UNEP/GRID-Arendal.

HICAP has a special focus on women, because social, economic, and political barriers limit their coping capacity, making women more vulnerable than men to the impacts of climate change such as droughts or flooding. Often, women are more likely than men to lose their lives during natural disasters, owing to their lack of basic lifesaving skills or cultural impediments such as clothing that restricts their mobility. Natural disasters also expose women to other risks including human trafficking.

Indawgyi Lake, Kachin, Myanmar



However, women are well positioned to lead the way in adapting to a changing climate and environment because of their key roles in managing households, domestic water use, agriculture, forests, biodiversity, food security, and other sectors.

“Women often play a stronger role than men in the management of ecosystem services and food security. Hence, sustainable adaptation must focus on gender and the role of women if it is to become successful. Women’s voices, responsibilities, and knowledge on the environment and the challenges they face will need to be made a central part of governments’ adaptive responses to a rapidly changing climate.”

– Achim Steiner, UNEP Executive Director

This five-year programme will endeavour to answer several key questions:

- How does adaptation to climate change in mountain contexts differ from that in other regions?
- How can scientific knowledge on climate change be transferred to communities more effectively to help them adapt? What types of science and knowledge are needed?
- How does climate change affect women differently? What can be done to ensure that women are involved in the development and application of knowledge?
- What can be done to ensure that research on adaptation integrates action?

ICIMOD’s strategic and operational partners express enthusiasm for the road ahead as HICAP brings knowledge from the field to national and regional policy processes and global forums for on-the-ground impact.

“The fundamental benefit of working in partnership with ICIMOD is the access to a region that is very complex and diverse, with difficult access to research sites.

“ICIMOD, in addition to being an excellent research institute, is enabling our institution to learn about the problems in the region through the knowledge it produces together with its partner institutions and community level partners.

“In addition, a partnership with ICIMOD enables a level of policy dialogue and policy impact that is difficult for institutions



Udayapur, Nepal

outside the region like ours. Meanwhile, CICERO contributes to linking the on-going work in HICAP with the international community via our networks, our international reputation for high quality research, and our communications strategy. CICERO has an international legitimacy that can help bring regional knowledge to the attention of global policy makers.”

– Dr Asuncion St. Clair,  
HICAP Project Lead of CICERO

“We started working with ICIMOD in 2007 and our first assignment was in 2008 with Too Much, Too Little Water. Aaranyak has a strong focus on research and advocacy. Our mandate is similar to that of ICIMOD, which has helped us build contacts with individuals and organizations to share knowledge. It has helped us to grow as individuals and as an organization by helping us to write better and publish better.

“My individual capacity has been built to a great extent through exposure to international project management. I was able to attend workshops on leading edge technologies. My associates have attended workshops that contributed to their capacity. Technically, ICIMOD has helped us to learn new methodologies and use of new hardware. It contributed to the intellectual strength of the staff members of Aaranyak, and brought us into contact with experts and colleagues in the HKH countries.”

– Dr Partha Das, Aaranyak Society for  
Biodiversity Conservation in Northeast India, a  
national partner in Assam, India







ICIMOD works on strategic responses to the complex issues facing the Hindu Kush Himalayan region, to develop responses to social and environmental problems and changes and enable people's adaptation.

To address these multifaceted issues, ICIMOD works in three main programmes – Integrated Water and Hazard Management, Environmental Change and Ecosystem Services, and Sustainable Livelihoods and Poverty Reduction. ICIMOD gathers, generates, and shares knowledge through a variety of innovative means that support all the programmes.

Over the past four years, the programmes have begun to work in a more integrated manner to respond to the complexities of the issues facing this mountainous region. In 2011, ICIMOD launched its first regional programme completely integrating research in the Centre's core areas across geographic landscapes and river basins.

# Strategic Programmes





Niujuangou Gully, Sichuan, China



# Water and Vulnerability

In the Hindu Kush Himalayas, water is both the most vulnerable resource and a cause of vulnerability in mountain communities. The most profound effects of climate change are likely to be on the availability of water, whether too much or too little.

ICIMOD made notable progress in the area of water and water-induced hazards in 2011. ICIMOD began to analyse water from a basin approach in order to tackle flood risk and water issues in a more holistic way. The Centre also initiated a system for managing flood risk by estimating rainfall in real time to predict potential flood-related risks.

By linking upstream and downstream areas, the basin approach allows for the integration of information about snow and glaciers in analysis of downstream flood risk and water availability. Since this approach will be especially useful for analysing the effects of climate change and adapting to them, it is gaining greater acceptance among key stakeholders in ICIMOD's regional member countries.

The Koshi River basin is an excellent example of a compact transboundary river basin, traversing China, Nepal, and India. To build transboundary cooperation, ICIMOD developed proposals for a multidisciplinary transboundary Koshi basin programme, which have been submitted to potential development partners.

The Indus basin covers over 1 million square kilometres in the mountains of Afghanistan, China, India, and Pakistan. During the dry season, the flow from the mountains is particularly important and affects all aspects of lives and livelihoods. In 2011, ICIMOD conceived a new Indus basin initiative to provide the basic information needed to support wise decision making and planning to ensure water availability, and developed a framework for its coordination. ICIMOD has successfully implemented an approach for glacio-hydrological modelling and assessment of climate change impact in the pilot

catchments of the Indus basin in Afghanistan and Pakistan and built capacity of key stakeholders in glacio-hydrological modelling and monitoring.

In November 2011, the ICIMOD Country Office in Pakistan, the Pakistan Meteorological Department, and the Water and Power Development Authority jointly organized a workshop for the upper Indus basin. The workshop took stock of hydrometeorological monitoring and modelling activities in the upper Indus basin, identified capacity gaps, and developed mechanisms to share scientific information and develop joint monitoring programmes with national and international partners. The 40 participants from various government and non-governmental organizations and academia formed a small working group to develop a broad agenda for the Indus basin initiative. The ICIMOD Country Office Pakistan will serve as the secretariat.

To support regional flood forecasting, ICIMOD tested a remote sensing approach for measuring rainfall and monitoring flow in pilot catchments in China, India, Nepal, and Pakistan. ICIMOD's materials and methodology for flash flood management and related capacity building are being used by partners such as Focus Humanitarian Assistance in Pakistan and the National Disaster Management Authority (NDMA) in India. A community early warning system for flash floods was implemented in Assam, India.

ICIMOD has also developed standardized methods for monitoring snow and glaciers for more accurate information, which is contributing to knowledge on water availability in the region. Data from the member countries are compiled in the online Mountain GeoPortal, which makes the information available in the region and around the globe.

# Creating a System to Send Flood Warnings Faster than Flood Waters

By linking on-the-ground data measurements with satellite information, ICIMOD aims to improve the capacity of six Hindu Kush Himalayan countries to estimate rainfall and predict potential floods and to share the information among the countries and their populations.

The problems that result in floods know no borders; intense rainfall and snow melt in one country or transboundary area can result in floods in other countries. Floods have undone decades of development progress in South Asia and exacerbated poverty in the affected areas. Every year, large swathes of India and Bangladesh are inundated with floodwaters, which displace millions of people. The 2010 Pakistan floods killed about 2,000 people and affected 20 million. In 2008, a breach of an embankment in Nepal displaced more than 70,000 people in the country and over 4 million

in neighbouring India. The impact of flooding is exacerbated by increased migration of poor people to flood-prone lowlands, the growth of dense settlements along the riverbanks, and the effect of climate change on the frequency and intensity of monsoon precipitation.

Together with the World Meteorological Organization (WMO) and partner countries, ICIMOD is implementing the HKH Hydrological Cycle Observation System (HKH-HYCOS) as a part of WMO's World Hydrological Cycle Observing System (WHYCOS). The HYCOS project promotes regional cooperation in real-time data sharing to increase the lead time for flood forecasts of national agencies and enable timely warnings to minimize the adverse impacts of floods. In 2011, ICIMOD entered into agreements with partner countries to select and upgrade hydrometeorological stations and to develop a Regional Flood Information System, in accordance with the interest expressed by Bangladesh, Bhutan, China, India, Nepal, and Pakistan. The aim is to upgrade 28 hydrometeorological stations selected by partner agencies with instruments of international standards for real-time data transmission, and to integrate 216 stations of the WMO Global Telecommunication System in the Regional Flood Information System. The capacity building and technical support of the project are already having tangible benefits at the national level.

Flood in Pakistan



“The main benefit of working with ICIMOD is the opportunity to receive assistance on various issues, due to the vast experience that it has in the region. As well, the chance to interact with similar organizations in the region, which ICIMOD facilitates, is also unique and rewarding. The Department of Hydro-Met Services of Bhutan is a very new organization after the recent restructuring. As we are starting in a new context, working with ICIMOD is proving to be fruitful in achieving our objectives of expanding the network, automation of observation stations, and increasing the capacity.”

– **Chhimi Dorji**, Planning, Coordination and Research Division, Department of Hydro-Met Services, Bhutan

# Building the Capacity to Monitor Ice and Water Resources

ICIMOD is training partners to carry out field-based glacier mass balance measurements and helping them to establish a long-term scientific programme to monitor the cryosphere – glaciers, snow, and ice.

The capacity building is part of a project to establish a glaciological and hydrometeorological observation network in selected glacier catchments for monitoring and assessing changes in glaciers, snowfields, and glacio-hydrology. The project is creating an HKH regional snow cover and glacier inventory database, with standardized data and information from a single consistent source that can be used across the Hindu Kush Himalayan region. It is planned that the information and knowledge generated through the project will be shared through conferences, workshops, networking, and data sharing, cementing ICIMOD's role as a cryosphere knowledge hub.

Without scientific information, it is impossible to predict the possible impacts of climate change with any certainty. With limited capacity among the HKH regional partners, there has been little on-the-ground meteorological and hydrological observation in the high Himalayas. Only three meteorological stations are located above 5,000 m and 38 above 4,000 m elevation. For glacier mass balance monitoring, which tells how much ice is stored in glaciers and the rate at which this amount is changing, in situ measurements are important. Such direct glacier mass balance measurements are complemented by analyses from remote sensing products (e.g. satellite imagery) and modelling.

The project has initiated a web-based cryosphere portal and an operational database of information on hydrology, glaciology, and water-induced disasters, which is already being used by project partners and academic institutions. In Nepal, ICIMOD, in collaboration with partners, has developed a functioning system for regular monitoring of snow and glacier data to analyse the changes each decade in two selected glaciers, Yala and Rikha Samba, and their catchments.

The effort to build regional capacity in cryosphere monitoring has begun with data and information gathering, information exchange, and training for

professionals in Bhutan, China, India, Myanmar, Nepal, and Pakistan. The project partners have also started an M.Sc. course on glaciology research in Nepal, which is the first of its kind in South Asia.

Imja Lake, Nepal



“The Cryosphere Monitoring Project has given us training on mass balance, modelling, remote sensing, safety measures, surveying, and using automatic instruments, which is very essential for us aspiring students. For me, there were many new topics, which were very useful in our field trip to Rikha Samba and Yala glaciers. As an aspiring glaciologist, I have to thank the project for all this training.”

– **Niraj S. Pradhananga**, Climate Section,  
Department of Hydrology and Meteorology,  
Kathmandu, Nepal

“The Cryosphere Monitoring Project has given us several training courses that enhanced our knowledge and enabled us to extract the data from the field, analyse the data, and reach a conclusion based on the acquired data. This training has set a positive track in my career as a glaciologist. Also, the training offers a chance to interact with well-known individuals engaged in the field of glacier studies, share ideas, and hear about their experiences on the glacier.”

– **Ms Sonika Shahi**,  
M.Sc. student in glaciology, Nepal





Bandarban, Bangladesh



# Linking and Valuing Ecosystems

The vast and varied topography of the Hindu Kush Himalayas creates a wide variety of habitats and ecosystems that allow for rich biodiversity while providing resources and amenities for the livelihoods of mountain communities and urban centres downstream.

ICIMOD works with the people of the region to conserve and manage biodiversity as a natural heritage and a resource for mountain livelihoods. It aims to promote resilience to environmental changes through research and advocacy of the issues related to mountain ecosystems by promoting participatory management of transboundary landscapes, watersheds, rangeland resources, and forestry.

In 2011, ICIMOD continued work on transboundary landscapes and ecosystem services. The learning on watershed management, shifting cultivation, valuation of ecosystem goods and services, and payment for environmental services brought new contributions to the environmental knowledge base and regional policy perspectives. ICIMOD strove to enhance enabling policies and the capacities of stakeholders to manage natural resources sustainably. For example, the organization has been working with government, forest user groups, and civil society in Nepal to pilot a mechanism for distributing REDD+ payments fairly.

On-going conservation initiatives promote cultural heritage in the Kailash Sacred Landscape and biodiversity corridors in the Kangchenjunga Landscape. In addition, ICIMOD has begun work in two other landscapes – at the meeting point of three global biodiversity hotspots in the Brahmaputra-Salween Landscape and in the arid protected areas of the Karakoram. Regional meetings held in Myanmar for the Brahmaputra-Salween Landscape and in Kathmandu for the Karakoram-Pamir Landscape gave significant signs of growing interest in transboundary collaboration. To build capacity in these initiatives, ICIMOD has involved the partners in all phases from



Kailash, Tibet Autonomous Region, China

“The support from ICIMOD in the Karakoram transboundary initiative is the right step at the right time.”

– Syed Mahdi Shah, Chief Minister of Gilgit, Baltistan, Pakistan

conceptualization to research, training and exchange visits, and policy-level sharing.

ICIMOD continued work on adaptation strategies through the High Mountain Agribusiness and Livelihood Improvement (HIMALI) project. In 2011, the project conducted action research in two remote districts of Nepal on adaptive agribusiness technologies in selected value chains, especially apples and medicinal plants. It examined how land and water management can be adjusted for resilience to climate change and future challenges and developed innovative tools to measure the adaptive capacities of local institutions and assess community vulnerability to and perceptions of climate change. As a result, local communities and institutions have realized the importance of climate change adaptation and have begun to prioritize agribusiness solutions.

ICIMOD has been instrumental in using and promoting open access data on biodiversity through the Global Biodiversity Information Facility (GBIF) and the Global Mountain Biodiversity Assessment (GMBA) network. Through this work, information on HKH biodiversity has been made accessible through a conservation portal with global linkages. With ICIMOD facilitation, member countries are contributing to the Convention on Biological Diversity's Programme of Work on Mountain Biodiversity by participating in and supporting landscape initiatives that take an ecosystem approach to biodiversity conservation and management.

//Bilateral collaboration for transboundary biodiversity conservation initiatives is easily ignored due to geo-political issues or organizational difficulty. However, the governments of member countries are more supportive and positive towards such initiatives. There are many experiences and lessons that neighbour countries can learn from each other since they share similar problems and opportunities. ICIMOD helped me to find research partners from member countries and improve my capacity for international exchange and cooperation. //

– **Professor Yang Yongping**,  
Institute of Tibetan Plateau Research,  
Chinese Academy of Sciences (CAS), Beijing

Earlier work also showed fruits in 2011. From 2003 to 2009, ICIMOD carried out the Himalayan component of the multi-regional K:TGAL (Kyoto: Think Global Act Local) project, which explored possibilities for including community-based forest management (CBFM) of existing natural forest as an eligible carbon mitigation activity under international climate change agreements, and for using CBFM as a climate change adaptation strategy. In 2011, the project was cited in support of the Government of India's plans for large-scale afforestation and forest restoration.

//It gives me pleasure to share that the K:TGAL (Kyoto: Think Global Act Local) project – regionally coordinated by ICIMOD (2003–2009), in which CHEA was the partner for Indian Himalayas – has been cited in the Green India Mission, one of the eight missions under the National Action Plan on Climate Change (NAPCC), adopted by the Government of India in 2008. In the next 10 years it aims to afforest or eco-restore 20 million hectares. Once the Mission Draft is adopted as a Mission Policy, this work contributed by K:TGAL will lead a way for this ambitious mission across the country. //

– **Dr Pushkin Phartiyal**,  
Executive Director, Central Himalayan  
Environment Association (CHEA),  
Uttarakhand, India

Red panda, Darjeeling, India





# On-The-Ground Methods to Implement the Global REDD+ Concept



*//Now, our capacity and awareness is raised and we cut grass and fuelwood in a more systematic way in particular plots of our community forest. We feel like we are helping the world, //*

– Ms Chhami Kumari,  
Chairperson of Chelibeti CFUG, in  
Chitwan district of Nepal.

An ICIMOD action research project, carried out in partnership with the Federation of Community Forestry Users Nepal (FECOFUN) and the Asia Network for Sustainable Agriculture and Bioresources (ANSAB), is demonstrating ways to implement the REDD+ (Reducing Emissions from Deforestation and Forest Degradation) concept and build capacity at the ground level in Nepal. The project has developed the first-ever Forest Carbon Trust Fund in Nepal and piloted a mechanism for governing the distribution of carbon payments to communities for their forest conservation and enhancement efforts; under this scheme performance-based incentives totalling US\$ 95,000 were distributed to representatives from community forest user groups (CFUGs) in three watersheds in Dolakha, Gorkha, and Chitwan districts in June 2011.

The project covered over 10,000 hectares of community-managed forest and reached over 16,000 households. It is one of the world's first pilot REDD+ projects involving local communities in monitoring the carbon in their forests and providing the necessary training for them to do so. A seed grant of US\$ 100,000 annually provided by the project donor has initiated the fund for three years.

The funds are allocated to CFUGs based not only on the quantity of forest carbon saved above the baseline, but also on socioeconomic criteria such as the relative numbers of households of indigenous peoples, Dalits, and poor people, and the population of women in the CFUG. The CFUGs use the funds for forest conservation, capacity building activities, and livelihood improvement activities for poor women and disadvantaged groups.



REDD+ project, Dolakha, Nepal

The project has attracted visiting forestry and government officials from India, Pakistan, Bhutan, and Tanzania, and researchers and scholars from Asia, Europe, North America, and Australia. By implementing REDD+ at the local level, this pilot project aims to offer its experiences and learning as inputs to the global REDD+ discourse and to the on-going process of developing national REDD strategies in developing countries. The system works in Nepal because community forestry has operated relatively successfully there for over three decades. The same approach may take longer in countries that do not have community-based forest management policies and institutions in place.

FECOFUN, as a member of the REDD Working Group under the REDD Cell of the Ministry of Forests

Handover of REDD+ payment, Chitwan, Nepal



and Soil Conservation, Nepal, feeds knowledge generated by this project to the national level discourse for policy making on REDD+ in Nepal. At the global level, the project is working with research institutions and firms specializing in the carbon market to link REDD+ activities to financing sources.

Having actually worked on the ground and offered payments, the REDD+ project is raising questions and opening discussion. For instance, what should be the criteria and basis for making REDD+ payments? Are the social criteria for sharing benefits from carbon payment feasible? With the REDD+ mechanism compensating the incremental growth of forests, how can the carbon stored in existing forests be valued? Other questions relate to replication of

the mechanism in differing situations and enabling feedback of the findings into national policy, regional initiatives, and global forums.

While the REDD+ mechanism demonstrated here can help development assistance money for conservation and poverty reduction flow into watersheds and communities, it does not have the economy of scale to compete in the carbon market for REDD+ finance. The carbon offsets from these small and varied forests may appeal only to limited market actors, as they will cost more because of the level of effort required to measure the carbon and work in a consultative manner with a large population. ICIMOD is now carrying these messages to regional and global forums while promoting community REDD+.

## Voices from the communities

“The advantage of REDD is that now people realize that they can earn income from conserving the forest as well as from selling wood. They are planting more trees in bare areas of the community forest. More CFUGs are asking to participate in measuring carbon.”

– **Mr Bharat Dhungana**, the REDD coordinator in Chitwan, a FECOFUN district representative, and member of his local CFUGs

“The project trained two women from our CFUG in the technical skills to support the forest carbon measurements and monitoring. There is also greater awareness of the rights of women, poor, and disadvantaged people so we devoted almost all of our seed money to the activities to try to improve their livelihoods. If we can start to help the Chepang villages upstream on the high ridges to grow income-generating crops and protect the forests, it will save us from landslides and floods. In a similar way, our community forest saves the villages below us from flooding and should be of value to them.”

– **Mr T. Adhikari**, the Treasurer of Kankali CFUG in Chitwan

“We have been managing our forests for many years, but now with the REDD+ project we have learned new skills to improve our capacity to manage our forests. We also have activities for women and smokeless stoves (financed through seed money) so we use less fuelwood and have less smoke. From the seed money, we started income generating activities for the poor and disadvantaged people like raising pigs, goats, chickens, or vegetables.”

– **Ms Laxmi Karki**, a member of the district FECOFUN

“In 2009, we had five days of basic training on how to measure carbon and how to mobilize our communities to make them aware of carbon and REDD+. The carbon work is very technical and we need more training for the skills and knowledge to continue the work and learn to do the calculations. We also need the equipment to do the measurements.

“My community appreciates the REDD+ programme because it has funds for income generating activities and helps us to preserve our forests. This is a good system with levels of committees so there is transparency and so each level shares the information. With this training and capacity, I realize that I am responsible to continue this work and to offer my support as the government prepares a plan for REDD+ so that the future programme reaches the villages and helps us to improve our livelihoods, protect the forest, and reduce climate change.”

– **Mr Uttam Praja**, trained to work for the project as a REDD facilitator for FECOFUN



Women's group, REDD+ project,  
Chitwan, Nepal



# Knowledge and Policies for Rangelands

Occupying over 60 per cent of the HKH land area, rangelands are one of the most fragile and critical ecosystems in the context of the changing climate. Despite their importance and vulnerability, these vast areas have been underacknowledged in government planning and development spending. For over a decade, ICIMOD has been promoting research and development for rangelands in six countries of the HKH.

In 2011, ICIMOD made significant progress in developing knowledge and policies for rangelands. In addition to preparing base maps of the region's rangelands, with its partners ICIMOD compiled reliable baseline data on the socioeconomic conditions of 667 households in sample pastoral communities in Afghanistan, Bhutan, China, India, Nepal, and Pakistan. For the first time, livestock valuation was done in Bhutan, China, India, Nepal, and Pakistan to support government planning with particular reference to climate change mitigation and adaptation measures for pastoral communities. The study aimed to determine the vulnerability of pastoral communities in the HKH to climate and other changes and to assess their resilience in terms of livelihood diversification under various socio-ecological systems; it included a gender needs assessment in Bhutan, China, Nepal, and Pakistan. Overall, respondents reported an increasing frequency of droughts and floods and perceived increasing shortages of food, water, fuel, and fodder.

In 2011, ICIMOD concluded its work with a project promoting decentralized clean energy services for enhanced adaptive capacity in rangeland sites of Bhutan, China, Nepal, and Pakistan. The introduction of these energy alternatives such as solar



Northwest Yunnan, China

*“I appreciate ICIMOD's efforts to initiate the development of rangeland policy for Pakistan. The scientists of PARC are still working with the rangeland stakeholders in the provinces to finalize this precious document.”*

– **Dr Muhammad Islam**, Director,  
Range Research Institute, National Agriculture  
Research Centre, Islamabad, Pakistan

energy, biogas, and bio-briquettes has helped local communities to cope with their domestic energy needs and to reduce their household contributions to black carbon in the atmosphere. The project now continues in the hands of partners.

Results are emerging from ICIMOD's cumulative efforts to promote an enabling environment for developing rangeland policy in HKH countries. With ICIMOD's support, partners in Nepal and Pakistan have formulated draft rangeland policies and submitted them to the respective governments. In Afghanistan, ICIMOD contributed to the review of rangeland policy, bringing to bear its expertise and knowledge from the other regional countries. ICIMOD provided the partners with continuous technical support for concrete improvements in the policy, based on case studies of other countries' policies. ICIMOD launched a study in 2011 to review the policies and institutions governing rangelands in the HKH member countries.

Solar cooker. Upper Mustang, Nepal







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





# Sharing Knowledge for the Region and the World

ICIMOD reaches out in as many ways possible to raise awareness of findings and solutions for mountain issues. It aims to ensure that knowledge transfer results in engagement, learning, and changes in policy, programmes, and behaviour. As presented by Kunda Dixit in an ICIMOD media workshop in 2011, *“Words into Action: Public awareness → Public pressure → Policy makers → Policy change!”*

The learning processes in the HKH region are influenced by the sociocultural context in which knowledge is packaged and shared. Hence, ICIMOD’s knowledge management and communications units provide a framework to disseminate information through different media in a coordinated way.

## Publications for stakeholders and the public

ICIMOD continued its contribution to knowledge sharing in 2011 with 63 in-house publications and 62 staff contributions to journals and book chapters. The combined effect of ICIMOD’s attention to quality and rebranding resulted in a doubling of the number of publications distributed; a marked increase in press coverage and requests for information, interviews, and other contacts; and a notable increase in visits to the website.

In 2011, ICIMOD disseminated 107,000 publications in hard copy, and 74,000 were downloaded. Media and public relations activities included responses to more than 80 requests for interviews, information, or visits; 10 newspaper articles by staff; 20 press releases; and regular presence at fairs and other outreach events. ICIMOD was covered in more than 400 press items in the HKH region and beyond.

## Comments from readers...

“The Flash Flood Trainers Manual is a substantial and valuable booklet for educating and training of local authorities and stakeholders. The clear and structured content makes this volume useful for the education of students in water management.”

– from **Institute of Hydrology**, Austria

“We are very grateful to you for sharing such a wonderful trainer’s manual on flash floods. Sindh has faced continuous flash floods for the last two years so this manual will guide our experts at the field level.”

– from **Sindh**, Pakistan

“Thank you for the flash flood manual and congratulations to ICIMOD for the excellent work done on the publication.”

– from **Associated Programme on Flood Management**,  
World Meteorological Organization

“The two ICIMOD publications on glaciers and snow-cover mapping and monitoring in the HKH are very important to our current research.”

– from **Institute of Tibetan Plateau Research**,  
Chinese Academy of Sciences

“The book and DVD (on glaciers) are important and informative for glaciologists and hydrologists. You used the most modern tools to research lakes and glaciers in Nepal and obtained outstanding results. I consider them the best in the world. This is good example for other researchers.”

– from **Department of Glaciology**, Institute of Geography,  
Russian Academy of Sciences

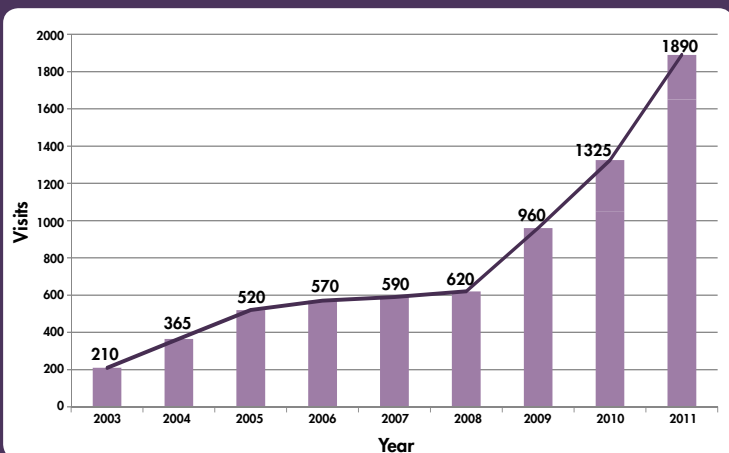




## ICIMOD website

Compared to 2010, 40 per cent more visitors went to the ICIMOD website and 30 per cent more ICIMOD publications were downloaded in 2011 (Figure). Anyone can subscribe to the ICIMOD Facebook page, follow ICIMOD on Twitter, or subscribe to or visit ICIMOD on YouTube.

ICIMOD website visits/day



## Hub for external networks

ICIMOD continues to be the knowledge hub for the Asia-Pacific Water Forum and the Asia-Pacific Mountain Network, which is the Asia-Pacific node of the Mountain Forum. As in previous years, the Food and Agriculture Organization of the United Nations (FAO) selected ICIMOD to implement knowledge sharing training sessions for its implementation partners in the region. Over 120 participants, including selected ICIMOD staff and partners, attended these sessions.

ICIMOD has remodelled its library as a Knowledge Centre focusing more on e-resources, with open

access computer terminals, and integration with the publications dissemination unit. Large parts of the resources are being digitized for inclusion in an e-library platform, the Himalayan Document Centre (HIMALDOC), which was launched in March 2011. HIMALDOC provides bibliographic information about various types of resources related to sustainable mountain development and direct access to selected full text and multimedia files in electronic format. The resources include books, articles, periodicals, theses, multimedia products, and other reference materials. By December 2011 the system included more than 14,700 records.

## Innovative knowledge outreach

In 2011, ICIMOD presented two Knowledge Forums with distinguished speakers, which attracted over 200 visitors each. The first forum, in March, featured a presentation on atmospheric brown clouds and black carbon by Dr Veerabhadran Ramanathan, Distinguished Professor of Climate and Atmospheric Sciences at the Scripps Institution of Oceanography of the University of California, United States. The

Dr Veerabhadran Ramanathan



second forum, in September, featured Dr Rajendra Pachauri, Director General of The Energy and Resources Institute (TERI), India, and Chairman of IPCC, who spoke on Climate Change in the Himalayas.

Staff and visiting scientists also presented ten internal knowledge seminars for learning and dialogue on new and emerging mountain topics and on-going project experiences.



Furthermore, two workshops helped media representatives untangle the facts and fiction of climate change, and two workshops engaged regional youth networks in discussing climate change issues.

The 'Promoting Herbal Gardens in Schools' initiative begun in 2010, which raised awareness on the conservation and uses of medicinal and aromatic plants among children in 21 schools in Nepal, was handed over to Environmental Camps for Conservation Awareness (ECCA) which will continue to encourage schools to establish herbal gardens. ICIMOD developed a video to share the concept with other countries in the region. In November 2011, the Ministry of Agriculture and Forests of the Royal Government of Bhutan, the Council for Renewable Natural Resources Research of Bhutan, and ICIMOD signed a Memorandum of Understanding to undertake a similar initiative in Bhutan.

## Development of the Godavari Training Centre

ICIMOD has begun to implement a business plan to increase the effectiveness of the Godavari Demonstration and Training Centre and transform it into a knowledge park. In 2011, it provided hands-on training on natural resources management topics to 72 visitors. The training centre also supported the 'Promoting Herbal Garden in Schools' initiative with seedlings and demonstration gardens. In addition, the centre supported the Community Forest User Group in Chapakharka by providing technical and planting material (cardamom) for income generation activities. The Godavari centre had 4,659 visitors in 2011.



School herbal garden, Kathmandu, Nepal

“An excellent demonstration centre to disseminate appropriate technologies. The centre has a huge role to play to transform the rural economy on the principles of sustainable development.”

– **B.M.S. Rathore**, Joint Secretary,  
Minister of Environment and Forest,  
New Delhi, India

“I am inspired by the simple low-cost technologies and effective and useful solutions demonstrated and provided by ICIMOD for the mountain people. These efforts can be replicated easily in my province. I invite ICIMOD to share its experience for sustainable and nature-friendly development in Gilgit.”

– **Syed Mehdi Shah**,  
Chief Minister, Gilgit, Pakistan

“Visiting ICIMOD's Godavari demonstration and training centre is a unique experience for me. Most of the technologies demonstrated are very much relevant to the hill districts of the Chittagong Hill Tracts.”

– **N.B.K. Triparu**, Secretary, Ministry of Chittagong Hill Tracts, Government of Bangladesh

Godavari Demonstration and Training Centre, Lalitpur, Nepal





## Engaging Youth and Media in Climate Discussions

In 2011, ICIMOD organized several events targeted to youth and media. ICIMOD's Asia Pacific Mountain Network (APMN) organized workshops to engage regional youth networks and media representatives in discussions on climate change, the green economy, and sustainable development.

Young people from 17 Asian countries participated in the week-long training and knowledge sharing workshop 'Asia Pacific Youth Forum on Mountain Issues and Climate Actions', organized by APMN in Kathmandu. The participants included 33 young people from ICIMOD's member countries and nine from other countries in the Asia-Pacific region. Coming from a wide spectrum of social and academic backgrounds, the participants were all below the age of 29 and more than 60 per cent of them were women. The workshop aimed to help build the next generation of leadership in sustainable mountain development and climate actions. The workshop made a declaration and submitted it to the UNFCCC COP 17 meeting in Durban, South Africa, and the Lucerne World Mountain Conference. In addition, it drafted the 'Asia Pacific Youth Position Paper on Rio+20', which was offered as input to the Zero Draft for Rio+20.

In November 2011 ICIMOD, within the framework of SERVIR Himalaya, organized a youth workshop in Bhutan, 'Earth Observation: Empowering Youth for Climate Actions in the Himalayas' in conjunction with the Climate Summit for a Living Himalayas.

*"After the youth forum, I came back to my country ready to start the first step – I will do what I can do, and motivate the other youth for knowledge sharing and building up capacity on current issues that we face in Myanmar."*

– **May Zin Thaw**, a Youth Forum participant, Myanmar

In May 2011, ICIMOD with partners including the Asia Pacific Adaptation Network, Stockholm Environment Institute (SEI), and UNEP organized a media workshop for journalists from South Asia. In November, ICIMOD organized a second workshop for journalists from the regional member countries. The goal of both workshops was to orient media representatives on the pressing issues of climate change and the vulnerability of the people of the region to the impacts of these changes. Participants were also briefed on emerging issues such as green economy.



Asia Pacific Youth Forum at ICIMOD

At the May workshop opening, Dr Young-Woo Park, Regional Director and Representative for Asia and the Pacific, UNEP, explained the rationale: "The basis of the three-day media workshop is harnessing the power of media and their influence on public opinion in this region for raising awareness on climate change and the need to adapt to it."

*"When I started writing for Reuters, understanding the technicalities was a stumbling block to my efficient reporting on climate change, environment, green economy, and mountain development issues. ICIMOD's media training on these issues, field trips to its project areas, and exposure to the local communities have built up my capacity to write on these issues. Thanks to ICIMOD media training, I feel empowered with knowledge and good understanding about these challenging issues and am now comfortable to write on them."*

– **Saleem Shaikh**, Climate Change and Development Correspondent, AlertNet Climate, Reuters News Agency, Pakistan

*"The workshop addressed concerns of journalists covering climate change with detailed presentations on climate change adaptation, impacts on glaciers, and field visits for first-hand feel of communities engaged in forestry, and the impacts of glacial lake outburst floods. The workshop gave us access to numerous resource persons, and research and networking opportunities for our continuing work."*

– **Meena Menon**, a participant representing *The Hindu*, Mumbai

# Connecting Space to Village: Enabling On-The-Ground Decisions and Policy

In November 2011, ICIMOD demonstrated its remote sensing applications in a symposium, exhibit, and youth forum on the sidelines of the Climate Summit for a Living Himalayas in Thimphu, Bhutan. The exhibit showed the variety of real-world applications that ICIMOD is developing and sharing through the Mountain GeoPortal, from monitoring the melting of glaciers and snow to assessing agricultural productivity for food security analysis, detecting forest fires, and mapping rapid responses for disasters and emergencies.

The Mountain GeoPortal is a web-based virtual platform for geo-information and knowledge resources of the Hindu Kush Himalayan region. It facilitates the sharing, integration, and use of geographic information for a wide range of users. It includes training and educational resources, map services, spatial visualization tools, and other related geo-information based services.

These modern decision support tools and technologies aid scientific understanding of mountain systems and thus enable better policy decisions and appropriate development interventions. The use of remote sensing is being mainstreamed in almost all of ICIMOD's strategic programmes. ICIMOD is developing applications in five key areas: cryosphere and water, ecosystems and biodiversity, disaster preparedness and emergency response, transboundary air quality and black carbon, and agriculture and food security.

The ICIMOD side events during the summit in Bhutan highlighted 15 applications, including tools for forest fire detection and monitoring, earthquake emergency

response in the Kathmandu Valley, and modelling water availability in a river basin under different scenarios. There was also a demonstration of land cover databases for Bhutan and Nepal containing data from 1990, 2000, and 2010.

ICIMOD has used these remote sensing tools to map 55,254 glaciers from Afghanistan to the far eastern end of the Himalayas – helping to fill the knowledge gaps identified in the IPCC report of 2007 and convert the HKH from a data deficient to a data sufficient region. The published reports on the regional status of snow and glaciers, released at Mountain Day at COP 17 in Durban, South Africa, were widely covered in the international press, including the *International Herald Tribune* and BBC News. In the month they were launched, they resulted in 1,500 downloads. The findings are having an impact at the global level by contributing to understanding of climate change effects in the cryosphere.

Release of ICIMOD publications in Durban, South Africa



3D demonstration of Eastern Himalaya during Bhutan symposium



“With space technology advancement, we are able to understand climate change challenges by recording and analysing information such as changes in climate variability, food security mapping, glaciers and land-use changes over time. Access to such information should be made a fundamental right of all, and it should be made available in the public domain so that today's slogan ‘from space to village’ can be truly meaningful.”

– **The Honourable Lyonpo Dr Pema Gyamtsho**, Minister for Agriculture and Forest, Royal Government of Bhutan, speaking at the Climate Summit for a Living Himalayas







A photograph of a mountain trail in Ladakh, India. A line of pack animals, including mules and horses, are carrying loads up a steep, rocky slope. The animals are wearing colorful gear, including yellow and red. The background features jagged, rocky mountain peaks under a blue sky with scattered white clouds. The foreground is a rocky, sparsely vegetated slope.

# Country Offices and Committees

Ladakh, India





Xishuangbanna, China



# CNICIMOD Secretariat

The Chinese Committee on ICIMOD (CNICIMOD) held a consultation meeting on its second five-year work plan in Beijing in May 2011. The Secretary General of CNICIMOD, Dr Deng Wei, reported on progress in organization building, implementation, and project cooperation over the past five years and introduced the new work plan; the consultation provided constructive suggestions.

ICIMOD and its Chinese partners organized ICIMOD-China Day in Beijing in July 2011 to further cooperation between ICIMOD and its Chinese partners and enhance Chinese ownership in ICIMOD. Participants presented an overview of their joint research, reflected on the challenges involved, and put forward suggestions for future collaborative projects especially in transboundary areas. During the workshop, ICIMOD Director General Andreas Schild delivered a certificate to academician Sun Honglie, former member of the ICIMOD Board of Governors, to honour his contributions to the organization.

CNICIMOD and the Asian International Rivers Center (AIRC) organized a workshop on 'Environment and Development of Mountain Regions under Climate Change' in Kunming, China, in December 2011. Its main objective was to mobilize scientists to push for multilateral cooperation in environmental conservation and to contribute to sustainable development in mountain regions. Dr Ouyang Hua from ICIMOD delivered a

speech on Climate Change and Transboundary River Basin cooperation within the HKH region.

The Chinese Academy of Sciences (CAS) and ICIMOD have collaborated on the project 'Geo-Surface Processes and Regional Adaptation to Climate Change in Himalaya Region' since 2009. A summary workshop held in Kunming in December 2011 reviewed the project's implementation and achievements and suggested objectives for the next phase. ICIMOD expressed its willingness to strengthen cooperation in research and put forward project proposals with Chinese partners.

Two partners of this project, the Institute of Mountain Hazards and Environment of CAS and Tribhuvan University, Nepal, have established working ties; in March 2011 they signed a scientific cooperation agreement to initiate a new phase of collaboration.

On 11 December, CNICIMOD – with support from ICIMOD and FAO – organized promotional activities to celebrate International Mountain Day 2011, including distribution of books, pamphlets, and videos.

In 2011, CNICIMOD published a report summarizing the five years of work from 2006 to 2010 and putting forward its future vision. Two issues of the CNICIMOD Newsletter gave updates on the collaborative activities of ICIMOD and CNICIMOD on mountain research and development.

ICIMOD-China Day, Beijing, China







Panjshir Valley, Afghanistan

# Afghanistan Office

In 2011, the ICIMOD country office focused on building partnerships and enhancing the capacity of its Afghan partners, mostly government ministries and universities. The ICIMOD country office was registered officially with the Ministry of Foreign Affairs. It supported the implementation of a wide variety of programmes in the country and sent several Afghan representatives to workshops and conferences in the region. The first group of Afghan university instructors supported in advanced studies by the Himalayan University Consortium completed their programmes; following studies in India, Nepal, Pakistan, and Thailand, 21 students received their masters degrees in 2011. Six more are expected to finish in 2012.

As part of the South Asia Water Initiative (SAWI) of the World Bank's Small Grants Programme, ICIMOD conducted a workshop in March 2011 to develop regional proposals for research projects on river basin and climate change topics, with institutions from Afghanistan as main partners. The workshop included participants from Kabul University, the Ministry of Energy and Water, the World Bank, Kabul Polytechnic University, the Society of Afghan Engineers, and the National Hydrology Committee.

In partnership with the Sustainable Land Management Institute (SLMI), ICIMOD provided technical support for training to build the capacity of local professionals for evaluation and documentation of good practices in sustainable land management. Eighteen local professionals attended from Bamyan University, Helvetas, Solidarity International, and the Agriculture Department of Bamyan Province.

ICIMOD provided technical support to the development of a National Plan for Rangeland Management in Afghanistan and for an assessment of the status of the country's rangelands using GIS/RS techniques, in partnership with the Ministry of Agriculture, Irrigation,

and Livestock (MAIL) and Kabul University. The ICIMOD country office and MAIL held beekeeping training for 11 'progressive' (i.e. modernization seeking) beekeepers and nine relevant MAIL staff in July 2011.

Six Afghani officials from the Afghan Geodesy and Cartography Head Office (AGCHO) attended skills training. One official stayed in Kathmandu for a month of on-the-job mapping-related training, while two officials had on-the-job training on the GeoNetwork metadata system.



Output from photographic mission, Bamyan, Afghanistan

A photographic mission in Afghanistan produced a large set of high quality photographs for use in publications, the website, and presentations.

The ICIMOD Director for Programme Operations visited Kabul to assess the overall activities of ICIMOD and their impact in the context of Afghanistan's development. He consulted Afghan partners and international agencies. The outcome of the visit was improved collaboration between ICIMOD and its partners in Afghanistan.





Kalasha Valley, Chitral, Pakistan

# Pakistan Office

The Pakistan Office was instrumental in the implementation of the project 'Improved Monitoring of Snow, Ice, and Water Resources in the Indus Basin'. Key activities included support to study missions of the Pakistan Meteorological Department (PMD) and Water and Power Development Authority (WAPDA) to the Passu Glacier, and recording hydrometeorological data.

The office organized a one-week training workshop, 'Strengthening North-South Cooperation in Climate Change Research: An Initiative for the Upper Indus River Basin' at the Swiss Federal Institute of Technology (ETH) in Zurich for Pakistani scientists from PMD, WAPDA, the University of the Punjab, the Global Change Impact Study Centre (GCISC), and the National University of Science and Technology. The training resulted in enhanced understanding of hydrological modelling concepts and the development of relationships among European partner institutions and Pakistani experts. It represents a step towards the development of a project on hydrological modelling in the upper Indus basin.

The country office organized a national workshop on 'Hydrometeorological Monitoring of Upper Indus Basin' to consider of the capacity of various institutions to undertake hydrometeorological and modelling research, identify capacity gaps, and develop mechanisms for sharing scientific information and developing joint programmes. The country office played a key role in the establishment of a remote sensing/GIS lab and transfer of tracer technology for monitoring water flows in turbulent mountain streams to WAPDA. It also facilitated the signing of Letters of Agreement with WAPDA and PMD for the HKH Hydrological Cycle Observation System (HKH-HYCOS) project.

In April, the country office organized Pakistan-ICIMOD day in Islamabad. Its objective was to assess the on-going collaboration with national

partners and identify strategic areas of cooperation for ICIMOD's planning. The event was organized in collaboration with the nodal agency, the Ministry of Food and Agriculture (MINFA). The participants included 137 individuals representing 40 institutions – government, NGOs, and media. The emerging priority areas for future collaboration with the national partners included cryosphere monitoring; research on climate change, and its impacts on hydrometeorology, biodiversity, and livelihoods of mountain communities; and adaptation measures.



Weather station, Indus basin, Pakistan

The country office interacted with multilateral and bilateral donors and gave briefings about the ICIMOD programme at various forums in Pakistan and in the region. A project on REDD preparedness in Pakistan was formulated with financing from the One UN Programme. During 2012, the focus of the country office will continue to be on the formulation, resource mobilization, and implementation of the larger Indus basin programme, and implementation of the REDD and HYCOS projects.





# Also at ICIMOD...

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

The SANDEE regional network, based at ICIMOD, aims to strengthen the capacity of individuals and institutions to undertake research on the interlinkages of economic development, poverty, and environmental change and to disseminate practical information for development policies.

In 2011, SANDEE supported research on climate change, biodiversity conservation, and policy analysis. In particular, we launched three cross-country studies on climate and migration in Bangladesh, India, and Pakistan. We seek to understand how migration may be an autonomous adaptation strategy and the extent to which the impact of weather on agriculture influences the movement of people.

This research complements on-going projects to understand why farmers in Bangladesh, India, Nepal, and Pakistan burn agricultural residues during wheat and rice harvesting. This burning causes substantial emissions of trace gases and particles that can have adverse health and climate impacts. The study in India examines farmers' adoption of technology that reduces rice residue burning. The findings of these studies can be used to design incentive programmes to help farmers forego burning.

SANDEE's environmental policy research support includes an examination of price subsidies, in particular for non-timber forest product pricing policy in India and renewable energy subsidies in Nepal.

As part of this effort, SANDEE organized a training programme on policy analysis for its senior researchers. The workshop by Professor Nancy Olewiler provided analytical tools that enable economists to think more broadly about the policy process. It was also an opportunity for senior SANDEE researchers to come together and discuss SANDEE's next decade.

In 2011 SANDEE trained about 100 colleagues on a range of issues. An annual three-week course in Environmental and Resource Economics continues to be SANDEE's flagship course, strengthening economics teaching in South Asia and helping to link research with training. To build capacity in regions underserved by teaching and research, SANDEE conducted four training workshops. These included a five-day training programme for northeast Indian researchers in partnership with the OKD Institute of Social Change and Development in Guwahati, a workshop in Shillong on 'Proposal Writing for Environmental Economics', and two research and writing training programmes in Bangladesh.

Cambridge University Press published SANDEE's second book – *Environmental Valuation in South Asia*. It gives an overview of environmental problems in South Asia and examines how economic valuation techniques could be used to assess these problems. Ten working papers and associated policy briefs were published in 2011, in addition to numerous refereed journal articles based on SANDEE research.

As South Asia makes economic strides, it is critical to ensure that measures of growth account for changes in natural assets. The Government of India took an important step in this direction by appointing an expert group to develop a framework for greening India's national accounts. SANDEE's founder, Sir Partha Dasgupta, is chairperson of the group and several SANDEE researchers are members. This initiative provides an opportunity to measure growth while addressing issues of how national accounts can be 'greened', how national data can be collected, what should be valued, and whether empirical estimates of the value of non-market environmental goods and services are accurate. As countries take small steps forward to account for the environment, SANDEE hopes that its future work will be defined by this need.





MoU signing at ICIMOD



## Partnership Development, Publications, People, and Finances



# Partnership Development

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

## Strategic partnerships with international organizations

- 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 areas 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 organize 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 clouds.
- 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:
  - Ev-K2-CNR (Mount Everest-Mount K2-Italian National Research Council), Italy; and
  - 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 hydroclimatology research and development.
- ICIMOD signed an agreement with the National Aeronautics and Space Administration (NASA) in support of the SERVIR-Himalaya initiative
- An agreement was signed with UNEP, Nairobi, to cooperate with ICIMOD on the project 'Assessment in Dryland Areas in the Hindu Kush-Himalaya'.
- A strategic agreement was entered into with the Stockholm International Water Institute (SIWI), Sweden for collaboration in research on water governance, policy, and participation in policy dialogues.
- For the preparation of climate change scenarios for pilot catchment in the Indus Basin, an agreement was signed with the Swiss Federal Institute of Technology, Zurich.
- An agreement was signed with the World Meteorological Organization (WMO), Switzerland, for the rehabilitation of the hydro-meteorological network of Pakistan.
- An agreement was signed with the United Nations Development Programme (UNDP), Nepal, for the implementation of a South-South Knowledge Exchange and Writers' Workshop and support to the Government of Nepal's national position paper as part of the Rio+20 preparation process.
- An agreement was signed with the United States Department of State, United States Embassy, Nepal, to host a regional workshop to share knowledge on existing glacier monitoring efforts and develop common methodologies.
- A partnership was established with the Secretariat of Asia-Pacific Regional Target Coordinators (AP-RTC) to conduct a part of Asia-Pacific Regional Process the 6th World Water Forum.
- An agreement was entered into with the United Nations Development Programme (UNDP), for the implementation for preparing full-size project document for community-based flood and glacial lake outburst risk reduction for UNDP Nepal.

- A financial and technical agreement was signed with GIZ for the project RED, Uttarakhand, India on 'Development of Knowledge Products on Value Chain Development in Uttarakhand.

### 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; and
  - 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 processes, 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; and
  - Aga Khan Rural Support Programme (AKRSP), Chitral, Pakistan.
- For the adoption and upscaling 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; and
  - CSK Himachal Pradesh Agricultural University, Palampur (India).

Visiting partners watch a demonstration of glacial mapping at ICIMOD





- 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.
- An agreement was signed with the Ministry of Environment and Forests, Government of Bangladesh, to organize and host a regional expert group meeting on water for the Climate Summit for a Living Himalayas – Bhutan 2011 and to produce a regional report from it.
- For the implementation of the project 'Establishment of a Regional Flood Information System in the Hindu Kush-Himalayan Region' (HKH-HYCOS), funded by the Government of Finland, agreements were signed with the Bangladesh Meteorological Department; the Gross National Happiness Commission, Bhutan; the Pakistan Meteorological Department; and the Water and Power Development Authority, Pakistan.
- For the implementation of the three major components of the AdaptHimal agreements were signed with the Western Uplands Poverty Alleviation Project, Nepal; the Leasehold Forestry and Livestock Programme, Nepal; the North Eastern Region Community Resource Management Project, India; and the Meghalaya Rural Development Society, India.
- Under the 'Kailash Sacred Landscape Conservation Initiative' project, agreements were signed with the Central Department of Botany of Tribhuban University, Nepal, and the GB Pant Institute of Himalayan Environment and Development, India, and IGSNRR, China.
- For designing and setting up a REDD payment mechanism in the community forest management system in Nepal, under the REDD+ project funded by the Norwegian Agency for Development Cooperation (NORAD), agreements were signed with the Federation of Community Forestry Users' Nepal (FECOFUN); the Asia Network for Sustainable Agriculture and Bioresources (ANSAB), Nepal; Forest Action, Nepal; and the South Asian Network for Development and Environmental Economics (SANDEE).
- For the assessment of impacts of particulate air pollutants on respiratory health of school children in the Kathmandu Valley under the Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia, an agreement was signed with Nepal Health Research Council (NHRC), Nepal.
- ICIMOD entered into collaboration with the Institute of Tibetan Plateau Research, Chinese Academy of Science (ITP-CAS) for sharing of information to strengthen databases of the region.
- For monitoring and assessment of changes in glaciers, snow, and glacio-hydrology in the HKH under the 'HKH Cryosphere Monitoring Project', with a special focus on strengthening the capacity of Nepalese organisations, an agreement was signed with Kathmandu University, Nepal.
- With the purpose of promoting herbal gardens in schools in Nepal, an agreement was signed with Environmental Camps for Conservation Awareness, Nepal (ECCA).
- For the implementation of the Baseline Vulnerability and Adaptive Capacity Assessment in the Eastern Brahmaputra Basin as a part of the Component 5: Vulnerability and Adaptation of the Himalayan Climate Change Adaptation Programme (HICAP) agreements were signed with
  - Aaranyak, Assam, India;
  - The Aga Khan Rural Support Programme (AKRSP), Pakistan; and
  - Nepal Development Research Institute (NDRI), Nepal.
- To conduct a collaborative research on rangeland ecosystem services for sustainable mountain development, an agreement was entered into with Chengdu Institute of Biology, Chinese Academy of Sciences, Chengdu, China.
- For adopting water quality assessment methods for rapid appraisal of water services under the World Agroforestry Centre-Rewarding Upland Poor for Environmental Services (RUPES) project, an agreement was signed with Aquatic Ecology Centre, Kathmandu University.
- For promoting herbal gardens in schools in Bhutan, an agreement was signed with the Council for Renewable Natural Resources Research of Bhutan (CORRB), Ministry of Agriculture and Forests, Thimphu, Bhutan.
- To support a mountain initiative conference led by the Ministry of Environment, Government of Nepal (MoENV/GoN), an agreement was signed with Integrated Development Society (IDS) Nepal.

# Publications

## From ICIMOD...

ICIMOD disseminates much of the information gathered during programme activities in the form of printed and electronic publications targeted at policymakers, development workers, government experts and decision makers, students, and the interested public. Full length books and manuals are still published, but increasingly publications are being prepared in shorter, more attractive, and easy-to-read information sheets and short formats. Long proceedings and more technical material are prepared in electronic format, for example on a CD-ROM with an introductory booklet or simply through web posting. Staff also publish more academic results in (usually peer-reviewed) journals. All ICIMOD's own publications can be downloaded free-of-charge from [www.icimod.org/publications](http://www.icimod.org/publications). Hard copies are provided free to institutions actively involved in sustainable development of the greater Himalayan region.

### Books and booklets

**Flash Flood Risk Management: A training of trainers manual** Shrestha, AB; Chapagain, PS; Thapa, R. 150pp  
ISBN 978 92 9115 222 3 LCCN 2011-312016

**Climate Variability and Change in the Himalayas: Community perceptions and responses** Macchi, M; Gurung, AM; Hoermann, B; Choudhary, D. 68pp  
ISBN 978 92 9115 226 1 LCCN 2011 312017

**The Status of Glaciers in the Hindu Kush-Himalayan Region** Bajracharya, SR; Shrestha B (eds) 127pp  
ISBN 978 92 9115 215 5 LCCN 2011-312013

**Snow-Cover Mapping and Monitoring in the Hindu Kush-Himalayas** Gurung, DR; Amarnath, G; Khun, SA; Shrestha, B; Kulkarni, AV (eds) 32pp  
ISBN 978 92 9115 218 6 LCCN 2011-312014

**Climate Change in the Hindu Kush-Himalayas: The State of Current Knowledge** Singh, SP; Bassignana-Khadka, I; Karky, BS; Sharma, E. 88pp ISBN 978 92 9115 220 9 LCCN 2011-312015

**Understanding Mountain Poverty in the Hindu Kush-Himalayas: Regional report for Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan** Hunzai, K; Gerlitz, JY; Hoermann, B. 68pp  
ISBN 978 92 9115 212 4 LCCN 2011-312011

**Three Decades of India/ICIMOD Collaboration: Strategic shifts in partnership** 29pp

**Green Economy for Sustainable Mountain Development: A concept paper for Rio+20 and beyond** 31pp

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

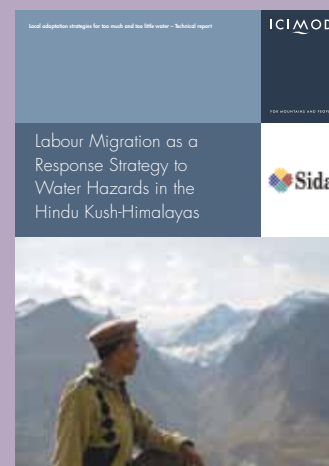
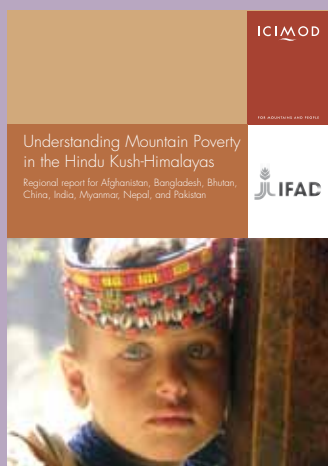
**Implementation of the Convention on Biological Diversity: A retrospective analysis in the Hindu Kush-Himalayan countries** Desai, BH; Oli, KP; Yang Yongping; Chettri, N; Sharma, E. 33pp  
ISBN 978 92 9115 205 6 LCCN 2011-312009

**Proceedings of the International Symposium - Benefiting from Earth Observation: Bridging the data gap for adaptation to climate change in the Hindu Kush-Himalayan region** Shrestha, B; Bajracharya, B (eds) 41pp + DVD with summary report and additional materials (programme, abstracts, presentations, posters, photos, videos, news) ISBN 978 92 9115 200 1 LCCN 2011-312007

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

**Glacial Lakes and Glacial Lake Outburst Floods in Nepal** ICIMOD. 96pp + DVD with full report and additional material (GIS database, maps, photos, video clips) ISBN 978 92 9115 193 6 LCCN 2011-312004





**Framework for Valuing Ecosystem Services in the Himalayas** Rasul, G; Chettri, N; Sharma, E. 18pp  
ISBN 978 92 9115 190 5 LCCN 2011-312003

**Framework for Community-Based Climate Vulnerability and Capacity Assessment in Mountain Areas** Macchi, M. 27pp ISBN 978 92 9115 182 0 LCCN 2011-312001

**Mainstreaming Gender in Mountain Development - From Policy to Practice: Lessons learned from a gender assessment of four projects implemented in the Hindu Kush-Himalayas** Leduc, B. 16pp + CD-ROM with Annexes ISBN 978 92 9115 179 0 LCCN 2011-312000

**Labour Migration as a Response Strategy to Water Hazards in the Hindu Kush-Himalayas** Banerjee, S; Gerlitz, JY; Hoermann, B. 27pp ISBN 978 92 9115 185 1 LCCN 2011-312002

## CD-ROMs and DVDs

**Biodiversity conservation and management in the Hindu Kush-Himalayan region** (DVD) Selected publications, films and others from 1986 to 2011 (updated)

**Climate change in the Hindu Kush-Himalayan region** (DVD) Selected publications on impacts, adaptation, and others from 1986 to 2011 (updated)

**Too Much Water Too Little Water** (video)  
ISBN 978 92 9115 204 9 (13.30 mins)

**Promoting Herbal Gardens in Schools** (video)  
(11.25 mins)

**Herbal Gardens in Schools** (video) – Nepali version  
(12 mins)

## General publications

**Annual Report 2010**

**Earth Observation and Climate Change**, *Sustainable Mountain Development* No. 60, Autumn 2011

**Labour Migration: Opportunities and challenges for mountain livelihoods**, *Sustainable Mountain Development* No. 59, Summer 2011

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

**Asia-Pacific Mountain Courier – Special issue on youth action for climate change through art**, Vol. 12 No. 1, June 2011

**CNICIMOD Newsletter** Vol. 5, No. 1, April 2011

**CNICIMOD Newsletter** Vol. 5, No. 2, October 2011

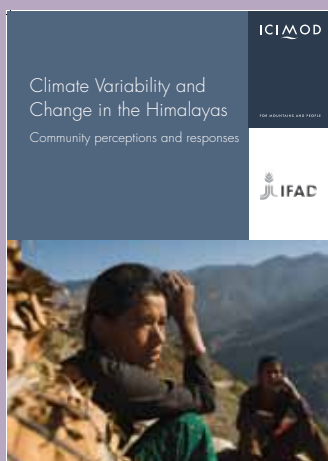
## Information sheets/briefing papers/project brochures

**Value Chains for Mountain Products and Services**

**Black Carbon in the Hindu Kush-Himalayan Region**

**Remittances: A key to adaptation?: Perspectives from communities exposed to water stress in the Himalayan Region**

**Himalayan Climate Change Adaptation Programme (HICAP): Enhancing resilience of mountain communities through improved understanding of vulnerabilities, opportunities, and potentials for adaptation**



Protected Areas and Payment for Ecosystem Services:  
A feasibility study in Shivapuri-Nagarjun National  
Park, Nepal

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

Space-Based Information and Rapid Mapping for  
Emergency Response

Improving Local Governance in the Hindu Kush-  
Himalayan Region Challenges and Good Practices

The Eastern Himalayas Biodiversity and Climate  
Change Adaptation website

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

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

What Do We Know About Climate Change in the  
Hindu Kush-Himalayan Region?

Regional Monitoring Scheme for Snow Cover of the  
Hindu Kush-Himalayas

Glaciers in the Hindu Kush-Himalayas: New inventory  
and data released

Mountain Day: Highlighting the critical role of  
mountain ecosystems for climate adaptation and  
sustainable development

Gender Experiences and Responses to Climate  
Change in the Himalayas: ICIMOD's interactive panel  
at the Women's World Congress 3–7 July 2011  
Ottawa, Canada

Bhutan+10: Gender and sustainable mountain  
development in a changing world

Sustaining Forests for Mitigation and Adaptation to  
the Impacts of Climate Change



# .....other publications by ICIMOD staff

## Articles in peer-reviewed journals

Babel, MS; Pandey, VP; Rivas, AA; **Wahid, S** (2011) 'Indicator-based approach for assessing the vulnerability of freshwater resources in the Bagmati River Basin, Nepal.' *Environmental Management* 48(5): 1044-1059

Babel, MS; **Wahid, S** (2011) 'Hydrology, management and rising water vulnerability in the Ganges–Brahmaputra–Meghna River Basin.' *Water International* 36(3): 340-356

Bayas, JCL; Marohn, C; Dercon, G; Dewi, S; Piepho, HP; **Joshi, L**; van Noordwijk, M; Cadisch, G (2011) 'Influence of coastal vegetation on the 2004 tsunami wave impact in west Aceh.' *PNAS* 108(46): 18612-18617

Bhattarai, S; **Pant, B**; Upadhyaya, CP (2011) 'Dependency of Tharu communities on wild plants: A case study of Shankarpur, Kanchanpur District.' *Banko Janakari: A journal of forestry information for Nepal* 21(1): 35-40

Danielsen, F; Skutsch, M; Burgess, ND; Jensen, PM; Andrianandrasana, H; **Karki, B**; Lewis, R; Lovett, JC; Massao, J; Ngaga, Y; Phartiyal, P; Poulsen, MK; Singh, SP; Solis, S; Sorensen, M; Tewari, A; Young, R; Zahabu, E (2011) 'At the heart of REDD+: A role for local people in monitoring forests?' *Conservation Letters* 4(2): 158-167

**Gurung, DR**; Kulkarni, AV; **Giriraj, A**; **Aung, KS**; **Shrestha, B** (2011) 'Monitoring of seasonal snow cover in Bhutan using remote sensing technique.' *Current Science* 101(10): 1364-1369

**Karki, MB**; **Shrestha, AB**; Winiger, M (2011) 'Enhancing knowledge management and adaptation capacity for integrated management of water resources in the Indus River Basin.' *Mountain Research and Development* 31(3): 242-251

**Partap, U** (2011) 'Innovations in revival strategies for declining pollinators with particular reference to the indigenous honeybees: Experiences of ICIMOD's initiatives in the Hindu Kush-Himalayan region.' *Pest Management and Economic Zoology* 18: 85-95

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# ICIMOD Board of Governors 2011

## Regional Board Members

<b>Afghanistan</b>  <b>HE Mr Raz Mohammad Raz</b>  Deputy Minister of Irrigation and Infrastructure, Ministry of Agriculture, Irrigation and Livestock	<b>Bangladesh</b>  <b>Mr Naba Bikram Kishore Tripura</b>  Secretary, Ministry of Chittagong Hill Tracts Affairs	<b>Bhutan</b>  <b>Mr Sherub Gyaltsen</b>  Secretary Ministry of Agriculture and Forest	<b>China</b>  <b>Prof Ding Zhongli</b>  Chairman of CN-ICIMOD Vice President Chinese Academy of Sciences
<b>India</b>  <b>Dr Tishya Chatterjee, IAS</b>  Chair ICIMOD Board of Governors Secretary, Ministry of Environment and Forests	<b>Myanmar</b>  <b>Dr Nyi Nyi Kyaw*</b>  Deputy Director General, Forest Department, Ministry of Environmental Conservation and Forestry	<b>Nepal</b>  <b>Mr Deependra Bahadur Kshetry</b>  Vice Chairman, National Planning Commission, Government of Nepal	<b>Pakistan</b>  <b>Mr Khusro Pervaiz Khan</b>  Additional Secretary, Economic Affairs Division, Pak Secretariat

## Independent Board Members

 <b>Dr Lars-Erik Liljelund</b> CHAIR, Programme Advisory Committee VICE CHAIR, Board of Governors Chief Executive The Foundation for Strategic Environmental Research (Mistra), Sweden	 <b>Dr Elke Förster</b> Environment, Climate Change and Biodiversity (4701) Priority Area Manager Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Germany	 <b>Dr Amir Muhammed</b>  Rector, National University of Computer and Emerging Sciences Pakistan	 <b>Dr Linxiu Zhang</b>  Professor and Deputy Director, Center for Chinese Agricultural Policy, Chinese Academy of Sciences, China
 <b>Prof Matthias Winiger</b>  Former Vice Chancellor, University of Bonn Department of Geography Germany	 <b>Dr Pal Prestrud</b>  Director, CEO, CICERO Norway	 <b>Dr Christoph Graf</b>  CHAIR, ICIMOD Support Group Head, South Asia Department Swiss Agency for Development and Cooperation	The Director General of ICIMOD is a member of the ICIMOD Board of Governors Ex-officio

\* Elected Chair of the Board of Governors at the meeting held in Paro, Bhutan, November 2011



# ICIMOD Staff 2011

As of December 2011

## Directorate

Ahmad, Farid, Head, Strategic Monitoring, Planning and Evaluation  
Basnyat, Ayushma, RL, External Relations and Monitoring Collaborator  
Ghimire, Shekhar, Director of Administration & Finance  
Karki, Madhav Bahadur, Deputy Director General  
Manandhar, Prem, Monitoring & Evaluation Support Officer  
Molden, David James, Director General (From Dec 1)  
Rana, Anju, Executive Assistant  
Schild, Andreas, Director General (Until Nov 30)\*  
Shakya, Naina, Fundraising and External Relations Officer  
Sharma, Eklabya, Director of Programme Operations  
Shrestha, Angeli, Senior Programme Assistant  
Thapa, Chomu Prerna, Senior Administrative Assistant

## ICIMOD Staff in the RMCs

Chaudhry, Inayatullah, Regional Programme Coordinator, Pakistan  
Doosti, Abdul Azim, ICIMOD Country Representative, Afghanistan

## Integrated Water and Hazard Management

Bajracharya, Sagar Ratna, Satellite Hydrology Officer  
Joshi, Sarita, Senior Programme Assistant  
Joshi, Sharad Prasad, Research Associate, Glacier Mapping  
Khadgi, Vijay Ratan, Assistant Project Coordinator, HYCOS  
Mool, Pradeep Kumar, Remote Sensing Specialist/AATL, MAIWR  
Nibanupudi, Hari Krishna, DRR Specialist/AATL, DRR  
Ouyang, Hua, Programme Manager  
Pradhan, Neera Shrestha, Hazard and Community Adaptation Specialist  
Rai, Himaa, Programme Assistant-HYCOS  
Rasaily, Rekha, Programme Assistant  
Shahriar, Wahid, Senior Hydrologist  
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Shrestha, Arun Bhakta, Climate Change Specialist/AATL, SUDL  
Shrestha, Krisha, Programme Support Officer  
Shrestha, Mandira Singh, Project Coordinator, HYCOS  
Shrestha, Rajendra Bahadur, Research Analyst  
Stumm, Dorothea, Glaciologist

## Environmental Change and Ecosystem Services

Aryal, Kamal Prasad, Agriculture Specialist  
Bhandari, Bishnu B, Wetlands Specialist\*  
Chaudhary, Sunita Research Associate, BCM

Chettri, Nakul, Community Biodiversity Specialist/AATL, BCM  
Dhakal, Madhav Prasad, Research Associate  
Fleiner, Renate, Watershed Management Specialist  
Ghale, Neetu, Programme Assistant  
Ismail, Muhammad, CBNRM Specialist/Assistant Research Officer-RRP  
Jaiswal, Suman, Database and Web Content Manager  
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Joshi, Sami, Senior Programme Assistant  
Kotru, Rajan, Watershed Management Specialist/AATL, InFEWS  
Oli, Krishna Prasad, Regional Coordinator, KSLCI  
Phuntsho, Karma, NRM Specialist  
Providoli, Isabelle Anita, Soil & Water Conservation Specialist\*  
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Rawat, Gopal Singh, Senior Scientist/Deputy Programme Manager  
Shakya, Bandana, Biodiversity Analyst  
Shapit, Keshar Man, Watershed Management Specialist\*  
Wu, Ning, Programme Manager  
Yi, Shaoliang, RRP Specialist/Coordinator Regional Rangelands Programme\*  
Zomer, Robert, Environment Change Specialist/Deputy Programme Manager\*

## Sustainable Livelihoods and Poverty Reduction

Banerjee, Soumyadeep, Migration & Livelihood Specialist  
Bhandari, Shova, Programme Assistant  
Bhattarai, Nirmal, MAPs Conservation & Research Specialist  
Bisht, Neha, Assistant to India Focal Point  
Choudhary, Dyutiman, MAPs Marketing and Enterprise Development Officer  
Choudhury, Dhruvad, Livelihood Specialist /Programme Coordinator, IFAD  
Gurung, Min Bahadur, Institutional Development Officer  
Hoermann, Brigitte, Economist/AATL, ILO  
Hunzai, Kiran Izhar, Poverty Analyst  
Joshi, Laxman, Payment for Environmental Services Specialist  
Joshi, Shrestha Anu, Value Chain Development Specialist  
Karki, Seema, REDD Research Associate  
Karky, Bhaskar Singh, Resource Economist  
Khadka, Manohara, Gender Specialist  
Kinal, Giridhar A, High Value Products & Value Chain, AATL  
Kollmair, Michael, Programme Manager  
Kruk, Ester, Tourism Expert  
Macchi, Mirjam, Associate Professional Officer\*  
Nazari, Noorin, Governance Specialist

Note: The list does not include short-term assignments, consultants; students, volunteers, and similar; \* Retired or left during 2011;  
AATL= Action Area Team Leader

Pant, Basant, Programme/Research Associate  
 Partap, Uma, Coordinator, Beekeeping Project  
 Rasul, Golam, Policy Development Specialist/ Division Head, EAD  
 Shrestha, Govinda, Programme Assistant  
 Shrestha, Mamata, Programme Assistant  
 Subedi, Nani Ram, Livelihoods & Governance Specialist  
 Verma, Ritu, Senior Gender Specialist /Division Head, G&G

### **Integrated Knowledge Management**

Boom, Daan, Programme Manager  
 Gauchan, Aneeta, Research Assistant  
 Gurung, Nira, Communications Officer  
 Jha, Anil Kumar, Library Assistant  
 Karmacharya, Jay P, ICT Systems Support Analyst  
 Khatri, Shiva Hari, Distribution Assistant  
 Maharjan, Dharma Ratna, Desktop Publisher  
 Mahat, Tek Jung, APMN Node Manager  
 Mendez, Joyce, Communications Specialist\*  
 Mishra, Udayan, Knowledge Management & Web Associate  
 Mohanty, Ashutosh, Capacity Development Officer\*  
 Murray Shrestha, A Beatrice, Division Head, KMIT\*  
 Pandey, Sushil Raj, ICT Specialist  
 Perlis, Andrea, Head, Publications  
 Pradhan, Punam, Desktop Designer and Publisher  
 Pradhan, Saisab, System Administrator  
 Sharma, Bishwonath (Sudas), Information Centre Coordinator  
 Sharma, Yuvraj, Application Developer/Programmer  
 Sherchan, Ujol, Senior Programme Officer  
 Sherpa, Doma Tshering, Communications & PR Associate\*  
 Sherpa, Samden Lama, Godavari Centre Manager  
 Tamang, Jiwan, Godavari Centre Assistant  
 Tandukar, Deependra, Knowledge Management & Web Specialist  
 Thaku, Asha Kaji, Cartographer/Graphic Artist  
 Thapa, Ram Sharan, Assistant Librarian

### **Mountain Environment and Natural Resources Information System (MENRIS)**

Ali, Amm Mostafa, Enterprise GIS/Database Specialist  
 Amarnath, Giriraj, RS Specialist/Modeler\*  
 Aung, Khun San, Remote Sensing Analyst  
 Bajracharya, Birendra, Senior GIS Specialist  
 Bajracharya, Rajan Man, Systems Analyst  
 Bajracharya, Samjwal Ratna, Remote Sensing Specialist  
 Dangol, Bikash, GIS Web Programmer  
 Dangol, Pradeep Man, Field Data Analyst  
 Dangol, Gauri Shankar, Graphics/Multimedia Designer  
 Gilani, Hammad, Remote Sensing Analyst  
 Gurung, Deo Raj, Remote Sensing Specialist  
 Joshi, Govinda, GIS Specialist  
 Maharjan, Sudan Bikash, GIS-RS Analyst  
 Manandhar, Liza, Programme Assistant  
 Pradhan, Bidya, Environment Officer

Pradhan, Sudip, GIS/DSS Developer  
 Pradhan, Suyesh, GIS Web Programmer  
 Qamer, Faisal Mueen, GIS-RS Expert  
 Shrestha, Basanta Raj, Systems Specialist/Division Head  
 Shrestha, Finu, GIS Data Analyst  
 Uddin, Kabir, GIS-RS Analyst  
 Wesselman, Sebastian, Geospatial Capacity Building Lead

### **Administration and Finance**

Amatya, Shree Mani, HRD Associate Officer  
 Bajracharya, Nani Keshari, Senior Admin Assistant  
 Bajracharya, Narendra, Equipment Support Supervisor  
 Gurung, Dipshikha, Communications Assistant  
 Jirel, Birkha, Security Guard  
 Joshi, Anusha, ERD Specialist  
 KC, Dhurba, Senior Driver  
 KC, Rishi Ram, Senior Travel Assistant  
 KC, Sudama, Senior Driver/Procurement Assistant  
 Kansakar, Chandra Bir Singh, HRD Officer  
 Magar, Bishnu, Senior Driver  
 Maharjan, Ram, Senior Driver  
 Maharjan, Chinikaji, Senior Driver  
 Maharjan, Kishore, Technician  
 Maharjan, Krishna, Senior Driver  
 Maharjan, Pancha Narayan, Mechanic/Senior Driver  
 Mali, Rajendra Prakash, Budget and Finance Officer  
 Nepal, Akil, Senior Mail Messenger  
 Rana, Ganga, Reproduction Clerk  
 Ranjit, Rabindra, Senior Technician, Store  
 Sadasankar, Pashupati, Senior Mail Messenger  
 Shakya, Kiran, Web/GIS Programmer\*  
 Shrestha, Kiran Man, Payment Processing Incharge  
 Shrestha, Kishore, Assistant Motorpool Supervisor  
 Shrestha, Mohan Krishna, Motorpool Supervisor  
 Shrestha, Nabindra Raj, Controller Receipts  
 Shrestha, Prabha, Controller Payments  
 Shrestha, Pramila, Finance Assistant  
 Shrestha, Shyam, Reproduction Clerk  
 Singh, Sabak, Senior Driver  
 Subedi, Jai Bahadur, Senior Driver  
 Thapa, Shambhu, Gardener  
 Upreti, Rajen, Travel Officer  
 Vaidya, Jenny, Store and Inventory Controller

### **Visiting Scientists and Advisors**

Vaidya, Ramesh Anand, Senior Advisor  
 Sporleder, Marc, Associate Professional Officer/CIP

### **South Asian Network for Development and Environmental Economics (SANDEE)**

Joshi, Malvika, Finance Assistant  
 Kafle, Anuradha, Communications Research Officer  
 Nepal, Mani, Senior Environmental Economist  
 Shyamsunder, Priya, Programme Director  
 Syangden, Bhawana, Programme Associate



# Financial Report

## ICIMOD Income and Expenditure Accounts 2002-2011

The financial management of the Centre is implemented through the establishment of programme and core funds, and co-financing project funds. All unrestricted contributions made by sponsors and member countries are credited to the core programme funds. All restricted contributions made by sponsors, governments, and non-government sources for specific projects are credited to co-financing project funds.

### Core Programme Funds

In US Dollars

SOURCE	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>A. Regional</b>	<b>76,553</b>	<b>170,880</b>	<b>220,563</b>	<b>344,805</b>	<b>276,196</b>	<b>245,249</b>	<b>359,116</b>	<b>334,209</b>	<b>630,277</b>	<b>539,592</b>
Afghanistan			5,000		10,000	5,770	7,873	10,742	14,658	14,658
Bangladesh	10,000	10,000	28,300	10,000	20,000	10,000	11,240	11,758	–	12,348
Bhutan	15,000		7,500	15,000	7,500	8,243		32,543	25,651	35,000
China	45,000	45,000	145,000	45,000	100,000	100,000	100,000	100,000	150,000	150,000
India	–	84,695	11,284	155,456	113,106	72,075	50,794	149,189	160,223	171,713
Myanmar	–	9,667	9,956			19,706	29,223	10,746	35,222	35,222
Nepal	6,553	12,903	13,523	14,154	13,784	21,246	23,566	19,231	20,175	20,819
Pakistan	–	8,615		105,195	11,806	8,209	136,420	–	224,348	99,832
<b>B. Non-Regional</b>	<b>2,364,407</b>	<b>2,562,469</b>	<b>2,703,124</b>	<b>2,592,999</b>	<b>2,733,819</b>	<b>2,860,492</b>	<b>4,739,611</b>	<b>4,066,646</b>	<b>3,858,895</b>	<b>3,463,530</b>
Austria	99,402	114,118	125,460	122,349	120,357	137,097	160,883	136,364	94,444	98,124
Denmark	–		400,572	200,901	–	214,264	–	–	–	–
Finland	133,554				–	–	–	–	–	–
Germany	574,904	854,625	494,694	630,416	931,632	888,988	1,002,060	1,536,038	1,225,203	1,446,528
Netherlands	450,000	585,714	660,438	600,000	600,000	540,000	60,000	–	–	–
Norway	464,087	508,012	521,960	539,333	581,830	580,143	1,843,281	817,625	841,652	909,310
Sweden	142,460						779,676	714,550	714,550	–
Switzerland	500,000	500,000	500,000	500,000	500,000	500,000	893,711	862,069	983,046	1,009,568
<b>C. Other Income</b>	<b>187,368</b>	<b>172,209</b>	<b>175,155</b>	<b>130,360</b>	<b>334,535</b>	<b>632,666</b>	<b>1,296,940</b>	<b>1,182,790</b>	<b>1,105,367</b>	<b>1,686,966</b>
<b>Total Core (A+B+C)</b>	<b>2,628,328</b>	<b>2,905,558</b>	<b>3,098,842</b>	<b>3,068,164</b>	<b>3,344,550</b>	<b>3,738,407</b>	<b>6,395,667</b>	<b>5,583,645</b>	<b>5,594,539</b>	<b>5,690,088</b>
<b>Project Co-financing</b>	<b>2,535,816</b>	<b>3,124,694</b>	<b>2,596,420</b>	<b>3,237,024</b>	<b>3,072,532</b>	<b>4,002,301</b>	<b>5,801,899</b>	<b>6,112,452</b>	<b>7,732,803</b>	<b>14,050,498</b>
<b>GRANDTOTAL</b>	<b>5,164,144</b>	<b>6,030,252</b>	<b>5,695,262</b>	<b>6,305,188</b>	<b>6,417,082</b>	<b>7,740,708</b>	<b>12,197,566</b>	<b>11,696,097</b>	<b>13,327,342</b>	<b>19,740,586</b>

EXPENDITURE	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Programme Gos	1,529,717	1,403,669	1,730,067	1,805,625	1,938,261	2,395,461	3,672,008	4,447,710	4,654,126	3,303,616
Project Cost	2,495,511	2,598,643	3,018,022	3,242,531	3,103,868	3,808,778	4,785,076	5,998,834	7,653,146	9,797,169
Support Cost 1	642,656	699,467	675,486	515,203	493,003	537,721	752,133	541,655	1,067,357	1,050,206
Directorate Cost 2	389,368	383,728	366,075	419,671	523,626	552,520	714,544	701,408	650,827	1,077,021
<b>Total Expenditures</b>	<b>5,057,252</b>	<b>5,085,507</b>	<b>5,789,650</b>	<b>5,983,030</b>	<b>6,058,758</b>	<b>7,294,480</b>	<b>9,923,761</b>	<b>11,689,607</b>	<b>14,025,456</b>	<b>15,228,012</b>

Note: Support cost in 2011 includes exchange loss amounting to US\$ 263,414.

## Project Co-financing Funds

In US Dollars

SOURCE	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	283,198	462,558	339,977	432,394	523,798	538,037	615,087	586,667	267,555	416,844
Finland								602,410	–	1,154,401
Germany	78,159	101,509	51,826	191	252,528	95,891	214,436	204,378	878,025	209,074
Netherlands	96,000	420,814	352,894	169,012					–	–
Norway				100,630				647,354	1,379,884	4,779,286
Sweden	64,246							350,925	343,425	1,845,325
Switzerland	407,757	404,820	547,166	648,496	420,477	510,690	1,179,487	190,307	271,158	85,481
USA	82,434	91,950	98,816	158,320	161,641	364,858	742,374	426,354	422,452	513,862
ITALY/IUCN	12,000	47,969	72,441	9,275	152,062	510,381	583,702	200,262	111,832	–

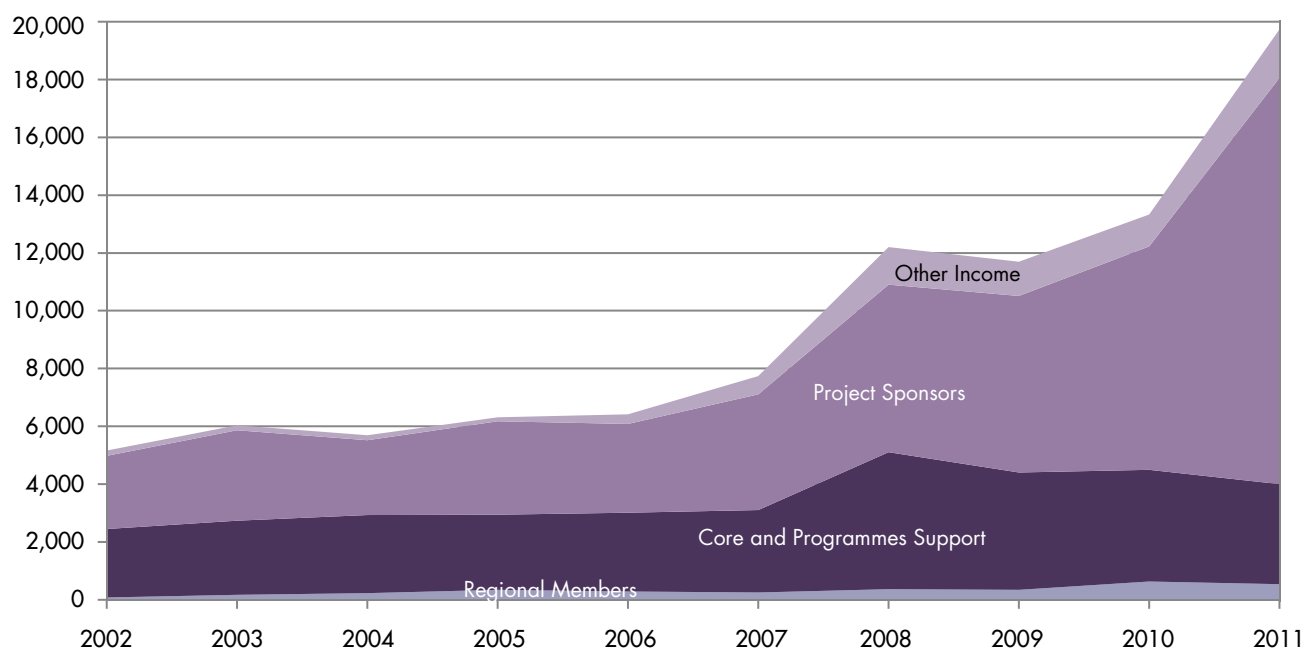
ADA									228,472	238,755
ADB			20,000	4,000	19,340			57,090	213,737	110,000
EU				33,631	429,077	30,717	136,875	71,228	–	60,355
CIP		8,100	9,000			85,690	31,990	40,000	43,173	65,683
FAO	121,330	70,500	165,200	83,025	50,425	106,785	101,274	98,700	384,118	686,632
ISNAR	60,000	72,000							–	–
UNEP	242,056	125,000	100,558	119,337	101,560	55,500	176,300	270,000	424,534	442,284
UNESCO	500	18,000	9,000	8,000	4,000	12,400	14,600	2,000	65,000	48,000
WWF		28,614	24,825				5,000		–	–
IFAD	345,000	428,000	127,000	433,000	95,391	469,430	10,000	379,506	573,019	551,348
UNOPS	30,000								–	–
UNIFEM	50,596	48,760							–	–
ESA				44,609					–	–
WI				124,649			69,636		–	–
FORD		200,000	200,000	143,127		100,000	200,000		200,000	–
IDRC	143,415	177,784	132,290	338,707	517,383	297,398	784,121	833,867	632,098	682,861
MacArthur	175,000	100,000	75,000	175,000	100,000	150,000	240,000		400,000	–
ICCO	207,715	133,436	24,021	140,015	168,845	146,790		152,779	164,403	173,938
CEH, UK	22,858	52,888	7,248						–	–
CFC/FAO						301,143			–	–
APN/START	65,606	71,734	68,600	13,400					–	–
ITC	19,910	35,467	41,991						–	–
Twente		24,791	81,953	30,096	71,209	132,183	172,767		–	70,211
Sandia			41,969	24,909					–	–
CICERO							34,814	238,533	356,350	–
World Bank							23,385	202,541	70,815	1,511,128
UNDP							337,075	327,375	–	89,030
Others	28,036		4,645	3,201	4,796	94,408	128,976	230,176	302,753	316,000
<b>T O T A L</b>	<b>2,535,816</b>	<b>3,124,694</b>	<b>2,596,420</b>	<b>3,237,024</b>	<b>3,072,532</b>	<b>4,002,301</b>	<b>5,801,899</b>	<b>6,112,452</b>	<b>7,732,803</b>	<b>14,050,498</b>

EXPENDITURES	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Total Expenditure</b>	<b>2,495,511</b>	<b>2,598,643</b>	<b>3,018,022</b>	<b>3,242,531</b>	<b>3,103,868</b>	<b>3,808,778</b>	<b>4,785,076</b>	<b>5,998,834</b>	<b>7,653,146</b>	<b>9,797,169</b>



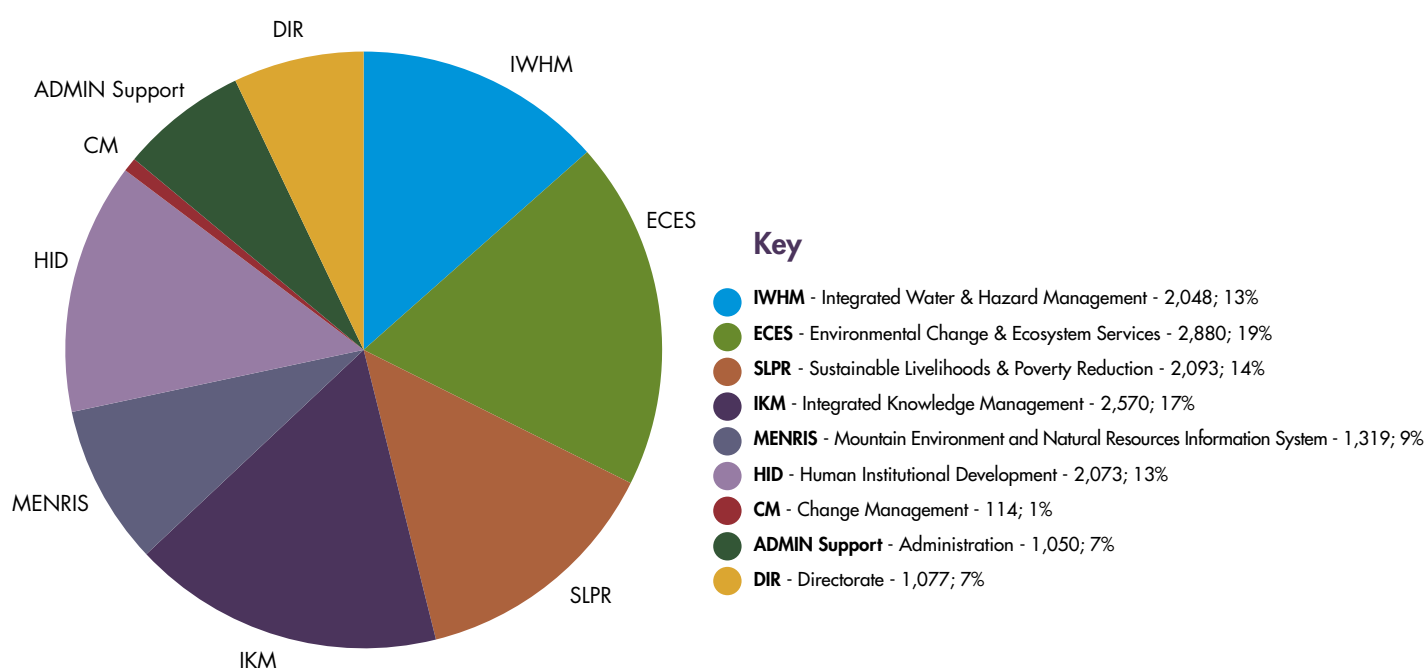
## ICIMOD Funding Sources 2002-2011

In thousand US Dollars



## ICIMOD Expenses by Programme 2011

In thousand US Dollars



Total expenditures US\$ 15.228 million

International Centre for Integrated Mountain Development  
Statement of Assets, Liabilities, Loan and Fund Balances  
as of 31 December 2011

All amounts in United States Dollars

	Schedule	As at 31 December 2011	As at 31 December 2010
<b>Fund Balances</b>			
General Reserve	1	2,998,943	3,175,749
Operational Reserve	1	411,403	250,788
Exchange Equalisation Reserve	1	503,606	503,606
Restricted Programme Support Fund Balances (net) [Note 2 (f) on Schedule 14]]			
Government of Germany		2,493	(96,137)
Special Project Fund Balances (net)	6C		
Amounts to be incurred on projects		8,243,080	3,713,971
Amounts to be recovered		(1,103,882)	(828,102)
<b>Total Sources of Funds</b>		<b>11,055,643</b>	<b>6,719,875</b>
<b>Assets and Liabilities</b>			
Fixed Assets	2	1,686,545	1,620,526
Current Assets, Loans and Advances:			
Cash and Bank Balances	3	11,514,834	7,399,200
Loans and Advances	4	1,172,532	1,123,611
		12,687,366	8,522,811
Less: Current Liabilities and Provisions	5	(3,318,268)	(3,423,462)
Net Current Assets		9,369,098	5,099,349
<b>Total Application of Funds</b>		<b>11,055,643</b>	<b>6,719,875</b>
Notes forming part of the accounts	14		

Schedules referred to above form an integral part of the Statement of Assets, Liabilities and Fund Balances

In terms of our report attached

For DELOITTE HASKINS & SELLS  
Chartered Accountants



ALKA CHADHA  
Partner

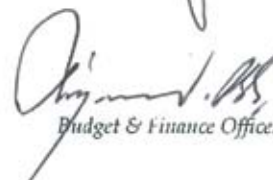


Director General

For International Centre for Integrated Mountain Development



Director, Administration and Finance



Budget & Finance Officer

Place: Gurgaon, India  
Date: 5 April, 2012

Place: Kathmandu, Nepal  
Date: 5 April, 2012



# International Centre for Integrated Mountain Development

## Operating Statement for the Year Ended 31 December 2011

All amounts in United States Dollars

	Schedule	Year ended 31 December 2011	Year ended 31 December 2010
<b>INCOME</b>			
Contribution from Donors	6		
Restricted Programme Support	6A	1,446,528	1,939,753
Core and Other Programmes Support	6B	2,556,594	2,549,419
Special Projects	6C	14,050,498	7,732,803
Other Income	7	1,686,966	1,105,367
		(A) <u>19,740,586</u>	<u>13,327,342</u>
<b>EXPENDITURE</b>			
Programme Cost			
Restricted	8	1,347,898	2,380,534
Others	9	1,378,791	1,847,456
Special Projects Cost	10	9,206,866	7,257,553
Scaling Up Cost	11		
Programmes	11A	462,049	208,107
Special Projects	11B	590,303	395,593
Core Support Cost			
Directorate	12	1,475,850	1,204,113
Administrative Support	13	896,317	803,023
Depreciation [Note 2 (a) (iii) on Schedule 14]		77,916	66,415
Less: Indirect Cost Allocation [Note 1 (xii) on Schedule 14]		<u>(471,392)</u>	<u>(577,331)</u>
		1,978,691	1,496,220
Foreign Exchange Loss (net)		263,414	439,993
		(B) <u>15,228,012</u>	<u>14,025,456</u>
Surplus/(Deficit) of Income over Expenditure		(A-B) 4,512,574	(698,114)
Less: Surplus of Special Projects' income over expenditure transferred to Special Project Fund Balances (net)		4,253,329	79,657
Less: Surplus/(Deficit) of Restricted Programme Support's income over expenditure transferred to Restricted Programme Support Fund Balances (net)		98,630	(440,781)
Net Surplus/ (Deficit) adjusted to Operational Reserve		<u>160,615</u>	<u>(336,990)</u>

Notes forming part of the accounts 14

Schedules referred to above form an integral part of the Operating Statement


In terms of our report attached

For DELOITTE HASKINS & SELLS  
Chartered Accountants

  
ALKA CHADHA  
Partner

  
Director General

For International Centre for Integrated Mountain Development

  
Director, Administration and Finance

  
Budget & Finance Officer

Place: Gurgaon, India  
Date: 5 April, 2012

Place: Kathmandu, Nepal  
Date: 5 April, 2012

# International Centre for Integrated Mountain Development

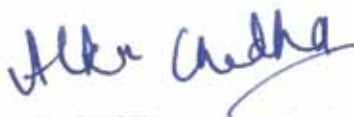
## Cash Flow Statement for the Year Ended 31 December 2011

All amounts in United States Dollars

Particulars	Year ended 31 December 2011	Year ended 31 December 2010
<b>A. Cash flow from operating activities</b>		
Net Surplus / (Deficit) as per Operating Statement	160,615	(336,990)
Adjustment for:		
Depreciation	77,916	66,415
Capital expenditure charged in the programmes	314,989	125,440
Interest on Time Deposits	(71,611)	(59,000)
Profit on sale of fixed assets	(313)	(25,728)
Exchange fluctuation -unrealised	251,270	10,909
Operating surplus / (deficit) before working capital changes	732,866	(218,954)
Adjustments for:		
Loans and Advances	(25,213)	193,578
Current Liabilities and Provisions	(323,543)	(293,170)
Net cash from / (used in) operating activities	384,110	(318,546)
<b>B. Cash flow from investing activities</b>		
Purchase of fixed assets	(437,888)	(187,985)
Sale of fixed assets	313	25,728
(Increase)/Decrease in time deposits with banks	(2,660,732)	566,349
Interest received	58,817	55,317
Net cash (used in) / from investing activities	(3,039,490)	459,409
<b>C. Cash flow from financing activities</b>		
Movements in Special projects funds	4,253,329	30,577
Movements in Restricted programme Support funds	98,630	(440,781)
Net cash from / (used in) financing activities	4,351,959	(410,204)
<b>D. Effects of Foreign Exchange differences on Cash and Cash Flow Statement</b>	(241,677)	(4,776)
Net increase/(decrease) in cash and cash equivalents (A + B + C + D)	1,454,902	(274,117)
Cash and cash equivalents at the beginning of the year	80,954	355,071
Cash and cash equivalents at the end of the year (Refer Schedule 3)	1,535,856	80,954

In terms of our report attached

For DELOITTE HASKINS & SELLS  
Chartered Accountants

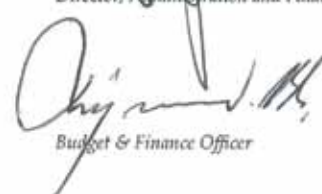
  
**ALKA CHADHA**  
Partner

Place: Gurgaon, India  
Date: 5 April, 2012

For International Centre for Integrated Mountain Development

  
Director General

  
Director, Administration and Finance

  
Budget & Finance Officer

Place: Kathmandu, Nepal  
Date: 5 April, 2012



# ICIMOD Members, Sponsors, and Funding Partners

## CORE FUNDING

### Regional member countries

Afghanistan  
Bangladesh  
Bhutan  
China  
India  
Myanmar  
Nepal  
Pakistan

### Non-regional countries

Austria  
Norway  
Switzerland

## PROGRAMMATIC FUNDING

- Austrian Development Agency (ADA)
- BMZ Bundesministerium Für Wirtschaftliche Zusammenarbeit (German Federal Ministry for Economic Development Cooperation), Germany
- International Fund for Agricultural Development (IFAD)
- Swedish International Development Cooperation Agency (SIDA)

## STRATEGIC AND PROJECT FUNDING

- Asian Development Bank (ADB)
- Asia Pacific Water Forum (APWF)
- Austrian Development Agency (ADA)
- British Council
- Capacity Building International Germany (InWEnt)
- Common Fund for Commodities (CFC)
- Consortium for the Sustainable Development of the Andean Ecoregion (CONDESAN)
- Department for Business Innovation Skills (DBIS)
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- Elsevier Foundation
- European Commission (EC)
- Food and Agriculture Organization of the United Nations (FAO)
- Institute for Global Environment Strategies (IGES)
- Interchurch Organization for Development Cooperation (ICCO)
- International Development Research Centre (IDRC)
- International Potato Center (CIP)
- MacArthur Foundation
- Ministry for Foreign Affairs, Finland
- Ministry of Foreign Affairs, Norway
- National Aeronautics and Space Administration (NASA)
- Norwegian Agency for Development Cooperation (NORAD)
- Overseas Development Institute (ODI)
- Stockholm Environment Institute (SEI)
- Swiss Agency for Development and Cooperation (SDC)
- The Ford Foundation
- The Royal Norwegian Embassy, Kathmandu
- The World Bank
- Twente University
- United Nations Development Programme (UNDP)
- United Nations Environment Programme (UNEP)
- United States Agency for International Development (USAID)
- University Corporation for Atmospheric Research (UCAR)
- World Agroforestry Centre (ICRAF)
- World Meteorological Organization (WMO)

# About ICIMOD

ICIMOD – the International Centre for Integrated Mountain Development – is an independent nonpolitical intergovernmental organisation established in 1983, whose primary objective is to promote the development of economically sound mountain ecosystems and to improve the living standards of mountain populations in the Himalayan region. ICIMOD encourages technical cooperation among governments in the region, and over the past 25 years has acted as a knowledge, learning, and enabling centre working to build awareness and taking action to preserve the unique role that the Hindu Kush Himalayan mountain system must continue to play. ICIMOD's long history of working in the region, its well-honed core competencies, and its strategic position and comparative advantages put it in a unique position to make significant contributions to helping the region take on new challenges. A holistic approach ensures that Centre-wide policies on economic analysis, gender and equity mainstreaming, and governance are an integral part of a complete solution.

ICIMOD's partners are agencies and organisations in the regional member countries – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – that interact with development practitioners, policymakers, and advocates. A feedback loop among these groups ensures that as conditions and policies change inputs are continuously revised. ICIMOD also encourages long-term partnerships with international centres of excellence from outside of the region as a means of acquiring the specific expertise it needs in technical areas. ICIMOD's donors are its financial partners, in recognition of the fact that developments in the region benefit both the people of the region and the larger global community.





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